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DAWSON WILLIAMS, M.D., D.Sc.(HON.),

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NORMAN GERALD HORNER, M.A., M.B.

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THE OLD HUMANITIES

AND

THE NEW SCIENCE.

THE PRESIDENTIAL ADDRESS DELIVERED BEFORE THE
CLASSICAL ASSOCIATION AT OXFORD, MAY, 1919.

BY

SIR WILLIAM OSLER, Bt., M.D., F.R.S.,
REGIUS PROFESSOR OF MEDICINE, OXFORD.

I.

EARLY in the sixteenth century a literary joke sent extinguishable laughter through the learned circles of Europe. The *Epistolæ Obscurorum Virorum* is great literature, to which I refer for two reasons—its standard is an exact gauge of my scholarship, and had *Magister Nostrandus Ortuinus Gratius* of Cologne, to whom most of the letters are addressed, been asked to join that wicked Erfurt Circle, he could not have been more surprised than I was to receive a gracious invitation to preside over this gathering of British scholars. I felt to have been sailing under false colours to have ever, by pen or tongue, suggested the possession of even the traditional small Latin and less Greek. Relieved by the assurance that in alternate years the qualification of your President was an interest in education and literature, I gladly accepted, not, however, without such anticipatory qualms as afflict an amateur at the thought of addressing a body of experts. Not an educated man in the Oxford sense, yet faint memories of the classics linger—the result of ten years of such study as lads of my generation pursued, memories best expressed in Tom Hood's lines:

The weary tasks I used to con!
The hopeless leaves I wept upon!
Most fruitless leaves to me!

In a life of teaching and practice, a mere picker-up of learning's crumbs is made to realize the value of the humanities in science not less than in general culture.

To have a Professor of Medicine in this Chair gives to the Oxford meeting an appropriate renaissance—shall we say mediaeval?—flavour, and one may be pardoned the regret that the meeting is not being held in May, 1519, to have had the pleasure of listening to an address from a real Oxford scholar-physician, an early teacher of Greek in this University, and the founder of the Royal College of Physicians, whose *Rudimenta Grammatices* and *de Emendata Structura Latini Sermonis* upheld for a generation, on the Continent at least, the reputation of English scholarship. These noble walls, themselves an audience—indeed, most appreciative of audiences—have storied memories of Linacre's voice, and the basis of the keen judgement of Erasmus may have been formed by intercourse with him in this very school. In those happy days, to know Hippocrates and Galen was to know disease and to be qualified to practise; and my profession looks back in grateful admiration to such great medical humanists as Linacre and Caius and Rabelais. Nor can I claim to speak for pure science, some salt of which remains from early association, and from a lifelong attempt to correlate with art a science which makes medicine. I was going to say the only—but it is more civil to say the most—progressive of the learned professions.

To have lived right through an epoch matched only by two in the story of the race, to have shared in its long

struggle, to have witnessed its final victory (and in my own case, to be left, I trust, with wit enough to realize its significance)—to have done this has been a wonderful privilege. To have outgrown age-old theories of man and of nature, to have seen west separated from east in the tangled skein of human thought, to have lived in a world re-making—these are among the thrills and triumphs of the Victorian of my generation. To a childhood and youth came echoes of the controversy that Aristarchus began, Copernicus continued, and Darwin ended, that put the microcosm into line with the macrocosm, and for the golden age of Eden substituted the *tellus dura* of Lucretius. Think of the Cimmerian darkness out of which our generation has, at any rate, blazed a path! Picture the mental state of a community which could produce *Omphalos*—an attempt to untie the geological knot!* I heard warm clerical discussions on its main thesis, that the fossils were put into the earth's strata to test man's faith in the Mosaic account of the creation, and our Professor of Natural Theology lectured seriously upon it! The intellectual unrest of those days wrapped many in that "divyne cloude of unknowynge," by which happy phrase Brother Herp designates mediaeval mysticism; and not a bad thing for a young man to live through, as sufficient infection usually remains to enable him to understand, if not to sympathize with, mental states alien or even hostile.

An Age of Force followed the final subjugation of Nature. The dynamo replaced the steam engine, radiant energy revealed the hidden secrets of matter, to the conquest of the earth was added the control of the air and the mastery of the deep. Nor was it only an age of Force. Never before had man done so much for his brother, the victory over the powers of Nature meant also glorious victories of peace; pestilences were checked, the cry of the poor became articulate, and to help the life of the submerged half became the sacred duty of the other. How full we were of the pride of life! In 1910 at Edinburgh I ended an address on *Man's Redemption of Man* with the well-known lines of Shelley beginning "Happiness and Science dawn though late upon the earth." And now! having survived the greatest war in history, and a great victory, with the wreckage of mediaeval autonomy to clear up, our fears are lest we may fail to control the fretful forces of Caliban, and our hopes are to rebuild Jerusalem in this green and pleasant land.

Never before in its long evolution has the race realized its full capacity. Our fathers have told us, and we ourselves have known, of glorious sacrifices; but the past four years have exhausted in every direction the possibilities of human effort. And, as usual, among the nations the chief burden has fallen on that weary Titan, the Motherland,

Bearing on shoulders immense,
Atalantean, the load
Wellnigh not to be borne
Of the too vast orb of her fate.

Not alone did she furnish the sinews of war, but she developed a spirit that made defeat impossible.

No wonder war has advocates, to plead the heroic clash of ideals, the purging of a nation's dross in the fire of suffering and sacrifice, and the welding in one great purpose of a scattered people. Even Montaigne, sanest of men, called it "the greatest and most magnificent of human actions"; and the glammers of its pride, pomp, and

* By the well known naturalist, Philip Henry Gosse.

circumstance still captivate. But there are other sides which we should face without shrinking. Why dwell on the horrors such as we doctors and nurses have had to see? Enough to say that war blasts the soul, and in this great conflict the finer sense of humanity has been shocked to paralysis by the helplessness of our civilization and the futility of our religion to stem a wave of primitive barbarism. Black as are the written and unwritten pages of history, the concentrated and prolonged martyrdom surpasses anything man has yet had to endure. What a shock to the proud and mealy-mouthed Victorian who had begun to trust that Love was creation's final law, forgetting that Egypt and Babylon are our contemporaries and of yesterday in comparison with the hundreds of thousands of years since the cave-dwellers left their records on walls and bones. In the mystic shadow of the Golden Bough, and swayed by the emotions of our savage ancestors, we stand aghast at the revelation of the depth and ferocity of primal passions which reveal the unchangeableness of human nature.

When the wild beast of Plato's dream becomes a waking reality, and a herd-emotion of hate sweeps a nation off its feet, the desolation that follows is wider than that in France and Belgium, wider even than the desolation of grief, and something worse—the hardened heart, the lie in the soul—so graphically described in Book II of the *Republic*—that forces us to do accursed things, and even to defend them! I refer to it because, as professors, we have been accused of sinning against the light. Of course we have. Over us, too, the wave swept, but I protest against the selection of us for special blame. The other day, in an address on "The Comradeship of Letters" at Turin, President Wilson is reported to have said: "It is one of the great griefs of this war that the universities of the Central Empires used the thoughts of science to destroy mankind; it is the duty of the universities of these states to redeem science from this disgrace, and to show that the pulse of humanity beats in the classroom, and that there are sought out not the secrets of death but the secrets of life." A pious and worthy wish! but once in war a nation mobilizes every energy, and to say that science has been prostituted in discovering means of butchery is to misunderstand the situation. Slaughter, wholesale and unrestricted, is what is sought, and to accomplish this the discoveries of the sainted Faraday and of the gentle Dalton are utilized to the full, and to their several nations scientific men render this service freely, if not gladly. That the mental attitude engendered by science is apt to lead to a gross materialism is a vulgar error! Scientific men, in multi or in uniform, are not more brutal than their fellows, and the utilization of their discoveries in warfare should not be a greater reproach to them than is our joyous acceptance of their success.

What a change of heart after the appalling experience of the first gassing in 1915! Nothing more piteously horrible than the sufferings of the victims has ever been seen in warfare.* Surely we could not sink to such barbarity! Is thy servant a dog? But martial expediency soon compelled the Allies to enlist the resources of chemistry; the instruction of our enemies was soon bettered, and before the armistice there were developments in technique and destructive force that would have delighted Nisroch, who first invented aerial "machinations to plague the sons of men." A group of medical men representing the chief universities and medical bodies of the United Kingdom was innocent enough to suggest that such an unclean weapon—the use of lethal gases, "condemning its victims to death by long-drawn-out torture," and with infinite possibilities for its further development—should be for ever abolished. "Steeped in folly by theories and prepossessions," failure to read the "lessons of war which should have sufficed to convince a beetle"—such were among the newspaper comments; and in other ways we were given to understand that our interference in such matters was most untimely. All the same, it is gratifying to see that the suggestion has been adopted at the Peace Congress.

With what a howl of righteous indignation the slaughter of our innocent women and children by the bombing of open towns was received. It was a dirty and bloody business, worthy of the Oxydracians, who by means of

Levin-bolts and Thunders more horrible, more frightful, more diabolical, maiming, breaking, tearing, and slaying more folk, confounded men's senses and threw down more walls than would a hundred thunderbolts (Rabelais, Bk. IV, ch. lxii).

Against reprisals there was at first a strong feeling. Early in 1916 I wrote to *The Times*: "The cry for reprisals illustrates the exquisitely hellish state of mind into which war plunges even sensible men. Not a pacifist, but a 'last ditcher,' yet I refuse to believe that as a nation, how bitter soever the provocation, we shall stain our hands in the blood of the innocent. In this matter let us be free from bloodguiltiness, and let not the undying reproach of humanity rest on us as on the Germans." Two years changed me into an ordinary barbarian. A detailed tally of civilians killed by our airmen has not, I believe, been published, but the total figures meet the requirements of a *lex talionis*. Could a poll have been taken a week before the armistice as to the moral justification of the bombing of Berlin—for which we were ready—how we should have howled at the proposer of any doubt. And many Jonahs were displeased that a city greater than Nineveh, with more than the three score and ten thousand who knew not the right hand from the left, had been spared. We may deplore the necessity and lament, as did a certain great personage:

... yet public reason just—
Honour and empire with revenge enlarged
... compels me now
To do what else, though damned, I should abhor.

All the same, we considered ourselves "Christians of the best edition, all picked and culled," and the churches remained open, prayers rose to Jehovah, many of Whose priests—even His bishops!—were in khaki, and quit themselves like men—yes, and scores died the death of heroes! Into such hells of inconsistency does war plunge the best of us!

Learning—new or old—seems a vain thing to save a nation, but possibly as a set-off science, as represented by cellulose and sulphuric acid, may yet prove the best bulwark of civilization. In his *History of the Origin of Medicine* (1778, p. 30) Lettsom maintains that the invention of firearms has done more to prevent the destruction of the human species than any other discovery. He says: "Invention and discernment of mind have made it possible to reverse the ancient maxim that strength has always prevailed over wisdom." Science alone may prevent a repetition of the story of Egypt, of Babylonia, of Greece, and of Rome. The suggestion seems brazen effrontery when we have not even given the world the equivalent of the Pax Romana. Ah! what a picture of self-satisfied happiness in Plutarch! One envies that placid life in the midst of the only great peace the world has known, spanning a period of more than two hundred years. And he could say, "No tumults, no civil sedition, no tyrannies, no pestilences nor calamities depopulating Greece, no epidemic disease needing powerful and choice drugs and medicines," though as a Delphic priest there is a pathetic lament that the Pythian priestess has now only commonplace questions to deal with.* Surely those cultivated men of his circle must have felt that their house could never be removed. Has Science reached such control over Nature that she will enable our civilization to escape the law of the Ephesian, written on all known records—*panta rei*? Perhaps so, now that material civilization is world-wide, cataclysmic forces, powerful enough in centres of origin, may weaken as they pass out in circles. Let this be our hope in the present crisis. At any rate, in the free democracies in which Demos with safety says "L'Etat c'est moi," it has yet to be determined whether Science, as the embodiment of a mechanical force, can rule without invoking ruin. Two things are clear: there must be a very different civilization or there will be no civilization at all; and the other is that neither the old religion combined with the old learning, nor both with the new science, suffice to save a nation bent on self-destruction. The suicide of Germany, the outstanding fact of the war, followed an outburst of national megalomania. For she had religion—it may shock some of you to hear! I mean the people, not the writers or the thinkers, but the people for whom Luther lived and Huss died. Of the two

* I am sorry to have seen Sargent's picture, "Gassed," in this year's Academy. It haunts the mind like a nightmare.

* Why the Pythian priestess, etc. (Plutarch's *Morals*, vol. iii, p. 100. Goodwin's edition.)

devotional ceremonies which stand supreme in my memory one was a service in the Dom, Berlin, in which "not the great nor well bespoken, but the mere uncounted folk" sang Luther's great hymn, *Ein' feste Burg ist unser Gott*.^{*} With the Humanities Germany never broke, and the proportion of students in her schools and universities who studied Greek and Latin has been higher than any other country. You know better than I the innumerable classical studies of her scholars. In classical learning relating to science and medicine she simply had the field, for one scholar in other countries she had a dozen, and the monopoly of journals relating to the history of these subjects. And she had science, and led the world in the application of the products of the laboratory to the uses of everyday life—in commerce, in the Arts, and in war. Withal, like Jeshurun, she waxed fat; and did ever such pride go before such destruction! What a tragedy that the successors of Virchow and Traube and Helmholtz and Billroth should have made her a byword among the nations! "Lilies that fester smell far worse than weeds."

II.

So much preliminary to the business before us, to meet changed conditions as practical men, with the reinforcement born of hope or with the strong resolution of despair.

For what does this Classical Association stand? What are these classical interests that you represent? Take a familiar simile. By a very simple trick, you remember, did Empedocles give Menippus in the moon-halt—the first stage of his memorable trip—such long and clear vision that he saw the tribes of men like a nest of ants, a seething mass going to and fro at their different tasks. Of the function of the classical members in this myrmecic community there can be no question. Neither warriors, nor slaves, nor neuters, you live in a well-protected social environment, heretofore free from enemies, and have been well taken care of. I hate to speak of you as larvae, but as such you perform a duty of the greatest importance in this trophidum stage of your existence. Let me explain. From earliest days much attention has been paid by naturalists to the incredible affection—"incredible *στοργή*," Swammerdam calls it—which ants display in feeding, licking, and attending the larvae. Disturb a nest, and the chief care is to take them to a place of safety. This attention is what our symphiliac community—to use a biological term—bestows on you. So intensely altruistic, apparently, is this behaviour, that for the very word "*στοργή*," which expresses the tenderest of all feelings, there is a difficulty in finding an equivalent; indeed, Gilbert White used it almost as an English word. The truth is really very different. It has been shown that the nursing function—or instinct—is really trophallactic. In the case of the ant the nurse places the larva on its back, and the broad ventral surface serves as a trough for the food, often predigested. The skill and devotion with which this is done are among the wonders in the life of the insect to which moralists have never tired of urging a visit. But listen to the sequel! The larva is provided with a pair of rich honey-bags in the shape of salivary glands, big exudatoria from which is discharged an ambrosia greedily lapped up by the nurse, who with this considers herself well paid for her care. In the same manner, when the assiduous V.A.D. wasp distributes food to the larvae, the heads of which eagerly protrude from their cells, she must be paid by a draught of nectar from their exudatoria, while if it is not forthcoming the wasp seizes the head of the larva in her mandibles and jams it back into its cell and compels it to pay up. The lazy males will play the same game and even steal the much sought liquid without any compensatory gift of nourishment.†

What does the community at large, so careful of your comforts, expect from you? Surely the honey-dew and the milk of paradise secreted from your classical exudatoria, which we lap up greedily in recensions, monographs, commentaries, histories, translations, and brochures. Among academic larvae you have for centuries absorbed the almost undivided interest of the nest, and not without

reason, for the very life of the workers depends on the hormones you secrete. Though small in number, your group has an enormous kinetic value, like our endocrine organs. For man's body, too, is a humming hive or working cells, each with its specific function, all under central control of the brain and heart, and all dependent on materials called hormones (secreted by small, even insignificant-looking structures) which lubricate the wheels of life. For example, remove the thyroid gland just below the Adam's apple, and you deprive man of the lubricants which enable his thought-engines to work—it is as if you cut off the oil-supply of a motor—and gradually the stored acquisitions of his mind cease to be available, and within a year he sinks into dementia. The normal processes of the skin cease, the hair falls, the features bloat, and the paragon of animals is transformed into a shapeless caricature of humanity. These essential lubricators, of which a number are now known, are called hormones—you will recognize from its derivation how appropriate is the term.

Now, the men of your guild secrete materials which do for society at large what the thyroid gland does for the individual. The Humanities are the hormones. Our friend Mr. P. S. Allen read before this Association a most suggestive paper on the historical evolution of the word Humanism. I like to think of the pleasant-flavoured word as embracing all the knowledge of the ancient classical world—what man knew of nature as well as what he knew of himself. Let us see what this University means by the *Literae Humaniores*. The "Greats" papers for the past decade make interesting study. With singular uniformity there is diversity enough to bear high tribute to the ingenuity of the examiners. But comparing the subjects in 1918 with those in the first printed papers of the School in 1831, one is surprised to find them the same—practically no change in the eighty-seven years! Compare them, again, with the subjects given in John Napleton's *Considerations*, 1773—no change! and with the help of Rashdall we may trace the story of the studies in Arts, only to find that as far back as 1267, with different names sometimes, they have been through all the centuries essentially the same—Greek and Latin authors, logic, rhetoric, grammar, and the philosophies, natural, moral, and metaphysical—practically the seven liberal Arts for which, as you may see by the name over the doors, Bodley's building provided accommodation. Why this invariableness in an ever-turning world? One of the marvels, so commonplace that it has ceased to be marvellous, is the deep rooting of our civilization in the soil of Greece and Rome—much of our dogmatic religion, practically all the philosophies, the models of our literature, the ideals of our democratic freedom, the fine and the technical arts, the fundamentals of science, and the basis of our law. The Humanities bring the student into contact with the master minds who gave us these things—with the dead who never die, with those immortal lives "not of now or of yesterday but which always were." As true to-day as in the fifth century B.C. the name of Hellas stands no longer for the name of a race, but as the name of knowledge; or, as more tersely put by Maine, "Except the blind forces of Nature, nothing moves [intellectually, he means] in this world that is not Greek in origin." Man's Anabasis from the old priest-ridden civilizations of the east began when "the light of reason lighted up all things," with which saying Anaxagoras expressed our modern outlook on life.

The Humanities have been a subject of criticism in two directions. Their overwhelming prominence, it is claimed, prevents the development of learning in other and more useful directions; and the method of teaching is said to be antiquated and out of touch with the present needs. They control the academic life of Oxford. An analysis of the Register for 1919 shows that of the 257 men comprising the Heads and Fellows of the twenty-three colleges (including St. Edmund's Hall), only fifty-one are scientists, including the mathematicians.

It is not very polite perhaps to suggest that as transmitters and interpreters they should not bulk quite so large in a modern university. 'Twas all very well

... in days when wits were fresh and clear
And life ran gaily as the sparkling Thames—

in those happy days when it was felt that all knowledge had been garnered by those divine men of old time.

* And the other, how different! The crowded Blue Mosque of Cairo and the crowded streets with the thousands of kneeling Moslems awaiting the cry of the Muezzin from the tower.

† Professor Wheeler in *Proceedings of Amer. Phil. Soc.*, vol. lviii. No. 4, 1918.

that there was nothing left but to enjoy the good things harvested by such universal providers as Isidore, Rabanus Maurus, and Vincent of Beauvais, and those stronger dishes served by such artists as Albertus Magnus and St. Thomas Aquinas—delicious blends of such skill that only the palate of an Apicius could separate Greek, Patristic, and Arabian savours.

It is not the dominance, but the unequal dominance that is a cause of just complaint. As to methods of teaching—by their fruits ye shall know them. The product of "Greats" needs no description in this place. Many deny the art to find the mind's construction in the face, but surely not the possibility of diagnosing at a glance a "first in Greats"! Only in him is seen that altogether superior expression, that self-consciousness of having reached life's goal, of having, in that pickled sentence of Dean Gaisford's Christmas sermon, done something "that not only elevates above the common herd, but leads not unfrequently to positions of considerable emolument." "Many are the wand-bearers, few are the mystics," and a system should not be judged by the exceptions. As a discipline of the mind for the few, the system should not be touched, and we should be ready to sacrifice a holocaust of undergraduates every year to produce in each generation a scholar of the type of, say, Ingram Bywater. 'Tis Nature's method—does it not cost some thousands of eggs and fry to produce one salmon?

But the average man, not of scholar timber, may bring one railing accusation against his school and college. Apart from mental discipline, the value of the ancient languages is to give a key to their literatures. Yet we make boys and young men spend ten or more years on the study of Greek and Latin, at the end of which time the beauties of the languages are still hidden because of the pernicious method in which they are taught. It passes my understanding how the more excellent way of Montaigne, of Milton, and of Locke should have been neglected until recently. Make the language an instrument to play with and to play with thoroughly, and recognize that except for the few in "Mods." and "Greats" it is superfluous to know how the instrument is constructed, or to dissect the neuro-muscular mechanism by which it is played. It is satisfactory to read that the Greek Curriculum Committee thinks "it is possible in a comparatively short time to acquire a really valuable knowledge of Greek, and to learn with accuracy and fair fluency some of the most important works in Greek literature." I am sure of it, if the teacher will go to school to Montaigne and feed fat against that old scoundrel Protagoras a well-earned grudge for inventing grammar—pace Mr. Livingstone, every chapter in whose two books appeals to me, except those on grammar, against which I have a medullary prejudice. I speak, of course, as a fool among the wise, and I am not pleading for the "Greats" men, but for the average man whom to infect with the spirit of the Humanities is the greatest single gift in education. To you of the elect this is pure camouflage—the amateur talking to the experts; but there is another side upon which I feel something may be said by one whose best friends have been the old Humanists, and whose brevity is Plutarch, or rather Plutarch gallicized by Montaigne. Paraphrasing Mark Twain's comment upon Christian Science, the so-called Humanists have not enough science, and Science sadly lacks the Humanities. This unhappy divorce, which should never have taken place, has been officially recognized in the two reports edited by Sir Frederic Kenyon,* which have stirred the pool, and cannot but be helpful. To have got constructive, anabolic action from representatives of interests so diverse is most encouraging. While all agree that neither in the Public Schools nor in the older Universities are the conditions at present in keeping with the urgent scientific needs of the nation, the specific is not to be sought in endowments alone, but in the heaven which may work a much needed change in both branches of knowledge.

III.

The School of Literae Humaniores excites wonder in the extent and variety of the knowledge demanded, and there is everywhere evidence of the value placed upon the ancient models; but this wonder pales before the gasping

astonishment at what is not there. Now and again a hint, a reference, a recognition, but the moving forces which have made the modern world are simply ignored. Yet they are all Hellenic, all part and parcel of the Humanities in the true sense, and all of prime importance in modern education. Twin berries on one stem, grievous damage has been done to both in regarding the Humanities and Science in any other light than complementary. Perhaps the anomalous position of science in our philosophical school is due to the necessary filtration, indeed the preservation, of our classical knowledge, through ecclesiastical channels. Of this the persistence of the Augustinian questions until late in the eighteenth century is an interesting indication. The moulder of Western Christianity had not much use for science, and the Greek spirit was stifled in the atmosphere of the Middle Ages. "Content to be deceived, to live in a twilight of fiction, under clouds of false witnesses, inventing according to convenience, and glad to welcome the forger and the cheat"—such, Lord Acton somewhere says, were the Middle Ages. Strange, is it not, that one man alone, Roger Bacon, mastered his environment and had a modern outlook!*

The practical point for us here is that in the only school dealing with the philosophy of human thought, the sources of the new science that has made a new world are practically ignored. One gets even an impression of neglect in the Schools, or at any rate of scant treatment, of the Ionian philosophers, the very fathers of your fathers. Few "Greats" men, I fear, could tell why Hippocrates is a living force to-day, or why a modern scientific physician would feel more at home with Erasistratus and Herophilus at Alexandria, or with Galen at Pergamos, than at any period in our story up to, say, Harvey. Except as a delineator of character, what does the Oxford scholar know of Theophrastus, the founder of modern botany, and a living force to-day in one of the two departments of biology, and made accessible recently to English readers—perhaps indeed to Greek readers!—by Sir Arthur Hort.† Beggarly recognition or base indifference is meted out to the men whose minds have fertilized science in every department. The pulse of every student should beat faster as he reads the story of Archimedes, of Hero, of Aristarchus—names not even mentioned in the "Greats" papers in the past decade. Yet the methods of these men exorcised vagaries and superstitions from the human mind and pointed to a clear knowledge of the laws of nature. It is surprising that some wag among the Examiners has never relieved the grave monotony of the papers by such peripatetic questions as "How long a gnat lives," "To how many fathoms' depth the sunlight penetrates the sea," and "What an oyster's soul is like"—questions which indicate whence the modern Lucian got his inspiration to chaff so successfully Boyle and the Professors of Gresham College.

May I dwell upon two instances of shocking neglect? It really is amusing in Oxford to assert neglect of "the measurer of all Art and Science, whose is all that is best in the passing sublunary world," as Richard de Bury calls "the Prince of the Schools." In Gulliver's voyage to Laputa he paid a visit to the little island of Glubbdubdrin, whose Governor, you remember, had an Endorian command over the spirits, such as Sir Oliver Lodge or Sir Arthur Conan Doyle might envy. When Aristotle and his commentators were summoned, to Gulliver's surprise they were strangers, for the reason that having so horribly misrepresented Aristotle's meaning to posterity, a consciousness of guilt and shame kept them far away from him in the lower world. Such shame, I fear, will make the shades of many classical dons of this University seek shelter with the commentators when they realize their neglect of one of the most fruitful of all the activities of the Master. In biology Aristotle speaks for the first time the language of modern science, and indeed he seems to have been first and foremost a biologist, and his natural history studies influenced profoundly his sociology, his psychology, and his philosophy in general. The beginner may be sent now to Professor D'Arcy Wentworth Thompson's Herbert Spencer Lecture,

* *Education, Scientific and Humane*, 1917, and *Education, Secondary and University*, 1919.

* How modern Bacon's outlook was may be judged from the following sentence: "Experimental science has three great prerogatives over all other sciences—it verifies conclusions by direct experiment, it discovers truths which they could never reach, and it investigates the secrets of Nature and opens to us a knowledge of the past and of the future."

† *Loeb's Classics*.

1913, and he must be indeed a dull and muddy-mettled rascal whose imagination is not fired by the enthusiastic—yet true—picture of the founder of modern biology, whose language is our language, whose methods and problems are our own, the man who knew a thousand varied forms of life, of plant, of bird, and animal, their outward structure, their metamorphosis, their early development; who studied the problems of heredity, of sex, of nutrition, of growth, of adaptation, and of the struggle for existence. And the senior student, if capable of appreciating a biological discovery, I advise to study the account by Johannes Müller (himself a pioneer in anatomy) of his rediscovery of Aristotle's remarkable discovery of a special mode of reproduction in one of the species of sharks. For two thousand years the founder of the science of embryology had neither rival nor worthy follower. There is no reference, I believe, to the biological works in the *Literae Humaniores* papers for the past ten years, yet they form the very foundations of discoveries that have turned our philosophies topsy-turvy.

Nothing reveals the unfortunate break in Humanities more clearly than the treatment of the greatest Nature-poet in literature, a man who had "gazed on Nature's naked loveliness" unabashed, the man who united, as no one else has ever done, the "functions and temper and achievement of science and poetry" (Herford). The golden work of Lucretius is indeed recognized, and in Honour Moderations Books I—III and V are set as one of seven alternatives in section D; and scattered through the "Greats" papers are set translations and snippets here and there; but anything like adequate consideration from the scientific side is to be sought in vain. Unmatched among the ancients or moderns is the vision by Lucretius of continuity in the workings of Nature—not less of *Le silence éternel de ces espaces infinis* which so affrighted Pascal, than of "the long limitless age of days, the age of all time that has gone by"—

... longa diei
infinita aetas anteacti temporis omnis.

And it is in a Latin poet that we find up-to-date views of the origin of the world and of the origin of man. The description of the wild discordant storm of atoms (Book V) which led to the birth of the world might be transferred verbatim to the accounts of Poincaré or of Arrhenius of the growth of new celestial bodies in the Milky Way. What an insight into primitive man and the beginnings of civilization! He might have been a contemporary and friend, and doubtless was a tutor, of Tylor. Book II, a manual of atomic physics with its marvellous conception of—

... the flaring atom streams
and torrents of her myriad universe,

can only be read appreciatively by pupils of Roentgen or of J. J. Thomson. The ring theory of magnetism advanced in Book VI has been reproduced of late by Parsons, whose magnetons rotating as rings at high speed have the form and effect with which this disciple of Democritus clothes his magnetic physics.

And may I here enter a protest? Of love-philtres that produce insanity we may read the truth in a chapter of that most pleasant manual of erotology, the *Anatomy of Melancholy*. Of insanity of any type that leaves a mind capable in lucid intervals of writing such verses as *De Rerum Natura* we know nothing. The sole value of the myth is its causal association with the poem of Tennyson. Only exsiccous dons who have never known the wiles and ways of the younger Aphrodite would take the intensity of the feeling in Book IV as witness to anything but an accident which may happen to the wisest of the wise, when enthralled by Virieu or some dark lady of the Sonnets!

In the School of *Literae Humaniores* the studies are based on classical literature and on history, "but a large number of students approach philosophical study from other sides. Students of such subjects as mathematics, natural science, history, psychology, anthropology, or political economy, became naturally interested in philosophy, and their needs are at present very imperfectly provided for in this University." This I quote from a Report to the Board of the Faculty of Arts made just before the war on a proposed new Honour School, the

subject of which should be the principles of philosophy considered in their relation to the Sciences. That joint action of this kind should have been taken by the Boards of Arts and of Science indicates a widespread conviction that no man is cultivated up to the standard of his generation who has not an appreciation of how the greatest achievements of the human mind have been reached; and the practical question is how to introduce such studies into the course of liberal education, how to give the science school the leaven of an old philosophy, how to leaven the old philosophical school with the thoughts of science.*

It is important to recognize that there is nothing mysterious in the method of science, or apart from the ordinary routine of life. Science has been defined as the habit or faculty of observation. By such the child grows in knowledge, and in its daily exercise an adult lives and moves. Only a quantitative difference makes observation scientific—accuracy—in that way alone do we discover things as they really are. This is the essence of Plato's definition of science as "the discovery of things as they really are," whether in the heavens above, in the earth beneath, or in the observer himself. As a mental operation, the scientific method is equally applicable to deciphering a bit of Beneventan script, to the analysis of the Commission on Coal-mines, a study of the mechanism of the nose-dive, or of the colour scheme in tiger-beetles. To observation, with reasoned thought, the Greek added experiment (but never fully used it in biology), the instrument which has made science productive, and to which the modern world owes its civilization. Our everyday existence depends on the practical application of discoveries in pure science by men who had no other motives than a search for knowledge of Nature's laws, a disinterestedness which Burnet claims to be the distinctive gift of Hellas to humanity. With the discovery of induced currents Faraday had no thought of the dynamo, Crookes's tubes were a plaything until Roentgen turned them into practical use with the x rays. Perkin had no thought of transforming chemical industry when he discovered aniline dyes. Priestley would have cursed the observation that an electrical charge produced nitrous acid had he foreseen that it would enable Germany to prolong the war, but he would have blessed the thought that it may make us independent of all outside sources for fertilizers.

The extraordinary development of modern science may be her undoing. Specialism, now a necessity, has fragmented the specialities themselves in a way that makes the outlook hazardous. The workers lose all sense of proportion in a maze of minutiae. Everywhere men are in small coteries intensely absorbed in subjects of deep interest, but of very limited scope. Chemistry, a century ago an appanage of the Chair of Medicine or even of Divinity, has now a dozen departments, each with its laboratory and literature, sometimes its own society. Applying themselves early to research, young men get into backwaters far from the main stream. They quickly lose the sense of proportion, become hypercritical, and the smaller the field, the greater the tendency to megalomania. The study for fourteen years of the variations in the colour scheme of the 1,300 species of tiger-beetles scattered over the earth may sterilize a man into a sticker of pins and a pasteur of labels; on the other hand, he may be a modern biologist whose interest is in the experimental modification of types, and in the mysterious insulation of hereditary characters from the environment. Only in one direction does the modern specialist acknowledge his debt to the dead languages. Men of science pay homage, as do no others, to the god of words whose magic power is nowhere so manifest as in the plastic language of Greece. The only visit many students pay to Parnassus is to get an intelligible label for a fact or form newly discovered. Turn the pages of such a dictionary of chemical terms as Morley and Muir, and you meet in close-set columns countless names unknown a decade ago, and unintelligible to the specialist in another department unless familiar with Greek, and as meaningless as the Arabic jargon in such mediaeval collections as the *Synonyma* of Simon Januensis or the *Pandects* of Matheas Sylvaticus. As

* Since writing this lecture, Professor J. A. Stewart has sent me his just-published essay on Oxford after the War and a Liberal Education, in which he urges with all the weight of his learning and experience that the foundations of a liberal education in Oxford should be "No Humane Letters without Natural Science and no Natural Science without Humane Letters."

* Summarized from D'Arcy Wentworth Thompson.

† Ueber den Glatten Hai des Aristoteles, Berlin, 1842.

Punch put it the other day in a delightful poetical review of Professor West's volume:*

Botany relies on Latin ever since Linnaeus' days;
Biologic nomenclature draws on Greek in countless ways;
While in Medicine it is obvious you can never take your oath
What an ailment means exactly if you haven't studied both.

(17. iv. 19.)

Let me give a couple of examples.

Within the narrow compass of the primitive cell from which all living beings originate, onomatomania runs riot. The process of mitosis has developed a special literature and language. Dealing not alone with the problems of heredity and of sex, but with the very dynamics of life, the mitotic complex is much more than a simple physiological process, and in the action and interaction of physical forces the cytologist hopes to find the key to the secret of life itself. And what a Grecian he has become! Listen to this account which Aristotle would understand much better than most of us.

The karyogranulomes, not the idiogranulomes or microsomenstratum in the protoplasm of the spermatogonia, unite into the idiosphaerosome, acrosoma of Lenhossék, a protean phase, as the idiosphaerosome differentiates into an idiocytosome and an idiocalyptosome, both surrounded by the idiosphaerotheca, the archoplasmic vesicle; but the idioectosome disappears in the metamorphosis of the spermatid into a sphere, the idiophtharosome. The separation of the calyptosome from the cyptosome antedates the transformation of the idiosphaerotheca into the spermioalcyptrotheca.†

Or take a more practical if less Cratylean example. In our precious cabbage patches the holometabolous insecta are the hosts of parasitic polyembryonic hymenoptera, upon the prevalence of which rests the psychic and somatic stamina of our fellow-countrymen; for the larvae of *Pieris brassicae*, vulgarly cabbage moth, are parasitised by the *Apanteles glomeratus*, which in turn has a hyperparasite, the *Mesochorus pallidus*. It is tragic to think that the fate of a plant, the dietetic and pharmaceutical virtues of which have been so extolled by Cato, and upon which two of my Plinian colleagues of uncertain date, Chrysippus and Dieuches, wrote monographs—it fills one with terror to think that a crop so dear to Hodge (*et veris cymata!* the Brussels sprouts of Columella) should depend on the deposition in the ovum of the *Pieris* of another polyembryonic egg. The cytoplasm or ooplasm of this forms a trophoammon and develops into a polygerminal mass, a spherical morula, from which in turn develop a hundred or more larvae, which immediately proceed to eat up everything in and of the body of their host. Only in this way does Nature preserve the Selenas, the Leas, and the Crambes, so dear to Cato and so necessary for the sustenance of our hard-working, brawny-armed Brasseriei.

From over-specialization scientific men are in a more parlous state than are the Humanists from neglect of classical tradition. The salvation of science lies in a recognition of a new philosophy—the *scientia scientiarum*, of which Plato speaks. "Now when all these studies reach the point of intercommunion and connexion with one another and come to be considered in their mutual affinities, then I think, and not till then, will the pursuit of them have a value." Upon this synthetic process I hesitate to dwell; since like Dr. Johnson's friend, Oliver Edwards, I have never succeeded in mastering philosophy—"cheerfulness was always breaking in."

In the proposed Honour School the principles of philosophy are to be dealt with in relation to the sciences, and by the introduction of literary and historical studies, which George Sartou advocates so warmly as the new Humanism,† the student will gain a knowledge of the evolution of modern scientific thought. But to limit the history to the modern period—Kepler to the present time is suggested—would be a grave error. The scientific student should go to the sources and in some way be taught the connexion of Democritus with Dalton, of Archimedes with Kelvin, of Aristarchus with Newton, of Galen with John Hunter, and of Plato and Aristotle with them all. And the glories of Greek science should be opened in a sympathetic way to "Greats" men. Under

new regulations at the public schools, a boy of sixteen or seventeen should have enough science to appreciate the position of Theophrastus in Botany, and perhaps himself construct Hero's fountain. Science will take a totally different position in this country when the knowledge of its advances is the possession of all educated men. The time too is ripe for the Bodleian to become a *studium generale*, with ten or more departments, each in charge of a special sub-librarian. When the beautiful rooms, over the portals of which are the mocking blue and gold inscriptions, are once more alive with students, the task of teaching subjects on historical lines will be greatly lightened. What has been done with the Music-room, and with the Science-room through the liberality of Dr. and Mrs. Singer, should be done for classics, history, literature, theology, etc., each section in charge of a sub-librarian who will be Doctor perplexorum alike to professor, don, and undergraduate.

I wish time had permitted me to sketch even briefly the story of the evolution of science in this old seat of learning. A fortunate opportunity enables you to see two phases in its evolution. Through the kind permission of several of the Colleges, particularly Christ Church, Merton, St. John's, and Oriel, and with the co-operation of the Curators of the Bodleian and Dr. Cowley, Mr. R. T. Gunther of Magdalen College has arranged a loan exhibition of the early scientific instruments and MSS. A series of quadrants and astrolabes show how Arabian instruments, themselves retaining much of the older Greek models, have translated Alexandrian science into the Western world. Some were constructed for the latitude of Oxford, and one was associated with our astronomer-poet, Chaucer.

For the first time the instruments and works of the early members of the Merton School of astronomer-physicians have been brought together. They belong to a group of men of the fourteenth century—Reed, Aschenden, Simon Bredon, Merle, Richard of Wallingford, and others—whose labours made Oxford the leading scientific University of the world.

Little remains of the scientific apparatus of the early period of the Royal Society, but through the kindness of the Dean and governing body of Christ Church, the entire contents of the cabinet of philosophical apparatus of the Earl of Orrery, who flourished some thirty years after the foundation of the Society, is on exhibit, and the actual astronomical model, the "Orrery," made for him and called after his name.

The story of the free cities of Greece shows how a love of the higher and brighter things in life may thrive in a democracy. Whether such love may develop in a civilization based on a philosophy of force is the present problem of the Western world. To-day there are doubts, even thoughts of despair, but neither man nor nation is to be judged by the behaviour in a paroxysm of delirium. Lavoisier perished in the Revolution, and the Archbishop of Paris was butchered at the altar by the Commune, yet France was not wrecked; and Russia may survive the starvation of such scholars as Danielevski and Smirnov, and the massacre of Botkin. To have intelligent freemen of the Greek type with a stake in the State (not mere chattels from whose daily life the shadow of the workhouse never lifts), to have the men and women who could love the light put in surroundings in which the light may reach them, to encourage in all a sense of brotherhood reaching the standard of the Good Samaritan—surely the realization in a democracy of such reasonable ambitions should be compatible with the control by science of the forces of nature for the common good, and a love of all that is best in religion, in art, and in literature.

Amid the smoke and squalor of a modern industrial city, after the bread-and-butter struggle of the day, "the Discobolus has no gospel." Our puritanized culture has been known to call the Antinous vulgar. Copies of these two statues, you may remember, Samuel Butler found stored away in the lumber-room of the Natural History Museum, Montreal, with skins, plants, snakes, and insects, and in their midst, stuffing an owl, sat "the brother-in-law of the haberdasher of Mr. Spurgeon." Against the old man* who thus blasphemed beauty, Butler broke into those memorable verses with the refrain "O God! O Montreal!"

* *The Value of the Classics*, Princeton University Press, 1917.

† Of course I have made this up out of a recent number of the *American Journal of Anatomy*, 24, 1.

‡ *Popular Science Monthly*, September, 1913, and *Scientia*, vol. xxiii, 5.

* I knew him well—a dear old Cornishman named Passmore.

Let us not be discouraged. The direction of our vision is everything, and after weltering four years in chaos poor stricken humanity still nurses the unconquerable hope of an ideal state "whose citizens are happy . . . absolutely wise, all of them brave, just and self-controlled . . . all at peace and unity, and in the enjoyment of legality, equality, liberty, and all other good things." Lucian's winning picture of this "Universal Happiness" might have been sketched by a Round Table pen or some youthful secretary to the League of Nations. That such hope persists is a witness to the power of ideals to captivate the mind; and the reality may be nearer than any of us dare dream. If survived, a terrible infection, such as confluent small-pox, seems to benefit the general health. Perhaps such an attack through which we have passed may benefit the body cosmic. After discussing the various forms of government, Plato concludes that "States are as the men are, they grow out of human characters" (*Rep.* VIII), and then, as the dream-republic approached completion, he realized that after all the true State is within, of which each one of us is the founder, and patterned on an ideal the existence of which matters not a whit. Is not the need of this individual reconstruction the Greek message to modern democracy? and with it is blended the note of individual service to the community on which Professor Gilbert Murray has so wisely dwelt.

With the hot blasts of hate still on our cheeks, it may seem a mockery to speak of this as the saving asset in our future; but is it not the very marrow of the teaching in which we have been brought up? At last the gospel of the right to live, and the right to live healthy, happy lives, has sunk deep into the hearts of the people; and before the war, so great was the work of science in preventing untimely death that the day of Isaiah seemed at hand "when a man's life should be more precious than fine gold, even a man than the gold of Ophir." There is a sentence in the writings of the Father of Medicine upon which all commentators have lingered, "*ἡν γὰρ παρὶ φιλανθρωπίας, πάρεστι καὶ φιλοτεχνία*"—the love of humanity associated with the love of his craft!—philanthropia and philotechnia—the joy of working joined in each one to a true love of his brother. Memorable sentence indeed! in which for the first time was coined the magic word *philanthropy*, and conveying the subtle suggestion that perhaps in this combination the longings of humanity may find their solution, and Wisdom—philosophia—at last be justified of her children.

DIAGNOSIS OF TUBERCULOSIS BY THE COMPLEMENT DEVIATION METHOD.

BY

CHUNG YIK WANG, M.D., B.Sc.,

INTERIM ASSISTANT SUPERINTENDENT, ROYAL COLLEGE OF
PHYSICIANS' LABORATORY, EDINBURGH,

AND

JAMES CROCKET, M.D.,

MEDICAL SUPERINTENDENT, CONSUMPTION SANATORIA OF SCOTLAND,
BRIDGE-OF-WEIR.

(From the Royal College of Physicians' Laboratory, Edinburgh.)

VARIOUS attempts based on Bordet's phenomenon have been made with a view to determine whether, in tuberculosis, as in syphilis, a diagnosis of the disease could be established by the complement deviation method. First studied by Wassermann, the subject was further investigated by subsequent workers, the technique employed in the test being in fundamental particulars identical with that of the Wassermann reaction. A number of antigeus, all being preparations or extracts in some form of the tubercle bacilli, have been used. Among these were the old tuberculin used by Wassermann¹; an emulsion of dry tubercle by Nesfield,² and Emery³; an emulsion of dead tubercle by Dudgeon⁴; and an emulsion of living tubercle by Inman,⁵ McIntosh and Fiddes,⁶ and Fildar.⁷ The outcome of their investigations in general showed that in a certain proportion of tuberculous cases (60 to 90 per cent.) an antibody could be demonstrated in the blood which, in the presence of a tubercle antigen, was capable of inhibiting complement.

On the other hand, it was also found that not infrequently (5 to 30 per cent.) a similar reaction resulting in the absorption of complement was obtained with a normal, but more often with a luetic, serum. Further, it was shown that where a positive reaction was elicited the amount of complement fixed was usually small. In face of these results, in especial of the large proportion of cases giving a non-specific reaction, it must be conceded that a diagnostic significance cannot be ascribed to any of the various tests. Thus the want of a reliable laboratory test which would not only detect the presence of a tuberculous lesion, but also discriminate an active from a latent lesion, has led us to try to elaborate a technique admitting practical application. As in the test the antigen constitutes a very important factor and one which is probably responsible, in part at least, for the discrepancies in the results arrived at by previous workers, the first step in our study was directed to the question of preparation of this reagent. Our investigation was begun towards the latter part of 1918, and was conducted throughout in the Royal College of Physicians' Laboratory, Edinburgh. After many preliminary trials, which need not be detailed here, both in regard to the antigen preparation and to the technique, we have adopted for the test the following procedure:

Requisites for the Test.

Tubercle Antigen.—This is essentially the bodies of the tubercle bacilli after their fatty substance has been removed. The process of extracting the fat is, with slight modification, that adopted by one of us (Wang)⁸ in studying the antigenic effect of lipoids *in vivo*. For the preparation a good growth of the bacilli is required. This is obtained by inoculating a 5 per cent. glycerin veal broth (standardized to +5) with a young egg culture, preferably one of two to three weeks old. The amount of the broth medium used is 200–300 c.cm. contained in a conical litre flask, and the growth is started on the surface. At least two flasks should be sown, one with tubercle bacilli of the human type, the other with bacilli of the bovine type. When, at the tenth week, a well formed scum is seen, such a culture is ripe for use. If a good growth does not occur, as often is the case with primary cultures, subinoculation by transplanting a piece of the surface growth on to fresh broth is necessary. The growth is transferred to a bottle and is now dehydrated by treating with absolute alcohol, which should be repeatedly changed. After the final washing, the alcohol is replaced with ether, in the amount of about 100 c.cm. to 10 grams of the wet bacilli. The bottle is shaken for two hours in a mechanical shaker, at a speed of about 120 strokes per minute, and at the end the fluid is centrifuged at a high speed. The residue is now treated with chloroform in the same amount and shaken as before. Here, before drawing off the fluid for the centrifuge, it is mixed with three volumes of ether, and the shaking continued for another couple of hours. After centrifuging, the process is repeated alternately with fresh ether and chloroform, until five extractions in all have been completed. The residue is then dried and stored in the dark. A fluid antigen is made up for use by grinding 100 mg. of the residue with 3 c.cm. saline in a mechanical mill overnight. The mill may take the form of a circular flask (diameter 10 cm.) a little more than half-filled with glass balls of the size of small peas, and is driven at about twenty revolutions per minute. At the finish the fluid is drawn off and the flask and balls well washed with repeated changes of saline. The washings are pooled and enough saline is added to make 100 c.cm. The antigen is preserved in 0.5 per cent. phenol and kept in the cold.

Syphilitic Antigen.—This is an alcoholic extract of the human heart, with or without the addition of cholesterol. For use, the extract should be allowed to float on the saline for ten minutes before being mixed.

Patient's Serum.—(a) The blood is collected as for a Wassermann test from an arm vein with a needle. After separation, the serum is heated at 55 to 56° C. for two full hours. It is important that the serum should be heated on the day of the test, for, as has been pointed out by Browning and Mackenzie,⁹ a serum may, on standing, develop increased anti-complementary power, whether it had been previously inactivated or not. (b) When, for any reason, the above procedure cannot be practised, sufficient blood for the test (to be carried out by the drop method

* *Oeuvres complètes d'Hippocrate*. Par E. Littré, t. ix, 258.

hereafter described) may be obtained from the finger. The thumb, previously bathed in comfortably warm water, is deeply pricked and the blood allowed to flow into either a Wright's capsule or a small tube, till about 0.5 c.cm. or more blood is collected. The separated serum is inactivated as before, but here, to prevent undue loss of fluid during heating, the tube should be closed with a rubber cap.

Blood Suspension.—This is prepared from defibrinated ox blood, which at the final washing should be spun at a fixed speed for a definite time, so that approximately the same thickness of blood is obtained each time. This precaution is important, as unless the strength of the amoceptor is estimated at each day's test the haemolytic titre must vary according to the strength of the suspension and consequently to the thickness of the blood. For this reason it is therefore necessary that the titre of the amoceptor should be determined from time to time against a working dose of the blood of a fixed concentration, in the presence of an excess of complement—namely, 5 minimum haemolytic doses. For use, a 1 per cent. suspension is made up, sensitized at room temperature with 8 to 9 M.H.D. of amoceptor.

Complement.—The complement used is that of guinea-pig serum of from four to eighteen hours old. After the animal has been bled an examination of its organs should be made, and if, to the naked eye, evidence of disease, in particular tuberculosis, is found, the serum ought to be rejected.

Technique.

First Stage.—Preliminary to the test the M.H.D. of complement is ascertained as follows: With a graduated 1 c.cm. pipette 0.1 c.cm. complement is accurately measured into 2.9 c.cm. saline (dilution 1 in 30). To a row of tubes the following doses of this solution are added: 0.05, 0.10, 0.15, 0.20, 0.25, 0.30 c.cm. Saline is added to equal bulk. Titration is made against 1 c.cm. of a 1 per cent. suspension of blood previously sensitized, as already stated, with 8 to 9 M.H.D. amoceptor. The tubes are incubated at 37° C. for an hour, and the M.H.D. is then noted.

Final Stage.—The titre of the complement being known, the neat guinea-pig serum is now diluted thus:

If M.H.D. complement (dilution 1 in 30) is—

- (a) 0.10 c.cm., 1 vol. serum is mixed with 29 vol. saline (dilution 1 in 30);
- (b) 0.15 c.cm., 1 vol. serum is mixed with 19 vol. saline (dilution 1 in 20);
- (c) 0.20 c.cm., 1 vol. serum is mixed with 14 vol. saline (dilution 1 in 15);
- (d) 0.25 c.cm., 1 vol. serum is mixed with 11 vol. saline (dilution 1 in 12);
- (e) 0.30 c.cm., 1 vol. serum is mixed with 9 vol. saline (dilution 1 in 10).

A serum giving weaker complement value than the last should not be used. It will be seen that 0.10 c.cm. of each of the above dilutions contains one M.H.D. of complement. For each serum three tubes are put up in the manner as shown in Table I.

TABLE I.—Routine Method.

	Tube 1.	Tube 2.	Tube 3.
Complement	0.20 c.cm. (2 M.H.D.)	0.40 c.cm. (4 M.H.D.)	0.40 c.cm. (4 M.H.D.)
Saline about	2 c.cm.	2 c.cm.	2 c.cm.
Syphilitic antigen	—	1 dose	—
Tubercle antigen	—	—	0.20 c.cm.
Patient's serum	0.20 c.cm.	0.20 c.cm.	0.20 c.cm.
*Incubation.			
1 per cent. blood sensitized with 8 to 9 M.H.D. amoceptor	1 c.cm.	1 c.cm.	1 c.cm.

* Quarter of an hour at room temperature, then half an hour at 37° C., followed by a quarter of an hour at room temperature.

After the blood has been added the tubes are again incubated at 37° C., and a result is taken when once the first control tube shows complete haemolysis, generally ten to fifteen minutes.

The satisfactory results which have attended Donald's drop method¹⁰ for the Wassermann test, practised by Harrison on a large scale and by one of us when the amount of serum available is insufficient for the test to be conducted in the usual way, has suggested to us that it might be applied here.

By this drop method we have tested over thirty specimens of serum in parallel with the first method, and have invariably found the two results agreed. However, this method should not be adopted as a routine and should only be practised when the first method is inapplicable. In the actual test the fluid is measured, instead of with an ordinary graduated pipette, in drops delivered from a vertically held Wright's pipette fitted with a test, at a uniform rate and pressure. Except when a series of pipettes gauged to a standard is available, the same pipette should be used throughout the test, though it must be remembered that there is here a slight variation in the size of the drops between the different reagents. The pipette is cleaned between each reagent and between succeeding serums by filling and emptying several times with saline. In the preliminary stage of the technique the complement is titrated as in the first method and diluted to a constant strength—that is, 0.10 c.cm. 1 M.H.D.

The final stage is conducted as shown in Table II.

TABLE II.—Drop Method.

(The figures in the table indicate the number in drops.)

	Tube 1.	Tube 2.	Tube 3.
Complement (0.1 c.cm. = 1 M.H.D.)	1 dose	2 doses	2 doses
Saline	7	5	5
*Syphilitic antigen	—	1	—
Tubercle antigen	—	—	1
Patient's serum	1	1	1
Incubate as in first method.			
1 per cent. blood, sensitized with 8 to 9 M.H.D. amoceptor	5	5	5

* This should be made up to the strength so that 0.2 c.cm. is equivalent to a dose in the Wassermann test.

After the final incubation the tubes are read as in the first method.

Interpretations of Results.

A negative serum is indicated by a complete haemolysis in the third tube (one containing the tubercle antigen), where the first control tube is clear.

A positive serum is denoted, where haemolysis is complete in the first and second tube, by absence of or only partial haemolysis in the third tube. The strength of the reaction may be judged by the degree of haemolysis in this differential tube. Thus:

- (a) A strong positive (+++) is signified by complete absence of haemolysis.
- (b) A moderately strong positive (++) by partial but slight haemolysis.
- (c) A weak positive (+) by partial but considerable haemolysis.
- (d) A doubtful positive (?) by an almost complete haemolysis.

When, as will be shown below, an inhibition of complement by a serum is observed in both the antigen tubes (second and third) it is necessary that here the serum should be further tested in order to eliminate a possible false positive. It is known that a tuberculous but otherwise normal serum may, though rarely, give a positive Wassermann reaction, and, conversely, we have found that a strong leucic serum may yield a reaction with a tubercle antigen. Hence to distinguish one reaction from the other means have to be found whereby the disturbing factor, whatever it may be, can be eliminated. There are various ways by which the Wassermann reaction can be abolished, but these, we have noticed, will also remove the greater part, if not all, of the tubercle antibody. Thus, while heating at 62° C. for half an hour will, according to Sach, annul the reacting substance in a Wassermann serum—a statement, in our experience, not invariably true—heating also has a marked inimical effect on the tubercle antibody, and is therefore inapplicable as a differential test. To detect this cross fixation we have accordingly devised the following method, which has proved itself reliable. The suspected serum, whether previously inactivated or not, is mixed with an equal part of saline in a tube, and to each centimetre of the mixture two or three drops of chloroform are added. The tube is vigorously shaken for ten to fifteen seconds, and thereafter placed in a water-bath at 55° to 56° C. for fifteen minutes. For use, the supernatant fluid is drawn off and the test proceeded with as described above, only here the quantity representing one dose is 0.4 c.cm. (that is, 0.2 c.cm. neat

serum). From ten to twenty minutes after the sensitized corpuscles have been added the results are read. Where less haemolysis is observed in the tubercle antigen tube than in the syphilitic antigen one the serum is tuberculous, in addition to being luetic. If, on the other hand, the reverse is the state of haemolysis, the probability is that the serum is only specific, and not tuberculous.

Results of Investigation.

Our investigation deals with the examination of serums from 104 tuberculous subjects, and 220 controls. Of the tuberculous, in 57 cases tubercle bacilli were found in the sputum, and in 47 they were absent. Altogether 49 of the cases had received tuberculin treatment at one time or another of the disease. The controls consist of 100 positive and 100 negative Wassermann serums, and of 20 serums taken from persons clinically known to be free from tuberculosis. Consideration of space has induced us to give, in lieu of a protocol *in extenso*, merely a summary of the results arrived at, as set forth in the accompanying tables (III, IV, and V).

TABLE III.—Summary of the General Results.

Classification.	Total.	T.B. in Sputum.		Injection of Tuberculin.	Results.							
		+	-		Yes.	No.	+++	++	+	-	-	-
T.T. Pulmonary ...	97	57			18		6	7	2	3		
						39	26	4	4	5*		
					25		5	7	8	5*		
			40			15	4	3	6	2		
T.B. Adenitis...	4	-	4	4	-	-	1	1	1	-		
T.B. Abdomen ...	1	-	1	1	-	-	-	1	-	-		
Lupus ...	1	-	1	1	-	-	1	-	-	-		
T.B. Dactylitis ...	1	-	1	-	-	1	-	-	1	-		
Normal serum ...	20	-	-	-	-	-	-	-	-	20		
Negative Wassermann serum	100	-	-	-	-	-	-	-	-	100		
Positive Wassermann serum	100	-	-	-	-	-	7	10	24	53		

* Including 1 doubtful each. † Including 3 doubtfuls.

TABLE IV.—Showing the Percentage of Positives in Tuberculous Cases treated and not treated with Tuberculin, and in Controls.

	Positive Results.			Negative Results.	Per Cent. Positive.
	+++	++	+		
Tuberculous cases:					
With tuberculin ...	14	16	11	8	84
No tuberculin ...	30	7	11	7	87
Normal serum ...	-	-	-	20	0
Negative Wassermann serum	-	-	-	100	0
Positive Wassermann serum...	7	10	24	59	41

All the positive Wassermann serums which were found to give a positive reaction in the test were further tested with the chloroform differential method, and in every instance the serums after treatment became negative. It may be stated here that this differential test has been applied, besides those cases just mentioned, to 30 specimens made up of known luetic and tuberculous serums, and with no exception all the serums remained positive. It is significant to note in the above tables that the results do not afford evidence of an effect which tuberculin, in the small doses as usually administered, has in the production of antibodies in the circulating blood, as judged by the reaction of the test, nor, it may be mentioned here, have we observed any relation between the strength of the reaction and the extent and severity of the disease. Interpreted according to the rules above formulated, arbitrary though they are, the results yielded may be expressed thus:

TABLE V.

Results.	Tuberculous.	Controls.
Strong positive (++++)	8	
Moderately strong positive (++)		
Weak positive (+)		
Negative (-)		
Total...		
Percentage of positives		

The findings of the cases investigated therefore furnish 85 per cent. positives out of 104 tuberculous subjects. As none of the controls that have been examined reacted positively to the test, it may be justifiable to regard the test as specific, and where a reaction is provoked a diagnosis may be safely pronounced, not only that the disease is present, but also that the lesion is in an active condition. Here, as in the Wassermann test, a negative finding is significant, though inconclusive.

The non-specific reaction which other observers have found was due, we venture to suggest, to the presence of lipoids in their antigen and, in part, also to the tested serums being insufficiently heated. Even with our delipoidal antigen we have found it necessary, in order to avoid a false reaction, to heat the serums for at least two full hours at 55° C., the usual inactivation for half an hour at this temperature being, in our experience, inadequate for the purpose. Thirty of our positive serums were taken at random for quantitative estimation; in 13 the complement fixed was over 8 M.H.D.; in 7, between 6 and 8 M.H.D.; and in 10 between 4 and 6 M.H.D. The reaction here obtained is, on the whole, more pronounced than has elsewhere been recorded, and this we take to be due to the nature of our antigen, which, being free from lipoids, is more easily emulsified and consequently more favourable to interaction with its antibody.

This investigation is the outcome of the work which one of us is at present conducting on lipid-free antigens, bacterial and otherwise, *in vivo* and *in vitro*, as means of diagnosis and treatment, and owes its inception primarily to the initiation by Professor James Ritchie of the study of the antigenic properties of lipoids. To him, for this and other valuable suggestions, we wish here to record our indebtedness. We would like also to thank Miss FitzGerald for kindness in supplying us with some of the Wassermann serums.

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WILL THE USE OF SCOPOLAMINE-MORPHINE IN LABOUR HELP TO IMPROVE THE BIRTH-RATE?

BY

W. OSBORNE GREENWOOD, M.D. LEEDS, B.S. LOND.

No one will gainsay that the present condition of the birth-rate is largely due to the express intentions of parents to limit their families. Sir Arthur Newsholme says "all the facts point to the conclusion that volitional limitation of the family is the chief and vastly predominant cause of the decline in the birth-rate which is taking place in so many countries." Doubleday's hypothesis as to the influence of increased nutrition is at least so problematical as to be negligible, and Sir A. Newsholme discounts the theory of the inverse relationship between cerebral development and the capacity to procreate. We are mainly concerned, then, with the volitional element, and a rough classification of the grounds on which this is done

will help us to obtain a better perspective of the subject. We may therefore make the following broad grouping:

1. The love of luxury and ease, an attitude which may be described as a kind of passive resistance.
2. The desire to have only as many children as can be well provided for and adequately educated beyond the "starting-point" the parents had.
3. Eugenic grounds.
4. Fear of the actual parturition.
5. To these may be added another that is not immediately voluntary, but which will have a considerable influence in the near future. The increased prevalence of syphilis and gonorrhoea will cause a marked proportion of sterility.

As there can be no profitable discussion with passive resistance, and compulsion cannot be used. Group 1 may be dismissed. Moral suasion has been tried and has failed. Whatever one's broad opinion of Group 2 may be, it has at least some laudable basis. Regarding Group 3, it is doubtful whether there are more than a few hundreds in the whole country who limit their families on eugenic grounds alone. Although Group 5 is a purely medical concern, it will probably be long before the ravages wrought by venereal disease can be anything like repaired, and this group therefore furnishes an additional reason for addressing ourselves to the problem. Thus it is with Group 4 that this article will mainly deal, for the first three are entirely outside the scope of our art. The groups must not, however, be regarded as being distinct, to the exclusion of all other considerations. Probably all will overlap one or more other groups, so that those who advance 4 as their main reason for refusing maternity will perhaps also be swayed by the reason under 2.

The task of grappling with such a problem is formidable enough almost to make the nation shrink from facing it. On the other hand, we have done so much during these last few years that it is quite conceivable we may be in the right temper to overcome yet another obstacle.

For the practical purposes of this discussion, fear of the actual parturition is in the hands of the medical profession. The report of the late commission on the declining birth-rate states: "It is in the interests of the State as far as is practicable to remove all conditions—physical, economic, or social—which make parenthood an almost intolerable burden, especially on the mother."² And, again, speaking of the fear of parturition, it says: "They (that is, women) may be assured that medical knowledge and skill can so relieve travail that it can be made at least bearable."³

This fear of parturition is a very potent factor in the decline of the birth-rate as any one who goes to the trouble of inquiring will very quickly discover. The reason is simple. In no civilized nation can parturition be regarded as a "normal and physiological process." It is an event looked forward to with misgiving, and, moreover, fraught with tremendous pathological possibilities. My thesis now is that few labours can in any sense be called normal, and although this may not be expressed in exact terminology by women, it is the knowledge of the fact itself that has given rise to so widespread a fear of parturition. The accompanying and inevitable pain is the factor that appeals to them—hence the fear. It is certain we have hitherto failed to appreciate how general is this fear and what vast numbers are refusing maternity on this plea alone or nearly so.

It has often been said that parturition is not nearly as bad or dangerous as an acute attack of renal colic or appendicitis. This is no doubt partially true, but I have just interviewed a patient whose first words were to tell me her first labour lasted forty agonizing hours, at the end of which time she was grateful for the application of forceps without chloroform. This is far from being an isolated case in my experience, and it is this that is making women take advantage of the knowledge of contraceptives. Even if we admit parturition to be more bearable than some acute diseases the comparison is faulty, for, in the present state of our knowledge we must usually submit to such an attack as inevitable; nor is the patient aware of the impending ordeal before its onset; there is nothing deliberate or voluntary about it. It is here, therefore, the supposed analogy and the comfort it is intended to give completely fail. With the present knowledge of contraceptives among even the poorest people, pregnancy, with its resulting

labour, is a purely voluntary condition in a large percentage of cases. Not even the most Spartan would deliberately invite acute cholelithiasis; considering the pathological character of a large number of labours, can we wonder that women who have a knowledge of its prevention are only too ready to use it? Therefore the point I have to urge is that if we have a means at our disposal of dispelling this fear of parturition we shall have gone far towards arresting the present alarming decline in the birth-rate.

It is only natural that the profession before discarding the time-honoured administration of chloroform in favour of scopolamine-morphine, and so allowing a far more extended use of a method of relieving the pains of labour, should be satisfied as to the safety of the supplanting method. In spite of the adverse criticism of a few eminent obstetricians, the verdict of a very large number who have used it fairly is that it is all it claims to be if administered with reasonable care and skill. But it is quite true that it demands time, and probably relatively few practitioners will be prepared to devote this time to it.

It is not possible to discuss fully the question of safety at present—I have done this exhaustively elsewhere⁴—the following remarks must suffice. In a series of over 400 cases the stillbirths have been under 2 per cent., as against a general average of 2½ per cent. This represents a reduction of one-fifth in stillbirths, or 20 per cent. These stillbirths included such complications as premature detachment of the placenta, a difficult breech presentation with considerable delay of the head, another breech presentation with a large hydrocephalus which necessitated perforation, one macerated fetus, and the like. On the other hand, among the successes may be mentioned a Caesarean section, some twenty-five cases of severe albuminuria in which every child is alive (one mother was a primipara aged 49), and a large number of premature labours, spontaneous and induced. This is a record which no amount of theoretical criticism can destroy, and in particular the absence of ill effects on premature children is instructive and suggestive. One patient had had two stillborn children before, in neither instance was scopolamine-morphine administered; the third child was born under scopolamine-morphine and is alive and well. Several others have had one stillborn child, while the second and third, under scopolamine-morphine, are alive and well. These cases emphasize the contention that the method is safe if overdosing be avoided. All the foregoing is amply borne out by Dr. Cecil Webb Johnson in his book *Twilight Sleep in the East*, and it may now be accepted as proved that the method is safe.

Thus far, then, we have reached the conclusions that the birth-rate in this country is in a very serious condition; that one potent factor is the fear among women of the actual labour; that this fear is by no means baseless, but has its origin in the pain and undoubted pathological character of the majority of labours; that the use of scopolamine-morphine entirely abolishes this fear, and has no counterbalancing evil results.

I must now draw attention to a significant fact. Of my own cases at least 7 per cent. were induced to submit to that particular pregnancy by the knowledge that they could have the labour conducted under scopolamine-morphine. At first sight this may not seem to be a great many, but on the modest assumption that it were possible for a million potential mothers to be assured of this treatment, we should have an increase of 70,000 births. The true percentage is in all probability greater than this, but is not even this worth an effort and a sacrifice?

The question is, How is this end to be attained? Coercion in a matter of this kind cannot be applied to the profession. Many cannot afford the extra time demanded for the administration of scopolamine-morphine; many have not the inclination; many of the poorer people could not pay the increased fee which every doctor would rightly consider his due. Is there no solution of the difficulty? I believe a great majority of the profession would be glad to be rid of their maternity work, either because of their distaste for it or because it interferes seriously with other work. If this is so, and the question of the birth-rate is so vital to the country, why cannot the State bestir itself and take over this work in the national interest? They would get those who are deeply interested in the work and

who are prepared to be expert in it. The results would justify their venture. Public health work is for all intents and purposes a State institution now; there has been some talk of taking over the hospitals (a much more difficult and perilous undertaking). We spend an enormous sum every year on hospitals or homes for incurables and on asylums for maintaining thousands upon thousands of hopeless lunatics. It is not suggested these should all be destroyed, though many thoughtful people have strong opinions on the subject. But if all this expenditure on perfectly useless life is considered legitimate, how much more legitimate would be an expenditure on the production of new life in the shape of an increased birth-rate?

I do not propose any elaborate scheme but merely an outline which may serve as a basis for discussion. Only the matter ought to be faced *now*, and not allowed to drift into another generation. First of all, we cannot admit any class distinction; rich and poor must equally feel they can have the advantage of scopolamine-morphine if they wish, so that we may hold out the inducement to all. To the large number who have refused maternity solely or mainly on account of the ordeal we may then say, "Your objection has been overcome, and you may now enter on pregnancy without the least fear."

The scheme in view would be the establishment in all large towns, in some very quiet part, and perhaps in certain other centres, of a combined midwifery hospital and home. Half, or some such proportion, of the beds could be reserved for those who could well afford to pay adequate fees, the remainder for those who perhaps could not afford any fee. It might even be practicable to have an intermediate grading. At all events the income from the one part would go largely towards maintaining the whole institution, and the burden on the State would, I venture to think, not be so great after all. The patients in the one part would have a bedroom each where the labour would be conducted. There would be one or more dining-rooms, as needed, common to this part. The others would be in rooms each of which would accommodate four to half a dozen beds, and to each of which would be attached one small lying-in room where the labour would take place. As for staff, one nurse can quite easily and efficiently attend to two patients in the better-to-do section if they are in contiguous rooms, an extra fee being charged if a patient preferred a nurse exclusively. In the small ward-rooms a nurse could easily manage one with some additional help from a probationer. There would be a superintendent obstetrician with assistants, the number of whom would be governed by the size of the institution. The success of it all would depend upon the enthusiasm of the staff, and only those in sympathy with the work would undertake it. This would be a very different matter from public opinion trying to coerce every practitioner into using scopolamine morphine regardless of his individual objections, which might be perfectly valid.

I believe any Minister who had the courage to initiate and carry out some such scheme would deserve more than ever the country could repay him. The field is white unto harvest, only the implements and the reapers are needed.

REFERENCES.

¹ *The Declining Birth-rate*, p. 33. (Now Tracts for the Times.) By Sir A. Newsholme, K.C.B., M.D. ² *The Declining Birth-rate* (Report by the Commission), p. 75. ³ *Ibid.*, p. 78. ⁴ *Scopolamine-morphine Semianarcosis during Labour*. Oxford Medical Press.

THE CURE OF MULTIPLE WARTS ON THE FACE.

By CHARLES IND, M.D.,
SITTINGBOURNE.

THE removal of these tiny growths, judging by what I have witnessed, is often very difficult.

A recent patient's troubles have been the means of my devising a plan, a combination of two methods suggested separately by other dermatologists, which seems to give a speedy and admirable result.

A man, aged 35, had had the warts for eleven years. He had seborrhoea sicca of the scalp, and suffered from an extreme grade of seborrhoea oleosa of the body and face; the latter I consider not unimportant as far as the etiology of the warts is concerned.

The warts were of the variety known as verruca plana juvenilis (Stelwagon), tiny roundish bodies situated on the forehead and closely set, especially as they neared the hair border. On the forehead there were about ninety at least. There were several dozens also on the scalp anteriorly. They were all of the above variety. One or two increased in size, and rarely two or three would coalesce; but in the main they remained discrete. Those on the scalp were yellowish and slightly vascular, whilst those on the forehead were pale and rounded, not very easily seen unless looked for sideways.

For the whole eleven years the patient had had treatment by dermatologists and doctors, but the number of warts did not show signs of diminishing. Internally he had had lime, thyroid extract, magnesium sulphate, and arsenic, also citric and other acids. He had also undergone electrolysis, and had had ionization with magnesium sulphate, and also with sodium salicylate, but without any result, good or bad. Locally, nitric acid had been used, and had scarred him badly. Glacial acetic acid and trichloroacetic acid had also been used. The warts were destroyed by these methods and did not recur, but usually more appeared later near the site of local treatment.

The various spirit-soaps, and lotions of resorcin, sulphur, and mercury perchloride were of no use; ointments of salicylic acid and sulphur gave extremely bad results, and the patient refused to go on with them. Salicylic plaster seemed of some service, but it is unsightly and attracts attention.

Acting on the belief that warts are infectious the patient wore a removable lining to his hat, which was changed each day, and the warts were simply cut off by a sharp instrument; results were not very satisfactory and recurrence frequently followed.

Stelwagon¹ recommends the use of a saturated alcoholic solution of salicylic acid, but says that it often fails to cure. By itself it did fail; but followed by abscission it was surprisingly effective. The warts and skin around were painted three times a day for one day with this liquid. On the following morning they were cut off by a flat sharp steel instrument, bevelled on one side only; this passes freely over the healthy skin, but when it comes to the wart cuts it off, leaving a slightly bleeding point. The surface is painted at once with the salicylic solution and twice more later during the same day, three times in all. This turns the little red points to a brownish-black colour, tiny scabs form which are allowed to drop off, taking about a week to do so, and leaving a perfectly clear healthy skin. The forehead is bathed with pure alcohol once a day until the scabs have all dropped off.

1. A razor is no use, a sharp flat instrument *pushed* over the skin is necessary.

2. Paint three times the first day and after abscission three times on the second.

3. There is neither pain nor scarring.

4. Sepsis does not occur.

5. The treatment is useless for larger warts.

6. The use of the salicylic solution prevents pain when the warts are cut off and recurrence afterwards.

REFERENCE.

¹ Stelwagon: *Diseases of Skin*, 1902 edition, p. 522.

Croonian Lectures

ON

THE SIGNIFICANCE OF THE CEREBRAL CORTEX.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS
OF LONDON, JUNE, 1919.

BY

G. ELLIOT SMITH, M.A., M.D., F.R.C.P., F.R.S.,
PROFESSOR OF ANATOMY, UNIVERSITY OF MANCHESTER.

LECTURE IV.

(Abstract.)

THE conditions revealed in the earliest fossil reptiles that have definitely taken the line of development leading toward mammals enable us to draw the inference that the hypopallium (neostriatum) and the neopallium came into existence simultaneously. But in the ancestors of the reptiles at present living the new cortex consisted mainly of hypopallium, whereas mammals cultivated both the new cortical formations. When the hypopallium, bulging into the lateral ventricle, filled up the limited space available in the reptilian brain progress in cerebral development was brought to a sudden stop. In mammals, however, the neopallium, lying upon the surface of the hemisphere, was

free to expand and develop those higher attributes which have made it the organ of the highest intelligence.

Both the hypopallium and the neopallium were differentiated to receive the suddenly increased influx of thalamo-cortical fibres which for the first time secured for senses other than smell an adequate representation in the cortex and a correspondingly increased influence over the animal's behaviour.

It helps us to understand the mechanism of the neopallium, the true cerebral cortex, if we compare the three cortical formations built up in the fore-, mid-, and hind-brain respectively from the receptive nuclei of the olfactory, optic, and vestibular nerves.

The cerebellum is an overgrown part of the vestibular nucleus; it is a mechanism which enables the effects produced by stimulation of the semicircular canals to be influenced by the conditions existing in all the muscles, joints, and skin areas of the body, so as to co-ordinate the whole muscular system to perform orderly movements for the purpose of correcting disturbances of equilibrium. But the linking up within the cerebellum of all the mechanisms which receive information from the various muscles and the building up of complex systems of nervous elements makes the organ the instrument for co-ordinating all complex and extensive movements, irrespective of whether they are concerned with equilibration or not. This cerebellar mechanism is made use of by the mid-brain and the fore-brain to co-ordinate the muscular actions which they excite.

The tectum of the primitive mid-brain contains nerve cells with widely branching dendrites, which collect into the same channel impulses coming from the eyes, the otic vesicle and lateral line organs, and the sensory nerves of the skin—all bringing information concerning the spacial relations and movements of objects in the outside world. This makes the tectum the great director of the animal's locomotion; and by means of the link established by the red nucleus the tectum can make use of the cerebellar apparatus to co-ordinate the muscles to perform the actions which it directs.

The primitive cerebral cortex had functions of a very different kind from those of the tectum and the cerebellum. It was originally the organ for appreciating the nature—the attractiveness or unattractiveness—of objects that affected the sense of smell. It was therefore the chief arbiter of the animal's behaviour; and the movements which it initiated were directed and co-ordinated by the tectum and the cerebellum. The architecture of the vertebrate brain was determined by the normal sequence of events in the primitive animal. The creature was led by smell, the organs of which were installed in the fore brain; directed by vision and the other senses, the instruments of which were connected with the mid-brain; the resulting movements were co-ordinated by the cerebellum in the hind-brain; and the consummation of the conscious experience led to the stimulation of the gustatory nuclei in the medulla oblongata, and the initiation of a complex series of unconscious visceral processes.

In the first lecture an attempt was made to explain the nature of the functions performed by the primitive cerebral cortex. It is the instrument by means of which the affective tone of the sense of smell gives coherence to a complicated sequence of events, so that all the incidents in a long and varied series of experiences are united to form part of a consecutive consciousness. Moreover, it provides the germ of the important aspect of consciousness whereby such sensations are projected and referred to happenings in the outside world. Our conceptions of coherence in space and time depend upon the activity of the fully developed cerebral cortex or neopallium.

But the primitive cortex is almost entirely devoid of the means for appreciating spacial relations. It only acquires such powers when the sensory tracts proceeding from the eyes, the vestibular apparatus, the muscles, joints, and skin, convey to it, in adequate degree, the information that is essential for such appreciations, after it has been integrated upon lower physiological levels. The new cortical formations in the Amniota are the expression of these new potentialities. The hypopallium or neostriatum is a crude and imperfect instrument for providing these spacial controls; the neopallium is the more perfect instrument, because it provides the means for a fuller development of those physiological dispositions by which discrimination and projection are rendered possible.

When it is realized that the tectum of the mid-brain is the recipient apparatus, not only of visual impulses conveying information as to movements of objects in space, but also of rhythmic wave movements either of water or air, and also of such impulses as ascend for the general sensory nerves, it is not altogether surprising to find that "the loss of power to appreciate serial movements in space is associated with inability to respond to the vibrations of a tuning-fork" (Head).

In the lower vertebrates these sensory impulses are integrated on the physiological level of the tectum, so as automatically to regulate movement; but in mammals there is also a psychical integration of such influences, which results from the physiological processes in the neopallium.

The conscious appreciation of succession, both in space and time, is strictly dependent on past events which have left their records in the neopallial mechanism. As Dr. Head expresses it, "every recognizable change in posture enters consciousness already charged with its relation to something which has gone before, and the final product is directly perceived as a measured postural change. This is the case with all the higher projectional aspects of sensation; they form a continuous series of physiological dispositions determined by previous events of a like order."

In the tectum we can study the foundations of the mechanism which makes such physiological dispositions possible. But not until the complex superstructure of the neopallium was added to the brain was it possible for the animal to acquire, in the full measure required for the learning of skilled actions, the conscious recognition of posture and movements, and the possibility of building up the physiological dispositions which, though not accessible to consciousness, are essential for the conscious appreciation of posture and movement.

When the mammalian neopallium acquired this power of appreciating spacial and postural relations it assumed direct control of voluntary movements, and the cerebro-spinal or pyramidal tracts and the cerebro-cerebellar connexions were established for the first time. The ability to recognize and measure the extent of movements made it possible the more precisely to control and regulate such movements. The acquisition by the neopallium of the power of learning to perform complex skilled actions was possible only because the sensory and visual cortex provided it with the postural information and the physiological dispositions without which such functions were impossible. In the train of these events the animal with a neopallium (more especially the Primates) gradually learned to form ideas of the size, shape, weight and texture of objects and of their position in space.

The influence of the arboreal mode of life in stimulating the attainment of such ability not only in the Primates, but also in the earliest mammals, was discussed.

In conclusion, the lecturer explained that his chief aim in these lectures had been to attempt to discover how the intellectual functions of the cerebral cortex had been acquired. Biologists and physicians in the past had shown a strange reluctance boldly to face the problem that the real functions of the cerebral cortex were of a psychical nature. It is as futile to discuss the significance of the cerebral cortex without considering its intellectual functions as it would be to try to interpret the structure of an aeroplane without reference to the fact that it was meant to fly. Hence in these lectures attention had been concentrated chiefly on the attempt to explain the real work which the cerebral cortex was devised to perform.

GOOD progress is being made with the erection of the new Rockefeller Hospital and Medical Schools in Peking, the corner stone of which was laid on September 24th, 1917, by Mr. Fan Yuan-lien, Chinese Minister of Education. The site covers an area of ten acres. An adaptation of Chinese architecture has made it possible to use Chinese materials almost exclusively and to give to the buildings, in addition to the scientific and practical requirements for which they are intended, beauty of design in harmony with the great monuments in Peking. The beauty of the buildings has been increased by a Chinese treatment of courtyards, gateways, and walks. The grounds contain fine trees, many of which will be saved, together with a typical Chinese rock garden, which will harmonize with the scheme.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ABDOMINAL OR BILOCULAR (?) HYDROCELE.

I was interested in reading Dr. Coleman's account of the huge hydrocele, on page 629 in the *BRITISH MEDICAL JOURNAL* of December 7th, 1918. In May, 1902, I published in the *Australasian Medical Gazette* (page 258) the particulars of a similar case, illustrated with profile and frontal photographs. The patient was a youth of 17 years of age, the side affected the right; the testicle on that side had been injured three years before. There was an ordinary hydrocele on the left side containing fourteen ounces. The abdomen presented the appearance of one containing a large abdominal tumour. The navel was prominent. On incising the right sac the diagnosis of a huge hydrocele was confirmed by free escape of fluid and reduction in size of the abdominal tumour. The abdomen was not opened, the sac walls were sutured to the scrotal wound and a drainage tube inserted. In a few days the upper part of the sac had well contracted. Recovery was uneventful. Later the left hydrocele was opened, and, the sac being very thick, radical cure was effected by excision of as much sac as possible.

I cannot quite agree with Dr. Coleman's nomenclature. "Abdomino-scrotal hydrocele" would be better. "Bilocular" is misleading, as the hydrocele sac is not loculated, but is one single cyst constricted in the inguinal canal.

LEONARD W. BICKLE, F.R.C.S. (Edin.),
Formerly Honorary Surgeon, Adelaide Hospital,
South Australia.

Sydney.

THE ARREST OF BLEEDING IN CERTAIN DISEASES OF THE BLOOD.

The following method has been found effective in small wounds, such as punctures for blood examination or small cuts, when the patient's blood has been deficient in powers of coagulation and bleeding has been persistent and dangerous.

As the patient's blood will not coagulate in the wound, it is necessary to apply blood that will. The bleeding point is held firmly and exposed between the fingers and thumb of one hand. It is then dried thoroughly, the pressure of the fingers and thumb preventing fresh non-coagulable blood from washing away the coagulable blood after application. The thumb of another individual whose blood is normal is pricked in the ordinary way for obtaining a blood film, and the drop of blood resulting is placed directly on the bleeding point. Pressure in the neighbourhood of the wound is maintained till the drop of blood coagulates, and may then be relaxed without fear of further bleeding. It is hardly necessary to add that the patient should be warned against knocking off the coagulated drop.

WM. GEMMILL, M.B., F.R.C.S.,
Major R.A.M.C. (F.C.C.).

Musselburgh.

Reviews.

RURAL HOUSING.

The chronic problem of rural housing has now become acute. Insanitary cottages all over the country have been closed or destroyed in large numbers; owing to the more urgent constructional problems set us by the war, the building of new cottages and the repair of old ones have inevitably been neglected for the last few years. On all sides the cry for more homes, and more attractive homes, for farm labourers goes up. Dr. W. G. SAVAGE,¹ Medical Officer of Health for the County of Somerset, has written an excellent book on the subject which may be warmly recommended to all who wish for enlightenment upon the many questions it presents for solution. The first chapter gives an account of the development of the problem, which dates from the middle of the eighteenth century. Next the rural housing laws are described and the existing housing conditions, with some practical details as to the conversion of insanitary houses into satisfactory dwellings. An account of the housing survey (ordered by the Local

Government Board in the Housing Act of 1909) and what may be expected of it and how it may hope to surmount the difficulties presented by the small owner or owner-occupier of cottage property, forms most interesting reading; it is followed by an excellent chapter on the causes and effects of the prevalent shortage of small houses in the country. Other chapters deal with the inadequacy of the law as it was to remove the shortage, on the requirements of new cottages in rural areas, and the harm wrought by bad ventilation, overcrowding, and the like. Finally Dr. Savage gives his own solution of the rural housing problem, which must, he says, be solved without delay if the present migration of the agricultural population to the towns or colonies is to be checked. This problem may be stated as follows: Existing cottages are wearing or have worn out; economic causes prevent private enterprise from erecting more cottages in anything like sufficient and compensatory numbers—to say nothing of the provision required for the thousands of ex-soldiers who are expected to take up agriculture as a trade, or of the 30,000 new houses that will be wanted if the two million additional acres of grass land are to be ploughed up in order to make our country more self-supporting.

The local authorities have been unwilling to exercise their powers of building because the loss would fall on the rates, and this has contributed to a disposition shown in many areas by the best of the agricultural working classes to emigrate either to the towns or overseas. The new Housing Bill promises an Exchequer grant for the relief of local authorities, and it is possible to hope that the exodus may be checked, even if the current is not wholly reversed, within the next decade. Dr. Savage thinks that the increase in the wages of agricultural labourers will contribute to produce the desired result, and we can all only hope that his forecast will be fulfilled. He writes clearly, shortly, and with obvious competence. His book is well illustrated, and should be read by all the wide circle of those interested in the rural housing problem, whether practitioners of medicine or laymen.

NERVOUS DISORDERS AND DISEASES.

The book in the *Collection Horizon* on treatment of the psychoneuroses of war,² by Drs. ROUSSY, BOISSEAU, and d'OLSENITZ, is a sound and practical exposition of the clinical aspect, treatment, and pathogenesis of the psychoneuroses of war; herein are included cases of hysteria, of neurasthenia, of psychasthenia, and cases of mild confusion and melancholia. The treatment advised is psychotherapeutic; persuasion is its chief instrument. First the patient is "prepared" by being persuaded that he is curable and sure to be cured; next he is "treated," at the right moment, by persuasion, eked out if necessary with faradization; finally, the cure thus effected is "fixed" or consolidated. The volume is clearly written, and should be in the hands of all who have to deal with cases of war neuroses. Dr. H. BROWN's volume on *Advanced Suggestion (Neuroinduction)*³ gives a general account of the good results he has obtained with psychotherapy in all sorts of conditions of disorder and disease, mental and otherwise, without hypnosis, but with careful instruction in relaxation followed by intelligent suggestion. It is a book for medical men. Dr. R. S. CARROLL's *The Mastery of Nervousness*⁴ is a book for the layman, and may perhaps be described as a guide to living and thinking sensibly, not without the platitudes that make easy reading for the public. Dr. COBIAT's *What is Psychoanalysis?*⁵ gives, in the form of questions and answers, an outline of what is attempted in this method of treating neuroses, such as those due to repressed emotions and unsatisfied instincts.

Miss M. MACDOWALL's booklet on the *Training of Mentally Defective Children*⁶ gives full details of the

² *Traitement des Psychonevroses de Guerre*. By G. ROUSSY, J. BOISSEAU, and M. d'Olsenitz. *Collection Horizon*. Paris: Masson et Cie, 1918. (Cr. 8vo, pp. 191; 12 plates. 4 fr.)

³ *Advanced Suggestion (Neuroinduction)*. By Haydn Brown, L.R.C.P., etc., Edin. London: Maillière, Tindall, and Cox, 1918. (Cr. 8vo, pp. viii + 342. 7s. 6d. net.)

⁴ *The Mastery of Nervousness*. Based upon Self Re-education. By Robert S. Carroll, M.D., Medical Director, Highland Hospital, Asheville, North Carolina. New York: The Macmillan Co., 1918. (Post 8vo, pp. 348. 10s. 6d. net.)

⁵ *What is Psychoanalysis?* By Isidor H. Corint, M.D., First Assistant Visiting Physician for Diseases of the Nervous System, Boston City Hospital. London: Kegan Paul, Treach, Trubner, and Co., Limited, 1919. (Cr. 8vo, pp. 124. 3s. 6d. net.)

⁶ *Simple Beginnings in the Training of Mentally Defective Children*. By Margaret Macdowall. London: Local Government Press Co. (R. T. Leach), 1919. (Cr. 8vo, pp. viii + 116; illustrated. 3s. 6d.)

¹ *Rural Housing*. By William G. Savage, B.Sc., M.D. (Lond.), D.P.H. With a chapter on the After-War Problem. London: T. Fisher Unwin Limited, 1919. (Demy 8vo, pp. x + 297; 32 figures. 7s. 6d. net.)

methods which, combined with infinite patience, have proved effective in training and improving the mental calibre of young imbeciles. It should be in the hands of all who have to look after low grade defectives.

Captain BALLARD'S *Epitome of Mental Disorders*⁷ is a short and didactic textbook for practitioners and assistant medical officers in asylums and hospitals for the insane. It is well arranged and written, and devotes adequate space to the subject of treatment; it may be recommended to the attention of those for whom it has been designed. The fourth edition of Dr. YOUNGER'S *Insanity in Every-day Practice*⁸ sets out the broad outlines of insanity; it is short and compendious, easy to read, and likely to be of great service. Dr. WHITE'S *Principles of Mental Hygiene*⁹ gives a general discussion of the best methods of dealing with the problem of insanity and its allied and borderland states. It deals in generalities, and the maladjustments between man as a social animal and the society in which he moves. Dr. HART'S lecture on *The Modern Treatment of Mental and Nervous Disorders*¹⁰ contains a popular and general review of the subject and a plea for the psychologist in treatment and research here.

NOTES ON BOOKS.

IN *The War Work of the Y.M.C.A. in Egypt*¹¹ Sir JAMES BARRETT applies his fluent pen to the task of describing and annotating the organization, objects, and methods of the Y.M.C.A. as exemplified by its work in connexion with the army in Egypt. His claim to act as historian and critic rests on the fact that he witnessed the initiation of the work of the Y.M.C.A. in Egypt at the beginning of the war, and thenceforward had it more or less under daily observation, and was himself a sort of liaison officer between the Army Medical Service and the Y.M.C.A. This tribute to the single-minded and devoted men and women who did such fine work for the troops, "but who never let their hearts run away with their heads," is endorsed by General Sir Edmund Allenby in an appreciative preface.

Dr. H. B. WOOD'S *Sanitation Practically Applied*¹² is written for the benefit of readers of all classes, medical or no. It contains a dozen chapters on such important topics as statistics, child welfare, water supplies, sewage disposal, and so forth, written on broad lines and without technicalities that would make it unintelligible to the general reader.

⁷ *An Epitome of Mental Disorders: A Practical Guide to Aetiology, Diagnosis, and Treatment*. For Practitioners, Asylum, and R.A.M.C. Medical Officers. By E. Fryer Ballard, M.B., B.S. London: J. and A. Churchill. (Demy 8vo, pp. xv + 211. 6s. net.)

⁸ *Insanity in Every-day Practice*. By E. G. Younger, M.D. Brux., M.R.C.P. Lond., D.P.H., etc. Fourth edition. London: Baillière, Tindall, and Cox. (Cr. 8vo, pp. x + 134. 5s. net.)

⁹ *The Principles of Mental Hygiene*. By William A. White, M.D. New York: The Macmillan Co. (Cr. 8vo, pp. xiv + 323. 10s. 6d. net.)

¹⁰ *The Modern Treatment of Mental and Nervous Disorders*. A Lecture delivered at the University of Manchester on March 25th, 1918. By Bernard Hart, M.D. Manchester: At the University Press. London: Longmans, Green, and Co. 1918. (Cr. 8vo, pp. 28. 1s. net.)

¹¹ *The War Work of the Y.M.C.A. in Egypt*. By Sir James W. Barnett, K.B.E., C.B., C.M.G., M.D., M.S., F.R.C.S. Eng., temporary Lieut.-Colonel R.A.M.C. London: H. K. Lewis and Co., Ltd. 1919. (Demy 8vo, pp. xx + 212; 23 plates; 3 maps. 10s. 6d. net.)

¹² *Sanitation Practically Applied*. By Harold Bacon Wood, M.D., D.P.H., Assistant Commissioner, West Virginia State Department of Health, etc. New York: J. Wiley and Sons Inc. London: Chapman and Hall, Ltd. (Demy 8vo, pp. vi + 473; illustrated. 13s. 6d. net.)

THE VITAL STATISTICS OF ENGLAND AND WALES, 1901-10.

The third part of the supplement to the seventy-fifth annual report of the Registrar-General which has recently appeared¹³ is a volume of more than 900 pages, 747 being devoted to abstracts of the records in the 634 registration districts. The abstracts are similar in form to those published in earlier supplements, but the list of causes of death has been extended and sex mortality is tabulated in detail; a useful addition is a table showing the deaths in public institutions of registration districts the rates of mortality for which are gravely affected by the inclusion of deaths of non-residents. The abstracts are preceded by a general review of the vital statistics, enriched by many tables which have no counterparts in earlier publications.

The Marriage and Birth Rates.

The marriage rate per 1,000 single and widowed males aged 15 years and upwards, which was 60.9 in 1861-70, fell to 53.6 in 1891-1900, and fell further to 51.6 in 1901-10. The crude birth rate, which was at its highest point in the decennium 1871-80—namely, 35.4 per 1,000—had fallen to 29.9 in 1891-1900 and reached 27.2 in 1901-10. The legitimate birth rate per 1,000 married women aged 15 to 45 declined rather faster than the crude birth rate and was, in 1901-10, 75 per cent. of the maximum value. There is now little difference between the standardized birth rates of urban and rural counties. The difference between the contrasting groups, which stood at 2.46 per 1,000 in 1881-90, was 1.77 in 1891-1900 and only 0.57 in 1901-10. Fertility has been lower south and east of a line from the Bristol Channel to the Wash than to the north and west.

The rate of decline in the more recent period has been generally greater than before, but in the Home Counties it has been retarded, as has happened also in the extreme north (excepting Westmorland). Dr. Stevenson remarks that "such differences in distribution seem to point to local variations from time to time in the strength of factors causing decline of fertility, and so to suggest rather the spread of a custom than the effect of a natural law." This is further supported by the increase in the proportional fertility of those English and Welsh counties which in 1911 had over 10 per cent. of their total males working as miners. In only one case, and that the county containing the smallest proportion of miners, was the ratio of the standardized birth rate to that of England and Wales less than in 1881-90. For instance, in 1881-90 the standardized birth rate of Durham was 107 per cent. of the all England rate for the decennium, in 1891-1900 it was 110 per cent. of the corresponding rate, and in 1901-10 it was 117 per cent. It is plain that the causes of reduced fertility apply less to coal mining counties in whatever part of the country they are situated than to others.

The standardized death rate of 1901-10 was 16.6 per 1,000 for males and 13.9 for females, respectively 73.8 per cent. and 67.1 per cent. of the corresponding rates for 1841-50; the decline has been both relatively and absolutely much greater in the last decennium than during any previous period. Thus the male rate in 1881-90 was 20.0, and only declined to 19.5 in 1891-1900; the fall in the past decennium was nearly equal to the difference between the rates for 1891-1900 and for 1861-70. The improvement has been greater in women than in men. In 1841-50 the male death rate was 109 per cent. of the female rate, in 1891-1900 it was 117 per cent., and in 1901-10 119 per cent. Equality of mortality between the sexes at 35 to 45 in 1841-50 has been converted into a male excess of 22 per cent. in 1901-10; a female excess of 6 per cent. in the age group 25 to 35 sixty years ago has become a male excess of 17 per cent.

An important factor of this change has been the greater relative decline of tuberculosis amongst females, but that this is not the whole explanation is proved by the fact that the females still have some advantage when tuberculous diseases are excluded from the comparison. At ages 25 to 35, the male death rate (excluding tuberculosis) was 103 per cent. of the female rate in 1851-60, and 110 per cent. of the corresponding female rate in 1901-10.

Turning to the regional distribution of mortality, the rates were usually lower in counties in which the greatest proportion of the inhabitants were in rural areas; there are, however, important exceptions. The twenty registration counties with the lowest mortalities included eight with a preponderance of urban population; one, Middlesex, had 96 per cent. of its population in town areas. The twenty counties with highest mortalities contained six, all belonging to Wales, with a majority of their population in rural areas. All the metropolitan counties other than the county of London itself, returned mortalities low in proportion to the degree to which their population was made up of town dwellers, partly because they consisted of the outlying suburban populations of a great urban area, the central and less healthily situated portion of which occupied a low place (forty-seventh out of the fifty-five counties). The counties of highest mortality were all important coal mining centres; since occupational records show that coal mining does not lead to undue mortality at working ages, it appears that attendant circumstances are

peculiarly unfavourable, an inference which is relevant to the recent discussion of housing conditions in mining districts.

Infant and Child Mortality.

In the decennium 1901-10 infant and child mortality declined enormously. In 1841-50 the deaths under one year per 1,000 births were 153, and the same rate obtained in 1891-1900; in 1901-10 the proportion was 128. The mortality under age 5 per 1,000 living was 66 in 1841-50, 57.7 in 1891-1900, 46.0 in 1901-10. The remarkable fall commenced in 1902. Diarrhoeal diseases, tubercle, convulsions, and bronchitis are the causes of chief numerical importance in the mortality from which substantial reductions have occurred.

Mortality among infants and children in the predominantly urban groups of counties has been 30 per cent. greater than in the corresponding rural group among legitimate and 50 per cent. greater among illegitimate infants. The disadvantage was relatively greater in the last nine than in the first three months of the first year of life. The lowest rate recorded for the whole of the first year was returned by the rural county of Wilts; the two next best were Dorset and Hertford. Lancashire, Nottingham, Glamorgan, and Durham had the highest rates. A comparison of mortalities in rural counties brings out the extremely unfavourable position of the Welsh rural counties, which recalls the point noticed above as to the attendant circumstances of mining, since 14.6 per cent. of the males over ten in the Welsh counties worked in mines or quarries, and only 3.2 per cent. of the males in the English counties with which a comparison was instituted.

Tuberculosis.

The death rates from all forms of tuberculosis and from phthisis declined 18.6 per cent. and 19.4 per cent. between 1891-1900 and 1901-10. In the fifty years from 1851-60 tuberculosis mortality has been nearly halved in males and more than halved in females. The death rates at ages have in certain groups changed their sex ratios in a remarkable way. At every age over 15 the females have improved faster than the males; at ages over 35 the difference is astounding. In 1851-60 the male mortality at 35 to 45 was 96 per cent. of the female mortality; in 1901-10 it was 153 per cent. At 45 to 55, 122 per cent. has become 202 per cent.; at 55 to 65, 138 per cent. has increased to 217 per cent. Taking standardized rates (all ages), and calling that of males in 1851-60, 100, the female rate for 1851-60 was 106; the corresponding figures in 1901-10 were 50 and 35. The difference between male and female rates was much greater in the urban than in the rural counties, being (1901-10) 133 per cent., 161 per cent., 220 per cent., 243 per cent. for successive decennial age groups from the age of 25 in the urban; 119 per cent., 132 per cent., 163 per cent., 165 per cent. in the rural counties. At ages 15 to 20 and 20 to 25 the mortality from phthisis of women in urban counties was below that of the rural counties, and the same held for males aged 20 to 25. A partial explanation is afforded by the migration of young healthy adults from country to town in search of work. Better material for testing this is afforded by the annual reports since 1911, when the deaths of non-residents were transferred to the place of origin. In 1911 the female death rates from pulmonary tuberculosis were higher in the rural districts in the age groups 20 to 25, 25 to 30, and 30 to 35. The proportions of females living in each of these age groups to the number aged 0 to 5 are much smaller in the rural districts than in England and Wales as a whole; if the disturbance of this proportion be regarded as a measure of emigration from country to town, and if the migrants be assumed not to suffer from tuberculosis, the recorded rates can be corrected, and we find that an application of the method to the data of 1911 suffices to raise the urban above the rural rate in these age groups.

With respect to the excessive urban mortality of males at older ages, it is tempting to attribute it to industrial employment, the phthisis death rate being well known to be excessive amongst males employed in such industries as printing and shoemaking, which are now mainly pursued in urban centres.

Increased Rates for Cancer and Diabetes.

In the decennium 1901 to 1910, 309,141 deaths were ascribed to cancer or malignant disease, giving a standard-

ized death rate of 867 per million, 13 per cent. higher than in the previous decennium. This and diabetes (the death rate from which increased from 77 to 93 per million) are among the few causes of death which show a rapidly increasing mortality. How far improved accuracy of registration is involved is a point often dealt with in the annual reports.

Suicide.

Suicides also were both absolutely and relatively more frequent; the rate per million (persons) was 107 in 1871-80, 119 in 1881-90, 134 in 1891-1900, and 146 in 1901-10.

Natural Increase of Population.

The rate of natural increase of the population in 1901-10 was very slightly higher than in 1891-1900 (11.8 per 100 against 11.7) and nearly as great as in 1851-60 (11.9), the declining birth rate having been compensated by the fall in the death rate. During the last few years this has ceased to be true; even before the war the effect of the declining birth rate had outstripped that of the lessening death rate.

Conclusion.

This summary will be enough to indicate to the student of vital statistics the nature of the information provided by Dr. Stevenson and his staff in their new report; the report is in every respect worthy of its predecessors and a credit to English statistical science.

EPSOM COLLEGE.

THE sixty-sixth annual general meeting of the Governors of Epsom College was held on June 27th, at 37, Solio Square, W., with Sir HENRY MORRIS, the treasurer, in the chair. The result of the last elections to ordinary pensionerships, Morgan annuities, and foundation scholarships was announced.

The annual report of the council, which was presented to the meeting, stated that in spite of the difficulties which have had to be contended with, including the greatly increased costs in many departments of the College, the results are fairly satisfactory. The council again expressed their appreciation of the efforts of the honorary secretaries, the British Medical Association, and other friends of the College to procure donations and subscriptions on behalf of the Royal Medical Foundation during the past year; they also wished to thank the editors of the *Lancet* and *BRITISH MEDICAL JOURNAL* for numerous kindnesses shown. Although many subscriptions had been lost as a result of the war, the sum of £4,500 required to maintain the work of the Foundation has been secured. The late Mr. Henry Duncombe, J.P., of Sutton Coldfield, has left to the College the net sum of £4,500 in trust, the income of which is to be paid in annuities to the daughters of medical practitioners "who shall be, and so long as they remain, unmarried, and who shall have attained the age of 50 years." Dr. Ralph Gooding, a vice-president, has given the sum of £100 to establish an annual prize for botany at the College. The War Memorial Fund, instituted by the Old Epsomian Club, now amounts to nearly £2,000. Subscribers to this fund will have the same voting privileges as contributors to the Royal Medical Foundation.

In proposing the adoption of the report the Chairman drew attention to the fact that the bequest from the late Dr. Strong, which had been reported in the press recently, was left for the specific purpose of increasing pensions and for providing new pensions. He also mentioned the need of special gifts for other purposes, such as building, repairs, reducing the mortgage, making good the depreciation of stocks, and providing for increases in masters' salaries. The expenditure in future on the last-named item would be greatly increased owing to the necessity for meeting the urgent demands for higher salaries for masters.

At the conclusion of the proceedings a cordial vote of thanks to Sir Henry Morris for his indefatigable services as treasurer was moved by Sir WILLIAM CHURCH, chairman of the council, and seconded by Mr. ERNEST PAGE, K.C., vice-chairman, and was carried by acclamation.

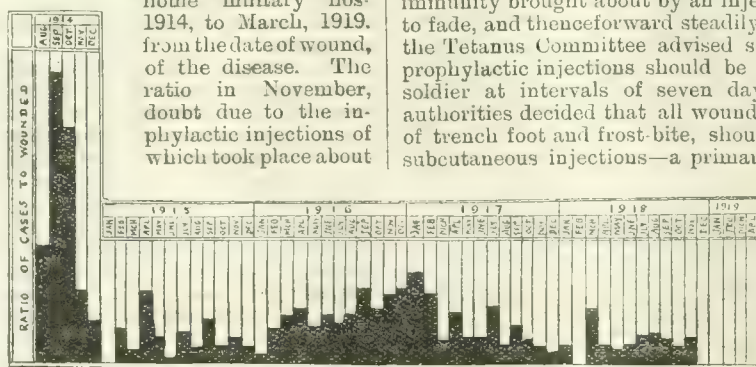
A MEDICAL officer of the United States Public Health Service, instructed to visit influenza patients for fifty miles up and down the coast of North Carolina, accomplished his duties by means of a naval hydroplane, which, with a pilot and a machinist, was placed at his disposal.

TETANUS IN HOME MILITARY HOSPITALS.

SUMMARIES of the first nine analyses of cases of tetanus treated in home military hospitals have appeared from time to time in the *BRITISH MEDICAL JOURNAL*.¹ We have now received from Major-General Sir David Bruce, K.C.B., F.R.S., the tenth and eleventh analyses, which complete the series. The number of cases of tetanus dealt with in the eleven analyses and the rates of mortality are shown in the following table:

Analyses	No. of Cases.	Recovered.	Died.	Mortality per Cent.
1. 1914-15	231	98	133	57.7
2. 1915-16	135	99	96	49.2
3. Aug.-Oct., 1916 ...	200	127	73	36.5
4. Oct.-Dec., 1916 ...	100	69	31	31.0
5. Dec., 1916-Mar., 1917.	100	81	19	19.0
6. Mar.-June, 1917 ...	100	71	29	29.0
7. June-Sept., 1917 ...	100	85	15	15.0
8. Sept.-Dec., 1917 ...	100	84	16	16.0
9. Dec., 1917-April, 1918	100	76	24	24.0
10. April-Sept., 1918 ...	100	74	26	26.0
11. Sept., 1918-Mar., 1919	100	74	26	26.0

The diagram which we reproduce below represents the ratio of the cases of tetanus to the number of wounded soldiers treated in pits from August, 1914, to March, 1919, from the date of wound, of the disease. The ratio in November, doubt due to the prophylactic injections of which took place about



Incidence of cases of tetanus per 1,000 of wounded.

Surgical Prophylaxis.

In the second analysis of cases of tetanus in 1915 the opinion was expressed that "if thorough surgical treatment is carried out on wounds from the beginning so as not to allow the presence of necrotic tissues or foreign bodies, the number of cases of tetanus should sensibly diminish, if not altogether disappear"; and later, in the fifth analysis, that "if surgical treatment could be made more successful, and if wounds could be cleaned up and rendered sterile at the beginning, then there would be no more cases of tetanus." The surgeons took a long time to learn how to do this, remarks Sir David Bruce, but on the introduction of primary excision and primary or delayed primary suture the most remarkable results were obtained, and if it had not been for the sudden cessation of the war, it is probable that tetanus would have become extinct in the British army as a war disease. The fourth edition of the Memorandum on Tetanus, issued by the War Office Committee for the Study of Tetanus, states, in the section on general surgical prophylaxis, that "complete and early excision of gunshot wounds is a most potent factor in the prevention of tetanus. . . . The surgical prevention of tetanus, therefore, consists of the free removal of all damaged tissues before the organisms carried into the wound have developed to a dangerous degree. This will probably be within the first twelve hours of wounding."

Incubation Period.

The average length of incubation of cases of tetanus treated in home military hospitals since August, 1914, is shown in tabular form. In the first analysis the number of cases dealt with was 231, in the second 195, and in the third 200. The last eight analyses dealt each with 100 cases. The total number of cases was 1,426. The average incubation period in days for each of the eleven analyses in chronological order was 13.4, 31.2, 30.6, 45.0, 67.0, 44.1, 55.5, 46.9, 46.19, 68.5, and 54.8. The average incubation period for the whole series was 39.5 days. Generally speaking, the mortality rate and the incubation period varied inversely in any group of cases.

In the tenth analysis there were 87 cases of general tetanus and 13 cases of local tetanus; the rate of mortality in the former was 29.9; among the latter there were no deaths. In the eleventh analysis there were 86 cases of general, and 14 of local tetanus; the rate of mortality in the former was 30.2, and among the latter there were again no deaths.

Serum Prophylaxis.

On the recommendation of the Adviser in Pathology to the B.E.F., France (Sir William Leishman), the primary prophylactic dose of antitetanic serum was changed from 500 to 1,500 units. This increase, which was instituted in November, 1918, should show its good effect, if any, on the incidence of the disease among all wounded rather than in the rate of mortality among cases of declared tetanus.

The prophylactic value of antitetanic serum is now established beyond doubt, but clinical and experimental evidence goes to show that within about ten days the immunity brought about by an injection has already begun to fade, and thenceforward steadily declines. Accordingly, the Tetanus Committee advised some time ago that four prophylactic injections should be given to every wounded soldier at intervals of seven days. The army medical authorities decided that all wounded men, including cases of trench foot and frost-bite, should receive at least four subcutaneous injections—a primary injection given at the time of wound and three others. Instructions were also issued that accidental wounds received at home—especially those contaminated with dirt—should be treated in the same way, as regards prophylactic

injections, as gunshot wounds received overseas. These multiple prophylactic inoculations have been in vogue more or less since the beginning of 1917, but the number of wounded men receiving four inoculations has varied much according to the energy of the local authority. The main result of multiple inoculations should be the lowering of the incidence of tetanus among the wounded, but figures are not yet available to show whether this is so or not. The known figures suggest strongly that the death-rate among those who contract tetanus tends to fall as the number of injections increases from one to five. Hence the Tetanus Committee records its opinion that until our knowledge of the immunizing process in tetanus is more advanced these multiple injections should be continued.

Double and Quadruple Serums.

Early in 1918 Major Carroll Bull, U.S.M.C., demonstrated at the R.A.M. College his method for the production of the toxin of gas gangrene (*B. welchii*). Dr. R. A. O'Brien, of the Tetanus Committee, at once began to prepare a double serum containing the antibodies of tetanus and gas gangrene, and the committee recommended the D.G., A.M.S. to put this double serum into use as soon as possible so that its value might be submitted to a practical test. By the end of March 10,000 phials were sent to France, and by the middle of July 60,000 doses had gone over. At a War Office conference held in London at the beginning of November, 1918, it was decided to add the antitoxins of *Vibrio septique* and *B. oedematiens* to the double serum. In the last two analyses of cases treated in home hospitals

¹ BRITISH MEDICAL JOURNAL, October 23rd, 1915; June 30th, 1917; September 15th, 1917; December 1st, 1917; February 23rd, 1918; March 16th, 1918; October 12th, 1918.

only two cases are noted in which the injection of double serum was given, and both recovered. It appears that this "tetanus plus gas gangrene serum" in the strength used was not a marked success in the prevention of gas gangrene, though there is no evidence that the addition of antitoxins of other anaerobes had any effect, good or bad, on the tetanus antitoxin.

Therapeutic Injections.

Specific treatment consists in the giving of tetanus antitoxin, which has the power of neutralizing the tetanus toxin with which it comes in contact. The problem in treatment is to bring about this contact in the fullest and speediest manner. Time is the all-important element in the treatment of tetanus.

The Tetanus Committee in their memorandum (from which we have just quoted) express the opinion that "in acute general tetanus the best method of treatment lies in the earliest possible administration of a large dose of antitoxin by the intrathecal route, repeated on the following day, combined with and followed on succeeding days by subcutaneous and intramuscular injections." In acute general tetanus the best results are obtained from very large doses of serum. From analyses of the figures in the last two series of 100 cases treated in home military hospitals no case can apparently be made out either for or against the intrathecal route. In each of these two series one patient did not receive therapeutic treatment with antitetanic serum, and died. Of the 99 patients in each series who received this treatment 74 recovered, and 25 died.

RESEARCH DEFENCE SOCIETY.

THE annual general meeting of the Research Defence Society was held on the afternoon of June 26th at the house of the Medical Society of London, when Viscount KNUTSFORD, chairman of the committee, presided. A report dealing with the work of the society during 1917 and 1918 was presented. It stated that many lectures and addresses were given, especially to soldiers, and a large quantity of literature was distributed. "But," the report continues, "the old sort of controversy has ceased, for the present at any rate, to be needed. There has been no urgent demand for our propaganda. The public has learned the value and the necessity of experiments on animals, and we cannot actively defend research unless it is actively attacked." It is recognized, however, that the society must be ready for any emergency such as that created by the second reading of the Dogs' Protection Bill last April. In connexion with this matter branches of the society held meetings in Dublin, Birmingham, and Portsmouth, a deputation was received at the Home Office, and literature stating the case against the bill was sent to M.P.'s and the newspapers. The offices of the society have been removed to the Medical Society of London, 11, Chandos Street, Cavendish Square, and the honorary secretary, Mr. Stephen Paget, has now for his colleague as assistant honorary secretary Major W. E. Elliot, R.A.M.C., M.C., M.P. for Lanark.

Lord KNUTSFORD said that the whole medical and surgical history of the war was a most complete and final answer to the antivivisection agitation. Few people now doubted the necessity for experiments on animals, and very few indeed were the experiments not performed mercifully and without pain. The society had done useful work, and though it could not declare dividends could show large profits. Early in the war it had helped to teach soldiers the great use of preventive measures, and its opponents had utterly failed to convince the soldier even with the bribery of a pound of chocolates.

Sir ANTHONY BOWLBY, K.C.B., K.C.M.G., K.C.V.O., spoke on experimental medicine and the sick and wounded in war. The British army, he said, had been the healthiest of all the armies engaged; its sick wastage was less than any other. The reasons for this were, in the first place, that the average man in this country was a cleanly animal, and understood and followed advice which was evidently reasonable; and, in the second place, that the Army Medical Service as a body of experts trained in hygiene and preventive medicine was unequalled in any country in the world. Every one was aware of the small incidence of enteric fever in the war, but there were

people who were trying to explain away the value of the prophylactic inoculation by saying that the comparative freedom from enteric was due not to inoculation but to improved hygiene. Even were this true the fact would remain that the hygiene of to-day was based upon the experimental medicine of yesterday; but he was not content to leave it at that, and he affirmed with positiveness that preventive inoculation was to a very large extent the real cause of the immunity. While it was impossible, because unjustifiable, to carry out experiments on bodies of men by inoculating some and not others, the case was proved to demonstration by the unfortunate instance of the French troops who, in the early days of the war, hurrying to save their frontier, went out uninoculated. The result was that between August, 1914, and the following April there were as many cases of enteric fever in the French army as were recorded in the South African war. The strength of the army was wasted to the extent of 60,000 men. The great prevalence of tetanus was not anticipated at the beginning of the war, so that at first the supply of prophylactic serum was not proportionate to the number of troops. Supplies of antitetanic serum were obtained as quickly as possible, and by the end of October, 1914, large quantities became available. Its value was shown by the fall in the ratio of tetanus cases to the number of wounded. The ratio in September, 1914, was six times as high as it became in November, and nine times as high as it became in December. On experimental medicine which had been actually developed during the war a book might be written, and doubtless would be. A great deal had been learned with regard to gas gangrene, in particular that three organisms were concerned, which accounted for the comparative failure of serum treatment. Towards the end of the war a trivalent serum was produced which, in the opinion particularly of the French authorities, was of very great value, although it did not do enough. Valuable work on the mode of dissemination of trench fever was done as a result of the action of British and American volunteers, who subjected themselves to the attack of infected lice, whereby it was established that it was through lice that trench fever infection was conveyed. Energies were thereupon directed to a simple means of getting rid of the lice by treating the clothing by heat, and the incidence of trench fever rapidly came down, thanks to a very painful vivisection upon the willing human subject. Much had been learned also with regard to dysentery, both the amoebic and the bacillary form; it was found possible to prevent spread and to expedite cure. Dysentery first developed in the British army as a result of the success of the battle of the Somme in 1916, when the men entered into territory which had been occupied by Germans suffering from the disease. In conclusion, Sir Anthony mentioned the discovery of filter-passing organisms by Sir John Rose Bradford and Captains Wilson and Bashford. He had no doubt whatever that this discovery would throw a flood of light upon the whole of the zymotic diseases met with in civil life.

Major W. E. ELLIOT, M.P., in seconding a vote of thanks to Sir Anthony Bowlby (which had been moved in a few words by Sir FREDERICK MACMILLAN), said that the regimental medical officers were most grateful for the work done in the laboratories at the base. He was an eye witness of the value of inoculation against typhoid. His own regiment was sent up the trenches in the Ypres salient in February, 1915, and, warned by the medical authorities, the step was taken of inoculating practically all the men against typhoid; in his own regiment there was not a single case, and in the division not more than half a dozen, and that in a region where typhoid had been prevalent. He also paid a tribute to the volunteers in the trench fever experiment who had subjected themselves to the great discomfort and risk of an attack by lice. It was intolerable that men who had manifested so great a desire to be of service to their fellow creatures should have mud thrown at them by the unthinking and the prejudiced.

THE first Scandinavian Congress on Pediatrics is to be held at Copenhagen on August 15th and 16th. The chief subject proposed for discussion is the classification and treatment of acute digestive disturbance in artificial feeding. The general secretary is Dr. A. H. Meyer, V. Boulevard 51, Copenhagen B.

British Medical Journal.

SATURDAY, JULY 5TH, 1919.

PEACE AND SOCIAL JUSTICE.

THE signature at Versailles on June 28th of the conditions of peace by the German delegates "without," as they aver, "mental reservation," may be reckoned to have brought the European war to an end, for when the instigator and chief supporter of the aggression admits defeat his abettors, it may be assumed, will quickly follow his example. The date of ratification remains uncertain, but it is probable that the war will be legally and technically over on August 4th, the fifth anniversary of its commencement.

M. Clemenceau, one of the chief makers of the peace, in his speech when presenting the text of the Treaty to the French Assembly, characteristically treated it as an instrument for removing obstacles and clearing the ground for the real tasks of reconstruction. We find General Smuts, too, describing the document as simply the liquidation of the war situation in the world, and asserting that a new spirit of generosity and humanity born in the hearts of the people in this great hour of common suffering and sorrow can alone heal the wounds which have been inflicted on the body of Christendom. While we may agree, we may yet claim that this treaty contains two parts which do foreshadow the new spirit among the people which General Smuts desires. The one is the disappearance of the theory of the balance of power and its replacement by the Covenant; the other is the establishment of an international conference, with a permanent executive, for the amelioration of the conditions of work-people and the adjustment of their relations with employers in all countries. The Covenant of the League of Nations is an attempt to promote international co-operation and achieve international peace and security by, to put it shortly, the establishment of international law as the actual rule of conduct among governments; with a tribunal for promoting this much-to-be-desired consummation. The original members of the League of Nations signatory of the treaty number thirty-two, and thirteen other States are invited to accede to the Covenant. The League will act through an assembly and a council, with a permanent secretariat. The assembly will consist of representatives of the members of the League; its work will be, in the main, done by a smaller body, the Council, consisting of representatives of the principal allied and associated powers, together with representatives, selected by the assembly from time to time, of four other members of the League.

So much must be said to make clear the paragraphs of the treaty which affect medicine and hygiene. They are to be found in the thirteenth part, which declares that universal peace can be established only if based upon social justice. It sets out the several respects in which conditions of labour involve injustice, hardship, and privation, producing unrest so great that the peace and harmony of the world are imperilled. The reforms needed are said to be the regulation of the hours of work, including the establishment of a maximum working day and week, the regulation of the labour supply, the prevention of unemployment, the provision of an adequate living wage, the protection of

the worker against sickness, disease and injury arising out of his employment, the protection of children, young persons and women, and provision for old age and injury. Failure of any nation to adopt humane conditions of labour is, the treaty declares, the obstacle in the way of other nations which desire to improve the conditions in their own countries. The treaty therefore sets up a permanent organization consisting of original members of the League of Nations and such other nations as may eventually be admitted to the League. It provides for the meeting of a General Conference of representatives of the members at least once a year; it will be composed of four representatives of each of the members, of whom two will be Government delegates and two persons representing respectively employers and the work-people of each of the members. There is to be established also an International Labour Office controlled by a governing body of twenty-four persons, consisting of twelve persons representing the Governments, six persons elected to represent the employers, and six to represent the workers. The delegates at the Conference may be accompanied by expert advisers, and technical assessors may be added to any committee appointed. Any of the members—that is to say, any of the States—will have the right to make complaint to the International Labour Office to the effect that another member is not carrying out a convention into which it has entered, and any industrial association of employers or of workers may make similar representations. If the governing body of the Labour Office thinks there is ground for investigation it will take steps to obtain the appointment by the Secretary-General of the League of Nations of a commission of inquiry, which will present a report on the validity of the complaint and indicate measures of an economic character against the defaulting government. The report will be communicated to each of the governments concerned by the Secretary-General. Any government which refuses to accept the recommendations may appeal to the permanent court of international justice.

The first annual meeting of the general labour conference will take place in Washington this year; it will be organized by an International Organizing Committee of seven members appointed by the United States of America, Great Britain, France, Italy, Japan, Belgium and Switzerland. The subjects for consideration will be the application of the principle of the eight-hours day or the forty-eight hours week; the question of preventing or providing against unemployment; matters concerning women's employment before and after childbirth, including the question of maternity benefit, the employment of women during the night and in unhealthy processes, and the conditions which should regulate the employment of children, including the minimum age of employment, and their employment during the night and in unhealthy processes. In particular, proposals will be made for the extension and application of the international conventions adopted at Berne in 1906 with regard to the prohibition of night work for women employed in industry and the discontinuance of the use of white phosphorus in the manufacture of matches.

Among the general principles enunciated are, in addition to those already mentioned, the abolition of child labour, and the imposition of such limitations on the labour of young persons as shall permit the continuation of their education and their proper physical development. Further, it is laid down that men and women should receive equal remuneration for work of equal value, and that each state should make

provision for a system of inspection in which women should take part in order to ensure the enforcement of the laws and regulations for the protection of the employed. These methods and principles, it is admitted, are neither complete nor final, but the high contracting parties believe them well fitted to guide the policy of the League of Nations.

If the machinery of the Covenant proves strong enough—and, so far as written engagements can go, it could hardly be made stronger—this part of the treaty may achieve great results, for, as we pointed out soon after the armistice, wages and the hours of work are the two great causes of the conflict between labour and capital. Could these disputes be settled by methods accepted by both parties as reasonable, a vast benefit would be conferred on humanity. We believe it possible that medicine may play a beneficent part in achieving this end, but for that a wide conception of the relations of medicine to industry is necessary.

THE SIGNIFICANCE OF THE CEREBRAL CORTEX.

PROFESSOR ELLIOT SMITH'S Croonian Lectures on the significance of the cerebral cortex, the publication of abstracts of which is concluded in this issue of the JOURNAL, comprise one of the most valuable contributions that British medicine has recently made to the study of the complex problem of the functions of the brain. For although Professor Elliot Smith is essentially an anatomist, and has gained his high reputation by anatomical investigations, these lectures are concerned largely with the physiological significance of the different divisions of the nervous system, and especially with the question of function as far as it can be deduced from the comparative anatomy and the evolution of the brain.

Inference of function from structure alone is not always reliable, and, as many of the views expressed in the lectures are influenced by other hypotheses that have not yet received sufficient independent confirmation, the distinguished author will not expect unreserved acceptance. He has, however, taken the opportunity of collating in an easily accessible form some results of the extensive researches made within recent years into the comparative anatomy of the brain, and he has also given us a working plan of the nervous machine as a whole. This plan is very welcome, and cannot fail to influence thought and research into the complex problem of cerebral function.

The lectures were inspired throughout by a vivid realization of the theory of evolution. Professor Elliot Smith pointed out that in the primitive vertebrate smell was the dominant sense; the only representative of the cerebral cortex was simply a receptive centre for smell impressions and a mechanism through which the animal's behaviour could be influenced by such stimuli. This primitive olfactory area was connected with the hypothalamus, which attained a relatively enormous development in the lower vertebrates. As this structure sent numerous descending tracts to the more caudal segments of the nervous system, smell impressions not only excited pursuit of food, but, by stimulating visceral and vasomotor centres, influenced the structures concerned in swallowing and digestion; this ensured an anticipatory preparation for the food that was sought. The hypothalamus was consequently an important centre for the correlation of olfactory impulses with visceral functions; and indirectly also, since the hypophysis, or pituitary body, which is developed from it has an important part in controlling the metabolic activities

of the body. This rudimentary cortex which received olfactory impressions was also the centre whereby the affective aspect of smell impressions was appreciated, since the olfactory tracts, unlike other sensory paths, enter the cortex directly, and not as these other sensory paths do, through the optic thalamus, which Dr. Head regards as the great affective sensory organ.

The original cortex was therefore mainly an organ for appreciating the presence, and the attractiveness or unattractiveness, of objects that affected the sense of smell, and it was consequently the chief arbiter in the primitive animal's behaviour; but it was also the organ by which the affective tone of olfactory impressions connected together a sequence of events, so that the various incidents of a long series of experiences became united to form part of a consecutive consciousness. In this way it made possible the first rudiment of consciousness, and the reference of sensations to happenings in the external world. The sense of smell consequently represents the germ of all the higher psychical powers.

But other senses endowed with spatial qualities which permit more accurate reaction to the environment, as deep sensibility, cutaneous sensibility, and vision, soon came into play and provided a powerful stimulus to the development and growth of the brain. The thalamic nuclei, which first receive these impressions, increased enormously in size, and from them tracts of fibres ascended to the lateral edge of the primitive cortex, which then underwent a corresponding development and bulged into the lateral ventricle. This new structure, which Professor Elliot Smith terms the hypopallium, is the first representative of the complete cortex, as in it visual, auditory, and cutaneous impressions could be correlated and so play a combined part in controlling the behaviour of the animal. Through it the reptile, for instance, acquired the power of associating the informations obtained by touch, hearing and vision, and of performing acts of discrimination in which these senses take a definite part.

The hypopallium was, however, but an imperfect instrument, and was converted into part of the corpus striatum as it was gradually superseded by the development of the more highly organized neopallium from the adjoining part of the external surface of the brain. It is the neopallium which constitutes the greater part of the cerebral hemispheres of the higher mammals. The appreciation of spatial relations and the power of discrimination became possible only as it developed in response to the corticalward flow of other and more varied sense impressions, endowed with spatial qualities which could be there psychically integrated. When as a result of this the higher mammal acquires a conception of space, the conscious recognition of posture and of movement, and the power of appreciating spatial relations, it began to assume control over its movements. Then, too, the animal was able to learn to perform complex and skilled acts, but only because the sensory and visual centres of the neopallium provided it with the knowledge of posture and the physiological dispositions without which these functions would be impossible.

By a further development along these lines, and especially by the correlation and integration of sense impressions of various origins, the animal with a neopallium acquired ideas of the size, of the shape, and of the weight of objects, and of their position in space in relation to each other and to itself. It is in this way that discriminative sensibility, which is one of the essential functions of the human cortex, was

acquired, and that the intellectual functions of the cortex developed. As the lecturer insisted, the real functions of the cortex are of a psychical nature.

TEMPORARY COMMISSIONS IN THE R.A.M.C.

In our last issue we announced the terms offered by the War Office to candidates for temporary commissions in the R.A.M.C. Medical officers are needed to replace others who have urgent claims for demobilization, and also to serve in India. The invitation was addressed both to newly qualified men and to medical officers who have served before. The former will be commissioned as lieutenants and the latter in their previous rank; the period of engagement is for one year or until no longer required, whichever shall first happen. Consolidated pay will be given at the rate of £550 a year, with rations or allowance in lieu thereof, and an outfit allowance to officers commissioned for the first time. No additional emoluments of any kind will be given, and no gratuity will be issuable on termination of service, but there will be the usual travelling allowance and expenses when travelling on duty. Candidates must be fit for general service at home or abroad. The junior ranks of the Territorial Force and Special Reserve will receive the same rates of pay as temporary officers. The announcement, which appeared also in the lay press last week, made no allusion to the position of medical officers now holding temporary commissions in the R.A.M.C. At the present time temporary medical officers in the R.A.M.C. are serving under a contract with the War Office, the period of such service being "until the termination of the present emergency, or until [their] services are no longer required, whichever shall first happen." We understand that the Army Medical Department is advised that in all probability "the present emergency" will be officially declared to terminate on August 4th, 1919. In addition to their consolidated pay of 24s. a day and a gratuity of £60 for each year or part thereof it is to be noted that temporary medical officers in common with other officers have been receiving since February last the Army of Occupation bonus of £72 16s. a year; thus their receipts at the present time are: Pay, £438; gratuity, £60; occupation bonus, £72 16s.; total, £570 16s. The Army of Occupation bonus is paid at the prescribed rates to every officer retained in the army anywhere, or for purposes of demobilization. On the day the present emergency ceases (probably August 4th, 1919) the temporary R.A.M.C. officer's contract automatically comes to an end in accordance with its terms. We are informed that that contract will not be renewed—it will, in fact, be no longer applicable when the emergency has been declared ended. Thus the War Office has no power to retain any man on the old contract after August 4th next. To those medical officers who wish to remain with the army the new contract is offered. The terms and conditions of the new contract are those outlined above and stated more fully in the JOURNAL of June 28th (p. 803). In the case of newly qualified practitioners joining for the first time, and of those who have served before, the period of service will commence on the day of joining for duty. In the case of medical officers now serving who desire to continue, the period of service will begin "as from August 4th, 1919, or the date of official termination of the war, whichever happens first." For all alike the period of service will continue until the expiration of twelve calendar months from its commencement, or until the officer's services are no longer required, whichever shall first happen. The new contract is offered to temporary R.A.M.C. officers now serving at contract rates of pay, and also to Captains and Lieutenants R.A.M.C., Special Reserve, and Territorial Force now serving. Beyond the £550 consolidated pay there will be no gratuity and no Army of Occupation bonus—that is to say, temporarily commissioned officers accepting the new

contract will receive £20 16s. a year less than, owing to the occupation bonus, they receive at the present moment. No temporary medical officer will, however, be retained against his will after the present emergency has officially terminated. With regard to the number of medical officers already demobilized, we understand that the total up to June 24th was 8,260.

THE DIRECTORS OF HYGIENE AND PATHOLOGY, A.M.S.

In the JOURNAL of May 3rd, 1919, we gave an account of the far-reaching scheme approved by the Army Council for the creation of directorates of hygiene and pathology, to form a part of the War Office organization of the Army Medical Department. The directorates will be directly responsible to the Director-General Army Medical Services for all matters relating to their respective spheres, and they will take over from the various branches of the Army Medical Department the sections of this work hitherto distributed between those branches. The scheme provides for the appointment of a director of hygiene and a director of pathology, these appointments carrying with them the rank of brigadier-general—a rank not, we believe, previously held by a medical officer. The post of director of hygiene or pathology may, however, be held by a major-general if selected for promotion to that rank in the ordinary course. It is now announced in the *London Gazette* of July 1st, that Colonel Sir William Horrocks, K.C.M.G., C.B., is appointed temporary director of hygiene at the War Office, and to be temporary brigadier-general whilst so employed; and that Major-General Sir William Leishman, K.C.M.G., C.B., F.R.S., is appointed director of pathology at the War Office. That these distinguished officers would be selected as the first holders of the new posts was, we may add, a foregone conclusion; in formulating the scheme for directorates of hygiene and pathology, Sir John Goodwin received from them expert assistance.

THE KINEMA IN MEDICAL EDUCATION.

The demonstration by Major E. Distin Maddick at a recent meeting of the Anatomical Society in London has served to draw attention again to the possibilities of the moving film as a means of lightening the task of the modern medical student. Those who are familiar with the history of the Scala Theatre will know that Major Maddick is a medical man who has made kinematic photography his hobby, and was amongst the first to realize the educative as well as entertaining value of the moving film. It is therefore not surprising to find him applying the ample means at his command to the problems he had to face when a student at St. Thomas's Hospital, some thirty years ago. His first medical film, so far as we are aware, was one shown in the theatre of the Royal College of Surgeons of England during last winter to illustrate Professor David Ligat's lecture on abdominal reflexes. In that lecture the whole audience could clearly see the elicitation of various responses which, under ordinary circumstances, would be visible only to the spectators immediately surrounding the patient. The films which Major Maddick exhibited at the Anatomical Society, and which were prepared from specimens in the museum of the Royal College of Surgeons, were intended to show that the film method has a place in the routine work of a medical school as well as in the exemplification and study of clinical conditions and surgical operations. By a species of "trick" photography a skeleton appears on the screen, kindly presents its various features to the audience, and then begins to undress, as it were, until only the spinal column is left. Then follows the reconstruction, where bone after bone appears, turns its various facets and markings in magnified details to the audience and then flits into its proper place in the skeleton. The student has an opportunity of seeing the bones of the skull assemble and enter into their respective positions in the

architecture of the cranium. The films are designed as an introduction to the study of the human skeleton and will prove of most value in imparting an elementary knowledge to lay audiences and will no doubt prove popular with the armies on the Rhine and in France. No one knows better than Major Maddick that such films cannot replace the study of actual bones, but they will serve to lighten the tedium of lectures on osteology. On the other hand, suitably prepared films will make it possible to bring before medical students certain subjects which are scamped at present because teachers have not the means of demonstrating them to lecture audiences—namely, the action of living muscles in standing, walking, breathing, etc. There can be no doubt that films will find a permanent place in the armamentarium of teachers in every department of medical education, because in no other way can an essential property of living matter be represented—namely, *movement*.

LIQUOR CONTROL OR PROHIBITION.

THE Council of the British Medical Association, at its meeting on June 25th, resolved to support a memorial, signed by a number of eminent members of the profession in England, with a slight modification, in the following terms: "In view of the great advantages to the efficiency and well-being of the nation, and to public health and order, which have followed the restrictions placed on the sale of intoxicating liquor during the war, the undersigned earnestly request His Majesty's Government to maintain reasonable restrictions until a permanent measure of reform has been enacted by Parliament." The position of the Government in the matter was clearly stated by the chairman of the Central Control Board when he met the deputation from the Temperance Council of Christian Churches on June 14th. He said that there could be no question of continuing the war powers, and that a new system, with parliamentary and ministerial control, would have to be set up. He went on to say that he believed that a large majority of the people would be in favour of setting up a form of Government control based upon recent experience, which, while ensuring improvement compared with the pre-war period, would not interfere with the habits, customs, and pleasures of the people to an undue extent. That is to say, he was in favour of the imposition of the minimum restrictions necessary to obtain the desired result. Most people will agree with him that the conditions of the present time offer a unique opportunity for achieving a permanent advance. There is at present no machinery for the maintenance in future of restrictions other than those in force before the war; but Mr. Bonar Law, in announcing on July 2nd that the existence of the Central Control Board was to be terminated, said that a bill was shortly to be introduced to set up a Commission under a Minister responsible to Parliament. The British workman seems very indisposed to accept restrictions on the quality of beer, and the gravity of beer is, in fact, to be increased. The same motive appears to underlie the action of the South Wales Branch of the Working Men's Club and Institute Union in purchasing a brewery, which they intend to conduct themselves. They paid £20,000, raised in £1 shares among the 20,000 members in the seventy clubs constituting the branch. In the United States a remarkable situation has been brought about. Under the war-time prohibition act the whole country was to become "dry" on Tuesday last, July 1st; that is to say, the manufacture, sale, or transport of intoxicating liquor within the United States, and importation or exportation, was prohibited as from that day; but Congress failed to provide machinery for enforcing the law in time, and the delay may last a week or more. Further, the law will cease to be operative when demobilization is complete, and this, it is said, may occur within seven or eight weeks. But even should this happen, the prohibition regulations will become permanent six months hence, for

an amendment of the Federal Constitution enforcing the same prohibition as from January, 1920, has been sanctioned by the requisite majority of State Legislatures. Before recent events prohibition in one form or another had been in force in thirty-four states out of the forty-eight. Sixteen were "bone dry"—that is, intoxicating liquor could neither be sold in them nor imported; eighteen were "dry," and in them liquor might not be sold but could be imported. In the other fourteen states there was no State legislation, but by the operation of local option many areas in most of them were "dry" or "bone dry"—in Idaho a citizen may be sent to prison for having intoxicating liquor in his cellar. In Canada the War Measures Act of the Federal Government prohibits transport and import. Moreover, eight out of the nine provinces have been voted "dry" by local legislation; in the ninth (Ontario) a referendum is being taken. In the province of Quebec a referendum is to be taken on the question whether beer and wine of very low alcoholic strength should be allowed, and in the United States brewers are fighting on this programme. They maintain that alcoholic beverages no stronger than 2.75 should not be classed as intoxicating liquors, and this point is to be decided by the courts. This is apparently about 1 per cent. lower than the average of German beers, about 2 per cent. lower than English mild beer, and about 1 per cent. more than ordinary stone ginger beer. Professor Stephen Leacock has an article in the *National Review* for this month—amusing in form, but serious in purpose as becomes the head of the department of political economy at McGill—in which he expresses the opinion that the federal prohibition law will, without doubt, come into force next January; but he foretells a revolt some day, with another campaign ending in repeal. In this country, although the American prohibitionists believe that they will get Great Britain "dry" within two years, we shall probably avoid extreme action. The medical memorial, which now has the support of the Council of the British Medical Association, may be interpreted as a request to the Government to introduce legislation at an early date, and it will perhaps be not unsafe to assume that the restriction mainly had in view is the limitation of the hours of sale. It may possibly be assumed also that the memorialists desire to discourage public-houses with standing bars and to encourage taverns where people may get a meal and wash it down with water, still or aerated, or infusions of tea or coffee, or alcoholic beverages, as they may prefer.

PROFESSIONAL CONFIDENCE.

EVERY now and again a judge at assizes takes the opportunity of pillorying a medical man for adhering to the principle of professional confidence. The principle rests upon the sure foundations of justice and humanity, and the nation is not likely to allow it to be overridden by *obiter dicta* from the bench. In December, 1914, Mr. Justice Avory made some observations at the Birmingham Assizes in relation to a case in which it was alleged that an illegal operation had been performed to procure abortion. He said that in such a case if the medical man attending considered that the woman was likely to die, so that her evidence would be lost, it was his duty to communicate with the authorities. He also said: "It may be the moral duty of the medical man, even in cases where the patient is not dying, or not likely to recover, to communicate with the authorities when he sees good reason to believe that a criminal offence has been committed." These observations led the British Medical Association to go into the matter once more, and on May 3rd, 1915, a deputation had an interview with the Lord Chief Justice; the discussion at the interview turned upon the duty of a medical man in a case of suspected criminal abortion. The Council at that time expressed the opinion that a medical practitioner should not under any circumstances disclose voluntarily without

the patient's consent information which he has obtained from that patient in the exercise of his profession, and stated that it had been legally advised that the State had no right to claim that such an obligation rests upon a medical practitioner. The Royal College of Physicians at about the same time arrived at a similar conclusion, stating that it had been advised that a medical practitioner is under no legal obligation either to urge the patient to make a statement, or if she refuses to do so, to take any further action. As will be seen from the letter from Sir John Tweedy published in another column, Mr. Justice Bray, at the Worcester Assizes, appears from the report in the *Worcester Journal* to have gone further than Mr. Justice Avory. In the case at Worcester the prosecution was for concealment of birth by an unmarried woman, and the doctor who was in attendance, after considering the matter, came to the conclusion that his duty to his patient precluded him from making any communication to the police. Mr. Justice Bray, somewhat imprudently as we think, committed himself, in a special address to the doctor, to the statement that professional confidence did not prevent the doctor in this case from giving information to the police, and that the view taken by the doctor was wrong. We believe that the doctor was right and that the judge was wrong, and this, we gather, is the view taken by the Medical Defence Union, which had been consulted by the doctor. This also was the view of Mr. Justice Hawkins, generally reckoned a strong judge; he said that for a doctor, called in to attend a woman and give her medical advice, to report the fact to the Public Prosecutor "would be a monstrous cruelty." This, again, was an *obiter dictum*, but it comes very much nearer the view of the medical profession in all ages and in all countries than the personal views expressed by Mr. Justice Avory and Mr. Justice Bray. There are cases in which a judge may be led away into believing that a doctor ought to violate the principle, but hard cases make bad law, and in the interests of society, justice, and humanity the principle of professional confidence must be upheld.

THE MINISTRY OF HEALTH.

THE Ministry of Health, with Dr. Addison as the first Minister, came into existence on July 1st; on that day all the powers and duties of the Local Government Board passed to the new Ministry. The question of the transfer to other Government departments of existing powers or duties not relating to the health of the people is reserved for consideration and decision at an early date. Communications should in future be addressed to the Secretary, Ministry of Health, Whitehall, S.W. All the powers and duties of the Insurance Commissioners passed to the Ministry of Health on the same day, and communications on insurance matters should in future be addressed to the Controller, Insurance Department, Ministry of Health, Wellington House, Buckingham Gate, S.W. The six commissionerships borne upon the estimates of the Commission are abolished, and the higher administrative staff, including the secretary and the six assistant secretaries to the Local Government Board and the secretary and the three assistant secretaries to the Insurance Commissioners, will be replaced. The Permanent Secretaries to the Ministry of Health are Sir R. L. Morant, First Secretary; Sir John Anderson, Second Secretary; Sir W. S. Kinnear, Controller of the Health Insurance Department; Mr. E. Hackforth, Deputy Controller of the Health Insurance Department; Sir A. V. Symonds, Mr. L. G. Brock, Mr. E. R. Forber, Mr. I. G. Gibbon, Mr. R. W. Harris, Mr. C. Knight, Mr. A. B. MacLachlan, Mr. H. O. Stutchbury, Mr. F. L. Turner, Mr. F. J. Willis, Mr. A. Woodgate, will be Assistant Secretaries to the Ministry of Health. Mr. M. L. Gwyer has been appointed legal adviser and solicitor in place of Sir J. Lithiby, who is retiring. Mr. M. Heseltine has been appointed Secretary to the Consultative Councils to be

set up. The medical staff of the Ministry of Health will be announced shortly. Sir Alfred Watson, hitherto Chief Actuary to the National Insurance Committee, has been appointed to a new post of Government Actuary. Steps have been taken to set up a Board of Health for Wales; the first members of the board, pending the settlement of the full scope of their duties, will exercise the functions hitherto performed by the Welsh Insurance Commissioners. Communications with reference to matters within the former province of the Welsh Insurance Commissioners should be addressed to the Secretary, Welsh Board of Health, Cardiff.

INCOME LIMIT FOR INSURED PERSONS.

A REPORT was printed in the *JOURNAL* of June 7th, p. 715, of a deputation from the Council of the British Medical Association to Major Astor, chairman of the Joint Committee for National Insurance, on the subject of the foreshadowed bill to change from £160 to £250 the limit of remuneration affecting the compulsory insurance of non-manual workers. The report was accompanied by an official statement by the Government. On June 26th a bill was introduced into the House of Commons by Major Astor giving effect to the Government proposals. It is entitled "A bill to alter the rate of remuneration for the purposes of exception from insurance under the National Insurance (Health) Acts, 1911 to 1918, and for purposes in connexion therewith." The bill consists of two clauses and is prefaced by the following memorandum: "Under the National Insurance Acts as they stand at present all manual workers are required to be insured without regard to their rate of remuneration, but persons employed otherwise than by way of manual labour are not insurable as employed contributors if their rate of remuneration exceeds £160 a year. The present limit of £160 a year was fixed in 1911, and, owing to the general increase in salaries and wages, it does not now represent the same dividing line between non-manual workers included in, and excluded from, insurance. The bill proposes the substitution of £250 for the previous limit as affording the closest possible approximation to the extent to which wages have risen in the case of the classes of non-manual workers affected." It is proposed that the measure shall come into operation as from June 30th, 1919. The second reading of the bill is fixed for Monday next. It is, of course, easy to understand why the Government is in haste to carry through this legislation; but the medical profession has a right to ask why it was not consulted long ago, for the position now brought about ought to have been foreseen.

CONFERENCE ON INFANT WELFARE.

A NATIONAL Conference on Infant Welfare was held at the Kingsway Hall, London, on July 1st, 2nd, and 3rd, under the auspices of the National Association for the Prevention of Infant Mortality. Dr. Addison presided at the opening session, when there was a large attendance of delegates from the various interested associations and local bodies all over the country. Dr. Addison said that it was recognized that one of the first duties of the new Ministry of Health must be to develop and extend the ante-natal and infant care services; of existing needs the chief was for a great many more maternity hospitals or homes of the right kind. By maternity homes he meant places small in size and simple in equipment for giving assistance in normal cases; these were required not only in large centres of population, but also in small towns and country districts. Linked up with these institutions there should be a more generous provision of maternity hospitals where skilled assistance for difficult cases would be available. In order to get the best results the co-operation of midwives throughout the country must be secured. Dr. Amand Routh followed with an address on the

causes of ante-natal, natal, and neo-natal mortality. In two British lying-in hospitals in a recent year, out of 119 cases of ante-partum haemorrhages sent in for treatment 8.4 per cent. of the mothers and 75 per cent. of the children died. What, then, must be the mortality where there was no expert medical advice during early labour, and no available lying-in institution where a sudden emergency could be dealt with? Nothing but adequate provision of ante-natal clinics and lying-in institutions would enable these and other complications of pregnancy to be discovered and treated. Mr. Eardley Holland, F.R.C.S., expressed the view that the time had come to make an estimate of the results to be expected from ante-natal care. He believed that the present rate of fetal mortality could be reduced by one-half; but this result could not be obtained by ante-natal methods alone, for not only were the majority of fetal deaths beyond the realm of ante-natal care, being the direct result of the accidents and complications of labour, but ante-natal care itself depended for its successful fulfilment on a high standard of midwifery. Out of the 50 per cent. of fetal deaths theoretically preventable he concluded that rather more than one-third (principally the syphilitic cases) could be prevented by ante-natal methods alone, rather more than another third (complications of labour) by intra-natal methods alone, and the remainder (cases of toxæmia, of pregnancy, and certain complications of labour) by combined ante-natal and intra-natal methods. Dr. J. J. Buchan, M.O.H. Bradford, urged that syphilis and gonorrhoea in pregnancy ought without delay to be made notifiable, and some power given to enforce adequate treatment.

ORTHOPAEDICS IN LONDON.

SIR ROBERT JONES has accepted the invitation of the Governors and Staff of St. Thomas's Hospital, London, to become Director of Orthopaedics to the hospital. He will co-ordinate and give general supervision to the various activities of the department, and will also give demonstrations and lectures. Sir Robert Jones has also accepted the invitation of the Royal National Orthopaedic Hospital to become a member of its surgical staff in order to assist in the extension of the facilities for orthopaedic surgery in London. We hope that this awakening of interest will lead to the establishment of adequate post-graduate instruction and a school of orthopaedics worthy of the metropolis. Sir Robert Jones will combine these new duties with those of the offices he holds in Liverpool, where he is lecturer on orthopaedic surgery in the University, and orthopaedic surgeon to the Royal Infirmary as well as to the Royal Southern Hospital.

LORD RAYLEIGH.

LORD RAYLEIGH, who died on June 30th in his 77th year, was one of the greatest men of science in the generation which is passing away. He was Senior Wrangler and Smith's prizeman in 1865, thus at an early age proving that he possessed both application and mathematical insight. He became a Fellow of the Royal Society in 1873, and succeeded his father as third baron in the same year. He succeeded Clerk Maxwell as director of the Cavendish Laboratory, Cambridge, in 1879, and was himself succeeded in 1884 by Sir J. J. Thomson; in 1908 he was elected Chancellor of the University. Lord Rayleigh's early investigations were in connexion with the theory of sound, but there was no department of physics to which he did not contribute. In 1885, while engaged on experiments on the density of gases, he made observations which led up to the identification of argon by the late Sir William Ramsay, and so to the discovery of a new group of inert monatomic gases. In 1885 he became secretary of the Royal Society, and twenty years later its president. Many other honours came to him during his long career. When the Order of Merit was founded

in 1902 he was among the first list of recipients, and in 1904 he received the Nobel prize for physics. He was one of the twelve foreign associates of the French Academy of Sciences, and held many other honours from foreign academies. Lord Rayleigh was an instance of the combination of the highest scientific attainments with practical administrative ability. He was one of the largest farmers in the country; he converted an estate of rough soil in Essex into good farming land, and was one of the first to show that the supply of milk to London might be conducted profitably with the observance of all scientific precautions to ensure purity. He is succeeded by his son, the Hon. R. J. Strutt, F.R.S., Professor of Physics in the Imperial College of Science, whose researches into the origin of radium and the measurement of geological time by radio-active data afford a striking instance of the inheritance of specialized ability.

THE HALF-YEARLY INDEXES.

THE usual half-yearly indexes to the JOURNAL and to the SUPPLEMENT have been prepared and will be printed. They will, however, not be issued with all copies of the JOURNAL. Any member or subscriber who desires to have one or both of the indexes can obtain a copy of what he wants, post free, by sending a post-card notifying his desire to the Acting Financial Secretary and Business Manager, British Medical Association, 429, Strand, W.C.2. Such copies will be dispatched shortly after the middle of July.

Medical Notes in Parliament.

The "Dogs' Protection" Bill.

THE MEASURE REJECTED.

THE "Dogs' Protection" Bill, which was introduced by Sir Frederick Banbury and was greatly altered on report at the instance of the Government, came up for third reading in the House of Commons on June 27th. The third reading was formally proposed by Sir F. Banbury, who reserved his right of speech until later.

Sir Watson Cheyne asked the House to say that it declined to proceed further with the measure, which would impose an unnecessary and vexatious obstacle to medical research. While recognizing the value of the amendment carried by the Government as an alternative to the bill itself, he held that it introduced a very great obstacle to research. The task of getting the additional certificate which was required as the bill now stood ought not to be imposed. Another reason why he objected to the bill was that it involved a very grave censure upon a large body of honourable men and on a great profession; for this censure there was no justification. The bill in its present form implied that cruelty was being practised, and that the medical profession delighted in torture and could not be trusted to deal with animals. At one time he held certificates and licences, and later he became one of those responsible for signing certificates. At the time that he sought licences he found it difficult to get the second signature, and when the certificates were obtained they had to be taken to the Home Office, and used to lie there for some considerable time before they were gone through. Under the bill it was proposed to have further restrictions and another certificate, which was to be got in order to show that no other animal was possible for the experiment except a dog. It would be necessary not only to persuade the informed people but also the Home Secretary, who perhaps knew little about this particular department of science, that the experiment was necessary. Thus a very great difficulty would be added to many existing difficulties, and delay would be caused. In maintaining that the fresh restrictions were unnecessary, Sir Watson urged that those in responsible positions as to these matters lived up to their responsibility. He had known the danger of delay, and had tried to make the decision the same day; but he had more than once refused certificates, either that he thought the research was not a good one, or because he thought the man seeking to undertake it had not had sufficient preliminary education for such important work. The suggestion of the Anti-vivisection Society, that the duty of deciding as to the

grant of certificates was not satisfactorily discharged, was disgraceful. Sir Watson next referred to the principal arguments raised against experiments on dogs. It was said that if there was anything of value to be learned it could be obtained by observations on patients and by *post-mortem* examination. As an illustration how wrong that opinion was, Sir Watson spoke of the situation which occurred when the Germans first used gas. Personally, he was much alarmed, for if the enemy had gas enough, it seemed to him they could easily destroy whole armies. How was that risk to be dealt with? Were the authorities to sit down and wait while the doctors watched gassed men and waited for a *post-mortem* examination? Had experiments on dogs not been made much valuable time would have been wasted and many lives would have been lost. But certain experiments on animals—dogs and goats—were made and complete protection was quickly found against the gas. The history of medicine was full of instances of prolonged observations of patients and of *post-mortem* examination, without result. Yet results had been achieved almost at once by experiments on animals. In conclusion, he urged that at a time when health bills had just been placed on the Statute Book the sensible thing to do would be to sweep away restrictions instead of imposing fresh ones.

Sir Philip Magnus, in seconding the amendment, said that by the rejection of this bill Parliament would show its appreciation of the efforts that had been made by scientific men through researches to prevent and cure diseases. The bill was inconclusive and contradictory. For example, it appeared, as he read the first clause of the bill, that if some eminent surgeon desired to perform an experiment on a dog, which would relieve it of great pain and possibly save its life, he could not perform this experiment, however urgent, without a certificate from the Home Office.

Sir Frederick Banbury, replying to Sir Watson Cheyne, said that his speech would have been more relevant if the bill had come for third reading in the same state as when it passed its second reading. All that the bill now did was to say that a certificate must be given in the event of a dog being used for certain experiments. The Government, by submitting certain amendments on the last occasion and getting them carried, had really adopted the bill. He held that the course the Government was now proposing to take would be a breach of faith with the House of Commons.

Sir Henry Craik said that there was no use in splitting hairs on the third reading. The position of members was well known. Some thought that these experiments were justified, and others that they were not. Those in favour of them were prepared to oppose the bill in any form, even amended. Those who quite sincerely thought the experiments were not justified supported the bill on the ground that we had no right to use animals to the advantage of human beings. Sir Henry maintained that such a position as the latter could not be sustained.

Dr. Addison, Minister of Health, maintained that the action of the Government in opposing this bill was in accordance with ordinary parliamentary procedure. The Government, by having secured an amendment to the bill on the report stage, were not bound to say that it was one which as a whole the House should accept. The measure had been fully and carefully considered, and the Government recommended the House not to support the bill. At present, a licence must be held for any experiment, and it must be conducted in a licensed place. In the first place, therefore, everybody had to get a licence for himself, and for the premises; then the animal must be fully anaesthetized, and remain under the anaesthetic. That certificate (a) might be suspended. In the case of an operation, or if the animal was to be allowed to recover, certificate (b) must be obtained. In the case of a dog or a cat, the operator would have to get a further certificate in addition to (a) and (b) under the general licence; that was certificate (c). That was the existing position. Were they justified in imposing further restrictions on people who were already very much restricted, and especially as regards dogs, cats and horses? Had the restrictions been evaded, or improperly used? Had the existing scheme, which was very exacting, been found to be insufficient? No single case had been brought forward to show this. Had the scheme been insufficient to prevent cruelty? Sir Frederick Banbury had not brought forward a single case of the kind, and he could not do so. It was not a question of the opinion of the medical profession so much as whether a case should be made out for this change, or not. Sir Frederick Banbury had failed to show that existing arrangements were inadequate.

Sir John Butcher thought that the sole question was whether the demand for this additional certificate would

hamper research unduly. It had already been demanded in the case of operations upon horses, asses, and mules, and he had never heard that there was any difficulty in obtaining it when it was required. He claimed that this bill was called for, to complete the recommendations of the majority of the Royal Commission, and that the Government should stand by the amendment made by the Under Secretary for the Home Office. He objected to the transfer of the matter to Dr. Addison.

Mr. Ronald McNeill saw nothing improper in the transfer of a bill from the consideration of one department to that of another. He favoured the rejection of this bill, because if operations in this country by British scientists were prevented, the only result would be that dogs now painlessly put an end to at Battersea would be sold for a few shillings or a few pence, and sent over to Boulogne or Ostend, where they would be operated upon by foreign scientists instead of our own, and, so far as he knew, there was no law in other countries providing so much protection as dogs got here.

Lieut.-Colonel W. Guinness traversed the statement by Sir John Butcher as to the Royal Commission and its recommendations, which had been carried out by administrative action. All that the Royal Commission said was: "If any alteration is made in the existing procedure the majority of us would agree that the special enactments now applicable to horses, asses, and mules might be extended to dogs and also to cats." That was a very different thing from saying that the Royal Commission recommended a change in the law in this respect. It was quite true that during the report stage the bill was practically transformed, that it was less disastrous to medical science now, it was more than ever libellous on the medical profession.

Colonel Burn supported the bill for reasons which he stated on report.

The House divided, and Sir Watson Cheyne's amendment was carried by 101 votes to 62.

The End of the Local Government Board.

On a vote for a sum not exceeding £1,380,377 for Local Government Board charges, of which £655,000 had already been voted on account, Dr. Addison made his last speech on June 30th as President of the Local Government Board before becoming Minister of Health on July 1st. He explained that the vote would hereafter be incorporated in the vote for the Ministry of Health.

In a general review Dr. Addison, touching first on war services, mentioned the assistance which had been given to the troops and invalided men by the Poor Law infirmaries throughout the country. They had provided 75,000 beds for the service of the army; of these 22,000 were in the metropolitan area. He next recalled that in February last an inter-Parliament organization was set up at the War Office, Admiralty, and Air Board to prevent the spread of infectious diseases arising out of or during demobilization. The methods adopted had proved to be successful. The number of discharged tuberculous men in institutions on June 1st was 2,000; the number awaiting treatment was 354.

Referring to the outbreak of rabies, Dr. Addison said that 54 cases of persons who had been bitten had been notified. Arrangements had been made in various centres throughout the country for the supply of antirabic vaccine, and the Board was being advised by Sir David Semple, who had been a Director of the Pasteur Institute in India. Vaccine for the first 19 persons bitten was obtained from Paris; subsequently 24 were treated in England, 11 with vaccine prepared at the laboratory in this country. No cases had developed hydrophobia. With regard to influenza, Dr. Addison recalled that in the six months ended March 31st there were in England and Wales alone 136,000 deaths from influenza. The Local Government Board, acting with the Medical Research Committee, had formed a Standing Committee to conduct research and endeavour to prevent the infection being brought into this country. He did not venture to hold out any sanguine hope as to the results of what could be done in the near future, as a great deal of research and organized inquiry was necessary. Speaking of venereal diseases, Dr. Addison said there were at present in England and Wales 146 centres. In London, Birmingham, Nottingham, Leeds, Newcastle, Manchester, Salford, and Liverpool there were excellent centres, each treating more than 13,000 persons, but in a large number of centres they were not doing as well as they would in time. At the very least 1,000 centres were needed. The difficulty was to obtain a staff of people with the modern training arising out of the experience of the war. It would be quite useless to require compulsory notification until the organization of efficient and up-to-date methods for treatment had been substantially completely organized. Otherwise people would be driven wholesale into very imperfect methods and into the arms of the quack. A most important matter yet to work out was to get the centres conducted on such lines that people needing assistance would readily come to them. With regard to tuberculosis, Dr. Addison said that during the

last year the number of beds available for tuberculous cases had been increased by 1,500, but it was useless to expect to cope with the disease until the state of national housing was improved. At present there were proposals for 3,300 additional beds. The grants made last year for assistance in dealing with tuberculosis amounted to £383,000. The maternity and child welfare work was at present in the experimental stage; the work went hand in hand with an improved nursing service and an improved midwifery service, all of which would take time to develop, particularly with regard to the necessary personnel. The latest work to be developed was in connexion with the treatment of the blind. The committee which had been engaged on the subject since 1917, with regional committees, had made a full survey of the blind population of the country, had examined all the institutes where training was given, and the Government had recently sanctioned the provision of £125,000 this year, for which a supplementary estimate would be submitted, to be distributed in assisting the blind in workshops, in homes, in hospitals, for home teaching, and for miscellaneous services.

Dr. Addison devoted the remainder of his speech to a consideration of the difficulties encountered in respect of housing schemes, but spoke hopefully of the future.

Lieut.-Colonel Raw said that it was reckoned that tuberculosis was killing about 60,000 persons in this country every year, and it was estimated that a million people in Great Britain were at present affected by the disease. With the advent of the Ministry of Health a much greater effort would be made to stamp it out. He advocated much more generous treatment, and especially that facilities should be provided free at the national expense for the treatment of all persons in the early stages. He suggested that the Government should undertake some great educational campaign in this connexion and should take complete control of the milk supply.

Sir Montague Barlow said that the report of the Committee as to the treatment of tuberculous soldiers would be ready this week or early next week, and he urged that the matter should be taken in hand at once.

Major Astor, in reply, said that the total number of tuberculous soldiers who had been discharged in the United Kingdom was 35,000, and there were now in institutions undergoing treatment about 3,000. There were 300 soldiers and a large number of civilians waiting treatment. The army had vacated some buildings, but had brought back to this country men suffering from wounds, so that it had not been possible to get hold of as many institutions as would otherwise have been possible. As regards the number of deaths from tuberculosis, in 1914 the total was 38,000, and in 1917 it was 43,103. Those figures must not be taken too rigidly. He believed that diagnosis was improving, but the figures showed no diminution. Co-ordination at the centre under the new Ministry of Health would assist enormously in dealing with this disease. Without fresh legislation, Major Astor added, as regards tuberculosis, the department had gone on the lines that it was better to make provision for treating the population as a whole rather than to provide special machinery for tuberculous ex-soldiers, for example. The whole tendency would be against specializing for any department, their desire being to make their local authorities and local medical officers competent to deal with various problems that might arise.

After some further debate progress was reported.

Nurses' Registration Bill.

The Nurses' Registration Bill, introduced as a private measure by Major Barnett, was considered in the House of Commons on June 27th, on report, as amended by a Grand Committee. The Minister of Health, Dr. Addison, interposed at an early stage to say that the Government had considered the matter carefully since the bill passed through Committee, and had discussed it and the bill introduced in the House of Lords with the various parties interested, with the hope of obtaining agreement, but the conferences had convinced him that this was not possible. While everybody agreed that the registration of nurses was desirable and necessary, those who were interested in the two bills were not by any means agreed as to what was implied by registration. In some quarters it was thought that the authority responsible for registration should deal with the conditions of training—not only the standard reached, but the conditions and conduct of training. In the parallel case of the General Medical Council it laid down the standard attainable but did not conduct the medical schools. The conferences showed that some thought that the body responsible for the register should also control the conditions of employment, which, again, was a function quite apart from the semi-judicial purpose of such a body. He quite agreed with those who attached importance to the conditions of employment of nurses; nurses had been scandalously underpaid and grossly overworked, but that was not the function to be exercised by a semi-judicial body, which had to decide who had to be on the register. The differences on these and similar subjects were so great that it was impossible to bring about agreement. The controversy appeared to have been unfortunately mixed up with personal and sectional issues which could not be reconciled. On behalf of the Government he undertook at the earliest moment to introduce a measure providing for the registration of nurses. So far as possible he would consult the various parties as to its general and main purposes. Whilst on the one hand the Government could not saddle a registration authority with duties that did not properly

belong to it, nor promote the interests of any sectional institution, on the other hand it could deal with public interests. The Government was prepared to make proposals to give effect to registration as soon as possible, subject to the exigencies of the session. On that understanding he thought it might be for the convenience of the House if neither of these bills went any further. The Government was very cognizant of the tact and patience shown by Major Barnett who was in charge of this bill, but if it did go to the report stage that day, its chances of finding its way to the Statute Book would still be very small indeed. The offer of the Government was not accepted, and the debate continued until progress was reported.

Disability Pension.—Mr. Newbould asked, on June 24th, whether the Pensions Minister would explain why the 20 per cent. bonus was payable on disability pensions awarded under the warrants of 1917-18 and not on pensions under earlier warrants. Sir James Craig (Parliamentary Secretary to the Ministry) said that the Minister was looking into the matter and would be glad to answer in a week or two. A man who on demobilization and transfer to the Reserve was found to have a disability caused or aggravated by his military service was entitled to a pension or gratuity according to his incapacity. If he were refused a pension by the Ministry on the ground that his disability was neither caused nor aggravated by service he could appeal to the Pensions Appeal Tribunal. Mr. Hogge asked whether the assessment by the medical officer on demobilization as to the percentage of disability pension governed the pension, or whether it was decided later by the Ministry of Pensions without seeing the man. Sir James Craig said that in the first instance on demobilization, as far as possible, the necessary form was filled up; if it were not, the medical referee was asked for his opinion, and on that opinion the pension is assessed.

Pensions for the Disabled.

EVIDENCE BY SIR DOUGLAS HAIG.

Sir Douglas Haig gave evidence before the Select Committee on Pensions at the House of Commons on July 1st.

He said that in the late summer of 1918 he was appalled by the evidence received as to the methods of the State to provide for the disabled. Not only were the cases dealt with by the Disabled Officers' Fund brought under his notice, but he daily received letters from all parts of the country with the same piteous appeal. Since then matters had been in some degree improved, but not so far as the officers were concerned. He held strongly it was the duty of the State to provide for those who had suffered in the war, but he was prepared to admit there might be small gaps which might be filled by voluntary effort. The strain thrown on charitable institutions was sufficient condemnation of Government methods and proof of the inadequacy of State Pensions.

In the first place he held it was necessary to have a single authority to co-ordinate and advise the three Ministries—War, Pensions, and Labour—who were affected. The need was foreseen in 1915 by Sir George Murray's Committee, and again brought to notice in 1918 when a conference was summoned of the Ministries of Admiralty, War, and Air, but nothing had been done, and the result was that on discharge, officers were in many cases left penniless. There was no chain of responsibility. The War Office should not discharge until the Pensions Ministry could take responsibility, and the Pensions Ministry should hold until the Ministry of Labour could make provision. Secondly, Sir Douglas dealt with Medical Boards. He said:

"In some cases the members of the Board are ignorant of the actual disease suffered. In others they are lacking in all sympathy and generosity. There is no uniformity in their decisions, and some treat every individual who appears before them as a malingeringer. I strongly advise the appointment of a selected combatant officer to act as assessor so as to produce some confidence in the decision. Again, in some cases the disability is reassessed at the Ministry of Pensions to the individual's disadvantage. That this should be done without the individual being seen or heard is contrary to all ideas of British justice."

His third point was that the action of the Government in putting officers on insufficient half-pay was inhuman. Fourthly, he said that delays in Government departments produced much hardship and distress. Fifthly, he advocated a more generous provision for the wives and children of officers and men, and also for the education of their children. Sixthly, he said that the total disability rates for both officers and men were inadequate. The weekly allowance should be increased to at least 40s. Seventhly, he urged a more generous and sympathetic treatment to all who suffered from gas poisoning, shell shock, and neurasthenia. It was admitted that their suitable treatment was no easy matter. Employers were shy of giving them appointments. Immediate reform in the method of treatment was called for. Eighthly, he referred to the attitude of the trade unions; and ninthly, to what he described as "the scandalous treatment of those who had earned pre-war pensions."

After paying tribute to the courtesy and sympathetic attitude of the present Minister of Pensions and to the excellent work of the present officers, Sir Douglas appealed for:

1. A greater generosity on the part of the State.
2. A single authority to co-ordinate the work of Ministers.
3. An improvement in the machinery, which was working laboriously but too slowly and in many cases unsympathetically.

Scotland.

At the meeting of the Court of the University of Edinburgh on June 16th it was resolved to institute a diploma in public health, and a scheme of regulations drawn up by the senatus was approved.

EDINBURGH ROYAL INFIRMARY.

At the meeting of the managers of the Edinburgh Royal Infirmary on June 23rd the following were elected to the honorary staff:

Assistant Physician: Charles McNeil, M.A., M.D., F.R.C.P. Edin.

Assistant Surgeons: John Fraser, M.C., M.D., M.Ch., F.R.C.S. Edin.; James M. Graham, M.B., Ch.B., F.R.C.S. Edin.; Alexander Pirie Watson, O.B.E., M.A., M.B., Ch.B., Ch.M., F.R.C.S. Edin.; and Frank E. Jardine, M.B., Ch.B., F.R.C.S. Edin.

UNIVERSITY OF GLASGOW: HONORARY DEGREES.

At the graduation ceremony on June 25th honorary degrees were conferred for the first time since the outbreak of the war. Among the recipients of the honorary degree of LL.D. was Lieutenant-General Sir W. Babbie, V.C., K.C.B., K.C.M.G., A.M.S., who received a very cordial welcome when introduced by Professor Glaister as one of the three Glasgow graduates who had won the Victoria Cross. Afterwards the university entertained the new doctors at luncheon in the Examination Hall, under the presidency of the Principal, Sir Donald MacAlister, who gave a toast to the twenty-two doctors just added to the roll of graduates. Sir William Babbie, in acknowledging the honour, said that in the great war which had just closed it was only by the assistance of the universities, of the medical schools, and of the whole profession of medicine, that the Royal Army Medical Corps had been able to achieve the success which had attended its organized efforts. That corps had been as much concerned with the prevention of disease as with the cure of the sick and wounded. Whether attention were directed to prevention of disease in its highest phase, or to the dietetic problems of rationing at home and abroad, or to the development of artillery and high explosives, or to the manufacture of and protection from poison gas, or to the applications of electricity and of the internal combustion engine to aerial and submarine warfare, and, above all, to transport, it was safe to say that without science, despite the courage and endurance of our soldiers, it was clear that success could not have been achieved. Science and courage were complementary. Science of itself could have done nothing without the dour courage of men, tried as soldiers had never before been tried in the history of war, because science had made war so indescribably terrible. It was the business of the soldier to face death and wounds, but to both science had added the horrors of Hell. Yet men had dared all and endured, because the same agency had preserved their health, had cared for their physical and, he might say also, their spiritual welfare. It was that which had brought the nation through the test it had endured. Colonel John Buchan, who received the same degree, also replied; he asserted that the Territorial and service battalions of the Glasgow regiments were not excelled by any troops in any army for courage and faithfulness. Whether they were required to make a stubborn defence or an uphill attack they never failed. Their qualities were a humorous stoicism in defence and a genial ferocity in attack.

GLASGOW EAR, NOSE, AND THROAT HOSPITAL.

At the annual meeting of the Glasgow Hospital for Diseases of the Ear, Nose, and Throat, the chairman referred to the purchase of property in St. Vincent Street as a site for new hospital buildings. The accommodation would provide at least forty beds, a large and fully equipped outdoor department, and adequate accommodation for the nursing staff. He said that while the managers believed in the voluntary hospital system, something must be done to ease the situation, or the system would no longer be equal to the demands made upon it. The adoption of the medical report was moved by Dr. J. Galbraith Connal and seconded by Dr. Freeland Fergus, who said that there was now a proposal to extend panel

practice to include special branches, such as diseases of the ear, nose, and throat, and of the eye. If the changes made for improvement they were to be welcomed, but he was not sure that ordinary panel practice had been of much service to the community. He thought it had been a failure. The State never managed anything so well as the private individual who had a personal and vital interest.

Ireland.

PENSIONS UNDER THE LOCAL GOVERNMENT (IRELAND) ACT, 1919.

THOUGH the main object of the Local Government (Ireland) Act, 1919, is to give legal effect to the principle of proportional representation at local elections, it contains some very important provisions with regard to pensions, which will be of much interest to Poor Law medical officers, as heretofore the granting of pensions to such officials was optional with boards of guardians and district councils. Section 8 (1) and (2) of the Act states that:

If any officer of a local authority who holds on the passing of this Act a pensionable office is removed from his office for any cause other than misconduct or incapacity, or resigns his office with the sanction of the Local Government Board, he shall, without prejudice to any other right, be entitled to receive from the local authority an allowance not exceeding two-thirds of the salary, fees, and emoluments which he was in receipt of at the time of the removal or resignation, and not less than an allowance calculated according to the scale provided by the Superannuation Acts, 1834 to 1892, and the rules thereunder, if at that time he has served as an officer of the local authority for not less than ten years, or a gratuity according to the scale in Part I of the seventh schedule to the Local Government (Ireland) Act, 1898, if he has so served for less than ten years, and the right to and amount of any such allowance or gratuity shall, in case of dispute, be determined by the Local Government Board.

The Local Government Board shall not give their sanction to the resignation of an officer for the purposes of this section unless they are satisfied that, owing to changes made without reasonable cause in the conditions of his employment after the passing of this Act, his position has been materially altered to his detriment; or that he has become incapable of discharging the duties of his office with efficiency by reason of permanent infirmity of mind or body; or that he is not less than sixty years of age and has served as an officer of the local authority for not less than twenty years.

MINISTRY OF HEALTH ACT, 1919.

The Ministry of Health Act provides that the Chief Secretary shall be Minister of Health for Ireland, and that it shall be his duty as such Minister to take all such steps as may be desirable to secure the preparation, effective carrying out, and co-ordination of measures conducive to health, including measures for the prevention and cure of diseases, the avoidance of fraud in connexion with alleged remedies therefor, the treatment of physical and mental defects, the treatment and care of the blind, the initiation and direction of research, the collection, preparation, publication, and dissemination of information and statistics relating thereto, and the training of persons for health services. The constitution of the Irish Public Health Council was indicated a fortnight ago, when the appointment of Dr. E. Coey Bigger to be chairman was announced. The chairman will receive a salary and the other members of the council reasonable compensation for loss of remunerative time.

PROFESSOR CORNET has given an account (*Paris Medical*, May 24th) of the medical conditions of the Grand Duchy of Luxembourg. The total population is about 267,500, and the number of medical practitioners is 123. The capital, with a population of 20,000, has 34 doctors. There is a fine laboratory of bacteriology under the direction of Dr. Auguste Praum, a former pupil of the Pasteur Institute, Paris. Dr. Praum is also president of the Société des Sciences Médicales, which is one of the three sections of the Grand Ducal Institute, the other two being devoted to history and natural science. At a meeting held in January last the society passed a resolution that the interest of the university studies and the medical future of Luxembourg demanded a close intellectual union with France. At present there is no higher teaching in the Grand Duchy, and for the legal practice of medicine it is sufficient to have a State diploma granted after examination by a medical commission.

Correspondence.

PROFESSIONAL CONFIDENCE.

SIR,—The attention of the Council of the Medical Defence Union has been drawn to certain remarks (reported in *Berrow's Worcester Journal* of June 7th) made by Mr. Justice Bray in a case tried before him at the Worcester Assizes at the beginning of this month.

The case in question was the prosecution of an unmarried woman for alleged concealment of birth. The medical man, who was called in six hours after the birth, was unable to find the body of the child, and, after considering the matter, decided that his duty to the patient precluded him from making any communication to the police.

The police, however, upon the matter being subsequently notified to them, took a different view, and adversely commented upon the doctor's conduct. He accordingly consulted the Medical Defence Union, which upheld his action in not reporting the matter to the police, on the ground that had he done so he would have been guilty of a breach of professional confidence. At the assizes the woman was found "not guilty." At the conclusion of the case the judge called the doctor in question into the box and addressed him, according to the report from which we quote, to the following effect:

... The judge said that he saw that in the depositions the doctor had stated that, knowing that a child had been born in the room, probably recently, he did not think it was his duty to inform the police; in fact, it would have been a gross breach of professional confidence if he had informed the police, and he protested most strongly against the police reporting the matter.

The judge added that in his opinion the doctor was quite wrong. There was no professional confidence in criminal cases of this kind, and it was his (the doctor's) duty to inform the police at once in a case like this. The doctor could understand the importance of it because it was possible that the child might have been still alive, and in that case it was the duty of the police to make inquiries. There was no professional confidence to prevent him giving information to the police. "I want you to please remember that," added the judge, "I am not blaming you for taking that view, but I think it is important that it should be known that the view you took was wrong."

Dr. Standing: "The Medical Defence Union instructed me that I was absolutely correct."

The judge: "The Medical Defence Union is wrong. If you had your attention called to a patient committing the offence of cutting another man's throat it would be your duty to go and inform the police. There is no difference between a small and a big offence."

Apart from the fact that in the case which had been tried a verdict of "not guilty" had been returned, the Council of the Medical Defence Union is unable to accept the analogy attributed to the learned judge as a fair one, or to allow that the cases are in any way comparable.

The standpoint taken up by the medical profession on this subject has more than once been challenged by the legal profession. The Council nevertheless maintains that the duty a medical man owes to his patient is paramount.

Assured as it is on this important question, the Council feels it incumbent upon it to continue to advise any member seeking the guidance of the Medical Defence Union that any communication made to him by a patient and any information acquired by reason of his attendance upon such patient are confidential, and that without the authority of the patient a medical man is precluded by the accepted canons of his profession from disclosing such information to any one.

In adopting this attitude the Council feels it will have the support of all those members of the profession who desire to maintain inviolate that trust and confidence which is reposed in them by their patients.—I am, etc.,

JOHN TWEDDY,
President.

Medical Defence Union,
4, Trafalgar Square, W.C.2, June 27th.

INFECTIVE CATARRHS—SO-CALLED "COLDS."

SIR,—The letter of Drs. Millard and Spriggs in the *BRITISH MEDICAL JOURNAL* of June 14th concerning colds is, I think, most valuable. While cold may provoke illness by lowering the defensive mechanisms, heat stagnation may also do so, and is, I think, the cause of a far greater impoverishment of health and increased morbidity and mortality. Heat stagnation arises from the common

attribution of illness to chills. Pepys in his *Diary* attributes symptoms, obviously due to the stone from which he suffered, to chill from sitting out on the edge of his bed. Evelyn recognized that his son—an infant prodigy of learning—was heat suffocated by women, who piled coverlets on the boy when sick of a fever.

The fear of cold goes back, then, a long way, and has become fixed in the nation. The lore handed down from mother to child has a far more potent influence than all the teaching of modern hygienists; the belief in open air has scarcely spread beyond the most educated class, as is shown by the very few windows that are to be observed open in any street of modest dwellings in the early morning hours. The medical profession by the use of the word "chill" keeps up a false etiology in the public mind, while pandering to over-indulgence in food and neglect of bodily exercise. The correct and rapid diagnosis and treatment of infective disease is, too, hampered by the belief of the profession in chill as a chief cause of illness. I would suggest that a "fug" should take the place of a "chill" in talking of infective respiratory catarrh, and a "glut of" in place of a "chill on" the bowels in talking of alimentary symptoms produced by overeating and lack of exercise. But if such words are used the practitioner must be paid, and liberally paid, by the State for preventing illness.—I am, etc.,

Loughton, June 25th.

LEONARD HILL.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

SIR,—Your correspondent "Senex" (June 21st, p. 784) states the case for men between 50 and 60 who gave up their practices and took posts under the Ministry of Pensions. I also am between 50 and 60, but as a pre-war Territorial I have served over four years in France—before the armistice—as a front line medical man. By that I mean that my service has always been with a division, as a field ambulance medical officer, and not in the rear area with casualty clearing stations, base hospitals, etc. Having now returned to an inevitably attenuated practice, I hold that my claim to a Ministry of Pensions medical appointment is superior to that of "Senex" or any younger man who has not served abroad. So far the Ministry of Pensions has not seen it, and I know that jobs are still being offered to men in their forties who have never crossed the Channel.

Can a list be obtained of such posts and of the men holding them, along with a record of their war service and their age? This would clear the air, and those situated like myself look to the British Medical Association to do it.—I am, etc.,

June 25th.

IN ARDUIS FIDELIS (T.F.).

SUDDEN DEATH UNDER AN ANAESTHETIC.

SIR,—With reference to the discussion on this subject in the last two issues of the *JOURNAL*, I have been asked many times whether open ether is suitable for children of all ages, or only used for adults; and more than one correspondent has suggested that "the injection of gr. $\frac{1}{10}$ of atropine appears much too large for young children." In reply, I may say that "open ether" (preceded by the hypodermic injection of gr. $\frac{1}{10}$ of atropine) is administered to practically all my patients, from six months upwards, for the operation of enucleation of the tonsils by dissection, and I have never seen any evil results from the employment of that dosage of atropine.—I am, etc.,

London, W., June 30th.

HERBERT TILLEY.

SIR,—We are nothing if not practical, and I do not think we are quite out of the wood yet. I readily admit that open ether administered by a highly skilled anaesthetist is the best and safest for the operation of enucleation of tonsils, but if one drops in to one of the big institutions in London where large numbers of these cases are dealt with almost daily, one rarely finds open ether being given by leading anaesthetists, but much more often those much decried drugs ethyl chloride, chloroform, or C_2E_2 , administered by less experienced men, and why? Because motives of time saving and economy come into action since the cases are so very numerous (note one operator's 18,000); and yet one child's life is as valuable as another's. At the risk of appearing unorthodox, I ask

the pertinent question whether it would not be better to more carefully pick the cases and dispense with enucleation in half or more, as the best way of escaping from the difficulty.—I am, etc.,

London, W., June 30th.

W. H. KELSON, B.S., F.R.C.S.

SIR,—The correspondence in your issue of June 21st is of great interest, and it is satisfactory to note the great reputation of some of the contributors to it.

The conclusions to be plainly read in it are of immense importance—that chloroform is a protoplasmic poison and ether a satisfactory and abundantly safe anaesthetic. These facts have of course long been known, but their recognition in the operation of removal of tonsils and adenoids has been for some reason hitherto dismissed. I am not sure that surgeons themselves have not been responsible for it. Be that as it may, we can now afford to leave the explanation of sudden death from chloroform—the paradoxical claim that small doses may cause fibrillation of the heart when large doses are safe; whether, indeed, the explanation may not really be one of relative overdosage by reason of intercurrent asphyxia—to the physiologists.

The practical point established for the surgeon and anaesthetist is that ether is a safe and sufficient anaesthetic, and there cannot be too much insistence upon and dissemination of this teaching.

For the operation in question deaths have been and continue to be deplorably common; the time seems almost to have arrived when, in every fatal case, a coroner should ask, What anaesthetic was used, and why?—I am, etc.,

London, N.W., June 21st.

ALEXANDER BROWN.

SIR,—We are indebted to Dr. Gabbett for raising the important question of anaesthesia for the removal of tonsils. I have been lucky not to have a single death in my own experience of over 8,000 cases during a period of nearly fourteen years' special work, but some cases have caused temporary anxiety. This anxiety has occurred before the commencement of the operation, and in most cases was due to obstruction of the airway. Such obstruction is frequently caused by opening the gag widely without pulling the jaw forward by the finger behind the incisor teeth, also by the falling back of the tongue, which should always be drawn out by a suture, or by one of the many tenaculum tongue forceps.

The arrest of respiration produced by pulling the tonsils forwards and inwards does not occur during moderately deep anaesthesia, and it is abolished by swabbing the surface of the tonsils and fauces with cocaine. I believe this arrest of respiration is due to a reflex closure of the larynx.

With these precautions, I am of the considered opinion that there is no danger peculiar to the tonsil-adenoid operation with any anaesthetic. Moreover, this operation is many times more frequent than any other surgical operation, and it is improbable that the percentage of deaths is any higher.

In order to diminish the depth of anaesthesia necessary for this operation, I have for many years swabbed the surface of the tonsils and fauces with a 20 per cent. solution of cocaine to which has been added an equal quantity of 1 in 1,000 adrenalin. This method has the double advantage of diminishing the superficial haemorrhage and of producing a vigorous reflex during its application, if the patient is insufficiently anaesthetized.—I am, etc.,

London, W., June 23rd.

EDWARD D. D. DAVIS.

INTRAVENOUS INJECTION OF ANTIMONIUM TARTARATUM IN KALA AZAR.

SIR,—Dr. Low, in his article in your issue of June 7th, raises the question whether kala-azar is indigenous in Mesopotamia. I fear it will be found that this is the case. During the summer of 1918 I diagnosed kala-azar in two British patients invalided to Bombay. They were demonstrated at a meeting of the Military Medical Society, and I think it is clear that they must both have acquired the infection in Mesopotamia. My patient, an officer, was taken ill at the end of December, 1917, in Amara, and when admitted to hospital had no enlargement of the liver. When he came under my care in Colaba War

Hospital, Bombay, there was considerable enlargement. He was treated with intravenous injections of antimonium tartaratum and recovered completely. The other patient was not under my care; he also received intravenous injections and had greatly improved when I left India. I hope to publish details shortly; a brief reference to these cases was made in the *St. Bartholomew's Hospital Journal* for January.

The Arabs appear to recognize some such disease, for I am informed that they differentiate two varieties of Baghdad boil, one of which they think is followed by generalized disease; and I am informed that before the war women used to come down to Basra from Baghdad and inoculate on the leg with the "male" or less toxic sore as a prophylactic against the more serious "female" lesion.—I am, etc.,

PHILIP HAMILL, M.D., F.R.C.P.,

London, W.1, June 15th.

Late temporary Major R.A.M.C.

INCREASED GRANTS TO INSURANCE PRACTITIONERS.

SIR,—In your issue of June 28th I was interested in a letter from the Secretary of the National Insurance Joint Committee to the Medical Secretary of the British Medical Association which was very typical of the usual Civil Service evasiveness. In this case the fallacy of the reasoning was too obvious and glaring to pass muster. The data taken for increased remuneration were the increased costs of the necessities of life, and incomes of £160 and £1,600 were compared, but—with a very big *but*—the first figure, £160, is, I take it, a *net* income, and what is the doctor's £1,600, particularly in a rural area? Take away the expenses of the practice and you reduce the figure at once by about half. I should like to see it firmly and gently pointed out to the National Insurance Joint Committee that out of our gross income (bonus, etc.) we have to pay increased expenses as first charge before we have anything to live on.—I am, etc.,

Withern, Alford, Lincs, June 28th.

A. A. J. McNABB.

SIR,—I trust Major Astor's charity dole of a substantial increase in panel practitioners' war bonus for 1919 will not tend to obscure the question of a permanent increase in the income limit of the insured from £160 to £250.—I am, etc.,

Crawley, Sussex, June 29th.

SIDNEY MATTHEWS.

INSURANCE TERMS AND CONDITIONS.

SIR,—A large panel list is not always acquired in the fashion described by Dr. Tibbles. Certainly a great number are acquired by the money power as by purchase (which is a criminal act in Germany, the home of this sort of cheap collective nonsense). Many enormous panel lists were established in Manchester, Birmingham, etc., from the mere fact that in populous areas every manual worker, who previously never had dreamt of doing so, was compelled to choose a doctor.

Many approved societies sent their members to particular doctors, even going so far as to pay half the fee their favourite doctors charged for examination, to eliminate the unfit from their lists.

Many doctors cut out all old and new patients who would be likely to give trouble, thus ensuring, like the coter insurance companies, a safe quarterly cheque of unearned increment.

When the Manchester Insurance Committee limited incomes from insurance work to £800 many partnerships were offered, even though the practices had only been established a few months. There is certainly some popularity and no doubt a little energy required in these instances. It looks to me more like commercial acumen than professional success.

The framers of M. 25 have a good deal to learn if they expect new medical men to fall over each other looking for 150 insured grumbling incurables to start practice with at contract rates. If this is reconstruction then it is no wonder that the older men are glad they are retiring. Why not start *de novo*? The Labour party are seeing to it that employers carry out their obligations in direct wages to their employees and there is no necessity for commercial competition of the contract type in the

profession. There is ample work for all, and if owing to the high state of taxes, rates, and living there is a class who need help, then the tariff of the National Deposit Friendly Society would be a good one for work done, the patient where possible supplementing it out of his own earnings. With such a scheme commissions, bribes, touting, and all the hundred and one ways of securing favours from the officials, etc., of the collecting societies would be done away with and the individual would be able to choose his own practitioner, and no doubt with his increasing intelligence in these matters would go to the most skilful. If by popularity from this skill a doctor got too much to do he would be able to pass it on to a professional brother and not a commercial competitor, and he would retain his efficiency, which under the present system he always loses by trying to do too much, and his commercial success is more often than not a professional failure.—I am, etc.,

Burnley, June 30th.

J. I. HALSTEAD.

SIR,—During an interesting meeting at the Essex Hall on June 27th a point emerged which I think should not escape the notice of the profession.

In the first place, this meeting was very insistent that there must be two central pools—one for any extra services and one for the present range of general practitioner service. I think there were none in favour of a common pool on which special services might be made a prior charge. The meeting, having adopted this attitude, next wished to know what increase of payment was going to be made for the present range of service. We know the income limit is to be raised, we have not heard that our fees are to be correspondingly raised. Here Mr. Smith Whitaker, who was present to elucidate the Commissioners' point of view, told us a very important fact—namely, that in fixing our remuneration account will be taken of the fact that in 1913 we were granted an extra half-crown for keeping records which we have since ceased to keep. Of course, we know well enough that the extra half-crown was given because it could not be refused (how often has the British Medical Association boasted of its part in this), and that the useless records were put in to save the faces of politicians. This will not avail. In your own columns last week it was stated that there is to be no extra remuneration for the present range of services, even with increased income limit.

And yet the British Medical Association is content to leave discussion of payment for a later date. Let us be fairly met as to payment for present services (not by a system of bonuses that a miner would laugh at) and we will willingly discuss extra services. That there is no intention of meeting us fairly is shown by Mr. Smith Whitaker's admission and your own columns.—I am, etc.,

Sevenoaks, June 30th.

GORDON WARD.

SIR,—I fancied that Drs. Cowie and Richmond would wish to give some explanation to the 1,400 panel men of London whom they represented of their extraordinary behaviour at the conference of Local Medical and Panel Committees called by invitation from the Medico-Political Union. They seem to be upset at my saying that M.25 was issued by the Commissioners as well as the Insurance Acts Committee. I beg to enclose you, Mr. Editor, the envelope that my copies arrived in from the Commissioners, whilst the second memorandum sent actually bears the marks of the Government printers.

Both gentlemen gave lengthy dissertations on medical politics in general and the Medico-Political Union in particular, quoting freely from the *Medical World*, especially the following resolution passed at the annual meeting of the Union: "That it is not to the interests of the members of the Union to accept any agreement based upon the Report M.25 of the Insurance Acts Committee of the British Medical Association." "At which" (annual) meeting (of the Union), they continue, "the secretary pointed out very pertinently, in answer to an inquiry, that the Council of the Union were bound by this resolution, but not bound by anything that took place at the conference on June 24th." The council of the Medico-Political Union is not bound by a conference of Local Medical and Panel Committees any more than the Council of the British Medical Association is bound by the findings of its own conferences of Local Medical and Panel Committees, and for that very reason I failed to see their argument or what

such a discussion had to do with "the general nature and purpose of M.25" or its consideration by the delegates present. Therefore I ruled it out of order and the conference agreed. If I was wrong and they had had the feeling of the meeting behind them, they should have voted me out of the chair and reigned in my stead. Such things do happen. But, as it was, the remaining delegates were surprised, if not relieved, at their sudden departure, and the conference continued a normal and most interesting course.

To talk of matters being prejudged is amusing to anyone who has attended one of the group conferences presided over by these gentlemen, using every conceivable argument and threat to make the profession accept M.25. Goodness knows what is the reason for their terrible anxiety to secure an easy passage for it. But I fear Drs. Cowie and Richmond did little to help it forward on June 24th, nor did they do much to increase the prestige of the London Panel Committee or the Insurance Acts Committee, which they represent, with the other delegates, who came from all over England.—I am, etc.,

Ashford, Kent, June 30th.

FRANK COKE.

** We publish this letter as the chairman of the meeting may be considered to have a claim to reply to the best of his ability, but we cannot find space for more letters on this side issue.

HOSPITAL RECONSTRUCTION.

SIR,—Recent correspondence in the *BRITISH MEDICAL JOURNAL*—especially the illuminating letter from Dr. Flemming of Bradford-on-Avon and the concrete proposals of Dr. Bottomley of Boscombe—indicates two outstanding needs that should be met in any proposals for reconstructing our hospital arrangements. The one is the provision for general practitioners of opportunities of sending such of their patients as require it into hospital and retaining responsibility for their treatment. The other is the provision of hospital accommodation for patients of moderate means.

To secure these two pressing needs most of the correspondents urge the establishment of a new type or types of institution. I believe this to be undesirable, and that those ends could best be attained by additions to or modifications of existing institutions. It is clear that in the near future most voluntary hospitals will need subsidies from local authorities. Those responsible for determining the conditions of such grants should see to it that one such condition should be that a certain percentage of the beds of every hospital are set aside to meet those two requirements.

The carrying on of these different types of hospital work under one roof will promote administrative economy and professional efficiency, it will lead to a highly desirable co-operation between general practitioners and specialists working in different parts of the same institution, and will tend to break down class distinctions, which would only be accentuated by the institution of separate hospitals for patients in different economic positions.—I am, etc.,

London, N.W., June 29th.

LACHISTON E. SHAW.

MEDICAL DEMOBILIZATION.

SIR,—I have read with much interest the various letters on demobilization in the *JOURNAL* and I should like to add another "grouse." This is, that because an M.O. has not got a job or practice to go back to he must therefore be content to stay out here indefinitely as if his future career were of no account. There are many doctors out here wasting their time as battalion M.O.'s, etc., who, although not yet in practice, are dying to get back to make a start, but are compelled to stay on and watch with disgust the newly qualified men getting all the plums. Surely if the young doctors who have seen no service were sent out at once, every army M.O. with over a year's service could come home if he desired.

With reference to the last paragraph of "Medicus's" letter in the *JOURNAL* of June 14th, every encouragement is given to M.O.'s to volunteer for further service. I have not heard of any one yet being demobilized against his will, and this is certainly not the case with the R.A.M.C. in the Rhine Army.—I am, etc.,

June 24th.

R.M.O.

Universities and Colleges.

UNIVERSITY OF OXFORD.

THE following candidates have been approved at the examinations indicated:

SECOND M.B.—*Materia Medica and Pharmacology*: W. H. Butcher, T. H. Cathrall, J. T. S. Hoey, J. G. Johnstone, H. A. Osborn, D. B. Paww, H. L. Rayner, M. E. Shaw, W. F. Skafie, N. F. Smith.

Pathology: T. A. Brown, C. K. J. Hamilton, J. T. S. Hoey, H. A. Osborn, H. L. Rayner, N. F. Smith.

Forensic Medicine and Public Health: L. G. Brown, W. H. Butcher, F. B. Chavasse, W. T. Collier, F. G. Hobson, B. G. von B. Mellé, O. B. Pratt, N. F. Smith, C. P. Symonds.

Medicine, Surgery, Midwifery: L. G. Brown, F. B. Chavasse, J. C. Dixey, F. G. Hobson, O. B. Pratt, N. F. Smith, C. P. Symonds.

Master of Surgery: R. O. Ward.

UNIVERSITY OF LONDON.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

THE Gilchrist Trustees offer through the Council of the London (Royal Free Hospital) School of Medicine for Women, a special scholarship tenable at the medical school by a woman who has served under an organization directly connected with the war during not less than three years since August, 1914. The scholarship is of the value of £50 per annum for five years. Applications must reach the Warden and Secretary of the Medical School, 8, Hunter street, Brunswick Square, W.C.1, not later than July 12th, from whom the necessary form of application and all particulars may be obtained.

UNIVERSITY OF GLASGOW.

AT a graduation ceremony on June 25th the degree of LL.D. *honoris causa* was conferred upon Lieutenant-General Sir William Babbie, V.C., K.C.B., K.C.M.G., and that of D.Sc. upon Dr. William M. Alexander for a thesis on research in Egyptology.

The Asher Asher gold medal prize in laryngology and rhinology has been awarded to Mr. Duncan M. Blair.

UNIVERSITY OF ST. ANDREWS.

THE following candidates have been approved at the examinations indicated:

THIRD M.B., CH.B.—*Materia Medica*: T. K. Buchanan, Katharine M. Campbell, Georgina S. Craig, D. W. Dawson, Mary Ellison, V. S. Ewing, H. Fisher, Phyllis Fleming, Annie A. Fulton, A. H. Harkins, L. Jacobs, Isobel M. Mansie, R. S. Paton, J. N. D. Smith, J. D. Stewart, Eleanor C. Thistlethwaite, Christina J. Thomson, Margaret L. Tod, Margaret H. R. Young.

Pathology: T. K. Buchanan, Katharine M. Campbell, Georgina S. Craig, D. W. Dawson, V. S. Ewing, H. Fisher, Phyllis Fleming, Annie A. Fulton, A. H. Harkins, L. Jacobs, Isabella D. Kilgour, Christian E. Little, Katharine D. Macfarlane, Elizabeth W. MacVicar, R. S. Paton, J. D. Stewart, M. M. Stewart, Eleanor C. Thistlethwaite, Christina J. Thomson, Margaret L. Tod, Margaret H. R. Young.

Forensic Medicine and Public Health: Bessie M. Davidson, Mary Ellison, Jean H. D. Fleming, Mabel Hodgson, Frances L. Knipe, Margherita M. Lilley, Christian E. Little, Kathleen M. Lyon, J. B. Macdonald, Gracie M. McRorie, W. G. Robertson, M. M. Stewart, Eleanor C. Thistlethwaite, Amelia MacD. Thoms, Olive M. Whyte.

FOURTH M.B., CH.B.—W. Alexander, J. M. Clark, J. M. Craig, Caroline R. Crystal, Lorna Lennox, Janet M. Macmillan, Mary R. Mitchell, Phyllis Montford, Gladys J. C. Russell.

Obituary.

ALEXANDER SCOTT, M.D.,

Certifying Factory Surgeon for South-East Glasgow and Tollcross.

ALEXANDER SCOTT, who died in April last, if asked what were the red letter days of his life, would probably have said the day of his appointment in 1877 as certifying factory surgeon for Tollcross, the day when in recognition of his special knowledge and interest he was made medical referee for all industrial diseases under the Workmen's Compensation Act in the Glasgow area, and the day when, in appreciation of his unobtrusive solicitude for the health and welfare of the boys in the Parkhead Reformatory School, he was asked by the then Inspector of Reformatory and Industrial Schools to visit and report on acute febrile illness prevalent in another similar school.

Most of all was he proud of his position as certifying surgeon, which enabled him to examine boys and girls as to their fitness for employment, and to give them the first word of encouragement and advice in their start in life, as he has described in his papers on "Medical inspection and supervision of workers in factories" in 1902, "The training of youth" in 1907, and "Deformity as a cause of industrial inefficiency" in 1916. He valued the chance the post gave him of investigating cases of industrial poisoning, which he followed up with zest. Every such inquiry was a source of excitement to him, and none

was ever treated as a matter of routine. Thus, in 1887, he published an account of cases treated by him of lead poisoning contracted in chrome dye works and pointed out how they could be stopped by the provision of fans, overalls, baths, washing accommodation, and a "dining hall." In 1896 he described in this JOURNAL a case of loss of memory and another of dementia, among the first ever recorded of the permanent after-effects of carbonic oxide poisoning.

"Wasn't that interesting now?" was his usual way of ending his story, perhaps accompanied by as infectious and hale a laugh as any man ever had, and on parting a handclasp that scrunched the bones; but that he found his cases interesting was simply due to the fact that he could not do anything in a perfunctory way. During the war he helped with the best kind of help a medical man could give in a munitions factory—namely, by using his clinical knowledge in the examination of workers and assigning to them the work for which they were fitted, following this up by subsequent examination of those whom he thought needed it, advising the management in cases where a medical opinion was desirable, and superintending the first aid equipment and the use made of it in the workshop and ambulance room.

He was happy in his family—three sons, two in the R.A.M.C., served throughout the war, gaining the M.C. and M.M. His personality endures.

THE HONOURABLE SIR JOHN MCCALL, K.C.M.G.,

M.D., LL.D.,

Agent-General for Tasmania in London.

WE regret to record the death, on June 27th, of the Hon. Sir John McCall, K.C.M.G., at a nursing home in London, after a fortnight's illness. He was born at Devonport, Tasmania, in 1860, and was the son of the Hon. J. H. McCall. After studying medicine at the University of Glasgow he graduated in 1881, and returned to practice in Tasmania. In 1888 he was elected to the Tasmanian House of Assembly as the member for West Devon. He retired five years later, but was re-elected in 1901, and became a member of the Executive Council. In 1902 he was appointed president of the Central Board of Health, and chief secretary in the Proposing Ministry. While holding these offices he was responsible for the complete reorganization of the Tasmanian Health Department, and was in charge of the Public Health Act of 1903. In 1909 he was appointed Agent-General for Tasmania in London. He was knighted in 1911 at the time of the King's Coronation, and was awarded the K.C.M.G. among the last Birthday Honours. At the outbreak of war Sir John McCall, who had long been an active Volunteer officer, offered his services and was appointed medical officer in charge of the first Australian hospital for officers in England with the honorary rank of lieutenant-colonel in the Australian Army Medical Corps. As president of the Australian Natives' Association in London he took a large share in the organization of the Anzac Buffet for Australian and New Zealand soldiers. The Australian Hospital on the golf links at Wimereux owed much to his efforts, and the King of the Belgians recently conferred upon him the Order of the Crown in recognition of his aid in organizing a Belgian military hospital in the south of France. Sir John McCall was twice married, and leaves a widow and four children.

GEORGE WILKS, M.B., B.C. CANTAB., Ashford.

DR. GEORGE WILKS, of Ashford, died on June 11th in his 79th year. He was the elder son of Dr. George Frederick Wilks, a native of Charing, near Ashford, where his father and other members of the family were doctors before him. He was educated at King's College School, London, at Dresden, and at Trinity College, Cambridge, where he took the B.A. degree with honours in the mathematical tripos of 1863. He studied medicine for two years at Addenbrooke's Hospital under Sir George M. Humphry, and then went to St. Bartholomew's Hospital, where he was a pupil of Sir James Paget. In 1867 he graduated in medicine and surgery at the University of Cambridge and obtained the M.R.C.S. and L.S.A. diplomas, and in the following year he joined his father in practice at 11, North Street, Ashford, the house in which he died. For some years Dr. Wilks was physician-in-ordinary to the Duke of

Edinburgh and his household at Eastwell Park, and attended the Duchess at the birth of the present Queen of Rumania, and of Princess Beatrice of Saxe-Coburg. In 1907 he was elected Master of the Society of Apothecaries of London, and from 1912 to 1917 he represented the society on the General Medical Council. He was an excellent musician, and for years conducted oratorio performances and concerts throughout South and East Kent. Taking an active interest in the affairs of his native town, he was for twenty-five years a member of the old local board and of its successor the urban district council, of which he was chairman for seven years. During his chairmanship a number of schemes for the improvement of the town and its sanitation were carried out. In 1895 Dr. Wilks was made a Justice of the Peace for the County of Kent. He was honorary secretary of the Ashford Cottage Hospital throughout the most anxious period of its history, and on his retirement from the active medical work of the staff in 1906 he was presented with a silver tray and a cheque for £150 in recognition of his great services to the institution; the cheque, it may be added, was promptly handed to the hospital by Dr. Wilks to form an emergency fund. During the last few years failing health forced him to relinquish most of his public duties. Genial, enthusiastic and full of energy, a ready speaker and an able organizer, George Wilks set an example of what a medical man may become in the life of an English country district.

WE regret to announce the death, as the result of a boating accident, of Dr. E. G. FEARNSIDES, assistant physician to the Hospital for Epilepsy and Palsy, Maida Vale.

SURGEON-GENERAL PHILIP MACKAY ELLIS, C.B., J.P., Army Medical Staff (retired), died at Pwllheli, Carnarvonshire, suddenly, on May 16th, aged 64. He was born at Madeira on January 30th, 1855; took the diplomas of M.R.C.S. and L.R.C.P.Lond. in 1876, and entered the army as surgeon in 1877, and became surgeon-general in 1908, retiring in 1910. He served in the Burma campaigns of 1886-87, receiving the medal with a clasp. During the great war he was county director of the British Red Cross Society for Carnarvonshire.

DR. HENRI HALLOPEAU, physician to the Saint-Louis Hospital, who died recently at the age of 78, was born in Paris in 1842. He graduated in 1871, and was appointed physician to the hospital in 1877. He became agrégé in 1878, and was elected a member of the Académie de Médecine in 1893. Before devoting himself to the study of skin diseases he wrote a treatise on general pathology which appeared in 1884, and till 1904 was the authoritative work on the subject in France. It was translated into Spanish, Greek, and Turkish. He produced in conjunction with Leredde a treatise on dermatology and a monograph on syphilis, written in collaboration with Fouquet. In addition to these works he was the author of more than eight hundred publications ranging over the whole field of dermatology. On his retirement from Saint-Louis under the age rule in 1907 he became consulting physician to the Maison Départementale of Nanterre, where he continued to work till October, 1918, when increasing failure of sight and other infirmities compelled him to give up active work.

It is reported that Professor ALBERT DÜDERLEIN, the distinguished gynaecologist, was among the hostages shot at Munich during the recent political disturbances. Born in 1860 he graduated in 1884, and, after holding the chair of obstetrics and gynaecology in the Universities of Groningen and Tübingen, accepted a call to Munich. He was the author of numerous publications on puerperal fever and various gynaecological subjects.

LIEUTENANT GEORGE HENRY FOSBROKE POWER, 6th, attached 3rd, Battalion Middlesex Regiment, younger son of Lieut. Colonel Sir D'Arcy Power, K.B.E., R.A.M.C.(T.F.), surgeon to St. Bartholomew's Hospital, was reported wounded and missing at the second battle of Ypres on May 8th, 1915, and is now presumed killed on that date, aged 21. He was educated at Oxford, where he was a commoner of New College, and President of the University Fencing Club. He got his commission in the 6th (Reserve) Battalion of the Middlesex Regiment on August 15th, 1914.

The Services.

HONOURS.

D.S.O.

Surgeon Lieutenant Commander Norman Sinclair Meiklejohn, R.N., has been appointed a Companion of the Distinguished Service Order for distinguished services in H.M.S. *Caledon*, as senior medical officer, 1st Light Cruiser Squadron.

O.B.E.

The distinction of Officer of the Military Division of the Order of the British Empire has been conferred upon Surgeon Commander Frederick William Parker, R.N., for valuable services as senior medical officer, R.N. Sick Quarters, Invergordon, and upon Surgeon Lieutenant Commander Ernest Lacey Markham, R.N., for valuable services in H.M.S. *Cardoe*, 6th Light Cruiser Squadron.

M.C.

The Military Cross has been awarded to temporary Captain John Campbell, R.A.M.C., for conspicuous gallantry and devotion to duty north of Shergat (Mesopotamia) on October 27th-28th, 1918. "He showed great skill and a total disregard of danger in tending the wounded under fire. On several occasions, owing to the intensity of the enemy's fire, he had to move his aid post, but in spite of all difficulties he managed to evacuate all cases successfully."

Medical News.

THE annual dinner of past and present students of St. Thomas's Hospital will take place at the Connaught Rooms, London, W.C., on Wednesday, October 1st, when Sir George Makins, G.C.M.G., C.B., President of the Royal College of Surgeons, will preside.

A DANCE in aid of the Royal Medical Benevolent Fund Guild will be held at Princes' Galleries on Wednesday, July 16th, at 9 p.m. Tickets (one guinea, including supper and bridge) may be obtained from Miss Tweedy, 100, Harley Street, W.1.

ACCORDING to the *Boston Medical and Surgical Journal*, 47,862 American soldiers were treated in British hospitals during 1918. Of this number about one-fifth were wounded or injured, the rest were cases of sickness. At the time of signing the armistice 9,310 Americans were under treatment in American hospitals in Great Britain. The United States army personnel working in American hospitals in Great Britain numbered about 3,200.

SIR JAMES SAWYER of Birmingham left £41,310.

THE house of the Royal Society of Medicine will be closed for cleaning during August.

DR. H. E. DIXEY of Great Malvern has been appointed a Deputy Lieutenant for the county of Worcester.

THE Government of the Republic of Nicaragua has established a Pasteur Institute at Managua.

DR. JOSEPH J. CONSTABLE, Senior Physician to St. John and St. Elizabeth Hospital, St. John's Wood, has retired from the active staff of that institution, with which he has been connected for many years. In consideration of his long and valuable service the board of management have appointed him consultant physician.

DR. WILLIAM ALLEN STURGE, of whose work in anthropology some account was given in our columns on April 12th, p. 469, left £13,494. He bequeathed his large collection of prehistoric objects of stone, bone, and horn to the British Museum.

THE annual report of the Board of Agriculture, on its proceedings under the Diseases of Animals Acts for the year 1918, is largely concerned with the outbreak of rabies. The first suspected case was notified in the neighbourhood of Plymouth on August 19th, and its nature finally confirmed on September 7th. It is thought probable, however, that the disease had existed in the country as early as the middle of May, 1918. As to how the first case was imported no proof has been obtained. Owing to the increase of traffic and the diminution of the staffs of the customs and police, strict observance of the regulations had probably been relaxed, and it seems to have been established that dogs have been brought over in aeroplanes to aeroplane stations in this country from France, where the disease, never entirely stamped out, increased during the war. At first there was difficulty in issuing muzzling orders applicable to wide areas, because the number of muzzles available was too small, but the special steps taken to expedite manufacture were believed to have been successful. In all 31 persons were reported to have been bitten by dogs believed to be rabid in 1918: of these

21 underwent Pasteur treatment either in Paris or in Plymouth. In the remaining 10 the evidence was not sufficiently definite, and it was eventually established that these persons had not actually been bitten.

THE University of Vilna in Lithuania, which had been closed since 1832, has recently been reopened. It was founded in 1578 by the Polish King Barthory and restored by the Czar Alexander of Russia in 1803. Lithuania has a population of 2,000,000.

A PAMPHLET entitled *Suggestions for the Care of Malaria Patients* has been issued by His Majesty's Stationery Office (from any bookseller, price 1d. net); it has been drawn up for the information of medical practitioners by Colonel Sir Ronald Ross, K.C.B., K.C.M.G., F.R.S., consultant in malaria to the War Office and the Ministry of Pensions, and Lieut.-Colonel S. P. James, I.M.S. (ret.), medical inspector and adviser on malaria to the Local Government Board. It contains sections on the diagnosis and treatment of malaria and on the prevention of indigenous infection, and sets out the conditions affecting medical practitioners with regard to the notification of cases of the disease. Full directions are given for making blood films, which, in the absence of other arrangements, may be sent to the Medical Department, Ministry of Health, Whitehall, London, S.W.1. With regard to after-treatment, four plans are mentioned: First, ten grains of quinine once daily, at dinner or bedtime; secondly, thirty grains of quinine on two consecutive days weekly; thirdly, thirty grains of quinine on one day a week in three doses of ten grains each, in the early morning, at midday, and in the evening; and, fourthly, the same amount taken in the same manner every tenth day. The degree of success obtained in any of these methods depends, it is stated, more on the arrangements for ensuring that the routine is conscientiously followed than on the particular method chosen.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitology*, Westrand, London; telephone, 2531, Gerrard.
2. ACTING FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate*, Westrand, London; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra*, Westrand, London; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

THE ELBOW-JOINT.

LIEUTENANT H. T. O'NEILL, R.A.M.C. (Army of Occupation), writes: In the BRITISH MEDICAL JOURNAL of June 14th the review of the book, *Emergency Surgery*, contains the following passage: "... Nor do we believe that the bony points of the elbow in any position of the joint form an equilateral triangle." This was rather a surprise to me, because the late Professor Cunningham in his *Manual of Practical Anatomy*, vol. i, fourth edition, p. 57, says: "... When the forearm is bent at a right angle the three bony points are placed at the angles of an equilateral triangle, the apex of which points downwards."

Our reviewer writes: The matter is entirely one of measurement. It may be that Cunningham's *Manual* states that the "three bony points are placed at the angles of an equilateral triangle," but the statement is not accurate, as any one can verify for himself on his own arms. The base of this triangle—that is to say, the distance from the external to the internal epicondyle—is always greater than any one of the other two sides, and in addition, in most arms which I have measured, the distance between the internal epicondyle and the most prominent point of the olecranon is less than the distance between the olecranon and the external epicondyle.

LETTERS, NOTES, ETC.

A CORRESPONDENT in Natal complains that British publishers of medical books do not in their advertisements state the postage of a volume to an address overseas.

BENZOL FOR MOTOR CARS.

WE stated a few weeks ago on the authority of the Automobile Association and Motor Union that the National Benzol Association had intimated that the price of benzol conforming to the A. A. specification was 2s. 9d. a gallon in 2-gallon tins. Apparently in some places a higher price is charged. The Automobile Association has published a list of benzol retailers, and in this those stocking benzol conforming to the approved specification are distinguished. Motorists can obtain a copy of the list by applying to the Secretary, Panum House, Whitcomb Street, London, W.C.2. The Automobile Association states that it is informed by the National Benzol Association that the price is 2s. 9d. a gallon in 2-gallon tins, and 2s. 8d. a gallon in 50-gallon drums. Members of the Automobile Association have the privilege of hiring such drums at a nominal rent.

PORK IN SUMMER.

DR. GEORGINA F. MALDEN (London, S.W.) writes to suggest that the reason why many people think pork unwholesome in hot weather is the belief that all animals classed as "unclean" in the Old Testament are unsuitable and unwholesome food in a hot country, and therefore in hot weather in any country. "I am not aware," she adds, "that Continental nations have this idea about the 'unclean' animals, but I think the Old Testament is much less familiar to them."

QUININE IN CYESIS.

DR. JOHN MCOSCAR (Buxton) writes: It has been my custom for many years to prescribe quinine in parturient women a month before the expected date of confinement. My prescription is quin. sulph. gr. ss, acid. hydrobrom. dil. m x, aqua chloroformi ad 3 ss, three times a day after food. In the majority of cases this treatment has been followed by a natural, easy, and rapid confinement, even in primiparae, as quinine is a tonic to the uterus and enables it to do the work it has to do at its allotted time. To me a night's rest is worth considering, as the labour of the next day is gone through with vigour instead of languor. The many now trained midwives can undertake the case, and will give thanks to the medical man in helping them through it.

AN INTERNATIONAL LANGUAGE.

THE Accademia pro Interlingua, which has been in existence for more than a quarter of a century, has made a scientific study of the question of an international language; the trend of opinion among the members seems to be towards the adoption of a simplified form of Latin. The President is Professor G. Peano of the University of Turin.

THE CITY PLANE.

THE plane is one of the few trees which will flourish in a city in spite of all the coal products wasted into the atmosphere. This immunity has commonly been attributed to the habit of the tree to shed its bark annually or at short intervals, thus, as has been supposed, getting rid of the irritating and clogging material. From an article in *Nature* (June 25th, p. 333) it appears that Professor A. Henry, who has given much attention to the subject of the production of vigorous trees, is of opinion that the particular plane commonly called the London plane (*Platanus acerifolia*) grows well and lives long in cities because it is a comparatively recent hybrid, and therefore essentially vigorous. It is believed to be the offspring of a cross between the oriental and the occidental plane; both were imported into England, the one from the east and the other from the west, and it is believed that accidental cross-fertilization occurred, probably towards the end of the seventeenth century, between two trees growing near each other, probably in the botanic garden at Oxford. The seeds of the London plane when sown produce a mixed crop of seedlings, in which the characteristics of the two parents are variously combined. One of these, *P. pyramidalis*, which originated on the continent of Europe about 1850, is now as commonly planted in the streets of towns as the true London plane.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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NOTE.—It is against the rules of the Post Office to receive *posteo* letters addressed either in initials or numbers.

A Clinical Lecture

ON

DISAPPOINTMENTS AFTER GASTRO-ENTEROSTOMY.

DELIVERED AT THE LEEDS GENERAL INFIRMARY.

BY

SIR BERKELEY MOYNIHAN, K.C.M.G., C.B.,
M.S., F.R.C.S.,
LEEDS.

EVERY operation in surgery, even the best, most exquisitely performed, may bring its disappointments. The operation of gastro-enterostomy, carried out in appropriate cases by a competent operator, is probably the most successful of all surgical procedures of equal magnitude, and it is certainly among the safest of those entitled to the description of major operations. In my last series of more than 300 non-malignant cases I have not lost a patient, and in recent years a temporarily unsatisfactory result has been extremely rare.

When we speak of disappointments after gastro-enterostomy, we must first remember that it may not be the fault of the operation but of many other circumstances if things go wrong. The success or failure of an operation may be due not only to the procedure itself, but also to its performance in cases which did not need it.

It falls to my lot to see many cases in which the operation of gastro-enterostomy has failed, and in reviewing these I find that they are capable of tabulation in the following manner:

A. THE OPERATION HAS BEEN PERFORMED IN THE ABSENCE OF ANY ORGANIC LESION JUSTIFYING IT.

This is by far the most frequent cause. In every ten cases of unsatisfactory results nine are due to this cause, and to this alone.

The conditions for which the operation has been needlessly performed are two:

(a) IN FUNCTIONAL DISORDERS OF THE STOMACH.

The more we know of organic diseases of the stomach the fewer do those cases formerly considered functional progressively become. It is not so long since a patient suffering from duodenal ulcer, for example, was frequently told that he was the victim of "acid gastritis," or "acid dyspepsia," "hyperchlorhydria," or "neuralgia of the stomach," all of which were said to be functional states.

When I first called attention to the symptoms and to the clinical diagnosis of duodenal ulcer, I found it difficult to persuade many of my friends that I was speaking of a common organic lesion which could be demonstrated during an operation to any intelligent onlooker.

To-day every one agrees that these symptoms are in truth due to a structural lesion and not to a vice in the chemistry or a defect in the motility of the stomach. And this holds good of other "functional diseases" of the stomach also. Inquiry upon the operation table reveals organic causes.

There still remain, however, a number of difficult cases of functional troubles associated with atony of the stomach or prolapse of this and other abdominal organs. Such cases may be difficult to treat by medical means, massage, exercises, and so forth; but they are often made very much worse by the performance of a short-circuiting operation. If such patients vomited before, they vomit still, though the character of the vomit is altered by the addition of large quantities of bile. In a few instances the patients will say that they are neither better or worse, and I have known one or two who incline to think their condition a little better than it was before operation. But the exceptions are very few to the rule that in these conditions surgical measures are harmful or disastrous.

In such patients the only further operative treatment which the surgeon should undertake is the reparation of the mistakes of his too enterprising predecessor. The anastomosis must be undone, and the stomach and intestine returned as far as possible to their original condition.

If there is a moderate degree of visceral prolapse great relief may be obtained from the application of a Curtis belt or of corsets.

(b) IN CASES OF CHRONIC DISEASE ELSEWHERE.

For several years I have endeavoured on many occasions to emphasize the importance of verifying, after the abdomen is opened, the original diagnosis of ulcer of the stomach or of the duodenum, before beginning any operation designed to relieve the patient of his symptoms. An ulcer of the duodenum or of the stomach, if the cause of symptoms so long continued, or so severe as to justify an operation, is always a visible, demonstrable, palpable lesion. If no ulcer is found no operation should be performed. The day is long past when a surgeon is entitled to accept a clinical diagnosis, however confidently made, as a sufficient warrant for an operation. The lesion supposed to exist must be recognized at the time the abdomen is opened before any further steps are taken with the intended operation. This rule, which should appeal to every one, is still violated with no little frequency. If no ulcer is found, a search should then be made elsewhere in the abdomen for a possible cause of those symptoms which have been attributed to a chronic ulcer. Failure to observe these precautions, and to remember this unalterable rule, has resulted in the performance of gastro-enterostomy for conditions remote from the stomach. The operation of gastro-enterostomy has been performed for the following diseases:

I. CHRONIC APPENDICITIS.

This is the commonest of the mistakes in this class. Many physicians and surgeons have long realized how exact the mimicry of the symptoms of ulcer of the stomach or of the duodenum may be in cases of chronic appendicitis. Nine years ago¹ "appendix dyspepsia," a condition in which symptoms closely resembling those due to gastric ulceration were caused by a chronic lesion in the appendix, was described, and special attention was called to the presence of haematemesis or melaena in these cases. Haematemesis is more common in other diseases than in gastric ulcer, of which it is not a very frequent symptom. The occurrence of haemorrhage should therefore raise at once a suspicion, not only of ulcer but of chronic appendicitis, splenic anaemia, or cirrhosis of the liver.

II. TUBERCULOUS DISEASE OF THE INTESTINE.

Tuberculous disease of the ileum, or caecum and ascending colon has been present in a small number of cases where gastro-enterostomy had been performed in the absence of any ulcer of the stomach or duodenum.

Tuberculous disease of the intestine appears to be a common disorder in England and in Scotland. The impurity of the milk supply, of course, is responsible for this. Manchester has recently discovered that 35 per cent. of the milk brought to it contains living tubercle bacilli, and a similar alarming discovery could doubtless be made in other towns if inquiry were instituted. The symptoms produced are, as a rule, clear evidence of tuberculous disease; but occasionally a patient may present such symptoms as make a diagnosis of duodenal ulcer not impossible. There are pyloric spasm, hyperacidity, pain, and vomiting. I have found tuberculous disease of this kind in two medical men who believed themselves to be the subject of duodenal ulcer, and whose belief was strengthened by other opinions. Both were a little dismayed when they learnt that gastro-enterostomy had not been performed; but both, I am glad to say, are cured by their operations. I have had one patient sent to me as a case of "gastric ulcer" upon whom I performed colectomy for hyperplastic tuberculous disease of the caecum.

III. CHOLELITHIASIS, OR CARCINOMA OF THE GALL BLADDER.

Cholelithiasis, in all cases except those in which a single cholesterol stone is present, declares its presence, even in early stages, by the symptoms of dyspepsia, and often also of hyperacidity. The pain of flatulence and of heaviness comes with fair regularity about half an hour after a meal. There may be vomiting, and there is often much complaint of acidity. A very large proportion of the cases of cholelithiasis at a time when no colic has occurred, are diagnosed as cases of gastric disease.

The way to prevent this, and so many other mistakes, is to examine all parts of the abdomen likely to be affected by disease, before the purposeful part of the operation is begun.

IV. CIRRHOSIS OF THE LIVER, WITH HAEMORRHAGE.

In cirrhosis of the liver there is often dyspepsia; flatulence, heaviness, soreness, frequent eructations, with loss of appetite and a foul tongue, are common symptoms. Haematemesis or melaena, or both, may be profuse. The absence of orderly development and precision in the time and character of the symptoms makes the differential diagnosis between cirrhosis and duodenal or gastric ulcer rarely difficult.

V. SPLENIC ANAEMIA.

I have known a short-circuiting operation to be performed in this disease. The haemorrhage is often very abundant. The most copious haematemesis I have ever seen occurred in a patient suffering from this condition upon whom I was asked to operate for duodenal ulcer. I have twice removed the spleen in cases of splenic anaemia from patients who were sent to me as cases of duodenal ulcer. In both no ulcer nor any scar was seen.

VI. TABES DORSALIS.

I have seen five patients who were operated upon in this disease after a mistaken diagnosis of "gastric ulcer" had been made. The gastric crises, and the other dyspepsias seen in tabetic patients, have so little akin to the symptoms produced by organic diseases of the stomach that there is no excuse for the mistake. I have had one patient who, suffering from tabes, had also the symptoms of duodenal ulcer. I operated upon him, demonstrated the ulcer, and performed gastro-enterostomy.

VII. DISSEMINATED SCLEROSIS.

I have seen one patient with this disease upon whom gastro-enterostomy had been performed; the surgeon found no ulcer, though the symptoms had suggested its presence to him. In the crises of the attacks of pain the stomach became greatly distended.

VIII. THE VOMITING OF PREGNANCY.

I have known two patients submitted to the operation of gastro-enterostomy for this condition under a mistaken belief that a gastric ulcer was present as the cause of the symptoms. Vomiting is neither a common nor, as a rule, a serious symptom in the great majority of cases of gastric ulcer.

IX. IN LEAD POISONING.

I have seen one patient upon whom gastro-enterostomy had been performed when neither open ulcer nor old scar could be found. The evidences of lead poisoning—colics, blue line on the gums, etc.—were quite clear at the later stage.

X. IN PROLAPSE OF KIDNEY.

Many years ago Sir F. Treves and Sir William Bennett described a group of cases in which a loose kidney had pulled upon the gall bladder and ducts to such a degree as to cause jaundice. The same drag may be made upon the duodenum and symptoms of pain and vomiting be produced. Loose kidneys comparatively seldom produce symptoms of any consequence, but there is no doubt of the existence of the conditions just described.

XI. COLIC ADHESIONS.

Many patients who suffer from vague dyspepsias, ascribed perhaps to intestinal stasis, or to chronic appendicitis, disclose on the operation table this condition: A membranous band, broad above, where it takes origin from the posterior abdominal wall, the under surface of the liver, the pelvis of the gall bladder, the cystic duct, and the duodenum, narrows below as it crosses the ascending colon to be lost on the peritoneum, to the inner side of the ascending colon, and on the enteric mesentery. Below this band, which is quite different from a "Jackson's membrane," the caecum and the ascending colon are distended and soggy. Very often the appendix looks turgid, thick, and stiff. Removal of the appendix, to which the troubles are ascribed, gives little or no relief. Division of the band allows adhesions to re-form. The only practice likely to give good results is the removal of

the terminal ileum, caecum, and ascending colon. The performance of gastro-enterostomy, of course, makes matters worse.

XII. EPIGASTRIC HERNIA.

A hernia of this kind, however small, may cause teasing and protracted symptoms. The chief complaint is of indigestion, dragging, heaviness, etc. A careful examination for this condition should always be made.

B. THE OPERATION HAS BEEN INCOMPLETE.

It appears to be still a custom in dealing with duodenal and gastric ulcer to perform gastro-enterostomy only, leaving the ulcer itself untouched, and making no search in the abdomen for other conditions. As these ulcers are probably often, if not always, secondary to some infection which may exist within the abdomen, such a search should be a necessary part of every operation, provided that the condition of the patient will warrant it. Chronic appendicitis is very frequently associated, probably in a causal relation, with ulcers of the stomach and duodenum. It is better, therefore, always to remove the appendix. The division of the membrane which causes a "Lane's kink" may also be practised. The gall bladder should always be examined for the presence of stones, or of that subserous deposit of fat, especially near the pelvis, and the cystic duct, which is, I hold, the first sign visible from the exterior of an infection of the walls of the gall bladder from within. Either the removal of stones and drainage of the gall bladder or removal of the gall bladder may be necessary.

But above all the ulcer itself should be dealt with in such manner as to secure that all large vessels running into it are ligatured, and that the risk of subsequent perforation is lessened or prevented by the infolding of the ulcer, and by the covering over of the first part of the duodenum by the two omenta. Cases of fatal haemorrhage from a duodenal ulcer, weeks or months after gastro-enterostomy had been performed, are recorded by Kocher, Quénu, Sir F. Eve, and others. And Mr. Corner has related the story of the fatal perforation of a duodenal ulcer in a patient upon whom I had operated three years before. Other cases of perforation in similar circumstances are known to me, and some are recorded in the literature. Merely to perform gastro-enterostomy in cases of duodenal ulcer is therefore to leave open many chances of subsequent disaster. A direct dealing with the ulcer is always necessary. In patients upon whom gastro-enterostomy alone has been performed, there may be a recurrence of all the original symptoms of duodenal ulcer. In such cases one of two conditions is present—either a jejunal ulcer, or a revival of activity in the duodenal ulcer. If the latter, the infolding of the ulcer, and its protection by a double covering of the omenta, will remove the symptoms at once. An x-ray examination before the operation will probably show that much of the food passes by the pylorus. I rarely practise either excision of the ulcer, exclusion of the pylorus, or partial duodenectomy and gastrectomy in cases of duodenal ulcer, for the results of the simpler operation of gastro-enterostomy are hardly to be improved.

The infolding of the ulcer of course narrows the pylorus for a time at least, but it is not with the object of producing obstruction that the infolding is done. As A. B. Mitchell has shown, the infolded ulcer very rapidly disappears.

C. DEFECTS IN TECHNIQUE.

The operation has been performed, rightly or wrongly, and certain technical errors cause distressing symptoms—pain, vomiting, diarrhoea, etc.

The chief of these occur when—

1.

The anterior or the posterior operation has been performed, and a long jejunal loop has been left. This loop may, with difficulty, be emptied; it may become "water-logged," and an obstruction may develop at the afferent opening into the stomach. "Regurgitant vomiting" occurs, only to be relieved by lavage, or in severe cases by the performance of an entero-anastomosis, which checks it at once.

2.

With a short or a long loop, the efferent piece of jejunum has been blocked as a consequence of a kink, or from adhesions, between the intestine on the one side, and the abdominal wall, omentum, transverse colon or mesocolon, and loops of small intestine on the other. Regurgitation occurs here also. Regurgitant vomiting means high intestinal obstruction.

3.

A short-loop posterior gastro-enterostomy has been performed. At the time when the jejunum was lifted up to oppose to the stomach before suture, adhesions were found binding it to the under surface of the transverse mesocolon, an exaggeration of the ligament of Treitz. These were divided and a raw surface left on the jejunum, proximal to the opening made to anastomose with the stomach. Adhesions then formed and caused obstruction of the proximal part of the jejunum between the duodeno-jejunal flexure, and the opening into the stomach. Mr. Nicoll of Glasgow describes this condition.

4.

The jejunum has been rotated round its longitudinal axis at the time when it has been approximated to the stomach. This twist may be quite enough to cause an obstruction.

5.

The opening is too small. I have operated upon patients suffering from pyloric obstruction when a short-circuiting operation had been performed a few months before, and have found the opening too small to admit the tip of my little finger. A gastro-enterostomy opening should always be large; not less than $2\frac{1}{2}$ in. in length.

6.

The opening is badly placed. The opening should always reach the greater curvature and is best placed in line with the oesophagus. Whether the jejunal direction is vertical, as I prefer it, or inclines from left to right, or right to left matters very little.

I have found the opening, originally made too small, lying midway between the curvatures, and in one case actually on the lesser curvature at the incisura. In such cases an x-ray examination will show the existence of a pool of unemptied stomach contents below the anastomosis. By manipulation the stagnant fluids can be pressed out of the anastomotic opening.

7.

There has occurred a hernia of the small intestine through the unclosed rent in the mesocolon. In one of my early cases (in 1902) I did not stitch the cut edges of the opening, made through the transverse mesocolon, to the suture line. A great part of the small intestine escaped through the opening into the lesser sac and became strangulated; the patient died. It is, I think, important to close the opening in the mesocolon very carefully. One of the ablest surgeons in the world told me of a case in which he did not suture the opening very completely, leaving a gap at the proximal end of the jejunum. A small knuckle of bowel crept in and became strangulated. An operation on the fifth day revealed the condition. The patient recovered.

The edges of the mesocolic opening should be sutured either to the stomach or to the suture line. If they are attached to the jejunum alone the stomach may withdraw into the lesser sac, and so cause a kink or obstruction near the stoma.

8.

The use of unabsorbable sutures—silk, linen, thread, thick chromicized catgut. The work of Wilkie seems to show that catgut is to be preferred to any other suture material. It remains long enough to ensure firm union between the viscera, and disappears in a few weeks' time. The catgut should be as fine as is compatible with adequate strength. I use the finest chromic gut (000000) for both sutures.

In many cases of haemorrhage occurring some weeks or months after the operation the liberation of an unabsorbable suture may be the cause. Such sutures may be seen hanging from the line of anastomosis when later operations are performed. I have found a piece of stout chromicized catgut three years and nine months after the

original operation. Of the two sutures it is, I believe, certain that the outer one, the sero-serous, is the one so long retained. The inner stitch, which apposes the cut edges of the mucous membrane, is probably always discharged within a very few weeks, whatever the material of which it is composed. The use of linen and silk is perhaps responsible in some degree for the development of jejunal or gastro-jejunal ulcers. The sutures have to work their way out, and so delay healing, or start an ulcer at any point. I have twice found small ulcers near the retained knot of an unabsorbable suture.

9.

Ventral hernia may follow an imperfect closure of the abdominal wound; or after any closure if there be persistent severe coughing, or vomiting.

D. LATE COMPLICATIONS MAY DEVELOP AFTER AN OPERATION PERFORMED, IN A CASE REQUIRING IT, WITHOUT ANY TECHNICAL FLAW.

1. Jejunal Ulcer.

This is by far the most serious of all the sequels of gastro-enterostomy. The ulcer may be at the suture line, or near it; it is generally small, and as a rule is single.

Its causes are not known with certainty. Among them are, probably, the use of unabsorbable sutures, inaccurate apposition of mucous membrane, bruising of the part of the viscera embraced by clamps with the result that a haematoma forms, a continuance of the cause of the original duodenal or gastric ulcer, and a persisting hyperchlorhydria.

It may at least be said that an avoidance of these faults or treatment of these conditions will almost certainly prevent the development of any fresh ulceration. The diagnosis of jejunal ulcer is not as a rule at all difficult. There are several clinical types which I have described in my book *Abdominal Operations*. There are several methods of operative treatment, not all of them satisfactory and some of them very difficult. Recently I have performed partial gastrectomy in such cases, removing the stomach up to the proximal side of the anastomosis, and all that part of the jejunum engaged in the junction.

The proximal end of the distal limb of the jejunum is closed and the side of it united to the cut end of the stomach; the distal end of the proximal segment is united to the distal portion of the jejunum just below the anastomosis with the stomach. I have known jejunal ulcer to develop in two patients after gastro-enterostomy performed in the absence of any lesion in the stomach or duodenum.

2. Carcinomatous Change in a Chronic Gastric Ulcer.

This may occur after an operation which has, for a time, seemed perfectly successful. I have now in my wards a patient upon whom I performed gastro-enterostomy for chronic gastric ulcer thirteen years ago. At the time of the recent operation a carcinomatous ulcer was present at the site of the former simple ulcer. In earlier days I have met with several cases in which malignant disease developed at the site of a chronic ulcer after operation. In the cases in which the cancer is found within, say, three or four years it may fairly be argued that the growth was present at the time of operation, for gastric cancer may increase very slowly. But in cases occurring later than this the great probability is that the change from a simple to a carcinomatous condition has taken place.

Nowadays I perform, as a rule, only two operations for cases of chronic gastric ulcer. If the ulcer is not near the oesophagus, and is of average or small size, I perform partial gastrectomy. If the ulcer is very large, burrowing deeply into the liver or the pancreas, and near the cardiac end of the stomach I perform gastro-enterostomy in Y, and into the proximal limb of the jejunum, below the duodeno-jejunal flexure, I introduce a tube, performing jejunostomy. Through this tube the patient is exclusively fed, for few or many months, until an x-ray examination suggests that the ulcer is healed.

In the case of the largest gastric ulcer I have ever seen, the ulcer occupying the whole of the lesser curvature and extending deeply into the liver, the patient did not take one spoonful of food or drink by the mouth for two years and nine months. I gave her permission to do so at the

and of two years, when the ulcer appeared to be healed, but she prolonged at her own desire the period of jejunal feeding for nine months.

The remembrance of her intense suffering before the operation, and her perfect comfort and satisfaction when she took food only by the tube, weighed with her in making this decision. The jejunostomy opening has been closed for nearly three years, and she remains perfectly well, free from pain, and is now 4 st. heavier than when the original operation was performed.

Symptoms after Unsuccessful Gastro-enterostomy.

The symptoms present in cases of unsuccessful gastro-enterostomy are chiefly four—pain, vomiting, haemorrhage, diarrhoea.

Pain may be due to:

1. A revival of activity in an unhealed ulcer.
2. The presence of a jejunal ulcer.
3. Adhesions crippling the proper action of the stomach or jejunum.
4. The presence of some other disease which has been overlooked at the operation—chronic appendicitis, cholelithiasis, and the other diseases enumerated above.

Haemorrhage may be due to:

1. The separation of a suture.
2. Continuing activity in a duodenal or gastric ulcer.
3. A jejunal ulcer.
4. The presence of some other disease which has been overlooked, such as splenic anaemia, cirrhosis of the liver, etc., as enumerated above.

Vomiting may be due to:

1. Obstruction as a result of any of those technical defects in the operation which I have already named.
2. Functional causes.

Diarrhoea may be due to:

1. Too rapid emptying of the stomach.
2. Some pathological condition of the intestine, or other viscera, which has been overlooked.
3. The offensive character of the escaping contents.

The too rapid emptying of the stomach is sometimes a cause, or is supposed to be the cause, of many discomforts, intestinal uneasiness and turmoil, and diarrhoea. When a patient suffering in this way is examined by the *x* ray the stomach is seen to empty itself very rapidly—perhaps in ten or twenty minutes, the food flowing through the opening into the intestine simply by the act of gravity. In the great majority of such cases that have come within my own knowledge the operation of gastro-enterostomy should not have been performed. The stomach which acts or fails to act, is generally a feeble, flabby atonic organ, capable of exercising little or no control on its contents. The fault here is due to the performance of the operation in an unsuitable case. The jejunum below the opening in such cases appears, by *x*-ray examination and on inspection, to be dilated as a result of the rapid filling; its distension may be the cause of great distress.

As I have said, pathological conditions which have escaped notice may be the cause of a continuing diarrhoea; of such cases are tuberculous disease of the ileum or caecum, or carcinoma of the ascending colon.

Diarrhoea may also occur within two or three weeks of the operation, and last a few days, or even a month or two, rarely more. This is especially noticeable in cases of malignant disease of the stomach causing obstruction, and is probably due to the unchecked escape into the intestine of putrid matter from the stomach, an intense intestinal irritation being the result.

In a few patients upon whom gastro-enterostomy has been performed with the usual striking success an occasional attack of diarrhoea may occur; the stools are liquid and green in colour, and irritating to the rectum. In other patients it may be noted that the stools are often clay-coloured, or almost colourless. In such cases the discomfort is trivial and temporary, and does not detract from the otherwise excellent result of the operation.

CONCLUSION.

The enumeration of all these untoward events in connexion with the operation of gastro-enterostomy appears very formidable. But, compared with the excellent results

of the operation performed in appropriate conditions, and in a skilful manner, the disappointments are nowadays extremely few. Many of the errors to which allusion has been made are probably things of the past. For their avoidance the greatest care in preliminary investigation is necessary. The diagnosis of duodenal ulcer is rarely difficult; the diagnosis of gastric ulcer is never easy. A very large majority of patients supposed to be suffering from "gastric ulcer" are in truth suffering from other diseases. There is only one unequivocal method of diagnosis in cases of gastric ulcer, and that is by *x*-ray examination. The clinical symptoms are very treacherous.

But when the operation is begun no clinical diagnosis, however confidently made, can stand against the conditions revealed then to the hand and eye. If an ulcer is not seen and cannot be demonstrated, it does not exist, and therefore no operation designed for its cure or relief should be performed. A search must then be made elsewhere. And remembrance should always be given to the associated and interrelated actions of such organs as the liver, spleen, pancreas, and the alimentary canal.

REFERENCE.

¹ BRITISH MEDICAL JOURNAL, 1910, i, p. 241.

THE INFLUENCE OF DEFICIENCY OF ACCESSORY FOOD FACTORS ON THE INTESTINE.

BY

ROBERT McCARRISON, M.D., D.Sc., F.R.C.P.,

BREVET LIEUTENANT-COLONEL I.M.S.,

PASTEUR INSTITUTE OF SOUTH INDIA, COONOR.

(Abstract.*)

THE pathological changes in the intestine which result from a dietary deficient in accessory food factors have been studied in 152 pigeons fed exclusively on autoclaved milled rice.¹ This dietary contains an excess of carbohydrates, is deficient in proteins and fats, and is almost wholly lacking in all classes of accessory food factors. The experiments were continued to a point at which death of the birds occurred, or was about to occur.

MACROSCOPICAL APPEARANCES.

The chief macroscopical features observed at autopsy in the intestine were atrophy and congestion, both of which might be extreme. All cases presented atrophy in greater or lesser degree, while a proportion, estimated at about 30 per cent., showed no congestion appreciable by the naked eye.

The upper portion of the intestine of healthy pigeons, especially that part embracing the pancreas, is thick and muscular. It is this portion which suffers most in consequence of the deficient dietary. The atrophy is of all grades of severity; it may be comparatively slight, or progress to a point at which the intestinal walls are so thin as to be transparent. As a rule the atrophy is more marked the longer the bird is under the influence of the defective diet.

The congestion is commonly confined to the upper part of the alimentary tract; less often it involves its whole extent. The branches of the mesenteric vessels surrounding the bowel may be greatly engorged, and extravasations of blood are occasionally to be seen under its serous coat. An attempt was made to correlate the degree of congestion with the degree of enlargement of the adrenal glands; no correlation could be established.

On splitting open the bowel, the upper three to six inches are often found to be distended with tapeworms, more rarely with round-worms—the latter usually dead, the former almost invariably alive. Round-worms have occasionally been found in the oesophagus.

On examining the surface of the bowel with the hand lens varying degrees of atrophy and erosion of the mucous membrane are encountered. These are not always uniformly distributed over the whole surface of the bowel; some areas show them in greater degree than others. Ecchymoses are common over the mucous surface; in the more severe cases pin-point haemorrhages into the bowel lumen are to be seen.

* The full text, with illustrations, is published in the *Indian Journal of Medical Research*, July, 1919.

HISTO-PATHOLOGY.*

Apart from some degree of atrophy of all coats of the bowel, which is universal in birds dying in consequence of this dietary, no marked histological changes, with the exception, it may be, of slight congestion, are found in approximately 30 per cent. of cases. In the remainder the histo-pathological appearances are very striking, although widely variable in degree in different birds. They comprised the following pathological changes:

1. *Congestion and Haemorrhage.*

In its mildest form this change consists in engorgement of the subperitoneal vessels, and in distension of the small vessels ramifying between the muscularis mucosae and the base of the crypts of Lieberkuhn, or the glandular structures corresponding to these in birds. The process of congestion is not usually limited to distension of vessels in these areas but may extend to those of the villi. The next stage in the congestive process is the occurrence of actual haemorrhages around the bases of the crypts. In some cases an almost continuous layer of haemorrhage may surround the bowel at this point. Such remnants of villi as remain are often seen to be much engorged or to contain effusions of blood; free corpuscles may be found in the lumen of the bowel or exuding from its congested and frayed mucous membrane.

A further, or simultaneous, stage in the process is the spread of these haemorrhagic areas from the submucous coat into the myenteron; these may involve only the circular layer of muscle fibres or penetrate to the longitudinal layer. It is not unusual to see larger tracts of the circular layer of muscle broken up by extensive haemorrhages into its substance. Such haemorrhages cause separation and rupture of the muscle fibres; the ruptured fibres may present ragged edges enclosing the collection of effused blood; the haemorrhages may be more diffuse, the corpuscles being scattered throughout the whole thickness of the myenteron and penetrating to the serous coat. Added to these appearances is the engorgement—often intense—of the vessels running under the serous coat and ramifying in the muscular layers. Oblique and longitudinal sections of these vessels may at first sight present the appearance of haemorrhagic effusions. Rupture of the vessel walls is, however, rare. Oedematous infiltration of the coats of the bowel has occasionally been encountered.

It thus appears that intense congestion, of, and haemorrhages into, the coats of the upper bowel, sometimes leading to actual breaches in their continuity, are amongst the results of a dietary deficient in accessory food factors. It may be assumed that resolution of such haemorrhages would lead to the deposition of much fibrous tissue in the myenteron and serous coat.

2. *Atrophy of the Myenteron.*

The thickness of the circular layer of the muscular coat is not the same at every point of the bowel's circumference; it gradually merges from about 0.35 mm. to about 0.25 mm. In pigeons fed on the deficient diet the degree of atrophy of the circular muscular layer varies considerably. The muscular coat is usually thinnest in birds which survive longest, or in which infection of the bowel walls has occurred; it is atrophied, as a rule, to the extent of one half to one quarter its normal thickness in health, and its efficiency is thus proportionately reduced. Added to this are frequent haemorrhages, the rupture and separation of muscle fibres thereby, and, less commonly, segmentation and fragmentation of these fibres. The extent to which the motor function of the bowel may be impaired by the deficient dietary will be realized from these statements.

3. *Degenerative Changes in the Myenteric Plexus of Auerbach.*

Careful scrutiny is necessary in order to detect, in healthy birds, the ganglionic swellings of this plexus, as they lie between the circular and longitudinal layers of the myenteron. They are compact bodies of oval form varying considerably in size, the variations being, of course, dependent on their point of section. They fit snugly between the layers of muscle and give rise to little or no bulging in the contour of these layers.

In sections of the intestine from birds fed on the deficient diet these ganglia are much more obvious and catch the eye at once. Their readier recognition may be due in part to the fact that the atrophy and recession of the circular and longitudinal muscle fibres renders them more prominent. Their greater prominence is, however, often the result of swelling due probably to oedematous infiltration. In size they vary within wide limits dependent in some measure on their point of section. In general, they are double or treble the size of healthy ganglia.

The swollen ganglia have frequently been noted to cause bulgings of the longitudinal muscular layer towards the serous covering of the bowel or of the circular layer towards its lumen, or both. The cytoplasm of the ganglionic cells may appear shrunken, their nuclei more eccentric than normal, and the nucleoli almost invariably fragmented, the last appearance being the most constant. Occasionally, whole cells or groups of cells appear to have disappeared, leaving in the ganglion lacunae empty of cellular structure.

There can, I think, be little doubt that the plexus myentericus is involved in a degenerative process. This being so, it may be concluded that the nervous control of the bowel is impaired in proportion to the degree of degenerative change.

4. *Atrophic and Inflammatory Changes in the Mucous Membrane.*

These consist in (a) atrophy and partial or complete disappearance of the villi; (b) frequent congestion of such villi as remain; (c) atrophy of the glandular cells of the crypts of Lieberkuhn, and separation of these from their basement membrane; (d) partial or complete disappearance of the lymphoid cells lying between and around the crypts; (e) thinning, or actual disappearance in places, of the muscularis mucosae; (f) a relatively greater proportion of reticular cells, and the scattered deposition of fibroblasts; (g) an increased proportion of leucocytes in the atrophic mucous membrane; and, more rarely, (h) bacterial invasion with intense inflammatory and necrotic changes in the mucous membrane and underlying coats of the bowel.

These appearances are, as a rule, most marked in birds which have survived the dietary for the longest time or in which infections of the bowel wall are found at autopsy. They are rarely present in the same degree at every area of the bowel's circumference. Sections of even the most severely affected intestines may show some areas in which these changes are much less marked than in others.

5. *Atrophy of Lymphoid Structures.*

In the healthy pigeon the lymphoid cells fill in the spaces between the crypts, and present a continuous layer of varying thickness between the bowel lumen and the muscularis mucosae. In diseased birds this protective layer is atrophied in greater or lesser degree. In some areas it was completely wanting, and the muscularis mucosae also had frequently disappeared.

6. *Fibrosis.*

The evidences of fibrosis are scanty in so far as the mucous membrane itself is concerned. Areas, however, are encountered in which there is a deposition of scattered fibroblasts. Some long-standing cases present areas of fibrotic infiltration in the muscular coats; but this being a reparative process, it is likely to be encountered only rarely in birds not permitted to recover. It may be expected that where such recovery is brought about the resolution of the haemorrhagic effusions will give rise to extensive fibrotic deposits in the muscular and serous coats of the intestine.

7. *Changes favouring Infection from the Diseased Bowel.*

Systemic infection is rendered more easy in the presence of these pathological processes owing (1) to impaired production of digestive juices; (2) to continued congestion of the mucous membrane and consequent malnutrition of its secretory cells; (3) to loss of the protective layer of lymphoid cells; (4) to increased leucocytic invasion of the mucous membrane and to increased leucocytic traffic in micro-organisms between the bowel mucous membrane and the blood stream; (5) to the greater facilities which

* This account of the histo-pathology is based on an examination of serial sections of the intestine in twenty-four pigeons fed to the point of death on autoclaved rice.

the debilitated mucous membrane provides for the growth of bacteria on its surface and in its substance; (6) to the imperfect digestion of food in the upper alimentary tract, which affords a favourable medium for the growth of micro-organisms; and, although more rarely, (7) to actual breaches of continuity in the walls of the bowel itself. Occasional specimens have shown a direct continuity of blood corpuscles from the eroded villus to the blood vessels running external to the serous coat.

Cases were encountered with comparative frequency in which the effects of intense bacterial invasion of the bowel walls have been added to the atrophic and congestive processes. In such cases bacteria of various types were to be found in large numbers throughout the necrotic mucous membrane and lying also in the submucous and muscular coats. By special staining methods bacteria (chiefly cocci) have been detected in the vessels of the submucosa, and bacteria-laden leucocytes are common objects in the microscopic field. In these circumstances bacterial organisms may pass directly into the blood stream from the infected bowel walls. In four such cases I cultivated from the heart's blood at autopsy, by aerobic methods, a small coccus in two, a coliform organism in a third, and a bipolar organism in a fourth. Infection of the blood from the bowel is therefore no uncommon consequence of "vitaminic" deficiency.

In cases of intense infection of the bowel walls the atrophic congestion and necrotic processes may be so pronounced as to render the recovery of the mucous membrane impossible. One is occasionally surprised to find that, while in one case the administration of "vitaminic" extracts will cure "polyneuritis" with surprising rapidity, another, to all appearances identical with it, will succumb. Amongst the reasons for this are the varying degrees of pathological change and of bacterial invasion of the bowel walls as well as systemic infection therefrom. It is evident that the ingestion of specific pathogenic organisms (such as *B. dysentericus*, *B. typhosus*, *Entamoeba histolytica*, etc.) in the presence of "vitaminic" deficiency is likely to be followed by their implantation on the debilitated bowel mucous membrane.

In connexion with these lesions in the upper alimentary tract of pigeons fed exclusively on autoclaved milled rice it is to be remembered that Hamilton Wright² was so impressed with the constancy of pathological changes in this situation in human beri-beri that he attributed this malady to a specific gastro-duodenitis. As is now well known, the pathological changes he described are not the cause of beri-beri; they are, however, important evidences of deficiency of certain accessory food factors in the diet. The fact that Wright found a bacillus of constant morphological characters in this situation is important. Although the organism is not the specific cause of beri-beri, its presence is an illustration of the fact that the wall of the upper intestine may become infected in the human subject in consequence of such a dietary.

During the course of my studies of the pathogenesis of deficiency disease³ I have had occasion to feed a number of pigeons (forty-two) on a dietary consisting of autoclaved milled rice, fresh butter, and onions—that is to say, on a dietary containing an excess of carbohydrates and deficient in accessory food factors, chiefly of the water-soluble "B" class. Naked-eye evidences of congestion and other pathological processes are much less frequently encountered in the intestine in birds so fed. The atrophy of the bowel, although often considerable, is usually less marked than in cases dying in consequence of complete "vitaminic" starvation. Histologically the same degree of congestion is not encountered, actual haemorrhages are rare, and the degree of atrophy of the myenteron and of the elements of the mucous membrane, although occasionally considerable, is often comparatively slight. A dietary of autoclaved rice which is enriched with butter and onions thus provides some at least of those factors on which the functional perfection of the alimentary tract is dependent.

COMMENTARY.

Interpreted in terms of bowel function, the derangements to which such pathological changes as have here been described may ultimately lead can be grouped as follows:

1. Impairment of the neuro-muscular control of the bowel; impaired transport of the intestinal contents along the alimentary canal.

2. Impairment of assimilative power.

3. Impairment of secretory function.

4. Impaired protective resources leading to infection of the mucous membrane of the bowel by pathogenic saprophytes, or ingested bacteria, and to systemic infection therefrom.

Unwilling as I am to apply too directly to the human subject the experimental results of intensive "vitaminic" starvation observed in birds, we may, I think, regard the changes I have described as applicable in some degree to man.

It is my experience that, while complete deprivation of accessory food factors will cause the relatively rapid appearance of so-called "polyneuritis"* in birds, subminimal provision of these substances, protracted over prolonged periods of time, will, especially in young and growing birds, eventually lead to a like morbid state. It is, I think, with sustained subminimal supply of accessory food factors that the physician is mainly concerned in practice. Complete "vitaminic" deprivation is, as I have pointed out in another place,¹ relatively rare; incomplete "vitaminic" deprivation, or subminimal supply of accessory food factors, is relatively frequent. If, in the light of the histo-pathological findings here recorded, we consider the case of children fed, it may be from birth, on foods deficient in these essential substances, and the frequency with which in later life their dietary continues to be ill-balanced and defective, we are, I venture to think, in a position to realize the ultimate consequences of such a dietary and to anticipate the sequence of events leading up to grave derangements of bowel function. Food deficiency also prepares the soil for bacterial growth, and the resultant morbid states will vary with the nature of the organisms which may become implanted upon it. This knowledge, if it does not enable us to account fully for such gastro-intestinal disorders as mucous disease, coeliac disease, and chronic intestinal stasis, will at least help us to a better understanding of their genesis.

MUCOUS DISEASE.

I have referred to the fact that pigeons fed on an exclusive dietary of autoclaved rice frequently suffer from diarrhoea,¹ and have pointed out that this symptom of "vitaminic" deficiency can in a proportion of cases be made to disappear, often with surprising rapidity, by the administration of the alcoholic extracts of the yolks of eggs. Others have drawn attention to the almost constant occurrence of diarrhoea or of colitis as precursors or concomitants of the condition known as "war oedema," a malady proved to be due to food deficiency.⁴ Clinical evidence of bowel derangements due to this cause are, therefore, not lacking. If, then, we attempt, from the results of our histo-pathological observations, to provide an explanation of the origin of mucous disease, we may, I think, surmise that continued subminimal "vitaminic" supply will lead to that state of chronic gastro-intestinal catarrh which characterizes this disorder.

Mucous disease is very common amongst European children in India who are fed largely on sterilized milk (milk which, in my own experience, is often poor in "vitaminic" content), artificial foods, white bread, polished rice, poor butter, over-cooked vegetables and excessive quantities of sugar. Therapeutic experience of this malady shows how readily it yields to limitation of carbohydrates and to a rationally-balanced dietary of good "vitaminic" quality. The mucous stools, the diarrhoea, the peevishness, the unhealthy appetite rapidly disappear on such a regimen, as also do the "night terrors" from which the subjects of mucous disease so frequently suffer.

I do not wish to dogmatize with regard to the genesis of this malady. I would but draw attention to the fact that an ill-balanced diet, deficient in accessory food factors, is capable of giving rise in pigeons to a state of chronic congestion of the intestinal mucosa, often accompanied with hypertrophy of the adrenal glands; the relief afforded to children suffering from mucous disease by the correction

* The term "polyneuritis," as applied to the morbid state resulting in pigeons from an exclusive dietary of autoclaved milled rice, is a misnomer. It suggests that the nervous tissues are exclusively or mainly involved in the pathological process, whereas in reality no organ or tissue escapes the consequences of "vitaminic" deficiency; some, indeed, such as the reproductive organs, the spleen, the thymus, and the digestive organs, are more gravely affected than is the nervous system. (See BRITISH MEDICAL JOURNAL, February 15th, 1919.)

of their ill-balanced dietaries may find an explanation in this fact.

COELIAC DISEASE.

One cannot read the illuminating account of coeliac disease given by Dr. G. F. Still⁵ in his recent Lumléian lectures without considering the possibility that it also may owe its origin to similar dietetic deficiencies. Its absence in breast-fed children, its onset between the age of nine months and two years, the diarrhoea which so frequently precedes it, the cessation of growth, the ill-formed, pale "oatmeal" stools, the frequent association of scorbutic symptoms, the abdominal distension, the afebrile nature of the malady, the diminished size of the liver, the blood changes, the occurrence of oedema, the thin bones, the muscular feebleness—all these find their counterpart in pigeons fed on an exclusive dietary of autoclaved milled rice.¹ The pathological findings recorded in this paper indicate with what readiness pathogenic organisms may invade the atrophying intestinal mucous membrane and lead to inflammatory states and fibrotic thickenings therein. The enlargement of the adrenals, which is so constant a result of "vitaminic" starvation, and so frequently associated with oedema in birds, may not be wanting in coeliac disease; I can find no records with regard to the adrenals in this malady.

I venture to suggest that those who have the opportunity should examine cases of coeliac disease, and more especially all available *post-mortem* material, from the point of view of food deficiency. Whether or not this malady is found to be due primarily to such deficiency, it would appear probable that a number of its characteristics are secondary to the imperfect assimilation of these essential ingredients of the food.

If, now, we bear in mind the possibility of subminimal "vitaminic" supply protracted over prolonged periods from childhood onwards, we have, I think, a new viewpoint from which to consider the genesis of that common disorder.

CHRONIC INTESTINAL STASIS.

In the recent edition of Sir Arbuthnot Lane's work on this subject⁶ Professor Arthur Keith draws attention to two anatomical factors which he regards as of primary importance in the causation of chronic intestinal stasis: (1) Defective action on the part of the abdominal musculature, and (2) a lesion of the neuro-muscular system of the intestine.

The histo-pathological findings recorded in this paper indicate one means by which both the abdominal musculature and the neuro-muscular system of the intestine may be simultaneously impaired in functional capacity. Deficiency of certain accessory food factors leads to atrophy of all muscular tissue as well as to disordered function or actual degeneration of motor nerve cells throughout the entire body. The abdominal musculature and the nerve elements controlling it must of necessity suffer along with other muscular and nervous tissues. It may be concluded, then, that defective action of the abdominal musculature will ultimately result in consequence of deficiency of accessory food factors.

In addition to this functional defect of the abdominal wall, we find also in pigeons starved of "vitamines" unquestionable evidence in the wall of the intestine itself of neuro-muscular lesions of great significance. Whether or not we are justified in applying these findings to the genesis of stasis in the human subject, we may at least regard with suspicion human food which does not conform to standard in respect to perfect "vitaminic" balance.

There can be no doubt that the dietaries of children amongst the poorer, and often amongst the richer, classes are frequently deficient in these important ingredients. Subsistence on such ill-balanced dietaries from childhood onwards may be regarded as calculated to lead to defect of the abdominal musculature, to neuro-muscular lesions of the intestine, and to changes in the glandular elements of its mucous membrane. Indeed, the pathological changes in the large bowel in stasis, as described by Professor Keith, are strikingly similar to those I have enumerated as occurring in pigeons fed on a "vitamine"-free food. He describes the morbid changes as affecting two systems—the glandular and the neuro-muscular:

The chief change in the muscular coats of the diseased great bowels removed from cases of autostasis is a fibrosis—one which mainly affects the tissue between the outer and inner

coats of the bowel, the intermediate stratum which insheaths the myenteric plexus. Degeneration in areas of the musculature, particularly of the outer longitudinal coat, also occurs. In every case there are inflammatory changes varying in degree. There are many marked changes in the lining glandular epithelium and in the submucous coat. One notes also that there is engorgement of the subperitoneal vessels and that the subperitoneal tissue is much thicker and denser than is normal.

Having regard to the fact that the pathological processes I have described are acute in nature, and induced by intensive "vitaminic" deprivation, whereas those recorded by Professor Keith are chronic, the similarity between them suggests that subminimal "vitaminic" supply protracted from an early age has a fundamental influence in the origin of the lesions found in stasis. However this may be, we must regard with suspicion an influence which is capable of providing at once the anatomical conditions necessary for the development of stasis and the facilities for systemic infections which are known to result from it.

CONCLUSIONS.

1. Deprivation of accessory food factors leads in pigeons to congestive and atrophic changes in all coats of the bowel, to lesions of its neuro-muscular mechanism, to impairment of digestive and assimilative processes, and to failure of its protective resources against infection.

2. Certain gastro-intestinal disorders in the human subject—of which three examples are referred to—may owe their origin to subminimal supply of accessory food factors protracted over long periods of time.

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AN INVESTIGATION OF THE END RESULT IN ONE HUNDRED AND TWENTY-FOUR CASES OF BLOOD TRANSFUSION.

BY

MAJOR W. GRANT WAUGH, R.A.M.C.

The following is a record of the results obtained in a series of blood transfusions carried out in a base hospital in France between November, 1916, and October, 1918; with a comparative table of the results in cases of as nearly as possible identical clinical nature, treated before blood transfusion was available.

Method.

Indirect transfusion by Vincent's paraffin coated tube was employed; thus unaltered blood was used. The use of citrated blood is open to the objection that citrate is a depressor of blood pressure.¹ Experience has shown this objection to be mainly theoretical, and as transfusion of citrated blood is easily performed and carries least risk to donor or recipient, I believe it to be the best method. It was, however, not available in the period dealt with.

Compatibility.

This was established at first by direct comparison of the bloods under the microscope, later by obtaining Group IV donors by the convenient macroscopic method introduced by Lee.²

Indications.

The main indications for blood transfusion in a base hospital are (1) severe secondary haemorrhage, (2) preliminary to high amputation of the thigh or arm, (3) certain cases of pyaemia. The primary indication for transfusion, surgical shock, is much less frequent at the base than at a clearing station, but I cannot subscribe to the view expressed that secondary haemorrhage is rarely accompanied by shock.³ There is a class of cases in which typical symptoms of shock are present, and the amount of blood lost is so small as to preclude the possibility of the clinical condition of the patient being due to anaemic

collapse. Not infrequently these cases exhibit premonitory symptoms, consisting of extreme restlessness, blanching, and increase of pulse rate, which are sufficiently definite to lead one to make sure that a tourniquet is readily available. A lesion of a main arterial trunk is almost invariably present in such cases. Experimentally, it was found that manipulation of a large vessel in a wound caused considerable variation in the general blood pressure, even if the vessel were uninjured. These cases lend support to the view that disturbance of the nervous mechanism of the vascular system may be the initial pathological factor in the production of surgical shock.

Amount.

The amount of blood employed was usually 600 c.cm., but amounts of 900 to 1,200 c.cm. have been injected as the condition of the patient demanded. The donor's blood pressure usually fell about 10 mm. Hg, but recovered to normal within an hour.

Accidents.

(a) *Incompatibility* has been met with on three occasions. In two of these transfusion was abandoned, no ill effects persisting; they occurred early in the series, and were probably due to faulty comparison of the bloods. (These cases are not included in the series.) The third case occurred in a patient suffering from pyaemia, and merits a detailed note.

The patient was being transfused for the third time, the same donor being employed as in the second transfusion, performed without mishap three weeks previously. The recipient's condition was normal until about 200 c.cm. of blood had been injected, when acute collapse, with symptoms of haemolysis, occurred, and death took place abruptly. Autopsy revealed no evidence of embolus in lungs or cerebrum, and as a specimen of blood taken from recipient's vein was found to be haemolysed, I have no doubt that death was due to incompatibility.

In addition to emphasizing the necessity for ascertaining the symbiosis of the two bloods before every transfusion, the case seems to indicate that incompatibility may develop as a result of multiple transfusion; unfortunately it was impossible to determine whether the antagonism in this case was peculiar to the blood of the individual donor, or a true incompatibility to an entire blood group. Incompatibility usually declares itself after 10 c.cm. of blood have been injected; in this case injection had proceeded for a considerable time before any symptoms appeared. Accidents of a similar nature have been reported by other observers; a suggested explanation given by Bond is that "a definite alteration has been found to occur in the direction of increased haemagglutinin content of the blood in the interval between two transfusions," and that this was responsible for the unfortunate result.⁴

(b) *Injury to Donor.*—This occurred once, probably the result of the transfusion tube having been reintroduced to the donor's vein after being employed on the recipient. Infection spread distally in the radial vein, which was removed through an incision at the wrist in the manner of Babcock's operation for varicose veins; complete recovery followed. A transfusion tube should not be filled a second time, and to avoid this it is convenient to employ a tube of 600 c.cm. capacity. In closing the donor's wound I make a point of removing half an inch of the vein opened in case it may have suffered damage during the proceedings.

Conclusions.

The cases are tabulated according to the clinical condition and operation performed. The figures, it should be remembered, represent a considerable proportion of the desperate cases met with in base hospital work, and afford no guide to the general death rate in the various clinical conditions. Transfusion for pyaemia was to some extent experimental, and was in fact an attempt to do something further than merely drain secondary abscesses. Patients who had recovered from some slight septic lesion were employed as donors. I think the number of recoveries in these very severe cases justifies an extension of the method as a therapeutic measure. The results in Class II indicate the usefulness of transfusion as a prophylactic against shock; it seems reasonable to hold that it should come into general use in civil practice as a preliminary to any severe operation.

Clinical Condition and Operation Performed.	Cases Transfused.			Cases not Transfused.		
	No.	Recov-ery.	Death.	No.	Recov-ery.	Death.
CLASS I.						
(a) Secondary haemorrhage; ligation of main artery	52	35	17=32.7%	52	28	24=46.1%
(b) Secondary haemorrhage; amputation of limb	14	10	4=28.5%	14	7	7=50.0%
CLASS II.						
Sepsis or gangrene; amputation of limb	39	35	4=10.2%	29	20	9=31.0%
CLASS III.						
Pyaemia	19	12	7=36.8%	—	—	—
Totals	124	92	32=25.8%	95	55	40=42.2%

A number of sphygmomanometric records were taken of the effects on blood pressure of various substances used in intravenous injections, and will be made the subject of a future communication.

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MASTOIDITIS.

BY

ADAIR DIGHTON, F.R.C.S.,

HONORARY SURGEON, EYE AND EAR INFIRMARY, LIVERPOOL; HONORARY AURAL SURGEON, BIRKENHEAD CHILDREN'S INFIRMARY.

For the last ten years I have been in daily contact with cases of suppurative otitis media, or its complications, in the out-patient department and operating theatres, and some opinions founded on this experience may be of interest.

The term "suppurative otitis media" is a misnomer, as in every case the disease starts in the mastoid antrum, and the suppurative otitis media is only an outward and visible sign or symptom of this invisible disease. I had swabs taken from the bottom of the mastoid antrum in fifty consecutive cases of operation for suppurative otitis media, and in every one pathogenic micro-organisms were found. The cases were not selected, but were taken as they came, and ranged, according to the duration of the discharge, from one day to seventeen years; and, according to the age of the patient, from one year to sixty-nine. It is therefore not a matter of wonder that treatment by drops, syringing, powders, etc., is ineffectual.

During 1915 I had further proof in a school clinic at which the patients could be seen and treated daily. The patients were divided into sets. One set was treated with drops, another set by hydrogen peroxide and syringing, another by massive lavage, etc.; but in no case was there any sign of improvement of any sort, but, on the contrary, the few cases which came to operation later on at the hospitals showed more extensive bone destruction than might have been expected from the duration of the disease. This experience was repeated during the years 1917-18, when, as officer in charge of the aural centre at Blackpool, 4,148 cases passed through my hands; 90 per cent. were cases of suppurative otitis media. They were treated daily by all known methods, with no good result of any kind, and remained in their original category of B 3. A great waste of men who, by means of operation (no beds were available), might, in the space of three months, have been raised to category A 1.

As the mastoid antrum is the real cause of suppurative otitis media, the only feasible treatment is by operation—and early operation. During my period as officer in charge of the aural centre I took particular note of all operated cases, and found that among 53 cases only 9 could justifiably be called healed. Of these 9, 5 underwent a radical operation, and 4 a modified mastoid, or Heath, operation.

In the former cases the best hearing was 7/17 watch, whilst in the latter the hearing was practically normal (15/17). These cases had not been operated upon by any one surgeon, but were drawn from all over England. Of the 44 unhealed cases, 33 had widely patent Eustachian tubes. This is interesting, as one very seldom, if ever, gets trouble from the tubes after Heath's operation; and the reason is, I think, because in it the drum heals up and so prevents what may be called a draught from the throat via the tubes through the ear. This draught, owing to the loss of the drum, and the inefficient closure of the tympanic orifice of the Eustachian tube in the radical operation, keeps on reinfecting the ear with micro-organisms from the throat. Ten of the 53 cases had had more than one operation performed, and another six had well marked facial paralysis.

In all except 5 cases the radical operation had been performed so that the statistics read: 48 operations, 5 healed, 10 operated upon more than once, 6 cases of facial paralysis, and 43 of the 48 in the same condition, possibly worse than they were prior to operation. The number of Heath's operation was small, in all probability because they were in a higher category than B 3, and so would not be found in a low category area such as Blackpool was.

From these statistics even the most ardent supporters of the radical operation can hardly claim satisfaction, and it cannot be wondered at that from them, and my other experience, I am of opinion that, save in very exceptional cases, it is hardly a justifiable procedure. These "very exceptional cases" are hard to define, as I have seen advanced cases of cholesteatoma recover after Heath's operation, and there is no necessity for a radical operation, if the internal jugular vein is ligated as a preliminary step, in cases of lateral sinus thrombosis. I think I should confine the indications for the radical operation to those cases in which there is present a non-functioning labyrinth, in which the operation has to be followed or continued by a complete labyrinthectomy.

The actual technique of the Heath operation has so often been described that it need not be repeated, but one or two variations I have found useful may be mentioned. As a preparatory dressing I find that iodine 2 per cent. in carbon tetrachloride is by far the nicest and does not blister or irritate the skin. The flap, which I described in the *Annals of Otolaryngology* (June, 1916), is the most useful, and, after one has used it for a few operations, can be so fashioned in nearly every case that the stitch which holds it closes the post-auricular wound and obviates the use of skin stitches. One skin stitch at most is all I ever use.

As after-dressing I prefer ribbon gauze soaked in freshly prepared eusol for a week, until the flap stitch is removed, and then instillations of rectified spirit with no syringing of any kind, as the drier the ear is kept the better.

After-complications are rare. I have never had a case of facial paralysis, but have had one of very large keloid in the post-auricular scar (possibly due to the use of scarlet-red ointment), which disappeared under treatment by radium. There was one case of metastatic ophthalmia; it occurred in a child, aged 7, who was admitted to my wards in 1912 with semi-acute mastoiditis on the right side. I operated by the Heath method, and for a day or two all seemed to go well, when a septic temperature with no localizing symptoms began. I opened the post-auricular wound, and, after washing it out, packed it from behind. The temperature dropped, and there seemed nothing to hinder her convalescence until the fourth day after the second operation, when she developed hypopyon in the left eye. This was accompanied by no pain, redness, or discomfort, and there was no wound or abrasion of the cornea. The vitreous gradually became infected, and she is now (1919) waiting to be taken into hospital to have the shrunken remnant of the left eye removed. Her ear is perfectly healed, the membrana tympani is normal, and the hearing 17/17 watch. The mastoid infection was streptococcal in origin. A point of interest in this case was the fact that the metastatic ophthalmia occurred on the opposite side to the operated ear, and hence the side on which the child lay in bed.

LAVAL UNIVERSITY, Montreal, has been separated from Laval University, Quebec City, and will henceforth be known as the University of Montreal.

TWO CASES OF ACUTE PERFORATED GASTRIC ULCER: OPERATION: RECOVERY.

BY

CAPTAIN E. HUNTLEY, R.A.M.C.,

SURGICAL SPECIALIST TO MILITARY HOSPITAL, FARGO, SALISBURY PLAIN.

THESE two cases are reported in order to illustrate once more the necessity of bringing such cases under treatment at the earliest possible moment if success is to be hoped for.

CASE I.

Pte. C. E., R.A.F., aged 49, was sent to hospital in an ambulance about 7 p.m. on December 20th, 1918.

He stated that before joining the army he had been an upholsterer. He had suffered from indigestion for years—that is, he had pain and tenderness in the epigastrium with occasional attacks of vomiting, and was always subject to "wind." He had been able to keep these symptoms more or less in check by dieting himself, until after he enlisted, when he had to have the food that was supplied to the troops. For two days before admission he had had rather more pain and had been sick once. On the day of admission he had had tea, consisting of tea and bread and jam, about 5 p.m.; shortly afterwards he was seized with sudden acute pain in the epigastrium and was sick.

He was a tall spare man, with very few teeth, and those he had were in a deplorable condition. The tongue was clean. He stated that his bowels had acted in the morning. Pulse 80; temperature 97.8°. He was very pale and wore a scared look. The pain was less severe and more generally distributed over the abdomen than when first seized. The epigastric region was distended. The rest of the abdomen was somewhat retracted but rigid. Tenderness was most marked a little to the right of the middle line midway between umbilicus and xiphoid cartilage. This area was tympanic and there was complete absence of liver dullness. The patient was seen, at my request, by Major Brasher, R.A.M.C.(T.), who confirmed the diagnosis of perforated gastric ulcer.

He was prepared at once for operation and taken to the theatre, Major Brasher kindly administering the anaesthetic for me. An incision was made from just to the right of the middle line between the xiphoid cartilage and the umbilicus. When the parts were retracted, the liver held up, and the stomach pulled gently downwards, the perforation was found to be on the anterior surface of the stomach, close to the pyloric end and rather nearer the lesser curvature. Bubbles of gas were escaping, as well as fluid that looked like weak tea. The perforation was of fair size; there was very little induration around it. It was closed with fine silk, invaginated, and sewn over in the usual way. Not much fluid was seen in the abdomen, but what was there was mopped away and two large drainage tubes with wicks inserted; one drained the right kidney region, and the other was placed in the pelvic cavity through a separate incision in the middle line above the pubis. There was no recent peritonitis to be seen anywhere, nor were there any adhesions to be found pointing to previous peritonitis. He made a completely uninterrupted recovery. He was kept on sips of water for forty-eight hours, and given salines by the rectum. He had been on chicken diet for three weeks before leaving hospital, and was discharged from hospital on February 17th, 1919, stating that he had not felt so well for a very long time.

CASE II.

Pte. M. S., Royal Irish Rifles, aged 38, was sent into hospital at about 8.30 p.m. on December 31st, 1918, in an ambulance. He was examined by Captain E. J. Coombe, R.A.M.C.(S.R.), who diagnosed perforated gastric ulcer. He was sent into one of my wards and seen by Major Brasher, R.A.M.C.(T.), and myself, and the diagnosis confirmed.

The patient stated that he had been subject to indigestion for a very considerable time, and that it had been worse during the past week. He had been in his usual state up to about 6 p.m. on the day of admission, when he was seized with violent pain in the epigastrium and was sick. On arrival he was somewhat collapsed, very pale and cold, with subnormal temperature and pulse of 88. He had very few sound teeth, and was generally of poor physique. The bowels had acted in the morning. He stated that the pain was easier and had become more general over the abdomen. The lower part of the abdomen was flat, but not retracted. The upper part was full, and the liver dullness quite absent. The epigastrium was tender, but no one spot could be found.

He was prepared for immediate operation, and taken to the theatre, where Major Brasher gave the anaesthetic. An incision was made to the right of the middle line, and as soon as the peritoneum was opened gas and greenish stomach fluid escaped. The perforation in this case was much larger, and was situated at the pyloric end of the stomach on its anterior surface, rather closer to the greater curvature. The induration around was distinct. The perforation was closed in the usual way, and a tag of omentum stitched over the site of the perforation. As much of the fluid as could be found was mopped away, and two drainage tubes with gauze wicks were inserted—one through the operation wound into the right kidney region, and the other through a separate incision below the umbilicus.

to drain the pelvis. No adhesions were found of any moment, and there was no sign of commencing peritonitis.

This patient progressed very satisfactorily for about ten days, when he had an attack of influenza followed by right-sided pneumonia. He weathered this storm under Major Brasher's care. He left the hospital on February 27th, 1919, somewhat pulled down in general health, but with no sign of any abdominal trouble.

In neither of these cases was irrigation of the abdomen performed after the closure of the perforation; in early cases such as these I am of opinion that irrigation may possibly do more harm than good.

The happy result in both these cases I put down to the patients getting under surgical treatment so early, and to the excellent nursing they received from first to last.

My best thanks are due to the nurses for their skill and kindness, and to Lieut.-Colonel Henchley, D.S.O., R.A.M.C.(T.), Commanding Military Hospital, Fargo, for his permission for me to publish these notes.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

JAUNDICE IN INFLUENZA.

IN accounts of the recent influenza epidemics jaundice has been mentioned as a serious, and often terminal, symptom. Lieut.-Colonel E. C. Cooper Cole, in a recent number of the *BRITISH MEDICAL JOURNAL*, states that "epigastric pain, with some rigidity, was a frequent complaint, and jaundice of considerable degree was usually of bad omen, fairly marked hepatic degeneration and occasionally perihepatitis being found *post mortem*." Dr. W. H. Willcox, in his Lettsonian Lectures, mentions that it has been noted by others in a less severe form.

In my experience jaundice is a fairly common complication, and has not been of serious import; it has sometimes occurred as a relapse after the patient has recovered from the initial attack of influenza. Many patients complain of nausea, epigastric and hepatic heaviness and pain, and if the urine is examined bile pigments are found.

The following sequence occurred in the epidemic at the end of last year in three consecutive cases of mine, all of which made good recoveries:

Case 1.—Influenza, temperature 104°, congestion of bases of both lungs; constipation, nausea, epigastric pain; bile pigments in urine.

Case 2.—Influenza, temperature 102°, nausea and vomiting; epigastric pain; icterus, bile pigments in urine.

Case 3.—Influenza, temperature 104.2°; right pleurisy; nausea and epigastric pain; icterus, bile pigments in urine.

Chester.

BARBARA G. R. CRAWFORD.

A CASE OF ASPIRIN IDIOSYNCRASY.

C. H., male, aged 32, married, a patient in Brompton Hospital under the care of Dr. Batty Shaw, was given 10 grains of aspirin, in tablet form, at 2.45 p.m. on June 19th, for some minor neuralgic trouble. At 3.45 I was called and found the patient cyanosed and gasping for breath; although he made efforts to speak he was unable to do so. His hands and feet were cold and clammy. His pulse was good; the rate slightly increased. This condition lasted about twenty minutes.

About 5 p.m. his face, forehead and neck began to swell, and this oedema was so marked at 5.30 that the patient was unable to open his eyes. About this time an erythematous rash was visible over the face and upper extremities. His breathing became less laboured, and by 6 p.m. was practically normal. The rash and oedema gradually subsided, but traces of them were visible at the end of the third day. At 6 p.m. on June 19th he passed about a pint of urine. It was clear; specific gravity 1015. There was a trace of albumin, but no sugar.

On questioning the patient closely I found that three-quarters of an hour after the dose of aspirin he experienced a sensation of choking and intense irritation of the skin of the feet. He also informed me that two years ago a somewhat similar series of symptoms developed after the taking of a small dose of aspirin. Obviously the case is not one showing toxic effects of the aspirin, for the same aspirin is in common use in the wards and has never

during my service in the hospital for twelve months produced such effects in any other patient. Further, this particular patient has only twice in his life taken "aspirin," and on each occasion he has had the above severe symptoms.

I am indebted to Dr. Batty Shaw for permission to publish the notes of this case.

W. A. E. KARUNARATNE, M.B., B.S.

Brompton Hospital.

Reports of Societies.

NASAL HYGIENE.

AT a meeting of the London Association of the Medical Women's Federation, held on July 1st at 11, Chandos Street, the President, Lady BARRETT, in the chair, Dr. OCTAVIA LEWIN read a paper on nasal hygiene and national health, and showed several cases of children successfully treated for nasal obstruction and deafness without operation. She also showed a case of stenosis of the posterior nares following an operation for adenoids in a child who was a diphtheria carrier. Dr. Lewin emphasized the fact that many operations could be avoided by proper attention to the nose and breathing. Miss LOWRY, in a paper on the nose in relation to general diseases, referred to the importance of nasal obstruction and sinus suppuration in respiratory, digestive, and nervous diseases, and gave instances of mistakes in diagnosis and treatment of such cases. She mentioned some of the superstitions held by patients as to the connexion between gynaecological conditions and the nose and throat, and said that it was to be regretted that similar statements were still made in textbooks on gynaecology, and apparently copied into papers and books on the nose and throat.

Reviews.

BELGIAN SURGERY.

THE first fasciculus of the second volume of the reports of the *Ambulance de "l'Océan,"*¹ under the general editorship of Dr. DEPAGE, fully maintains the high level set in the first issue. The matter is, of course, largely "war" material, and for much of it there is happily little immediate application, but it serves to show how great a measure of unanimity of opinion and practice amongst Entente medical men was attained before the armistice. The editor describes the operation of excision of wounds with moderation and common sense; he discusses the proper limits of primary and delayed suture. With Dr. Delrez he describes the treatment of wounds of the foot, giving incidentally an account of a method of flap transplantation *en cascade*, that is to say, gliding one end to a new position, and when that is well "alive," detaching the original pedicle, and reimplanting still lower, and so on.

The authors do not seem to experience the same trouble as other surgeons with ineradicable sepsis of the tarsus, possibly because they excise large portions with reconstruction of "dumped" feet, which, however, do not—as far as may be judged from pictures—promise very well for the artificial limb makers' purposes. Delrez himself deals with joints, and speaks in high terms of the early movement of infected joints, a novel method which obtained equally good results in the hands of some of our own surgeons. Dr. Neuman writes of wounds of the abdomen, with statistical results comparable to those of the British and French armies. Dr. Janssen describes his method of cranioplasty; he employs tibial grafts, periosteum to dura. His methods have their greatest employment in the relief of headache, vertigo, hypermotivity, epilepsy, and psychic disturbances, with cosmetic improvement. Dr. Harven makes an interesting contribution to the histology, physiological and pathological, of wound tissues. Dr. Govaerts describes a new method of ascertaining the bacterial state of a whole wound surface pre-

¹ *Ambulance de "l'Océan," la Panne*. Published under the direction of Dr. A. Depage, Tome II, Fasc. I, July, 1918. Paris: Masson et Cie.; London: H. K. Lewis, 1918. (Roy. 8vo, pp. 376; illustrated. Single copies, 14s. net. Annual subscription, 25s. post free.)

paratory to secondary suture. Drs. Delrez and Govaerts give the results of experiments on the elimination of organisms from the blood stream, indicating that the process is not always or chiefly an agglutination but rather a massing of organisms and platelets precipitated in the capillaries. Dr. Zunz, besides giving an account of a case of pleural effusion containing cholesteroline, makes a contribution to the study of the antiproteolytic properties of exudates and their alkali-reserve content. The last hundred pages, from the pen of Professor Levaditi, are devoted to a study of the streptococcus in war wounds, characterized by the thoroughness and care usual in the publications of the Pasteur Institute. There remains to be mentioned an article by Professor Dustin on fasciculation of nerves, of which more detailed mention will be made elsewhere.

RADIOGRAPHY OF THE CHEST.

DR. R. LINDSAY REA, in a volume entitled *Chest Radiography at a Casualty Clearing Station*,³ has given an account of his experiences of x-ray work in France. His object, as stated in the preface, is to help x-ray officers, working under similar conditions, to overcome the difficulties likely to arise while in the field and away from the facilities available in a base or home hospital. In this he has succeeded, as his book is full of sound advice and he displays a wide knowledge of his subject. The first chapter deals with the arrangement of the x-ray department of a casualty clearing station; he rightly points out that the x-ray room must be intimately associated with, if not actually a part of, the operating theatre, which was the almost universal practice in France. Several plans for x-ray huts are given, including Lieut.-Colonel F. W. Higgs's portable sail-cloth hut. Dr. Rea considers the best hut to be the Nissen bow with the floor lowered 18 in. so as to give additional head room and with a partition at one end dividing off an office and the developing room. The necessity of adequate ventilation is insisted upon. The provision of a standard portable hut is hinted at—the cessation of hostilities naturally put an end to the plans for this type of hut, which had been prepared at the time of the armistice.

Chapter II deals with the varieties of injury likely to require examination by x rays; Dr. Rea is rightly insistent on the necessity of a complete picture being taken of the whole chest, so as to compare the sound with the injured side—a point not infrequently overlooked. The various details to be observed are mentioned and stress is laid on the possibility of severe injuries being due to splintering of ribs; fallacies due to intrapulmonary and parietal haemorrhage are alluded to. A method, founded on clinical and *post-mortem* investigation, of making an approximate estimate of the amount of blood effused may be of value in the investigation of serous effusions in civil practice. It is of interest to note that Dr. Rea saw no cases of "contralateral collapse" in casualty clearing station work.

The third and last chapter contains an account of the methods to be employed in the examination of chest wounds in their early stages. The importance of an accurate knowledge of the appearance of the normal chest and the range of movements of the diaphragm is insisted upon. Dr. Rea gives a clear description of the normal chest with reproductions of x-ray plates and diagrams to illustrate his points. The range of movement of the diaphragm shown by his methods is considerably greater than has been usually stated. The methods of localization which he advocates are by double exposure after shifting the tube. Hampson's method, involving the use of sections of the normal thorax, is recommended for finding the depth and location of the foreign body. Experience of this method is entirely satisfactory, but the author's complete disregard of stereoscopic methods will not be endorsed by all.

The book suffers from poorness of literary style, but should be of considerable value to radiographers. There are a large number of good reproductions of x-ray plates which enhance the value of the book.

³ *Chest Radiography at a Casualty Clearing Station*. With Atlas. By R. Lindsay Rea, B.Sc., M.B., late Supervising X-ray Officer, Fourth Army. Belfast: Mayne, Boyd, and Son; London: H. K. Lewis and Co. (Cr. 4to, pp. viii + 24 and atlas; 61 figures. 15s. net.)

OBSTETRICS.

PROFESSOR HASTINGS TWEEDY'S *Practical Obstetrics*,⁴ which has reached its fourth edition, has all the weight of the writer's experience at the Rotunda Hospital, Dublin, behind it. The author claims the right to be dogmatic on this ground, and dogmatic he certainly is—to the benefit of the undergraduate student. It is unnecessary to say that the teaching is as sound as the reputation of the great hospital from which it emanates, and it is only on points of detail that any criticism can be raised.

The book is not intended to be a textbook of midwifery; it is a most excellent companion to a systematic textbook or course of lectures, focussing the teaching on important clinical points. It is for this reason that, for example, one single chapter embraces abortion, premature labour, vesicular mole, extrauterine pregnancy, accidental haemorrhage, placenta praevia, hydrorrhoea gravidarum, polypus and cancer—all of which present certain common features but important clinical differences. In regard to plugging of the vagina in accidental haemorrhage, the author maintains that the plug, if properly inserted, obliterates the uterine vessels when the uterus is pressed down upon it by a firm binder. He is quite dogmatic on this point and "trails his coat" in true Hibernian fashion for any one, who dares, to tread upon it. Far be it from the reviewer to do so under the veil of anonymity! One does, however, feel inclined to wonder whether even his Rotunda experience justifies the writer in dogmatically using the expression "uterine tendons" when he means the perivascular connective tissue at the base of the broad ligaments. It is regrettable that Professor Tweedy has fallen into the habit of appendices. Surely his papers on the cause and cure of eclampsia, and on his conception of the lower uterine segment, might have been worked into the substance of the chapters dealing with these subjects, even if a considerably extensive resetting of type were necessitated.

The illustrations are on a low level of artistry, which, according to modern standards, is quite unworthy of the letterpress, but most of them succeed in teaching what they are intended to convey—and that, after all, is the most important matter.

The appearance of a second edition of Professor SHEARS'S *Obstetrics*⁵ within three years of its original publication indicates that its merits as an essentially practical textbook have more than counterbalanced some of the minor failings to which we were then compelled to draw attention. This second edition is an improvement on the first in these particular respects, and otherwise fully maintains the standard the author set himself. His long practical experience makes Professor Shears's teaching of great value, and many of his sentences are on an aphoristic plane. For example:

Eclampsia, in most cases at least, is easily prevented. In the present state of our knowledge it is not easily cured.

Uterine inertia. This much abused term is too often used as a cloak for lack of skill in diagnosis or a euphemism to explain certain facts in connexion with the physiology of labour of which we know as yet little or nothing.

Test every pelvimeter with a tape measure or a foot rule.

It is too often assumed that, while the Caesarean section can only be properly performed by the surgical or gynaecological specialist, it makes little difference who makes trial of the forceps or attempts the delivery of the after-coming head (in contracted pelvis). This is a grave error, as every practical obstetrician knows.

There are few cases (induction of labour) in which the delay required for conservative measures involves as much risk as does the additional burden of a rapid operative delivery.

The high forceps operation is to be regarded not as an operation that once begun must be finished at any cost, but . . . as a means of diagnosis, a test of the operability of the case in hand.

As may be judged from these few examples, there is much of great value in this book. It is therefore all the more regrettable that the author insists upon attempting to throw his teaching into high relief by repeated references

⁴ *Practical Obstetrics*. By E. Hastings Tweedy, F.R.C.P.I., and G. T. Wrench, M.D. Fourth edition. London: Henry Frowde, and Hodder and Stoughton. 1919. (Demy 8vo, pp. xxi + 557; 159 figures. 21s. net.)

⁵ *Obstetrics, Normal and Operative*. By George Peaslee Shears, B.S., M.D., Professor of Obstetrics at the New York Polyclinic Medical School and Hospital, etc., and E. E. Shears, M.D. Second, revised edition. Philadelphia and London: J. B. Lippincott Company. 1919. (Med. 8vo, pp. xx + 745; 419 figures. 30s. net.)

to what he regards as the failings of other textbooks unnamed. We again congratulate him upon some superb reproductions of photographs of the processes of labour.

NOTES ON BOOKS.

*The Voyage of a Vice-Chancellor*⁶ consists of extracts from the private diary of a member of the British University Mission, which made an extensive tour in the United States during the autumn of 1918. The mission was sent out under the auspices of the British Foreign Office at the invitation of the Council of Defence at Washington. Its members travelled many thousands of miles, and visited the leading universities and colleges of the United States and Canada. The author is easily identified as the genial Master of Christ's College, Cambridge, and his narrative is everywhere enlivened with light touches and amusing anecdotes. New York was reached on October 9th, when there began "the series of ceaseless kindnesses and unbounded hospitalities which continued all our trip." After a particularly assuaging dinner the party left "feeling, as the tablets say in our redecorated churches, 'enlarged, restored, and beautified.'" Immense numbers of speeches were made—as is the custom in America—and by the time the Yale visit was over "the incessant strain of meeting hundreds of hospitable hosts each day, the constant speeches and the eternal lack of sleep had proved too much for more than one of us," and the following day's diary contains the laconic entry "Slept." Speaking of the work of a former pupil whom he found engaged in getting together and setting out collections of artistic objects in the Montreal Fine Art Museums, Dr. Shipley makes this interesting observation: "Like so many students of the biological sciences, he has a real feeling for colour, form, and design."

The fact that HARTRIDGE'S *Refraction of the Eye*⁶ has reached its sixteenth edition in a space of thirty-five years is sufficient proof of its popularity. The book has always been a favourite with students because of the simple way in which it is written; it is profusely illustrated with woodcuts to explain the text, and the mind is not overburdened with mathematical formulae, a point which specially appeals to students, and there are many such, whose minds have not been trained in higher mathematics. The present edition does not differ much from the last, but a few additions have been made, and the whole text has been revised. *Refraction* is essentially a practical subject; there is no short cut or easy road, much time and labour must go to the making of a competent refractionist, and no amount of reading will ever serve instead; no better book, however, can be offered to the student who is beginning his practical work in the outpatient department than Mr. Hartridge's volume.

The first volume of the *Jamaica Public Health Bulletin*⁷ contains a record of the work of the members of the Society of Medical Officers of Health of that island, which was founded five years ago. Among the interesting papers it contains is one on the so-called "vomiting sickness" of Jamaica, in which the author, Dr. M. GRABHAM, details a number of the many poisonous plants with attractive-looking fruits or seeds met with in Jamaica, concluding that they are, in all probability, causes of the attacks.

We have already referred to the paper in the current number of *Brain* by Brown and Dujardin on the cerebrospinal fluid in herpes zoster and the relation of herpes zoster to syphilis. Other papers in the same issue are: on the genesis and physiological significance of spasticity by Walshe, and on the pathological examination of forty intracranial neoplasms by J. Godwin Greenfield.

In *Beverages and their Adulteration*⁸ Dr. H. W. WILEY gives an account of the preparation, standard characteristics, and adulteration of all sorts of beverages. Beginning with water, mineral waters, and "soft" (or non-alcoholic) drinks, he goes on to describe tea, coffee, cocoa, and chocolate. More than half the book is occupied

with the consideration of alcoholic drinks of all sorts; their preparation and adulteration are described and interesting notes on their history are given. A volume such as this should appeal to a large circle of readers—those who have to do with the analysis of liquors of all sorts, and those who drink them and are interested in what they are drinking.

The second edition of the Catechism Series *Midwifery*⁹ contains the compressed and unreasoned information customary in books of this class. It may be recommended to candidates reviewing their knowledge immediately before an examination.

*The Practice of Soft Cheese-making*¹⁰ is a well illustrated account of a branch of industry of national importance. The book describes the making of a greater variety of soft cheeses than it has ever been our fortune to meet, in a direct and thoroughly practical style. It should be in the hands of anybody with a little initiative who keeps cows, or a cow, or even a milch goat.

THE *Medical Register*¹¹ for 1919 was issued on July 4th; the delay has been due no doubt to difficulties created by the war. The number of names on the *Register* for the years of the war, 1915, 1916, 1917, 1918, shows a slight upward tendency, but the differences are small. The number added by registration steadily declined from 1,526 in 1915 to 1,077 in 1918. The total number on the *Register* in that year was 43,926; in 1915 it was 43,225. The number of names removed in 1918 by evidence of death was 946; in the previous year it was 801, and in 1916, 983. The annual average number in the last five years is considerably higher than for the last twenty-four. The *Dentists' Register*¹² for 1919 has also been issued. The names on it number 5,567; of these the licentiates and graduates in dentistry number 4,290.

⁹ *Midwifery*. By E. Mary Barclay, M.A., M.B., Ch.B. Edin. Catechism Series. Parts I and II. Second edition. Edinburgh: E. and S. Livingstone. 1918. (Cr. 8vo, pp. 80 and 152. 1s. 6d. net each part.)

¹⁰ *The Practice of Soft Cheese-making*. By C. W. Walker-Tisdale, F.C.S., and Theodore R. Robinson, F.S.I. London: John North. 1918. (Cr. 8vo, pp. 106; illustrated. 3s. net.)

¹¹ *The Medical Register* for 1919. London: Published for the General Medical Council by Constable and Co. 1919. (Pp. 1214. 10s. 6d.)

¹² *The Dentists' Register* for 1919. Same publishers. (Pp. 140. 3s. 4d.)

ROYAL MEDICAL BENEVOLENT FUND.

At the meeting of the Committee held on June 10th thirteen cases were considered and £147 10s. voted to twelve of the applicants. The following is a summary of some of the cases relieved:

Daughter, aged 80, of M.R.C.S.Eng. who died in 1859. She is too old to work. She receives £30 from friends, and £30 from another charity. Pays 25s. a week rent. Relieved seven times, £96. Voted £15 in twelve instalments.

Daughter, aged 62, of M.R.C.S.Eng. who died in 1879. Receives £25 from investments. Her employer is now dead, but she is looking after the house until the son's return home; she receives no salary. Relieved four times, £48. Voted £12 in twelve instalments.

Daughter, aged 55, of M.R.C.S.Eng. who died in 1894. Has no income. Lives with her sister, who also has help from the Fund. Unable to earn anything owing to ill health. Relieved nine times, £120. Voted £12 in twelve instalments.

Daughter, aged 60, of M.R.C.S.Eng. who died in 1879. Only income, £4 from investments and £20 from friends. Pays 8s. a week rent for one room. Suffers from chronic glaucoma. Relieved ten times, £106. Voted £15 in twelve instalments.

Daughter, aged 58, of M.R.C.S.Eng. who died in 1917. Was left unprotected for. Applicant acts as organist at the parish church, for which she receives £12 per annum, and by teaching music she receives about £12 a year. Pays £13 10s. for rent and rates. Relieved twice, £24. Voted £12 in twelve instalments.

Widow, aged 54, of L.S.A.Lond. who died in 1910. Applicant was left with four children, and now receives £2 8s. per week from the two eldest. Owing to the high cost of living she finds it impossible to manage. Relieved seven times, £84. Voted £12 in twelve instalments.

Subscriptions may be sent to the Acting Honorary Treasurer, Dr. Samuel West, at 11, Chandos Street, Cavendish Square, London, W.1.

The Royal Medical Benevolent Fund Guild is now called upon, as a result of the war, to deal with many widows and children who, in happier times, would not have thought of asking for assistance. It is glad to receive secondhand clothing and household linen. The class of clothes most wanted is that suitable for boys and girls working in offices, for women, and for old men. The gifts should be sent to the secretary of the Guild, 43, Bolsover Street, W.1.

⁶ *The Voyage of a Vice-Chancellor*. By A. E. S. Cambridge: The University Press. 1919. (Cr. 8vo, pp. 148; map. 6s. net.)

⁷ *The Refraction of the Eye*. By G. Hartridge, F.R.C.S. Sixteenth edition. London: J. and A. Churchill. 1919. (Cr. 8vo, pp. xii + 281; 110 figures. 7s. 6d. net.)

⁸ *The Jamaica Public Health Bulletin*, 1917. Edited by Edw. R. C. Earle, M.B.Lond., M.R.C.S.Eng., L.R.C.P.Lond., and L. Oliver Crosswell, M.B., C.M.Aberd. Kingston: Times' Printery. 1918. (Post 8vo, pp. 231. 2s. 6d.)

⁹ *Beverages and their Adulteration*. By Harvey W. Wiley, M.D. London: J. and A. Churchill. 1919. (Med. 8vo, pp. 421; 42 figures. 21s. net.)

INCOME TAX.

MARGINAL INCOMES.

DR. R. BRUCE FERGUSON (Watford) has sent us the following memorandum on the provision of the Finance Act of 1916 with regard to incomes just exceeding a limit:

At periodic intervals one comes across articles in the BRITISH MEDICAL JOURNAL dealing with the vexed question of income tax returns which have proved very useful to many. But I have not seen any reference to the method—allowed by the Finance Act, 1916—of assessing incomes which exceed by a small margin an even hundred, nor any advice as to how and when advantage should be taken of this method, or at what figure such advantage ceases.

Briefly put, the method is as follows (earned income alone is dealt with):

Assume one's income to be £501; hand over to the Inland Revenue the excess over £500—in this case £1—and then call the income £500. An example will best illustrate this. In the ordinary way an income of £501 is subject to an abatement of £100 and a tax of 3s. in the £; whilst an income of £500 is also subject to the same abatement, but a tax of 2s. 3d. only. The results of the two methods may be set out thus:

Method 1.				£
Income ...	...	...	...	501
Abatement ...	...	...	...	100
Taxable income				401
£401 @ 3s.	...	...	...	=£60 3s.

Method 2.				£
Income ...	...	...	...	501
Deduct ...	...	...	...	1
				500
Abatement ...	...	...	...	100
Taxable income				400
£400 @ 2s. 3d.	...	...	...	=£45
Add sum previously deducted ...	...	...	...	£1
				£46

There is thus a saving of £14 3s. by method 2.

As the income increases, so the amount to be "given away" increases, and the limit where the advantage of method 2 ceases is reached when the tax, as estimated by each method, shows the same figure in each. It is easy to calculate at what figure this will occur, and in the case of incomes slightly exceeding £500, the limit is reached at £517 12s. 11d.

Again, an income just over £700 can claim no abatement; but by the sacrifice of a few pounds it can be brought down to one not exceeding £700, which is subject to an abatement of £70. The advantage ceases when the income reaches the amount of £712 7s.

As the wording of the Act is that "the tax payable is not to exceed the sum of" the two amounts as shown in method 2, it might be argued that the surveyor, when preparing one's assessment, has this point in mind, and gives the taxpayer the benefit of it, rendering it unnecessary for him to worry himself further about it. It is, however, always well to be alive to possibilities; moreover, as I hope to show, there are occasions when it is incumbent on the taxpayer to be familiar with this regulation, or suffer in consequence, as no relief can be expected which is not claimed.

For example, if the income is £805, nothing would be gained by giving up the odd £5, and so bringing it down to one not exceeding £800 (since there would still be no abatement to claim, and the tax would be 3s. in either case), if it were not for the fact that an income of £800 can claim relief of £25 for wife and the same for each child under 16 years of age. But the taxpayer who finds his income to be over £800, and sees from the "Instructions" on Form 11 that such relief is granted only on incomes not exceeding £800, thinks it is useless to make the claim, and therefore omits to do so, to his own cost. The taxpayer whose income is slightly in excess of £800 must therefore consider very carefully whether it is not worth his while to sacrifice a few pounds of his income, and by so doing claim the relief to which he would then become entitled.

The following figures, which give the limit of income where all advantage ceases, and where, therefore, no claim for relief need be made, will, I hope, assist him. It follows, conversely, that between £800 and the limit shown in these figures, relief should be claimed.

	£	s.	d.
Wife ...	804	8	3
Wife and 1 child ...	808	16	5
Wife and 2 children ...	813	4	9
Wife and 3 children ...	817	12	11
Wife and 4 children ...	822	1	2

When the income exceeds £1,000 it is taxable at 3s. 9d., and the sacrifice of a few pounds may bring it into the lower class

of incomes not exceeding £1,000, where the tax is only 3s. The limit where this advantage ceases is £1,046 3s. 1d.

A further point is that by this method relief of £25 will be given—if claimed—for each child under sixteen in excess of the first two. Where relief for one such child can thus be claimed, no advantage will accrue by such claim where the income exceeds £1,050 15s. 5d., and in the case of two children £1,055 7s. 8d.

** The question of the marginal limit points was referred to in articles published in 1916 and 1918, but the limit points were not set out at that time because a further question arises which to some extent affects the calculations. The limit point in almost every case will be affected by the amount of the life assurance allowance, seeing that the greater that allowance the smaller the gain to the taxpayer by bringing his income into a category taxable at a lower rate—for example, on Dr. Bruce Ferguson's first example the gain is stated as £14 3s., but if there were allowances £25 for wife, £25 for life assurance, and £50 for two children the gain would be £14 3s. less (£100 @ 9d. =) £3 15s. = £10 8s. only.

The marginal allowance is undoubtedly a mandatory one—that is, does not need to be specifically claimed—and in general would be granted on the statement of total income which the practitioner would make in the ordinary way. But the point raised in the article that at the £800 and £1,000 limits a practitioner might suffer through forgetting that the operation of the marginal relief in effect raises those limits to persons entitled to claim allowances for wife and children is important, and practitioners will be well advised to complete those portions of the form of return relating to the "wife" and "children" claims if the total income does not exceed, say, £1,100.

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.

THE annual meeting of the London and Counties Medical Protection Society was held on July 2nd, when Sir JOHN ROSE BRADFORD, K.C.M.G., F.R.S., was in the chair.

The report of the council stated that notwithstanding the difficulties arising from the prolongation of the war during the greater part of 1918 the prosperity of the society had been well maintained. A limited number of members on military service had resigned, but were now rejoining, and a second entrance fee would not be required of them. In addition special arrangements had been made to assist those whose subscriptions had fallen into arrears during their absence abroad. During the year nearly 10 per cent. of the members had availed themselves of the assistance of the society; several law suits were undertaken, the result in the majority of instances being satisfactory to the members concerned. The society had also taken steps to restrain unqualified medical and dental practice, so far as the present unsatisfactory state of the law allowed.

Major C. M. FEGEN, the treasurer, stated that the financial position of the society was never better than at the present moment. In view of possible liabilities, however, he thought that it should not rest content with a reserve of less than £100,000.

Sir JOHN ROSE BRADFORD was re-elected president, and in acknowledging the compliment said that he could conceive nothing so likely to relieve the anxieties of a practitioner as to feel that a body of this kind was at his back.

All the vice-presidents were elected again, with the addition of Mr. C. W. Glassington, L.D.S., and to fill vacancies on the council Drs. Percy Norman Cave and Montague Frank Hopson were elected. Very appreciative tributes were paid to Dr. Hugh Woods on his re-election to the general secretaryship.

THE meeting of the twenty-sixth Congress of the Italian Surgical Society at Trieste has been postponed till October owing to the lack of sufficient lodging accommodation.

As a part of the re-education of injured soldiers Columbia University, New York, has recently established a course of music-therapy, in which the indications for the use of specific musical instruments for specific ailments in the "psychoses and neuroses of shell-shocked men," and the "effects of key, rhythm dynamics, timbre, colour, pitch and vibratory musical massage for curative results" will be studied.

PORTRAIT OF SIR CLIFFORD ALLBUTT.

WE publish below a further list of the names of subscribers to the Fund for presenting Sir Clifford Allbutt with his portrait. It will be seen that some subscriptions have recently been received from India and America. As it is intended to close the Fund from July 31st, the Treasurer requests all those who wish to take part in the presentation, but who have not yet notified their intention, to send their subscriptions without delay. The amount is limited to one guinea. Cheques and postal orders should be made payable to the "Sir Clifford Allbutt Presentation Fund," crossed London County, Westminster, and Parr's Bank, and addressed to the Treasurer of the British Medical Association, 429, Strand, London, W.C.2.

After the portrait in oils has been painted it is intended to commission a mezzotint engraving from it which subscribers to the Fund will be able to purchase for their own collections.

Dr. T. D. Acland (London)
Dr. R. Atkinson (Smethwick)
Dr. A. G. Auld (London)
Dr. William Bain (Harrogate)
Sir Harry Baldwin (London)
Dr. E. Billing (London)
Dr. W. Blair (Jedburgh)
Dr. A. Bowe (St. Neots)
Dr. Byrom Bramwell (Edinburgh)
Sir John F. H. Broadbent, Bt. (London)
Dr. A. Bronner (Bradford)
Dr. J. Mitchell Bruce, C.V.O. (London)
Lady Butlin (London)
Dr. Archibald Campbell (Newcastle-upon-Tyne)
Lieut.-Colonel Aldo Castellani (London)
Dr. Vivian E. Chang (Leeds)
Dr. W. Chisholm (Sydney)
Dr. J. F. Churchill (Chesham)
Dr. J. M. Cowan (Glasgow)
Dr. C. R. Crowther (Plymouth)
Dr. T. L. Drakes (Chepstow)
Dr. D. Durran (Thurso)
Major General W. R. Edwards, C.B., C.M.G., D.G. I.M.S.
Miss A. Estcourt-Oswald (Colchester)
Dr. J. S. Fairbairn (London)
Dr. W. J. Fenton (London)
Captain Charles Forbes, O.B.E. (Liverpool)
Sir James K. Fowler, K.C.V.O., C.M.G.
Dr. W. O. Greenwood (Poppleton)
Dr. F. W. W. Griffin (Fulham)
Surgeon Lieutenant Commander S. W. Grimwade, R.N.
Dr. G. A. Hamerton (London)
Dr. M. Handfield-Jones (London)
Dr. C. R. Harper (Peckham)
Dr. C. L. Hawkins (Birmingham)
Dr. K. R. Hay (London)
Captain H. G. Hill, R.A.F.
Dr. Joseph Horne (Glasgow)
Dr. T. Aubrey Jones (Tunstall)
Colonel Herbert Jones, R.A.M.C. (Hereford)
Professor W. W. Keen (Philadelphia)
Colonel G. Lee (Dewsbury)
Dr. J. Livingston (London)
Mr. Arthur Lucas (Buckingham)
Dr. A. Lyndon (Hindhead)
Brevet Lieut.-Colonel R. McCarrison, I.M.S. (Madras)
Dr. Michael McDonough (Galway)
Dr. Eneas K. Mackenzie (Tain)
Dr. Archibald N. McLellan (Glasgow)
Dr. W. S. Melville (Lenzie)
Dr. William Millar (Brough)
Captain C. S. Miller (Nottingham)
Dr. H. H. Mills (London)
Dr. G. B. Muriel (Whitehaven)
Major E. H. Myddelton-Gavey (Flax Bourton)
Dr. David Nabarro (London)
Mr. Alexander Napier (Glasgow)
Dr. J. H. Naismith (Tow Law, co. Durham)
Dr. W. Noble (Baillieston)
Dr. J. C. Norman (Hebburn-on-Tyne)
Dr. T. O'Kelly (Chipping Norton)
Dr. A. Orme (Leyton)
Dr. H. Holmes Orr (London)
Dr. John Parkinson (London)
Dr. A. R. Parsons (Dublin)
Dr. A. R. Paterson (Parkstone)
Surgeon Commander C. A. G. Phipps, R.N.
Dr. E. E. Prest (New Cumnock)
Captain J. R. Rees, R.A.M.C. (Epping)
Dr. J. Lloyd Roberts (Liverpool)
Dr. J. McGregor Robertson (Glasgow)

Dr. H. J. Robinson (Kirkoswald)
Dr. J. B. Ronaldson (Beaconsfield)
Dr. James Russell (Sandhurst)
Captain S. K. Sanyal, I.M.S. (Handsworth)
Dr. M. Seeraj (Liverpool)
Dr. B. H. Shaw (Stafford)
Professor W. J. Simpson, C.M.G. (London)
Dr. W. M. Smith (Eastbourne)
Dr. W. Snodgrass (Glasgow)
Dr. C. H. Swayne (Dublin)
Dr. Horace Sworder (Luton)
Dr. J. H. Tallent (Chislehurst)
Captain E. C. Tamplin, M.C., R.A.M.C.
Dr. John Teacher (Glasgow)
Dr. W. H. M. Telling (Leeds)
Dr. A. Tennyson-Smith (Orpington)
Dr. J. L. Thomas (Newport, Mon.)
Professor Arthur Thomson (Oxford)
Professor W. Thorburn, C.B. (Manchester)
Dr. A. J. Vause (Hastings)
Dr. E. Ward (Wokingham)
Mr. Hugh T. A. Warnock (Invereske)
Dr. T. Boswall Watson (Woldingham)
Captain T. T. B. Watson, R.A.M.C.
Dr. John White (Nailsea)
Dr. John Whyte (South Shields)
Dr. W. Charrington Wood (Penshurst)
Dr. H. C. S. Woodward (Abingdon)

RECRUITING FOR THE R.A.M.C.

STATEMENT BY THE D.G. A.M.S.

WE have received the following communication for publication:

"As there appears to be some misunderstanding as to certain points in connexion with the terms of the recent offer by the War Office of engagement in the Royal Army Medical Corps for service with the Army of Occupation, the Director-General Army Medical Service makes the following explanation:

"(1) Officers who are at present serving in the Royal Army Medical Corps under contracts for twelve or six months or other definite stated periods will be required to complete these engagements, with the option of entering into the new contract on termination.

"(2) Officers who are serving under contracts 'until the termination of the present emergency' will be eligible for demobilization on the statutory date for the end of the war which will be published, and the gratuities payable under such contracts will be issuable on that date.

"(3) All officers who are at present serving may offer themselves for service with the Army of Occupation (such service to commence on the day following the completion of their present contracts) under the terms of the recent offer—namely, for a period of twelve months or until their services are no longer required, whichever may happen first, at a salary of £550 per annum, *plus* rations or the allowance in lieu. The sum mentioned is inclusive of both bonus and gratuity, and no additional emoluments of any kind are issuable.

"(4) Officers holding the acting rank of Lieutenant-Colonel or Major will be required to sign a contract embodying the above terms, but will draw the pay and allowances of their acting rank whilst holding it, the contract terms as to emoluments remaining in abeyance during that period; they will revert to contract rates on ceasing to hold the acting rank.

"(5) Field Officers of the Territorial Force and Special Reserve will receive the pay and allowances of their substantive field or acting rank.

"(6) Officers will continue to draw Children's Allowance for the present."

THE NEW CONTRACT.

Possibility of Release.

WE are asked whether an officer R.A.M.C. at present serving who enters into the new contract with the War Office on August 4th for a "year, or until no longer required, whichever shall first happen," would be released by the War Office should he obtain an appointment under another ministry at a date later than August 4th.

"* We are informed that the War Office will not undertake to do this, but should the officer not get the appointment under the other ministry he could then join the R.A.M.C."

British Medical Journal.

SATURDAY, JULY 12TH, 1919.

MEDICAL PENSIONS BOARDS.

THE evidence given by Sir Douglas Haig before the Select Committee on Pensions last week has been read by many with concern and regret. His charges were enumerated under nine heads, but his remedies were summarized under three—first, a greater generosity on the part of the State; secondly, a single authority to co-ordinate the work of the Ministers; and thirdly, an improvement in the pensions machinery, which he asserted was working laboriously but too slowly and in many cases unsympathetically. The memorandum he put in was very strongly worded, and contained some sensational stories calculated to raise public indignation against the authorities of the Navy, the Army, and the Ministry of Pensions, and, by implication, to put a serious slur on the medical profession. With regard to two specific instances of alleged hardship to officers related by the Field Marshal, it has been shown by the Ministry of Pensions and the Admiralty respectively that he must have relied on secondhand hearsay evidence, and that he had thus allowed himself to be made responsible for statements which were wholly inaccurate. It is necessary to refer to this matter, for the discovery of such errors must discount the value of his evidence and throw doubt on all his conclusions; but our chief concern is with allegations against the competence and good faith of the medical boards of all kinds. He alleged that in some instances members of the board "are ignorant of the actual disease suffered." The phrase is far from clear, and we find difficulty in knowing what significance should be attached to it. Does it mean that the members are insufficiently acquainted with the prognosis of certain diseases unfamiliar in this country? Or does it mean that the members are not supplied with the proper history of the man's case? In the latter alternative the fault must lie with the military authorities, and we have no doubt that the Field Marshal will use his influence to have it remedied. In the other alternative there need be no false shame in admitting that the work of assessing pensions for disability due to disease was new to the great majority of civil practitioners in this country. The public—rightly as we think—demanded that they should take a large share in this work, but in any case the immense amount that had to be done would have made it necessary to enlist their help.

The work of the Pensions Medical Boards has from the first been conscientiously done, and its quality has steadily improved as experience has been gained. The Ministry has recently been careful, by the circulation of special information and instructions, to take its share in the steady improvement which has been going on. We do not believe that any local medical boards "treat every wretched individual who appears before them as a malingerer," but we are rather afraid that the medical department of the Ministry of Pensions may have been at one time inclined to this view. The Ministry was not at first organized on a proper footing, and the medical—the most important department—was, unfortunately, no exception.

Speaking with some knowledge of the experience of other countries, we pointed out several years

ago that if the problem of pensions, even then large and daily growing larger, was to be solved with fairness to the fighting man and to the taxpayer, the medical department must be so organized that it would act promptly under the guidance of skilled medical and surgical advice. Unfortunately things were allowed to drift, and the new Minister and his staff found on their hands a huge task without any adequate organization for dealing with it. Sir Douglas Haig paid a tribute to the courtesy and sympathetic attitude of the present Ministry of Pensions, and we are glad to know that with the advent of Sir Laming Worthington Evans and a well organized medical department under Colonel A. L. Webb there has already been a great advance, and that all hands are resolved on speedily making further improvements. We entirely agree that decentralization is necessary, and we understand that it is now in progress; we also agree that the system under which disability was reassessed at the Ministry of Pensions without the individual being seen or heard is very liable to error unless carefully safeguarded and wisely administered. The risk was the greater because the man's pension might be altered by the board of medical assessors at Chelsea, not only without seeing the man, but also without reference to the medical board who saw him and reported on his physical condition. A further disadvantage of this arrangement was that the boards of first instance never knew the fate of their recommendations, never knew whether they were accepted or changed—upwards or downwards. This may account for Sir Douglas Haig's complaint that there has been a lack of uniformity in the decisions of the boards. The present medical department of the Ministry of Pensions is well aware of this defect in the machinery, but we hope that the Minister will not accept the Field Marshal's curious suggestion that it might be remedied by the appointment of a selected combatant officer to act as assessor, for it is not easy to see how an officer ignorant of medicine could be of any assistance to a medical board in determining the degree of disability. The Select Committee has taken a good deal of evidence on this point. It is unsatisfactory that one medical assessor, *plus* papers, should overrule the verdict of three medical officers, *plus* papers, *plus* patient. The Ministry intends, we believe, to provide that if in the future the medical assessors differ from the finding of the board of first instance, all papers are to be referred back in every case where the information is inadequate, or the findings are judged to be faulty or not in accordance with the standard sought to be maintained at head quarters. If the process of decentralization is carried out the assessor will often be able to attend the local board and discuss the case with its members—obviously the proper course in any doubtful case.

Upon one matter it seems to us that the Field Marshal went entirely off the track. He said that the need for reform in the method of treatment of gas poisoning, shell shock, and neurasthenia was crying. It was admitted, he said, that the treatment of these conditions was no easy matter, and we agree that the diagnosis between malingering and functional disorder is often a matter of great difficulty; the diagnosis of functional from organic disability may be equally difficult. No one, however, who has seen a large number of pensioners can doubt that when the interests of the taxpayer and the pensioner are in conflict, the medical board is disposed to incline the balance in favour of the latter. It is easier to mistake functional for organic disease than vice versa, and in a mixed case it may be a matter of extreme

difficulty to estimate the amount of functional disability which is grafted upon an organic basis. The tendency of medical boards generally is to give the patient the benefit of the doubt. As to the need for reform in the method of treatment, a great deal of knowledge has been gained through the work of French and British psychologists and neurologists, and no one with even a superficial acquaintance with the work of a neurological centre here or in France can doubt that treatment in such cases to-day is very much more efficient and effective than even two or three years ago.

THE CAUSAL ORGANISM OF YELLOW FEVER.

THE causal organism of yellow fever has been the object of much research both before and since the heroic Yellow Fever Commission consisting of Reed, Carroll, Lazear, and Agramonte proved in 1900 that the disease was conveyed by the mosquito *Stegomyia fuscata*. It was shown soon after by Carroll that subcutaneous injection of diluted blood from a yellow fever patient can, after passage through a new and sterilized Berkefeld filter, produce the disease, and it has therefore been assumed that the virus is a filter-passer. Special interest therefore attached to the announcement made in our issue of May 24th that Noguchi of the Rockefeller Institute, working with the Yellow Fever Commission of the International Board of Health (1918) in Guayaquil, Ecuador, the last remaining endemic centre of the disease, had found a spirochaete closely resembling in its morphology the causal organism of spirochaetosis icterohaemorrhagica. He has now published three papers¹ on the symptoms and pathology of yellow fever, founded on an analysis of 172 cases, on experimental transmission of the disease to animals, and on the symptoms and pathological changes in the animals thus infected. In the first paper it is shown that the yellow fever in Guayaquil was clinically and pathologically identical with the disease, whether endemic or epidemic, described elsewhere by other observers, the incubation period varying from three to six days, and the conjunctivae becoming slightly yellow on the second or third day. This preliminary account would meet the conceivable criticism that the disease in Guayaquil was not genuine yellow fever.

In the experimental transmission of yellow fever to animals blood drawn from the median basilic vein of patients at various stages of the disease, mainly during the first week, was injected before coagulation into the peritoneal cavity of mammals and into the pectoral muscles of birds. Nine kinds of mammals and nine species of birds were tried, but most of them proved very slightly susceptible, and eventually guinea-pigs, which were so successfully employed for the purpose of investigating spirochaetosis icterohaemorrhagica by Inada and Ido, were chiefly used. Out of seventy-four guinea-pigs inoculated with blood from twenty-seven cases of yellow fever, eight, representing six cases, after an incubation period averaging three to six days, developed symptoms and lesions corresponding to the disease in man; and in the blood, liver, and kidneys of these guinea-pigs a minute organism closely resembling in its morphology the causal agent of spirochaetosis icterohaemorrhagica was found. This organism, which is provisionally called *Leptospira icteroides*, can also be directly cultivated from the blood of yellow fever patients. It is, however, immunologically distinct from the species responsible for spirochaetosis icterohaemorrhagica, but this subject will be more fully discussed in future

papers. It may here be mentioned that in 1917 Noguchi pointed out that the *Spirochaeta icterohaemorrhagiae* of Inada and his Japanese colleagues differed from all other spirochaetes both morphologically and in resisting the destructive influence of a 10 per cent. solution of saponin, and accordingly he describe it as a separate genus, *Leptospira icterohaemorrhagiae*.

Obviously further points remain to be made out; the life of the organism in the mosquito is an interesting problem, and as some of the protocols of the experiments incidentally mention that the infected guinea-pigs were in mosquito cages with *stegomyias*, it appears certain that a series of further reports may be anticipated.

Immediate injection of blood from a yellow fever patient into a guinea-pig may fail to reproduce the disease, whereas a portion of the same blood, after temporary enrichment of the virus by cultivation in a medium composed of Ringer's solution and 0.3 per cent. neutral agar is successful. The explanation of this is—as experiments to be published later, we are told, show—that the blood serum of yellow fever patients contains immune bodies antagonistic to the development of the organism in the guinea-pig. The virulence of the *Leptospira icteroides* varies; it may produce a fatal infection in some guinea-pigs, an abortive disease in others, and in yet others no obvious effect. It can be passed from one guinea-pig to another by timely transmission, and a guinea-pig that survives infection becomes immune. The symptoms and morbid changes induced in guinea-pigs are much more pronounced than those observed in dogs or marmosets; but the experimental disease closely resembles human yellow fever, which, as regards its intensity, is intermediate between the manifestations produced experimentally in marmosets on the one hand and in guinea-pigs on the other.

The morphological similarity between the *Spirochaeta icterohaemorrhagiae* and Noguchi's *Leptospira icteroides* may be correlated with the clinical resemblance between spirochaetosis icterohaemorrhagica and yellow fever, commented on last year by Nolf and Firket,² and raises some further important questions. The infection of spirochaetosis icterohaemorrhagica is generally believed to be spread by the excreta of rats and to enter the body either with contaminated food and drink or directly through the skin; but Nolf and Firket argue that, as the disease is most virulent in hot weather and dies out in the winter, when wet weather would favour ordinary contamination of food and the skin, the disease is conveyed by some biting insect active during the summer. This conception is rendered all the more attractive by the analogy of yellow fever, now that Noguchi has shown such good reason to believe that the latter disease is due to a closely allied organism. It also clearly follows that serum treatment, already employed in spirochaetosis icterohaemorrhagica, should be applicable on similar lines to yellow fever. Although Noguchi is silent on this point, it seems safe to assume that the serum of convalescent patients and animals has been tested for its curative properties and that the results will be forthcoming before long. Finally, it is surely appropriate that the prospect of this cure for "that dreadful scourge yellow fever," to quote from the memorial inscription to Dr. Walter Reed, who "gave to man the means of control" over its occurrence, should open before us just when the Dogs' Protection Bill, with its threat to the future of such work in this country, has fortunately been rejected.

¹ H. Noguchi, *Journ. Exper. Med.*, Baltimore, 1919, xxix, 547-556.

² Nolf et Firket: *Arch. méd. belges*, Paris, 1918, lxxi, 380.

AMERICAN HOSPITAL FOR GREAT BRITAIN.

PLANS for the establishment of an American hospital in London are now in so advanced a stage that a meeting of the governing council will be held next week at the house of the Royal Society of Medicine, at which Lord Reading (who has accepted the presidency of the hospital) and the American Ambassador have promised to be present. Upon the signing of the armistice last November it was considered that the moment was ripe for bringing the project of an American hospital to the consideration of the medical profession in Great Britain as well as of the American colony in London. The promoters were of opinion that the need of the foundation of such a hospital was obvious, and that the exceptional opportunities of the moment were never likely to recur. The medical profession in America and in Great Britain has hitherto worked too much apart, although each has much to learn of the other. The incidence of the war has brought them into closer contact. Sir Anthony Bowlby has recently in *The Times* borne warm testimony to the sympathy between the medical profession in the United States and in Great Britain. He recalls that "an American unit from Harvard University, under Colonel H. Cabot, completely staffed one of our general hospitals in France as early as 1915, and in 1917 six more British hospitals in France were staffed by the United States. In 1917 the British army in France had one to two hundred American surgeons working on our front with regiments, field ambulances, and casualty clearing stations, and not a few of them were killed or wounded while serving under the Union Jack. The services they rendered at a time when we were very short of surgeons should never be forgotten, and it would be impossible to overestimate the cordial good fellowship and mutual regard and esteem which prevailed everywhere." American medical men have not only been attached to British units in the field, but have worked side by side with the British medical man upon the staffs of military hospitals in all parts of England and Scotland. The help given in the hospitals of this country, especially by the teams of orthopaedic surgeons who came over when we were in dire need of their skill, will never be forgotten. The comradeship brought about by such friendly co-operation and interchange of scientific knowledge is of such importance to the future of the two nations that it must be encouraged and strengthened in every possible manner. The scope which should be given to the hospital was discussed by a Medical Executive Committee, consisting of Sir William Osler, Sir Arbuthnot Lane, Sir Humphry Rolleston, Sir John Bland-Sutton, Mr. J. Y. W. MacAlister, and Mr. Philip Franklin. At the Congress of the American Surgical Association and the American Medical Association in Atlantic City last month, Sir Arbuthnot Lane notified officially that the hospital would be established. He pointed out that no more fitting monument could be raised to those who had fallen in the war, and that the hospital was designed to form the headquarters for American medical men who visited Europe for the purposes of post-graduate study. At the Congress the plans of the Committee, as described by Sir Arbuthnot Lane, were received with enthusiasm, and he was assured by distinguished members of the profession that the medical men of America were keenly alive to the great value of such an institution in England as a centre for study and research. A committee was then formed to ensure the co-operation of American doctors upon a definite footing, and to act in conjunction with the Executive Committee in London, and, if desirable, to work under the National Research Council at Washington. This American Committee consists of Dr. George W. Crile, of Cleveland, appointed by the American Academy of Sciences on International Relations; Dr. W. J. Mayo and Dr. Charles H. Mayo of Rochester, Minnesota; Dr. Albert J. Ochsner of Chicago; Dr. Rudolph Matas of New Orleans; and Dr. Franklin Martin of Chicago, appointed by the American Gynecological Association.

This committee will send a delegate to assist the London Medical Committee here in the detailed organization of the hospital. It has, we are informed, been planned upon the most modern lines, and will be complete in every department of medical and surgical activity; accommodation will be arranged for every class of patient. A research institute, modelled upon the Rockefeller Foundation of New York, will form an integral part of the building. The consulting staff will bring together many distinguished members of the profession in the United States and Great Britain. The visiting staff will be nominated by the Executive Medical Committee. The Governing Council of the Hospital consists of many prominent members of the American colony in London. Mr. Philip Franklin, F.R.C.S., is acting as honorary secretary.

THE MEDICAL CORPS, UNITED STATES ARMY.

GENERAL PERSHING, Commander-in-Chief of the American Expeditionary Forces, in a letter to Brigadier-General Walter D. McCaw, Chief Surgeon to the Forces, pays a warm tribute to the medical corps. He expresses his personal appreciation of their splendid services at the front and in the long chains of hospitals extending down to the base ports. He said their achievements had added new glory to the noble profession they had so ably represented. Many of them had shared with the line troops the hardships of campaign conditions, and had suffered casualties and privations with a fortitude beyond praise. Special praise was due to those who had served continuously with the armies of their allies. Their efficiency and high ideals had won the highest praise of the Governments under whom they had served. According to a statement recently issued by the Surgeon-General of the United States Army 442 casualties occurred among the medical officers of the American Expeditionary Forces in France from July 1st, 1917, to March 13th, 1919. Of these 22 died of wounds, 9 of accidents, 101 of disease; 46 were killed and 7 were missing in action; 4 were lost at sea. There were 38 prisoners unwounded, 47 wounded in action (degree undetermined), 93 severely wounded in action, and 72 slightly wounded. The Surgeon-General has appointed a board to consider criticisms and suggestions relative to the medical service submitted by officers as the result of their experience during the war.

RED CROSS AMBULANCE FOR HOME USE.

The response to the offer of the Joint War Committee of the British Red Cross and St. John Ambulance Association to supply some of the motor ambulances sent home from France for use in this country to transport accidents and acute cases to hospital and transfer them home again, has fully justified the expectations of those who believed that such a scheme would meet a real want in the rural counties. Applications were invited from 99 county areas, and have been received from 89. Allotments of ambulances numbering altogether 206 have been made to 76 counties; 13 applications are in abeyance for some local reason. Out of the 206 cars allotted, 73 have been delivered to county directors for service. These figures show that 89 county areas out of 99 have been, or are being, dealt with. Of the remaining 10, there are 3—Isle of Wight, Guernsey, and County Limerick—which state that the scheme is not necessary in their areas. The remaining 7 include the county areas of London City and County, Birmingham, Bristol, and Middlesex, places which, under the conditions of the scheme, it is not intended to attempt to serve until the needs of the rural districts of the country are met. Considerable difficulty in delivering the ambulances has been occasioned by the refusal of the various railway companies to carry the cars to their destination on the ground that as the cars can be driven they should be delivered by road and thus relieve the congestion of railway traffic. This has necessitated county directors

sending their own drivers to London to take delivery of the cars allotted. An arrangement has, however, now been made with Miss Hutchinson of the First Aid Nursing Yeomanry, that she and some of her colleagues, who gave the Joint Committee such excellent service in France, shall assist county directors by driving ambulances down to the various localities on repayment of out-of-pocket expenses. The offer has already been accepted by a good many county directors.

TREATMENT OF PERSONS IN PERIL OF HYDROPHOBIA.

THE Memorandum on the procedure to be adopted in the case of a person bitten by a dog suspected or ascertained to be rabid has been revised and reissued. The arrangements made and now to be carried out by the Ministry of Health, as successor to the Local Government Board, centre in the medical officer of health of the district in which the bitten person resides. He will act under the advice of the Ministry of Health. The arrangements for bringing a case to the notice of the medical officer of health appear to be cumbersome. A person bitten by a stray dog or a dog exhibiting unusual behaviour is advised at once to inform the police, with a view to the necessary inquiries being made. Apparently the police then inform the Board of Agriculture and Fisheries, and that Board passes on the information to the medical officer of health, who then reports to the Medical Department of the Ministry of Health, giving particulars—the day on which the bite was inflicted, its severity and the part of the body bitten, the name and address of the owner of the dog, or other information which will enable the dog to be identified, and as to whether rabies in the dog has been diagnosed locally. Having received this information from the medical officer of health the Ministry of Health will proceed to ascertain the opinion of the veterinary officers of the Board of Agriculture and Fisheries on the facts in their possession regarding the suspected dog, and having obtained this information will let the medical officer of health know if the veterinary officers advise that the dog is to be regarded as rabid. Should there be much delay in making a definite diagnosis the Board of Agriculture will advise the Ministry of Health whether the symptoms of the dog are sufficient to justify antirabic treatment before the confirmatory diagnosis is available, and the Ministry of Health will then pass this information on to the medical officer of health, who is to await instructions from the Ministry of Health before sending cases for treatment. One short cut has been devised, inasmuch as the Board of Agriculture is authorized to communicate directly with the medical officer of health if it becomes aware that a person has been bitten by a dog suspected of being rabid. As most persons bitten by a dog nowadays are almost sure to take the advice of the Ministry of Health "to get the immediate services of a doctor," it almost seems to us that the reasonable plan would be for the doctor or the patient, or both, to communicate direct with the medical officer of health. The final decision whether or no antirabic treatment is essential rests with the medical officer of health, and there are now six places where the treatment can be carried out: In London—Dr. Dudgeon (Department of Pathology, St. Thomas's Hospital, S.E.1); Plymouth—Dr. Pethybridge (11, Whitefield Terrace); Cardiff—Dr. Schölberg (King Edward VII's Hospital); Birmingham—Dr. Leonard G. Mackey (141a, Great Charles Street); Manchester—Dr. W. J. Reid (10, St. John Street); Newcastle-upon-Tyne—Dr. Alfred Parkin (Royal Victoria Infirmary). The vaccine employed at these centres is a carbolyzed antirabic vaccine prepared in the laboratory of the Ministry of Health. The hospitals named do not, except by special arrangement, undertake to provide indoor accommodation for patients undergoing antirabic treatment; if the M.O.H. is satisfied that a person who needs such treatment cannot afford the expense of residing at the centre for

two or three weeks he will represent the matter to the district council, in order that the requisite funds may be provided. The memorandum concludes with the following paragraph: "Attention may again be drawn to the importance of securing all possible expedition in the above procedure." Could it not be simplified?

DIGITALIS IN THE RHEUMATIC HEART OF CHILDREN.

SINCE 1910 our conceptions of the mode of action of digitalis and its therapeutic scope have undergone considerable modification as the result of the work of Sir James Mackenzie and his followers. The conditions for which the drug may reasonably be given have been more accurately defined and restricted. Formerly the principal action of digitalis was held to be slowing of the pulse; but with the recognition of auricular fibrillation orthodox opinion has come to the conclusion that excessive slowing of the pulse with ordinary doses of the drug occurs only in that condition. In 1917 Dr. Thomas Lewis said that there were a large number of carefully observed cases of auricular fibrillation in which the rate of the ventricle had undoubtedly been controlled by digitalis, but no comparable series of cases in which, with a normal sequence of chamber contraction, digitalis has been shown to have a similar effect, or, in fact, any striking beneficial effect. Dr. G. A. Sutherland has taken up this challenge, and, in a paper¹ of considerable practical importance in regard to the treatment of rheumatic hearts in children, points out that a regular heart showing signs of failure may be beneficially acted upon by digitalis. All his patients were under 14 years of age, and after acute or subacute rheumatism were left with a persistently rapid pulse rate of from 115 to 130, due to activity of the sino-auricular node induced by the rheumatic poison. Digitalis was not given until the temperature was normal; then after full doses for three or four days, or after a longer interval when smaller doses were given, the pulse rate fell thirty or more beats a minute and the cardiac efficiency was thereby improved, as was well shown by the condition of the liver, relief from dyspnoea, and so forth. This effect can be maintained by continuing the use of digitalis in small doses for a period varying in different cases; and by this means the period of convalescence is much shortened, and the prolonged rest in bed, which cautious physicians have as a rule enforced, is rendered unnecessary. The action of digitalis is to inhibit overaction of the sino-auricular node, and is just as specific as is its inhibitory action on the auriculo-ventricular node and bundle in auricular fibrillation.

THE PRICE OF MILITARISM.

For some time a Danish committee has been engaged in collecting information as to the cost of war in terms of human life, and the results as regards Germany have now been issued.² The information is still, of course, fragmentary, and Dr. Döring, the author of the report, has perhaps not sufficiently allowed for the decline of the birth rate which would certainly have continued in Germany, as elsewhere, even without a war, while his attempt to separate civilian from military losses has probably not been altogether successful. Nevertheless his main results can probably be accepted. The effect of the war upon the birth rate manifested itself as increasingly important from April, 1915, onwards, and within the first year, reckoning from April, 1915, the births were 21 to 24 per cent. fewer than in the last year before the war. The accumulated deficit of births by the end of the war amounted to 3½ millions. The deaths steadily increased, and were more than 2 millions above those which would have been expected to occur under

¹ *Quart. Journ. Med.*, Oxford, 1919, xii, 183-211.

² Bulletin No. 4 der Studiengesellschaft für soziale Folgen des Krieges: Die Bevölkerungsbewegung im Weltkrieg, von G. Döring, Deutschland, 2nd edition, Copenhagen, 1915.

pre-war conditions; if, as seems probable, not more than 1,800,000 of these can be attributed to the direct effects of fighting, the death toll of civilians was considerable and was taken mainly in the years 1917-19, when the effects of under-nutrition were becoming prominent. Testimony to this is afforded by the course of mortality from tuberculosis; there were 56,861 deaths from this cause in Prussia in 1913; the numbers increased each year and amounted to 66,544 in 1916, but the difference between 1917 and 1916 is much greater than that separating 1916 from 1913; in 1917, 86,217 persons died of tuberculosis. Secondary evidence pointing in the same direction is the increase of deaths attributed to dysentery (121 in Prussia in 1913, 882 in 1916, 7,652 in 1917) and the fact that the rate of mortality in the first year of life did not share in the general increase to any important extent. The price paid by Germany amounts to about 5½ million lives, more than two of these millions actual deaths, the balance made up of the births lost. The actual population is some 2,700,000 less than in 1913, the proportion of the sexes utterly disturbed. At ages 20 to 50 the sex ratio before the war was 1,000 males to 1,005 females, now it is 1,000 males to 1,155 females. Of men of military age 13 per cent. are gone. In Dr. Döring's words, "To a definite loss of more than 5½ million human beings is to be added a long continuing decline of the birth rate and for years to come a higher rate of mortality." Such is the end of the attempt to secure a Germany hegemony. These figures teach another lesson—that of the importance of the food factor in the great war. The measures advocated by the English physiologists had precisely the effect predicted, and their calculations as to the time when the strain would become unbearable were fully justified. Germany lost the war in the granary, and the chief contributory causes were her poor comprehension of racial psychology and her love of the spectacular side of war. Her delay in the institution of ruthless submarine warfare and her laboured attempts to throw the blame upon her foes did not have the psychological effects in conciliating neutral opinion which she anticipated, while the lust for Dreadnoughts no doubt precluded her from constructing before 1915 an overwhelming fleet of submarines. Had she been able to mobilize in 1914 an armada of submarines comparable with that of 1916 then, since it takes at least twelve months to convince a British administrator that scientific investigation is more than an agreeable hobby and its results of any importance at all, there would have been more than a sporting chance of bringing us to our knees. This should be a pleasant topic of meditation for those Teutonic war lords who survive the vengeance of the conquerors, and will perhaps be pondered by the very large proportion of Englishmen who still despise science in their hearts.

BRITISH SCIENTIFIC PRODUCTS ON EXHIBITION.

A SECOND exhibition of British scientific products and processes, arranged by the British Science Guild, was opened by the Marquis of Crewe at Westminster Central Hall on July 3rd. The first exhibition, a year ago, was intended to show how, under the stress of war, the nation had made itself independent of products previously obtained from the enemy; the object of the present exhibition is to promote the development and peace-time application of the industries thus established and to encourage new manufacturing enterprise which is dependent upon science and invention. A tour of the exhibition suggests that the greatest scientific progress of the war years has been made in mechanical engineering, especially in the design of all kinds of instruments of precision—balances, limit gauges, micrometers, and physical apparatus generally. The science of measurement seems at length to be taking its appointed place in industry. The exhibition includes various displays of pharmaceutical products, serums and vaccines, stains and reagents for microscopic work, surgical

and diagnostic instruments of recent introduction, x-ray and electro-medical appliances, and laboratory equipment. Most of these exhibits figured at the exhibition held in connexion with the Clinical Meeting of the British Medical Association in April last, and were noticed on that occasion. A noteworthy display in the building is the wireless telephone of the Marconi Company. This is not the place for a full technical description, even if it could be given at present, but the instrument depends upon the principle of the electric valve, which generates the high-frequency currents necessary; these currents are passed on to the transmitting "aerial," from which the energy is radiated in the form of ether waves, and these waves are made to vary at acoustic frequencies by the vibrations of the human voice acting upon the transmitter diaphragm so that the variations are reproduced upon the diaphragm of the receiver. The range for telephonic transmission with this apparatus is stated to be at least sixty miles over normal flat country, and we believe it has already been applied to direction finding for aircraft. Aircraft figures largely in the exhibition; among other things, the oxygen apparatus by which pilots have overcome the difficulty arising from rarefaction of the atmosphere at altitudes of 20,000 feet or more is shown. The British photographic industry, again, has made great advances during the war, both in optical and chemical production. A process of tropical photography is shown whereby the addition of certain salts to the ordinary hardening bath is said to prevent softening of the film even at very high temperatures. An exhibition so varied, including as it does paper making and illustration processes, fuels and metallurgy, textiles and dyeing, and many other branches of applied science, suffers greatly from its cramped quarters, and if another exhibition of the kind is held it should be in a larger building which would admit of some arrangement in sections.

THE MAUDSLEY LECTURESHIP.

THE Medico-Psychological Association has fixed the conditions for the Maudsley lectureship, founded by a bequest of the late Dr. Henry Maudsley. The lecturer will be elected by the council each year in the May preceding the year of the lecture, and will be a person who has made contributions of well recognized importance bearing on the knowledge of mind and its disorders and their prevention and treatment. The lecturer may be of any nationality and of either sex. He or she will be required to give two lectures—the one scientific, dealing with mental disease or an ancillary science, and the other popular, dealing with the hygiene of mind—and will receive a suitable honorarium and a gold medal with ribbon.

BOVINE INFECTION IN CHILDREN.

IN an interesting report by Dr. J. Tertius Clarke, the Health Officer at Kinta in the Malay States, on *Phthisis, an Infectious Disease*, the occurrence of bovine tuberculosis in that part of the world is stated to be unknown in so far as any evidence of its presence in cattle is forthcoming. Tubercle of the lungs is very prevalent in the human subject of the many different races met with in the mining districts of Perak. No account is given of the disease as affecting children, nor is any mention made of glandular or bone infiltration in patients of any age. It is stated, with regard to the Chinese children who may have come under treatment, that milk is very little used by them as an article of diet; if it can be proved that in the absence of bovine disease in the country there is also no glandular or intestinal infection in children, such facts would provide strong support to the theory that the bovine form is the commonest originator of the malady.

THE wide interest shown in some of the topics now under discussion in our correspondence columns compels us to postpone the publication of numerous letters.

Medical Notes in Parliament.

National Insurance Bill, 1919.

INCOME LIMIT.

MAJOR ASTOR, in moving the second reading of the National Insurance Bill, on July 3rd, said that under the Acts as they stand at present all manual workers are required to be insured without regard to their rate of remuneration, but persons employed in non-manual labour are not insurable as employed contributors if their rate of remuneration exceeds £160 a year. In view of the change in money values, the bill proposed to substitute £250 for £160 as the limit for insurance of non-manual workers. Major Astor claimed that the effect of the measure would be to maintain as far as possible the *status quo*. Unless this bill were passed as from June 30th last, between half a million and a million of insured non-manual workers would be driven out of insurance and lose the advantage of all their contributions at different times. In selecting the figure of £250 instead of £160 as the limit for such insurance the Ministry were guided by the award of the Conciliation and Arbitration Board for Government employees. Had the Government estimated independently on the increased cost of living, they would probably have selected a higher figure. Employers had been in doubt whether or not to treat their employees who were insured before at a rate of remuneration covered by the old limit as still insured under the higher scale of wages. They were induced to carry on, and now it had become essential to pass a bill in order to regularize the situation. There was difficulty in defining the difference between a manual and a non-manual worker, and there were cases in which a man was sometimes a manual worker and at others a non-manual worker. Hence it was the more necessary to pass this small bill. There were a certain number of people who in 1914 were non-manual workers, taking a little over £160, whose incomes had not now gone up beyond £250. To that extent new people would be brought into insurance under this bill. So far as he could tell, that number was practically negligible. If he had to give a figure he would estimate it at something like twenty or thirty thousand, whereas if the bill was not passed about a million people would be affected. So far as could be ascertained the total number of people insured after the passing of this Act would, if anything, be rather less than it would have been according to the original intention of 1911. Some of his medical friends had doubts as to the need of passing this bill at this particular moment, but he had tried to explain to the deputation that the date of June 30th was crucial for insurance and the bill could not be postponed. During the war insurance doctors had received a war bonus. At the present moment and for some time past the department had been discussing with representatives of the medical profession the rates of remuneration for the future, and that raised the whole problem of the nature of the services to be rendered in return. He could not go into that matter then, but if this bill were not passed, a large number of medical men who dealt with insured persons would lose their patients. He had received deputations from medical men. Reference had been made particularly to the bringing into insurance of that very limited class of between twenty and thirty thousand persons to whom he had already referred. The Government did not want to bring them into insurance, but to exclude them was found impossible. Endeavour was made to frame a clause which would exempt them, but it could not be done. If an amendment were put down which would carry out this intention the Government would be prepared to accept it.

Dr. A. C. Farquharson agreed as to the necessity of some such bill, the primary object of which was to prevent individual persons lapsing from insured benefits. But he found fault with the text of the bill, and objected to it on account of the effect it would produce. The text was so framed that by a stroke of the pen altering the figures from £160 to £250 a large number of entrants into insurance benefits were legalized by statute. He had not the slightest objection to everybody and anybody obtaining insurance benefits, but the position in which the parties now stood was standardized and fixed by statute. The doctors made definite binding contracts that they would attend people whose incomes did not exceed £160, and those contracts were passed in review at the end of each year. What the Government did now was to propose by a simple statute absolutely to destroy the sanctity of a contract existing between the Government through its agents, the Insurance Commissioners, and the medical profession. The medical profession did not desire to

exclude people from medical insurance, but did say that where those services were part of something which the Government was bartering for something else, they must be considered. The profession had the right to stand upon the sanctity of a contract, and to say that it should not be penalized for the benefit of any section of the community. It was all very well for the Government to come down to the House with altruistic feelings towards insured persons, but the whole history of the relations of the Government to the medical profession since the Insurance Act came into force had been one series of incessant instances of betrayal and of depriving them of every penny that they could be deprived of. Major Astor had referred to the war bonus given to doctors and left the inference that they were getting rich upon it. (Major Astor dissented.) The bonuses were given only to the poorest of the poor of the profession and on condition that they tabulated their income from all sources. Was there another occupation in the whole country which had to submit to such ignominy? For years they had been allowed 2s. 6d. for notifying an infectious disease, and then in 1916 someone came along and said, "We will strike out this miserable 2s. 6d. for giving a professional opinion upon a professional document and sending it to an official, and we will make the figure 1s." This was an outrageous attitude to take up towards an honourable profession which deserved well of the country. In regard to the position of the panel practitioner, Dr. Farquharson said the Government had contracted with him to do certain things under certain rules. This contract had been departed from. Take, again, the case of a non-panel practitioner—the middle class non-panel practitioner attending people for small fees. By this bill all non-manual workers, such as clerks, would be compelled to be insured. Major Astor had estimated the number as very few, but that estimate was the merest conjecture. The number might be very large or very small, but the Government was destroying a contract of service with the panel practitioners and destroying a great many practices of men working hard for a miserable livelihood. The Government ought to postpone this bill until the whole question of the unified medical services came up. Instead, it adopted this policy of pin-pricking and grinding down and sweating the profession. He appealed to the Government to modify the bill so as to postpone fresh entries into insurance. If this policy was continued the great majority of the members of the medical profession would inevitably drift into the ranks of trade unionism. He suggested that the whole measure should be redrafted. It would be enough if it secured that no person should lapse from insurance to which he was entitled.

Captain Ormsby-Gore moved an amendment that the House should not proceed with the bill without guaranteeing acceptable medical service to all insured persons and without establishing the principle of free choice both by patient and medical practitioner. The National Insurance Commissioners and the committees set up under the original Act had not, he submitted, provided acceptable medical service to insured persons where those persons were either unwilling or unable to make use of the services of the panel doctors. In his own constituency a very considerable proportion of the working men had formed an association; they were all poor men—a good many of them Post Office servants—and they consulted the doctors who were not on the panel. Efforts had been made to get the doctors on the panels but had failed. In the circumstances it was the duty of the Insurance Commissioners, under Section 15, Subsection (3), to provide something in lieu of medical benefit under such arrangements as the panel system. The Act provided that the Insurance Committee might allow insured persons, whether individually or collectively, in lieu of receiving medical benefit under the arrangements made by the Committee, to make their own arrangements for receiving such treatment. What had happened? In the town of Stafford a few panel doctors had far more patients than they could pay attention to, and the remainder of the doctors got nothing from the Insurance Committee or the Insurance Fund. Still they were dealing with over 700 insured persons, and these had to pay twice over. It was not in any hostile spirit he moved his amendment, but simply because there had been a breakdown, and he thought that they should not extend the principle unless they were prepared to carry out the original intention of Parliament. He agreed that owing to the rise in wages something must be done; but the pay of the doctors ought to be considered, too. Prices had gone up to them as they had gone up to the insured persons. Their case should be investigated.

Captain Elliot, seconding the amendment, said, however, that he was not entirely in favour of it. Not all the

people who would come under this Act would be compelled to contribute. A certain number would be entitled to get the certificate of exemption. The main point he wished to make was that the insurance services just now, from the medical point of view, were not satisfactory. In these circumstances an extension of the scheme should not just now be carried out. There was a chance to remove the undoubted grievances of the people of the country who had been compelled to contribute towards medical benefits which were not satisfactory and did not carry out the original intention of the Act. Great services under the Insurance Act were still being given for charity as they were before. The services of consultants, surgeons, and others were thus being rendered. It was not fitting that services to the sick in this country should be so supplied.

Lieutenant Commander Kenworthy hoped that the amendment would not be pressed, for the class particularly hard hit at the present time was that of non-manual workers with low incomes. He was sure that members would support any motion the Minister of Health would bring forward to increase the fees chargeable to panel doctors; but let this bill go through first.

Sir Philip Magnus said there were many points in the amendment with which he agreed, but he did not think it ought to be carried at the present time. He believed that the Minister in charge would consider favourably in Committee certain amendments, some of which might be of a drastic character. He reminded the House that when the original bill was passed in 1911 there was a strong effort by the medical men to make the limit £104, and the £160 was carried only by the strength of the Government majority. He emphasized the fact that the minimum limit of income exempting any one from income tax still remained at £160. He thought there ought to be some close connexion between that limit and the limit for insurance.

Lieut.-Colonel Sir A. Warren, on behalf of the Approved Societies, hoped that the amendment would not be pressed. He emphasized the difference in the economic value of money. Mr. Tyson Williams spoke to the same effect. The bill should be given an opportunity of going into Committee, where it could be improved.

Major Astor, in reply, said that it was not believed that the bill would make any additional charge on the Exchequer. He appealed to Captain Ormsby-Gore not to press his amendment, as the new persons who would be brought in would have the right of claiming a certificate of exemption so that his point would be met. What Captain Ormsby-Gore had said about a certain number of insured persons in his constituency appeared to be a matter not of legislation but of administration. Dr. Addison would go very carefully into the question and see if anything could be done.

Captain Ormsby-Gore then withdrew his amendment, accepting the assurance given as to inquiry into the particular matter he had brought up; and the bill was read a second time, and referred to a Standing Committee.

Nurses' Registration Bill.

When debate on the Nurses' Registration Bill was resumed on report on July 4th, Major Nall moved the adjournment. He said that if the promoters of this bill (introduced by Major Barnett) would allow it to drop, the promoters of the opposing bill would be willing to withdraw their bill on the understanding that the Government would bring in a bill. He had received the authority of the chairman of the College of Nursing to make this statement. Mr. Hailwood seconded the amendment.

Major Barnett said that if it had not been for the time taken up by wrecking amendments and motions for adjournment it would have been possible to deal with all the real amendments promised in the Committee stage and to have passed the bill in the Commons with a good chance of some agreement being reached in another place. He recognized that in present circumstances it was useless to go on. The adjournment was afterwards agreed to.

The Demobilization of Medical Men.

Mr. Churchill, in a written answer to a question by Mr. Macquisten on July 8th, said that the demobilization of an individual medical officer was in the hands of the general officer commanding in charge concerned. The policy was to release first those who on account of age, length of service, personal hardship, public expediency, etc., were regarded as most deserving of consideration. Even then it was impossible to meet every claim, as it was still found necessary to retain certain officers possessed of special qualifications, and for whom it was impossible to find substitutes. Applications received by the War Office were given every consideration, and when the claims of either an individual medical officer or the application of any public body for the services of a particular officer came under any of the above categories every effort was made to obtain his release, but his claim had to be considered in conjunction with the claims of other officers serving in the same command at home or expeditionary force overseas. No temporary

commissions had been granted in the Royal Army Medical Corps since the armistice. It was hoped that under the new contract a large number of recently qualified medical men would volunteer for service overseas, and thus enable those who had served longest to be released.

Welsh Board of Health.—Brigadier Sir Owen Thomas on July 8th asked whether it was proposed to give representation on the Welsh Board of Health to the Executive Committee of the Welsh National Memorial Association, to the North and South Wales Nursing Association, and to the Executives of the North and South Wales Soldiers' and Sailors' Disablement Committees. Major Astor replied that the Board was not yet complete, but section 5 of the Ministry of Health Act required the persons constituting the Board to be officers of the Ministry and this requirement excluded the possibility of adopting the principle suggested in the question. The important bodies referred to would probably be asked to suggest suitable names of persons for membership of the Consultative Council of the Ministry of Health in Wales. In reply to a further question, Major Astor said that the remuneration of the three members of the Welsh Insurance Commission who had been appointed members of the Welsh Board of Health was at the rate of £1,500, £1,200, and £1,000 per annum respectively and no change had been made in these rates on their transference. The whole time of the Commissioners was fully occupied with insurance work, except in so far as they undertook various forms of temporary war work. The question what further salaries, if any, were to be paid to members of the Board had not yet come up for decision.

Nursing Services in the Highlands.—Mr. Munro, Secretary for Scotland, in a written answer to a question by Sir Archibald Williamson, stated that the salaries paid to nurses within the area of the Highlands and Islands Medical Service Board were at the discretion of the District Nursing Association in whose employment they were, and at the present time there was no uniform standard of remuneration. The Board had, however, just passed a scheme under which it would be empowered to give grants to associations to enable the latter to pay more adequate salaries. This scheme, which was at present before the Treasury, would have the effect of increasing the nurses' remuneration by approximately 30 per cent. on the pre-war figures.

The Dogs' Protection Bill.—Sir John Butcher asked, on July 8th, whether the Government intended to take the administration of the Cruelty to Dogs Act, 1878, out of the hands of the Home Secretary and place them in those of the Minister of Health; if not, why was the conduct of the Dogs' Protection Bill on the occasion of the third reading taken out of the hands of the Home Secretary and placed in the hands of the Minister of Health? Mr. Bonar Law replied it was not proposed to make any change in the administration of the Act. The discussion of the bill raised the general question of its effect on medical research, and it was arranged that the Minister of Health should speak on behalf of the Government.

Scotland.

The Scottish National Hospital at Bellahouston, Glasgow, founded by the Scottish Branch of the Red Cross Society in October, 1915, will be taken over by the Ministry of Pensions at an early date as an institution for the treatment of discharged disabled soldiers. The fully equipped orthopaedic department will be maintained in full use by the Ministry of Pensions.

SCOTTISH BOARD OF HEALTH.

Mr. J. W. Pratt, M.P. for Cathcart (Glasgow), who was one of the Lords Commissioners of the Treasury, has been appointed by the Secretary for Scotland to be Parliamentary Under-Secretary for Health in Scotland. Sir George McCrae, D.S.O., Vice-President of the Local Government Board for Scotland, has been appointed Chairman, and Sir James Leishman and Dr. J. C. McVail (Chairman and Deputy Chairman respectively of the National Insurance Commission, Scotland) have been appointed members of the Scottish Board of Health.

SCOTTISH CHAIRS.

Owing to the resignation of Mr. F. M. Caird, the Regius professorship of clinical surgery in the University of Edinburgh will become vacant on August 3rd. In the University of St. Andrews Dr. F. J. Charteris, Assistant Physician to the Western Infirmary, Glasgow, has been appointed Professor of Materia Medica in succession to Professor C. R. Marshall, who has been called to the corresponding chair in Aberdeen, and Mr. Lloyd Turtton Price, Surgeon to the Dundee Royal Infirmary, has been appointed Lecturer in Clinical Surgery, in the vacancy caused by the resignation of Mr. David MacEwan.

POST-GRADUATE TEACHING IN EDINBURGH.

It will be remembered that on February 8th the JOURNAL (p. 170) furnished details of post-graduate courses in clinical medicine and clinical surgery on somewhat novel lines which were being prepared in Edinburgh more especially for the use of medical men who had graduated during the war and who had been doing military duties for the four years of its continuance. During the summer session which has just ended the first of these remodelled means of instruction has been going on; concurrent courses on clinical medicine and clinical surgery and allied subjects were given and agreed in detail exactly with the plan sketched in the JOURNAL. Each course was limited to thirty members, and there were only a few vacant places in either of them. Those attending were in the main representatives of the military forces, graduates of Canadian, Australian, and New Zealand universities, and graduates of the various Scottish universities; they included also medical officers of the American army who were graduates of the different medical schools in the United States. Towards the end of the courses (on the evening of Tuesday, June 24th) the members had the opportunity of meeting the teachers in a social way in the University Union; on this occasion the Chairman of the Executive Committee made reference to the aim of the instruction which had been arranged and given, and several of those who had attended expressed the benefit they had received and the pleasure and profit it had been to them to meet the representatives of the Edinburgh Medical School. During the vacation months of August and September only one course will be given, that dealing with obstetrics, gynaecology, and pediatrics (more especially in relation to child welfare). This course begins on Tuesday, August 5th, and will include the subjects specified already in the JOURNAL of February 8th and follow the lines there indicated. It will last for eight weeks. In October, again, there will be coincident courses on clinical medicine and clinical surgery. The place of Mr. Miles, who acted as interim honorary secretary, has now been taken by Dr. R. W. Johnstone, 10, Alva Street, the permanent honorary secretary.

England and Wales.

THE MEDICAL STAFFS OF LONDON MENTAL HOSPITALS.

At the meeting of the London County Council on July 8th it was agreed to revise the scale of remuneration and the conditions of appointment of assistant medical officers at the larger mental hospitals (those with 2,000 patients or more). Recommendations are to be submitted at a later date as regards officers in the two smaller institutions. The first assistant medical officers are to receive inclusive salaries of £700; the second assistant officers, from £525 rising to a maximum of £600; the third and fourth, from £425 to £500; and the fifth and sixth, from £300 to £400. The war bonus and percentage additions are to apply as long as these are payable generally in the Council's service, and will have the effect of bringing up the total remuneration of the four grades respectively to £875, £680 to £755, £561 to £650, and £430 to £553. Favourable consideration is also to be given to applications made by the officers for seconding with a view to holding clinical posts at the Maudsley Hospital or taking post-graduate courses at other hospitals, and they are to have facilities for reasonable study leave with a view to obtaining a diploma in psychological medicine. In making appointments to positions in the medical service at the mental hospitals special consideration is to be given to those candidates who hold degrees in psychological medicine. Officers are also in future to be appointed to the London mental hospital service, and not necessarily to the service of one institution.

LONDON AMBULANCE SERVICE.

It was reported to the London County Council on July 8th that the Establishment and Fire Brigade Committees had considered a letter from the Metropolitan Counties Branch of the British Medical Association urging that instead of appointing a principal administrative assistant in the London ambulance service as proposed, an officer should be appointed possessing medical qualifications. The two committees also jointly received a deputation from the Branch, but after going carefully into the matter, both

committees were unanimously of opinion that the post should be purely administrative, and that medical advice could be given by the Council's medical officer of health. It was decided to increase the administrative staff, which works under the chief officer of the Fire Brigade, by one senior assistant and three assistants of other classes.

India.

SHORTAGE OF OFFICERS, I.M.S.

THE shortage of officers in the Indian Medical Service is very great, and an addition of something like 150 will be necessary if the cadre is to be maintained. The deficiency is accounted for by various factors. During the war recruitment in England was greatly reduced, and at the same time the losses through casualties were increased. The new leave rules, the extension of the station hospital system, and development of medical research, are among other causes which affect the position,

PREVENTION OF INFLUENZA.

In view of a possible recrudescence of influenza the Government of India have forwarded to local governments and administrative bodies copies of a memorandum setting forth the opinions founded upon observations during the pandemic of last year, and medical literature indicating preventive measures which promise to give the best results. The memorandum, which has been prepared by the Sanitary Commissioner with the Government of India in consultation with the Director of Medical Services, is intended for circulation among medical officers and others concerned, and Government also consider it desirable that it should be translated into suitable vernacular and distributed as widely as possible to the public.

PUBLIC HEALTH ORGANIZATION.

The Government of India has announced that the conference of medical experts which assembled at Simla to consider the utilization of the allotment of 5 lakhs made by the Government of India for the initiation of a public health organization passed a number of resolutions and concluded its sittings on May 24th, 1919. Among the more important recommendations made by the conference was the establishment of a central public health board consisting of official and non-official members, with a view to the co-ordination of preventive and curative medicine and of research, and the creation of similar boards in the provinces. There should also be a mobile corps of epidemiological workers who would be maintained from the allotment. These workers would ordinarily be at the disposal of provincial governments, but might be concentrated at the orders of the Government of India in any area afflicted by a severe epidemic. Their functions would be the investigation of any particular epidemic, assistance in coping with it, and education of the people in the avoidance of disease. The conference also laid stress on certain kindred measures, such as the establishment of an epidemiological statistical bureau, the increase of the curative medical staff, the multiplication of dispensaries, and the further development of research facilities by the establishment of a well-equipped central institute.

MEDICAL EDUCATION IN MADRAS.

The Surgeon-General has, at the request of the Government of Madras, worked out a scheme for the establishment of a medical college at Vizagapatam. Plans and estimates for the rebuilding of the civil hospital there, at a cost of over five lakhs, have been approved, and a scheme of medical schools and continuation schools has been drawn up. The Government has accepted the proposals, but has recorded its opinion that the policy now forced upon it by the absence of hospitals of adequate size at various centres does not represent the ideal for medical education in the province. The Government holds that a single medical college will not permanently meet the needs of the Presidency of Madras.

A UNIVERSITY IN RANGOON.

The proposals have taken shape for the establishment of a university in Rangoon with which would be affiliated the Judhoo College and the Government University College. At first instruction leading to degrees or diplomas in arts, science, and law, will be given, and arrangements are being made for the addition of other constituent colleges, the

object being to concentrate the work as much as possible. It is hoped that colleges for electrical engineering may be established and affiliated with the University of Rangoon in the near future.

Correspondence.

RADICAL CURE OF FEMORAL HERNIA BY THE INGUINAL ROUTE.

SIR,—The contribution by Mr. Percival Cole in the *BRITISH MEDICAL JOURNAL* of June 21st is timely, and may prevent a hurried operation for the radical cure of femoral hernia by some who are still of opinion that it is more easy to obtain a radical cure in this form of hernia by a simple procedure than in any other form of protrusion. Those of us who had experience before the attempt was made to close the canal from above could give many instances to prove the contrary.

There are a certain number of cases of femoral hernia which can be cured by excision of the sac and reduction of the ligatured neck into the abdomen, because the canal is narrow, and has not undergone any appreciable amount of dilatation from repeated descent of abdominal contents. There are many more which present themselves for radical cure, especially in hospital practice, which require additional help before there can be a reasonable expectation that the result will be satisfactory. It is not easy to say to whom in this country the idea occurred that the operation for femoral hernia would be more satisfactory if a barrier was placed at the upper end of the canal. Dr. T. E. Gordon¹ quotes Mr. W. H. Bennett as having said in 1893: "That the essential detail was the placing of a barrier across the upper part of the femoral canal." Tuffier² is said to have recommended in 1895 approach through the aponeurosis of the external oblique. R. H. Parry³ read a paper at a meeting of the British Medical Association, and described cases in which he had operated by a plan similar to that of Lotheissen, the first of which had been performed four years before the date of his paper. Lotheissen described his method in the *Centralbl. für Chirurgie*, 1898.

Dr. Cantas⁴ made researches to decide the question as to the best operation, and came to the conclusion that there were three things necessary in order to attain success: (1) Suppression of every trace of a peritoneal diverticulum by the application of a ligature to the highest possible level of the neck of the sac; (2) annihilation of the femoral ring by dragging down Poupart's ligament; (3) replacement of the septum crurale by a strong musculo-aponeurotic screen.

In 1899 the conviction that it would be best to close the upper end of the canal with some barrier of living material led me to perform an operation in which the strong aponeurosis of the external oblique was utilized. It was first described in 1901,⁵ and a further communication was read before the Medical Society⁶ in May, 1906, on which date I had performed the operation sixty-five times. I have done it many times since, and the results, so far as I know, have been uniformly successful. When opportunity permits I shall hope to give some details which prove a justification for this method of performing this operation. —I am, etc.,

London, W., June 30th.

W. H. BATTLE.

SIR,—Mr. Joseph Cuning's criticism of my description of Lotheissen's operation is perfectly just. His letter emphasizes and makes clear an important step in the procedure. Cooper's ligament is, as Mr. Cuning rightly says, a firm dense white band which can and should be clearly demonstrated before the sutures are passed. Mr. Cuning is also correct in his parenthetic surmise as to the extent of my acquaintance with *Aids to Surgery*. Its popularity is well known and this particular instance supplies added proof of desert, in that reference to it would discover a method ignored in larger and more pretentious volumes. —I am, etc.,

London, W., June 30th.

PERCIVAL P. COLE.

THE ETIOLOGY OF AORTIC REGURGITATION.

SIR,—The letter of Dr. Knyvett Gordon criticizing my reference to the connexion of scarlet fever with endocarditis affords me an opportunity of explaining a statement which perhaps was carelessly worded.

What I intended to indicate was that scarlet fever and a few other diseases have no specific action in leading to the development of an endocarditis which results in chronic valvular disease. That specific action is limited, I maintain, to rheumatism and its sister disease, chorea. Even syphilis does not directly produce endocarditis. Aortic valvular disease is the only form of chronic valvular disease associated with syphilis, and when due to syphilis is secondary to disease of the aorta.

If we exclude from consideration the causation of calcareous disease of the aortic valve, the only diseases which lead to chronic valvular disease may be said to be rheumatism, chorea, and syphilis. Although this is so, any disease which may be complicated by septic infections may present localized spots of inflammation in various parts of the heart, including the valves, and occasionally such infections may show more widely distributed disease in the form of early malignant endocarditis.

Dr. Gordon speaks of inflammation, in cases of scarlet fever, occurring in the interior of valves of the heart, microscopical sections of which showed the presence of micro-organisms. Dr. Gordon, I presume, does not intend to imply that the micro-organisms were the cause of the scarlet fever with which disease of a valve was associated. If the micro-organisms were not the cause of the scarlet fever then the endocarditis was due to a different cause, and obviously was not caused by the scarlet fever. The cause of the endocarditis would probably have acted equally well in many other diseases which would have admitted it to the circulation. I see nothing therefore in Dr. Knyvett Gordon's experience to controvert my statement that scarlet fever does not produce endocarditis in the sense in which I intended to refer to its influence on the heart.

Dr. Gordon also indicates that he could bring evidence from the clinical side of the question to support the view that scarlet fever produces endocarditis. If I have appeared to be over-bold on the pathological side I should be still bolder on the clinical. I have spent many months tracing cases in which cardiac murmurs had been heard in children, some years having elapsed since the children were first seen. My experience convinces me that murmurs which develop in acute diseases of children, other than rheumatism or chorea—and many of the murmurs in these also—have no connexion with endocarditis. If cardiac murmurs appear during an attack of scarlet fever I can confidently say that they are not due to endocarditis—at least, to a simple endocarditis which owes its existence to scarlet fever.—I am, etc.,

June 22nd.

THEODORE FISHER.

SUDDEN DEATH UNDER AN ANAESTHETIC.

SIR,—Over thirty years' experience of the removal of "adenoids and tonsils" by every method and under most anaesthetics leads me to the opinion that the views of Mr. Waugh and Dr. A. G. Levy are the more correct and reasonable. The operation can be performed with equal safety with either chloroform or ether if properly administered to suitable patients. In children under 12 years of age chloroform pushed to the point of abolition of the conjunctival reflex, with proper previous control of the tongue, has in my experience of many thousands of cases been invariably successful. I am happy to be able to say that I have never had to endure the mental suffering described by my friend Mr. Tilley on account of a death during chloroform anaesthesia for either the guillotine operation or enucleation of tonsils. My hospital operations and most of my private cases in the last sixteen or seventeen years have been performed with the skilful assistance as anaesthetist of my friend and colleague Dr. Hugh R. Phillips. He has until recently always administered chloroform with oxygen, and we have never yet had any serious difficulty, and such rare troubles as occurred were of the slightest character. I think a great many of the fatalities with chloroform may have been due to "oxygen lack" and to neglect of the proper control of the patient's tongue from the very start of the anaesthesia. Writing

¹ T. E. Gordon, of Dublin, *BRITISH MEDICAL JOURNAL*, 1900, vol. i, p. 1338.

² Mentioned loc. cit.

³ R. H. Parry, *BRITISH MEDICAL JOURNAL*, 1901, vol. ii, p. 1136.

⁴ *BRITISH MEDICAL JOURNAL*, Epitome, March 10th, 1906.

⁵ *Lancet*, 1901, vol. i, p. 302.

⁶ Medical Society's *Transactions*, 1906, p. 343.

altogether from the operator's point of view, I should prefer chloroform in children up to 12 years old if skilfully and carefully given. Over that age the risk from chloroform becomes greater, and appears to be at its height between 15 and 20 years. If a patient's enlarged tonsils have been neglected until he, or especially she, is 15 years old they may well be let alone for a few years more or treated by methods that do not call for a general anaesthetic. Certainly chloroform should not be used alone. If an operation must be performed it would be better to use open ether or some modification of chloroform anaesthesia.

Dr. Phillips has lately, even in children under 12 years, been inducing the anaesthesia with chloroform and continuing with ether and oxygen pushed to deep anaesthesia, and this, so far, seems to be a very satisfactory method for enucleation. But the whole decision should be left to the anaesthetist. Even from the operator's point of view it is a good rule to have an anaesthetist in whom entire confidence can be placed, and to leave it to him after examining the patient to choose his own anaesthetic and modify it as he thinks best for the safety of the patient during the course of the operation. There is reason for the suggestion that some of the accidents recorded have been due to some extent to the operator overruling the anaesthetist not only in the choice but in the degree of administration of the anaesthetic. After all it is the anaesthetist who has to take most of the mental suffering and other consequences of a misadventure.

Although I accept Dr. Levy's view that enucleation can be performed equally well with full chloroform or open ether, I do not associate myself with the statement in his first paragraph that the death of Dr. Gabbett's patient "is the old story of an intermittent and insufficient administration of chloroform." I have had on several occasions the advantage of Dr. Gabbett's co-operation in throat and nose operations and I know him to be a highly skilful and most careful anaesthetist for whom such an administration as Dr. Levy describes would be an impossibility. In expressing for my own part the sympathy we all must feel for Dr. Gabbett in this misfortune it appears to me that the age of the patient and the condition discoverable only *post mortem* were the predisposing factors, and not the anaesthetic or the mode of administration.

I do not think Mr. Waugh himself would make the claim made for him by Dr. Felix Rood that the operation of enucleation of the tonsil was introduced by Mr. Waugh. It is one of the oldest operations in surgery, and was much in vogue for adults, at any rate in Dublin, when I was a student. I remember giving anaesthetics at the Richmond Hospital, Dublin, in the years 1885-86 for a house-surgeon who was quite an expert in removing tonsils with a dissecting forceps and a curved blunt-pointed scissors, much as they are done now. When Mr. (afterwards Sir Thornley) Stoker presented the hospital with some Mackenzie guillotines the old "knife and fork" operation went out of fashion there as in most other places, although many of the older laryngologists, including myself, have never laid it wholly aside. Without wishing to be hypercritical of Dr. Rood's assertion, I am unable to see any essential difference between Mr. Waugh's description of the operation in the last edition of Burghard's *System*, except in avoiding the use of the forefinger, and of Sir Henry Butlin's account of "shelling out the tonsil" in its predecessor. Although Mr. Waugh gives a most careful and detailed account of the preparation for and performance of this "Removal of the tonsil by dissection," under, be it noted, chloroform anaesthesia, he nowhere calls it enucleation or claims it as his own method or even as a new operation.—I am, etc.,

London, W., June 23rd.

JAMES DONELAN.

SIR,—The discussion under this heading is most instructive. I wish to state my humble experience of the last eighteen months during which 550 tonsil enucleations were done in the institution in which I am a resident. In this series not one death occurred under an anaesthetic though all were done under chloroform anaesthesia, and 145 of these were enucleations "by dissection," the rest with the guillotine.

This interesting discussion naturally raises the no less important question of how many deaths or serious

complications are directly or indirectly attributable to the operation.

In this series of cases two deaths have occurred some days later from complications (one acute mastoiditis with lateral sinus thrombosis and septicaemia, the other with septic bronchopneumonia); one child developed severe septic bronchopneumonia, but fortunately recovered; another who developed a laryngeal paralysis (diphtheria) five weeks later, also recovered; a few more were not brought to the hospital on a second visit, probably as the children (some at least) were too ill to be removed from their homes. With such results, and the possibility of death under the anaesthetic, be they due to inexperienced operators, anaesthetists, the anaesthetic itself, or the patients themselves in that they are of a lymphatic diathesis, I must say that tonsillectomy, though most often and commonly done as a minor operation, is attended with major risks, and too often in my experience with serious complications (about 1 per cent.). In other words, tonsillectomy is not a "perfect operation," as I have heard it stated by an eminent surgeon before a learned society, unless of course I have been less fortunate than others.

The question I would like to ask is: Is not tonsillectomy done far more frequently than is necessary, particularly in institutions; and do not the great risks to which a patient is exposed justify more palliative and prophylactic measures before resorting to operation?

It would be most interesting and instructive in this connexion to hear what serious complications, if any, occurred in the 18,000 tonsillectomies done by Mr. Waugh, and in Mr. Tilley's experience; also the opinions of physicians on the operation of tonsillectomy, and the results of palliative treatment, etc., adopted.—I am, etc.,

London, June 30th.

T. H. GUNWARDEN.

SIR,—It will be a pity if there does not emerge from the present discussion the clear teaching that a deep ether narcosis is the proper form of anaesthesia for cases of dissection of tonsils. For that reason I venture to write in support of the letters of Mr. Tilley and others, and to deprecate certain passages in the letters of Dr. Levy and Mr. Waugh. The latter's experience of 18,000 cases with one death must be regarded as entirely exceptional and in no way to be taken as an example. It is contradictory, not only to Mr. Tilley's stated experience, but contrary to the general experience of chloroform anaesthesia in all cases—not merely in cases of dissection of tonsils. Thus we are at liberty to congratulate Mr. Waugh most heartily on his performance, but at the same time to dissuade every administrator of anaesthetics from seeking to provide other surgeons with opportunities for emulating it.

To Dr. Levy we are all indebted for a physiological explanation of deaths in light chloroform narcosis which have always been the bugbear of the anaesthetist. The practical application of his experimental work should undoubtedly be to avoid chloroform for induction. He has not shown us how in practice the danger period of early narcosis can be passed over with safety. His recommendation is "to administer the vapour continuously and of sufficient strength to get the procedure expeditiously performed." That has been the endeavour of most of those who have used drop-bottle, Junker, or Vernon-Harcourt; yet fatalities have occurred. They will occur again if practitioners are encouraged by Dr. Levy to believe that danger can be eliminated from chloroform anaesthesia. Other physiologists, in particular Dr. Buckmaster, have shown other reasons also why the early stages of chloroform inhalation are dangerous. Dangerous they will remain, and the practical lesson of clinical experience for fifty years and more, as well as of physiologists' experiments, is that the only way to avoid all danger from chloroform is to avoid chloroform. This injunction may, however, be limited to the induction period, since it is admitted that the later fatalities—the over-dose cases—are probably avoidable.—I am, etc.,

London, July 1st.

J. BLUMFIELD.

SIR,—I have been surprised to see no mention in this correspondence of the use of gas for enucleation of tonsils and removal of adenoids. I have given gas to school children for Mr. Courtenay Yorke of Liverpool in over 300 consecutive cases without a single case of post-operative

haemorrhage, and have seen no complication of any sort either during the operation or after. The enucleation is complete, the bleeding slight, and the patient recovers in half an hour, and is sent home. Considering the safety of gas and the almost complete immunity from untoward events, either at the time or subsequently, it seems to be the ideal anaesthetic for the operation.

A more prolonged anaesthesia with ether is occasionally required in adults if the tonsils are buried, adherent, and require removal by dissection, though frequently the same anaesthetic can be with advantage employed in adults.—I am, etc.,

C. RONEY SCHOFIELD, M.B., Ch.B., M.R.C.S., etc.,
July 2nd. Assistant Medical Officer, Southport Infirmary.

SIR,—Early contributions to this correspondence came from those whose full experience enabled them to speak with an authority which I expected to be conclusive; lack of unanimity, however, induces me to add to the subsequent correspondence.

In view of the frequency with which troubles (both local and remote) are associated with the diseased remains of imperfectly removed tonsils, it is difficult to see why the removal of tonsils by dissection, as originally advocated and practised by Waugh for upwards of at least a dozen years, should still find a dissentient voice, unless from a mistaken impression as to the risks involved. Only Waugh's method of complete removal (which includes the various modifications in technique) can ensure the certainty, accuracy, and precision demanded of modern surgery; the systematic performance of this simple and rapid operation for so many years in thousands of cases, under almost all conditions, by his colleagues, without (so far as I am aware) any of these tragic accidents, should surely establish its safety.

At the same time, during my investigations into the nature of surgical shock, I was forcibly struck by the marked fall of blood pressure associated with the deep chloroform anaesthesia; a fall which was accentuated to a dangerous degree by dragging on the tonsil at the moment of enucleation. (Arris and Gale Lecture, *BARRISH MEDICAL JOURNAL*, 1911.) Though no accidents occurred in my experience, I came early to the conclusion that this immunity was due to the skill of the individuals responsible rather than to the safety of the method; and that, if the procedure was to be adopted generally by the profession, the security of the patient would always depend almost entirely on the personality of the surgeon and anaesthetist. In other words, the margin of error was too small to justify the general adoption of this method by any but the most highly skilled, if chloroform was the anaesthetic employed.

For the last ten years, therefore, I have practised Waugh's operation under deep ether anaesthesia followed by a little chloroform in a Junker's inhaler, in some thousands of cases with no fatality, and real anxiety on only one occasion. At least $\frac{1}{10}$ gr. atropine has been given systematically (the smallest infants receiving a reduction in the dose), while open ether has been invariably the anaesthetic of choice at all ages.

With regard to the local use of cocaine and novocain, my investigations some ten years ago failed to show that this had the least effect in mitigating the reflexes arising from the necessary manipulations; these reflexes being too deep to be affected by superficial local measures.

In conclusion:

1. It must be admitted that partial removal of the tonsils is to be deprecated under all circumstances, owing to the evil after-effects, and the well known fact that, after such procedures, Waugh's operation is subsequently necessary in the vast majority of cases.

2. If chloroform is the anaesthetic employed, the patient's safety depends almost entirely on the personal factor.

3. If deep ether anaesthesia is employed, preceded by the hypodermic injection of atropine gr. $\frac{1}{10}$ or more, as advocated by many contributors to this correspondence, there is no more danger in tonsillectomy than in any other minor operation, provided (a) blood is not allowed to pool, (b) the operator has had the patience to familiarize himself with this simple operation, and (c) surgeon and anaesthetist are familiar with each other's methods, and work together as one person.—I am, etc.,

London, W., July 7th.

H. TYRRELL GRAY.

REMUNERATION OF RURAL PANEL PRACTITIONERS.

SIR,—In the letter by the Secretary of the National Insurance Joint Committee (*SUPPLEMENT*, June 28th, p. 140) there is no reference to the remuneration of rural practitioners. His statement that "the increase in prices has been most marked as regards the necessities of life" surely cannot apply to rural practices; take, for instance, petrol, which is still more than three times the price of pre-war times; cars are double or more; drugs are enormously increased in price. The revenue from country work is so small that in a short time there will be no practitioners in purely rural districts, unless there is considerable increase in remuneration, especially if the income limit is raised to £250, for then nearly all the inhabitants will be eligible for the panel; not more than 3 or 4 per cent. excluded. The cost of travelling to see cases in thinly populated rural districts is not less than the revenue in insurance work.—I am, etc.,

Chulmleigh, N. Devon, July 1st.

JOSEPH TUCKER.

SIR,—Having two panels, I am able to give some particulars on this subject. I have one small panel of 19, for which I am paid only on 17. Including mileage and drugs, etc., I only received £7 10s. 6d. last year. For this sum I have paid 89 visits, supplied 71 bottles of medicine, signed 79 cards, and travelled over 700 miles during the year, the number of sick persons being 10 out of 19, or about 51 per cent.

	£	s.	d.
Cost of travelling at 1s. per mile ...	...	35	0
Cost of 71 bottles of medicine at 6d. ...	...	1	15
Signing 79 sickness cards at 6d. ...	...	1	19
		38	15
Amount paid to me for one year ...	...	7	10
Out of pocket ...	...	30	4

On the other panel with 750 members I was paid only for 696. Payment for year £280, including mileage, and £31 bonus for increased cost of living = £311; 250 sick persons during the year equal about 34 per cent. Work done: 3,500 visits, 3,000 bottles of medicine, 3,000 cards signed.

	£	s.	d.
Cost of travelling at 1s. per mile (3,000 miles) ...	...	175	0
Cost of 3,000 bottles of medicine at 6d. ...	...	75	0
3,000 cards signed at 6d. ...	...	75	0
		325	0
Amount received ...	...	310	0
Total loss ...	...	15	0

The loss from the two panels was £45 4s. 6d. Thus, after working hard for a whole year, I am £45 out of pocket. The contract system is wrong to start with; if, however, we are forced to do this work, we should be adequately remunerated, and not left to carry on at a loss. I reckon I see four national insurance patients for each private one. Nothing under £1 per year is just remuneration. I am not overstating the case; mileage and drugs are the cause of the deficiency.

If it were not for the fact that the Government would be sure to put a man here who would absorb part of the private work I would resign to-morrow. I wonder if my case is an isolated one.—I am, etc.,

June 17th.

ENSLAVED.

INCREASED GRANTS TO INSURANCE PRACTITIONERS.

SIR,—The letter of Mr. Hackforth (Secretary of the National Insurance Joint Committee), published on p. 140 of the *SUPPLEMENT* of June 28th, contains at least one fallacy. It assumes that the medical man's gross receipt bears the same relation to his net income as the insured person's or the civil servant's gross receipt does to his net income. This is not the case.

My motor groom has no working expenses payable by himself. In this respect he is a typical insured person. Two-fifths of my gross income of last year were spent in paying my working expenses and his. The increase of capitation grant and mileage grant is not comparable to increase of a net income. And here let me interpolate that the proportion of the mileage allowance both before and after increase is inadequate for fairness.

The civil servant's working expenses are paid by the State, and are not reckoned part of his income. My working expenses so far as national insurance is concerned are, Mr. Hackforth and Major Astor may say, paid by the State, but they are reckoned in Mr. Hackforth's letter as part of my income. The cases are not parallel.

I do not contest the statement that the increase in prices has been most marked as regards the necessities of life. Perhaps I may be allowed to call bacon and margarine necessities. Bacon used to cost 1s. 4d. a pound; I get it now for half a crown. Margarine used to be 1s. a pound; it is now 1s. 4d. A motor car also is a necessity of life for a man of my work and physique. Such a car as used to cost £135 now costs £250; such a car as used to cost £285 now costs £495. I quote now from Mr. Hackforth's letter:

It should be appreciated that the increase in prices has been most marked as regards the necessities of life, and that since such necessities absorb a larger proportion of a small income than of a larger income, the increased cost of living accordingly justifies a larger proportionate ratio of war bonus increase in the case of the former than in the case of the latter.

Mr. Hackforth may consider it unfair on my part to relate the word "such" (which I have italicized for the reader's convenience) to a car. He has not related the word at all. He keeps on safe ground when he writes generally of a small and a larger income, both of which may be small. I claim that the difference between a doctor's income and a miner's is not big enough to constitute petrol, lubricating oil, tyres, and the car itself less necessities of life than the steak on which a miner's whipplet may have the first claim.—I am, etc.,

Duns, July 3rd.

A. J. CAMPBELL.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

SIR,—In the JOURNAL of June 21st, p. 784, "Senex" says: "In some cases civil practitioners who, although over military age, . . . have given up their practices and every other source of professional income." I wonder whether this was purely for the country's sake? There are practices not worth ten guineas a week.

I maintain that, financially, the stay-at-home, whether of military age or over it, is much better off than the one who went away. The work done had to be shared by those who remained; the amount done depended on them. Old patients died or left the district, new ones came, and when the service man returned he was not known; the limpets got in.

All honour to the men of over military age who did their bit; but surely they all see that a practice must suffer, even in the country, by the absence of the principal.

However one looks at it one cannot help seeing that every one has had some hardship to bear, and only rightly so; but what of those who have given their all?—I am, etc.,

Bingham, Notts, June 25th.

R. COPE.

SIR.—Those who took up national service work were either over or under military age. Those over were in many cases attracted to the work by the conditions of service, which meant fixed hours, no night work or bad debts. In other words, they were infinitely better off in every way than in general practice. Those under age who had made up their minds that they would not serve in the army unless forced to, seized upon these posts and fought tooth and nail to keep them, urging the fact of their being so occupied as their ground for resisting being called up. I can call several instances to mind in which this excuse availed. The fact of having this kind of work to do also enabled them to refuse the less delectable parts of general practice—for example, midwifery—as they were able to tell their patients without risk of offence that, owing to work of a national or military character, they had not time to undertake it.

Men now being demobilized find, in many instances, that their practices are yielding next to nothing, and, having given all, have an undoubted claim upon any Government posts. The men who stayed at home all had some reason (satisfactory to themselves) for doing so. They got what they wanted, and the time has now come for them to be made to feel that they have had their cake and cannot go on eating it. In the case of civilian medical

practitioner appointments under the War Office, the latter has definitely given instructions to the commands to recognize that demobilized men can claim the appointments from non-service men who may be now holding them. In the case of Ministry of Pensions appointments a very weak policy has so far been followed. In fact, it would seem that the present non-service holders form a closed corporation.

On application for an appointment one is told that any drastic action would result in a great outcry. The only outcry the writer can foresee is the one that will undoubtedly be made by the country at large unless something is speedily done for the "demobbed" man.—I am, etc.,

June 22nd.

"OUT OF WORK."

INSURANCE TERMS AND CONDITIONS.

SIR,—Reports are coming to hand of the group conferences to consider M. 25 of the British Medical Association and the memorandum of the Insurance Commissioners, and they present some interesting reading. To my mind they all make the fundamental mistake of assuming that any alterations in the medical services of the country must be based upon the existing Insurance Acts.

One of the Commissioners is reported as having said at one of the conferences that "the adequacy of the insurance medical service was a matter of national concern, and the Government was asking the profession to help in determining the lines of the best service that the country could afford to give." Note "the best service." Is there any one having experience of the working of the present Insurance Act who can say that any service based upon that Act can be the best that could be devised?

All that up to the present has emerged from the various conferences is, that the present system should be stretched a little here, patched up a little there, altered and tinkered with generally, and then fastened closely down upon the medical profession like a badly fitting shoe, with which nobody will be satisfied, and which will hamper and limit the freedom of the profession for all time. Surely something better can be devised!

The present contract system for medical benefit has not been a success, and never will be, however it is modified. The principle is wrong. It destroys the sympathetic relationship which ought to exist between doctor and patient. Every doctor knows what I mean, and every insured person knows it as well. As for it having secured an improvement in the health of the nation as a whole I do not for a moment believe it. I need not enlarge on this, though it would be quite easy to do so if required.

In Huddersfield this matter has been considered from the point of view of the health of the nation as a whole, or, in the words of the Commission, to help "in determining the lines of the best service that the country could afford to give," and we think that the following proposals would secure that result. Any alterations of the health services of the country should secure:

1. An efficient public health service, which would provide adequate sanitary, housing, and food supervision. (This exists at present to some extent but could be improved.)
2. An efficient nursing service with an adequate supply of midwives.
3. An efficient service of clinical and pathological laboratories.
4. Residential institutions for acute medical and surgical cases.
5. An efficient service for the poor.
6. A system of referees for insured persons.
7. That the present contract medical service should be abolished, and patients allowed to make their own arrangements as before the Act.
8. That the present arrangements for securing sickness and maternity benefits might be continued, with possibly a small contribution for the upkeep of the auxiliary services.

This is the outline of the system suggested. It would free the medical profession, and bring out the best that is in it. It would free the insured population, would develop their self-respect and self-reliance, and would save us from becoming a nation of "medicine drinkers," as at present we are fast becoming. It would also further simplify the present procedure enormously, and do away with all the proposed irritating and perplexing restrictions suggested in M. 25.

Now is the time for the medical profession to assert itself. There will never be such another opportunity. If the present proposals take shape the profession will be bound for all time, and bound in every direction, and this can only result in the deterioration of the health of the nation.—I am, etc.,

Huddersfield, June 29th.

R. H. RIGBY.

SIR,—I have read document M. 25 several times, I have heard it discussed at two meetings of the Surrey Panel Committee, and at the meeting at Essex Hall held under the auspices of the London Panel Committee. At this last meeting we heard M. 25 gently and persuasively expounded to us by Dr. Cowie; and Dr. Brackenbury was also present to explain that, on several important points, M. 25 did not mean what it said.

But after all M. 25 has to be judged by what it says, and not by what Dr. Brackenbury or its other authors say it was meant to say. And if the scheme promulgated in M. 25 were carried out, there would in a few years be a State medical service for nearly all sections of the community; private practice would almost disappear, and doctors would become civil servants under the control of the Ministry of Health.

This point was put before the above meeting, and all that the apologists for M. 25 had to say was, that it was not a "whole-time salaried service," which is obvious, but does not alter the fact that M. 25 is a scheme for a complete State medical service, and the important question is whether the medical profession is prepared to accept such a position for itself and its successors.

I have heard it said that as a class the British general practitioners have not their equal anywhere in the world; that being so, why bring them under the blighting influence of State control?

There are, we know, some men who are in favour of bringing the medical profession under State control, and these men seem at the present moment to have control of the machinery of the British Medical Association.

I would suggest that, before further mischief is done, a postal vote of the whole medical profession in England, Scotland and Wales (Ireland, I think, does not come under the Insurance Act), should be taken on this question:

Are you in favour of a State medical service as proposed in M. 25?

This service would in a few years bring almost the whole of the medical profession under State control.

Please answer Yes or No.

So important is this question that I would invite the Presidents of the Royal Colleges of Physicians and Surgeons to act with the President of the British Medical Association as scrutineers.

So great is the change involved and so disastrous would it be to the medical service of the country that, in my opinion, it should not be made unless there were a two-thirds majority in favour of the change.

May I beg Dr. Hodgson of Crewe to amplify his letter of June 7th, and give us the reasons of his disagreement with M. 25.—I am, etc.,

Epsom, July 5th.

E. C. DANIEL.

SHORTAGE OF DOCTORS.

SIR,—I, like the majority of medical officers while serving temporarily in the army or navy, heard on all sides about the great shortage and urgent need for doctors in civilian work.

But on being demobilized, I find to my surprise that (I am only speaking for my own town) there is no shortage of doctors at all—on the contrary there is an increase, and yet there are large numbers of medical officers still being retained with the troops, both at home and abroad. Apart from this, there are also those who can never return, having given up their lives for their country, but whose absence should still further increase this shortage. I understand that I am by no means alone in this experience, and that doctors who have served are now finding out on their return that, with only the nucleus of their old practices left, they have to face the opposition of now-comers, who have already comfortably established themselves in the immediate neighbourhood.

Where have these "arrivals" come from? And why have they chosen to start in such places? Also why, if there is or was this shortage, did not they go to those

places where there was a legitimate opening owing to the death or retirement of the previous holder? Perhaps some of the demobilized medical officers will give their experiences.

In the meantime I will only sign myself—Yours, etc.,
June 27th.

PUZZLED.

THE NEW R.A.M.C. CONTRACT.

SIR,—The War Office announces that temporary R.A.M.C. officers will, after August 4th, receive consolidated pay of £550 a year, and no other allowances but rations, and must sign on for one year, or until their services are no longer required. What I and my colleagues at this hospital want to know is the feeling of the other temporarily commissioned officers now serving, and whether the British Medical Association—of which we are members—think it a fair peace-time contract, and if they intend to take any action in the matter.

I would point out that in addition to the loss of income of £20 16s. there is the additional income tax to be paid on £52; the loss of children's allowance, and the upkeep of uniform. Why should our pay be reduced in these times when every one else is clamouring for increase and getting it?

Further, how can a contract be considered fair that binds one party for a year and allows the other party to terminate it at a day's notice? If our circumstances alter, such as by the acceptance of an appointment, how is one to get out of the army? Would a court of law uphold such a contract?

How is the older man to keep a wife and educate his children on this sum, or find the alternative civil appointment to enable him to do so? And how is the newly-qualified man to have any incentive to work or even know the value of money? The man who served for years is put on the same footing as the newly qualified, and the pay for work at home and abroad is the same.—I am, etc.,

July 6th.

WAITING.

*** On the point of the children's allowance the Director-General A.M.S., in the statement printed at p. 46, says that officers will continue to draw this for the present.

HOSPITAL RECONSTRUCTION.

SIR,—There has been considerable correspondence in the medical and lay press as to the need for increased hospital accommodation, especially of the cottage hospital type. The difficulty in establishing these institutions is not so much the cost of building and equipping, as the fear that exists that they will be a continued and increasing drain upon the charitable public. For this reason it is important to consider the question of maintenance; there is apparently a general agreement that this should be as little as possible dependent on charity.

Take the case of an auxiliary hospital with twenty beds serving a population of ten thousand. One ward of five beds would be set aside for maternity cases. The upkeep of these beds might, under the terms of the Maternity and Child Welfare Act of last year, be provided, for the greater part, by the local authority; in so far as it might not be, the cost would be met by the patients occupying them, so that this ward, at any rate, would in no way be dependent on charity.

Another section of the hospital would consist of separate private beds for patients willing to pay such fees as would not only cover the actual cost of their maintenance, but would allow a certain profit to the institution. The number of these beds would vary with the character of the population, perhaps five out of twenty. This would be no charge on charity.

There would remain ten ordinary hospital beds. Some of the patients occupying these beds might be able and willing to pay the necessary fees, but the majority would probably not be willing, or if willing, would not themselves be able to pay. As yet we cannot look for these payments from the National Insurance Commission, approved societies, or local authorities, although the latter, under Section 131 of the Public Health Act, 1875, have the power to make them; but we may quite fairly point out to the public that the time cannot be very far distant when one or other of those authorities will be called upon to support these hospitals.

The most business-like system is to pay for each patient admitted the actual amount of his cost to the institution. To do this, it would be much better if the public, different bodies of workers, and other groups of persons, instead of paying hospitals indefinite sums, for which they expect an indefinite amount of treatment, would each form their own hospital fund, out of which they would pay for any patient that they sent to hospital the whole of the sum required. This would be a more businesslike arrangement, more fair and satisfactory for all concerned. Those using the hospital would feel a greater sense of independence. There would be no differentiation between the patients, each one of whom would bear, directly or indirectly, his fair share of the expenses of the hospital. Contributors would feel a more direct interest in the management of the institution, and would probably appreciate more fully the benefits that they received. If each society or group of persons had, as suggested, its own hospital fund, it would be able to pay for its own patients as occasion arose. It would not be bound to support any particular hospital. Payment would be made, not only for in-patients, but for such out-patients as there might be.

If these hospitals are used, as it is suggested they should be, for various public services, school clinics, maternity and child welfare centres, and so on, they would derive from these a certain income.

As to the payment of members of the medical staff—all insured persons, and others for whose treatment they contract, would be treated by them in hospital without any further fee. It must here be noted that there is a very real probability of the dependants of insured persons before long being granted medical and sickness benefit. For patients in the maternity ward, unless other arrangements are made, medical men, when called in by the midwife in charge, would receive the same fees as if the patients were in their own homes. For the patients of the public services the doctors would receive an agreed payment, but for all others they would make their own arrangements with each patient.—I am, etc.,

Bradford-on-Avon, July 4th.

CHAS. E. S. FLEMMING.

A TUBERCULOSIS SERVICE.

SIR,—The financial side of Dr. Halliday Sutherland's letter on a tuberculosis service is probably one of the reasons for suggesting a separate tuberculosis service. Men who have specialized in tuberculosis see tuberculosis appointments going the way of all recent additions to the public health services—becoming assistants to the M.O.H. at salaries relatively few of which reach £500 and still fewer surpass it. School medical appointments went the same way. Maternity and child welfare never had an existence except as assistants. Oculists are being roped in similarly and venereal disease assistants are beginning to appear.

The result is that the number of junior appointments is increasing out of all proportion to the senior appointments, making the prospects of the service very poor for those who enter it even if one omits the number of senior appointments filled "locally."

In the BRITISH MEDICAL JOURNAL of May 24th (selected at random) twenty-one assistants are advertised for at salaries ranging from £350 to £500, and special experience in tuberculosis, eye-work, children's diseases, venereal diseases, are among the things asked for. In some an age limit is stated, definitely placing them as junior appointments. One county asks for a batch of six, one to have ophthalmic and another venereal disease experience. Six responsible better-paid appointments, from £600 to £850, are advertised—three M.O.H.s, two tuberculosis officers, and one school medical officer.

Tuberculosis officers are not yet completely submerged; the school medical officer advertisement is a rarity. The experience of the mental services is being repeated.—I am, etc.,

June 18th.

M.O.H.

INFECTIVE CATARRHS—SO-CALLED COLDS.

SIR,—I entirely agree with Drs. Spriggs and Killick Millard (June 14th, pp. 751-2). I am convinced that until the general public realize that the "common cold" is an infective disease, due to definite organisms, and is, as a rule, only contracted by those frequenting crowded public buildings, conveyances, or stuffy rooms, we shall continue

to suffer from these so often dangerous and fatal infections, due to the inhalation of infected atmosphere. I believe that not only are the common respiratory catarrhs infections due to specific micro-organisms, but that the so-called liver chill and stomach chill are due to the same organisms, causing an acute catarrh of the mucous membranes of the stomach and intestines. It is the common experience of the general practitioner to have some members of a family suffering from a "common cold" and others from "stomach chills," due, in my opinion, to the same organism. The fact that these infections are practically unknown in sanatoriums, where there is abundant ventilation and fresh air, and that in the recent influenza epidemic those sufferers who were shut up in warm, stuffy rooms suffered a higher mortality than those in hospital wards with an abundant supply of fresh air, is a conclusive proof that the common belief in the "cold" or "chill" theory is not only a mistake but actually harmful. What, then, is the remedy?

1. To educate the public, by the adoption of a suitable name for these conditions, to the fact that the cause of these infections is not "cold" or "chill," but warm, stuffy, infected atmosphere, due to lack of proper ventilation.

2. Bacteriological research with a view to discovering the causative organisms.

3. The intelligent use of a protective vaccine in cases likely to run the risk of infection, and a curative vaccine given early in infected cases.

Last autumn I inoculated over one hundred of my private patients with protective doses of a mixed vaccine, prepared from the *Pneumococcus*, *Micrococcus catarrhalis*, *Bacillus pneumoniae* (Friedländer), *Bacillus influenzae*, *Bacillus septus*, *Staphylococcus*, and *Streptococcus*, and only three of these developed influenza, and all in a mild form. My own experience is that the primary infection is usually the *Pneumococcus* or *Micrococcus catarrhalis*. With regard to the proper name to adopt for this class of case, with a view to the education of the public, I agree with Drs. Spriggs and Killick Millard that "infective catarrh" would be as good a designation as any other.—I am, etc.,

Woking, June 24th.

R. THORNE THORNE.

SIR,—No one is likely to quarrel with the sensible views expressed by Dr. Spriggs and Dr. Millard in your issue of June 14th. But is not the mere change of name, which they advocate with so much stress, likely to be a slow way of achieving what they want? I imagine that doctors have been teaching their patients for a generation at least that "colds" are infectious diseases. Yet this has not availed to upset the crooked convention by which the wise man who takes himself (and his cold) to bed for two or three days is accounted a poor-spirited creature; while the streaming, snuffing distributor of poisons who goes about his business notwithstanding is taught to regard himself as in some sort a hero for perpetrating what is an offence against society.

This state of affairs must be laid at our door, for, in spite of what we have done, the public does not appreciate the formidable nature of a malady which can claim the parentage of diseases like pneumonias of different sorts, bronchitis, "tonsils and adenoids," otitis media, and sinus infections. The common "cold" can hardly be made a notifiable disease, though it deserves that distinction a good deal better than mumps or chicken-pox; but the influence of our profession should be capable of creating a canon of social life by which the possession of an acute cold absolves its possessor from social and business obligations without imputation; with the corollary that one so afflicted must keep himself to himself during the acute phase of his illness, both within his family circle and without it. This may sound impracticable at first hearing, but such an embargo on the wholesale dissemination of the disease might well be expected to reduce the incidence of it to manageable proportions.

I am not blind to the practical difficulties of deciding what degree of acuteness in a "cold" should warrant the ostracism of its possessor, though most of us know pretty well when we are in for a bad cold and when we are not. At all events, one may expect a general agreement with the view of your earlier correspondents, that the Medical Research Committee could not find a more deserving field of investigation, with a view to providing data for such

decisions, among other things. But it may be doubted whether it is necessary to wait for preciser knowledge than we have before attempting some organized "reconstruction" of the public attitude towards the common cold; and I should say that nothing but good could come of a memorandum addressed by, say, the Presidents of the Royal Colleges, to the lay press, giving the admitted facts and calling attention to the economic and other advantages of voluntary isolation. No doubt there would be a disdainful howl from large employers of labour; but they would learn in time that the steps which would be necessary to prevent malingering on this score were worth the money spent upon them.—I am, etc.,

London, W., July 7th.

W. P. S. BRANSON.

PROFESSIONAL CONFIDENCE.

SIR,—I feel that the medical profession cannot rest satisfied with the pronouncement of the Council of the Medical Defence Union in respect to the case reported in the *JOURNAL* of July 5th.

The fact that there are two patients involved in the case has been entirely overlooked.

The duty of a doctor extends to the child no less than to the mother, and if, as in this case, the child is not forthcoming it is his duty to seek for it. And in the event of it not being found, to call on the police for assistance in the matter.

That he is at liberty to "pass by on the other side," which seems to be the considered judgement of the Medical Defence Union, must shock the moral sense of both the profession and the public. Neither can it be claimed that anyone by obtaining the professional assistance of a medical man has any ethical right to involve him in guilty knowledge and expect to do so with immunity.—I am, etc.,

Lincoln, July 5th.

II. W. VAUGHAN.

SIR,—I am indebted to your courtesy in giving me an opportunity of seeing the letter which you have received from Dr. Vaughan, and which will appear in this week's *JOURNAL*. Dr. Vaughan is wrong in thinking that the Council of the Medical Defence Union has overlooked anything in the case referred to in my letter in the *JOURNAL* of July 5th. He states as a fact that there were two patients involved in the case. With all deference to him, such is not the fact. The Council fully recognizes the duty which a medical practitioner owes to any patient he may be in attendance upon, but it maintains that this duty must not be subordinated to the interests of a person whom he has never seen and of whose existence he has no certain knowledge.

It perhaps not infrequently happens that where an unmarried woman has given birth to a child, the friends, in order to avoid a social scandal, remove the child immediately after birth, and place it in good and safe hands for custody, before the arrival of a medical man. In such a case, is the medical man who may be called in to attend the mother to be expected, because the baby is not in evidence, to inform the police that the woman has had an illegitimate child, and may possibly be a murderess?

The Council contends that in the circumstances described in my former letter it was not the duty of the doctor to communicate with the police. Unless patients can feel at liberty to confide in members of the medical profession with full assurance that their affairs will be as jealously guarded as disclosures to a priest at confession, "the moral sense of both the profession and the public" would receive a shock even greater than that which Dr. Vaughan fears will result from the failure of the doctor in this case to act voluntarily as a police agent.—I am, etc.,

JOHN TWEEDY,
President.

Medical Defence Union,
4, Trafalgar Square, W.C.2, July 9th.

TEXTBOOKS OF PHYSIOLOGY.

SIR,—I desire to emphasize your comment in to-day's *BRITISH MEDICAL JOURNAL*, in the review of textbooks of physiology, that "there is room for a book which will expound the principles of physiology underlining the essential facts without deteriorating into a cram book." I am looking for such a book.—I am, etc.,

June 28th.

GENERAL PRACTITIONER.

Obituary.

E. G. FEARNSIDES, M.A., M.D., F.R.C.P.,

Major R.A.F., Director of the Golders Green Home of Recovery
(Ministry of Pensions).

EDWARD GREAVES FEARNSIDES, who met his death in a boating accident near Holyhead on June 26th, was born at Horbury, Yorkshire, in 1883. He was educated at Dewsbury, became a senior scholar of Trinity Hall, Cambridge, and obtained a first class in both parts of the Natural Science Tripos, taking physiology as his chief subject. In 1906 he entered the London Hospital with a high academic reputation, and obtained first a university entrance scholarship and later one in medicine.

After holding all the usual appointments he became medical registrar, and filled this post for the unusually long period of four years. During this time he took part in a series of researches on syphilis of the nervous system in conjunction with Drs. Fildes, McIntosh, and Head.

He was appointed assistant physician to the Hospital for Paralysis and Epilepsy, Maida Vale, and threw himself into this work with his accustomed energy and devotion; during the earlier part of the war there was no duty he would not assume to help the hospital to carry out its responsibilities towards its military and civilian patients.

In August, 1916, he obtained a commission in the R.A.M.C. and was sent to Rouen, where he worked for six months; but in the early part of 1917 he returned to be attached to the Springfield Military Hospital, which was devoted to the treatment of functional nervous disorders. When the Home of Recovery was established at Golders Green, in connexion with the Ministry of Pensions, Fearnside was chosen to direct it. This was one of the happiest periods of his life. Here he could entertain his friends, and he made the hospital a rallying point for those who were interested in the scientific problems of neurology or the treatment of functional neuroses. Finally, in September, 1918, when the Home of Recovery was taken over by the Royal Air Force, he received the rank of major in that force and continued to work at Golders Green until his death.

He took the degree of M.D.Camb. in 1914, and was elected a Fellow of the Royal College of Physicians the next year.

Throughout the whole of his career, whether in Cambridge or in London, his most striking characteristic was an untiring devotion to his work. His mind was acquisitive rather than original; but, in spite of the wide range of his scientific interests, his knowledge was astonishingly accurate. The review he gave in *Brain* (vol. xl, 1918) of the innervation of the bladder and urethra was a remarkable summary of our knowledge on the subject. Throughout the whole of the work on syphilis of the nervous system he acted as liaison between the laboratory and the wards; every patient was known to him personally, and it was he who furnished the final protocol. He had a genius for order and thoroughness; no one was a better critic of the success or failure of an attempt to present some difficult subject. He read widely in French and German scientific literature, and was responsible for a large number of the neurological abstracts in the *Medical Supplement* to the Review of the Foreign Press, compiled by the Medical Research Committee, which had so great a success during the war. But his interests extended beyond medicine; a keen geologist, he made many excursions in the company of his brother, the Professor in the University of Sheffield, and he published with Dr. Shipley a paper on the metazoan parasites.

He was beloved and trusted by his patients, both in hospital and private practice, and he filled many an awkward administrative gap by his genial efficiency. Unfortunately he did not live to reap the reward of that self-sacrificing devotion to both the science and art of medicine, but he had already made a place for himself in neurology, which cannot be filled now he is dead.

HENRY HEAD.

RIGHT HON. SIR WILLIAM MACGREGOR, P.C.,
G.O.M.G., C.B., M.D., LL.D.

SIR WILLIAM MACGREGOR, rightly described as "a great colonial governor," died in a nursing home at Aberdeen on July 3rd. The son of an Aberdeenshire farmer he was

born in 1847, and was educated at Aberdeen and Glasgow. He graduated M.B. in 1872, and M.D. in 1874 at Aberdeen. In 1872 he took the diplomas of L.R.C.P. Edin. and L.F.P.S. Glasg., and obtained the Fellowship of the latter body in 1908. He served for a time as resident surgeon and physician in the Glasgow Royal Infirmary, and resident medical officer in the Royal Lunatic Asylum, Aberdeen.

His colonial career began in 1873, when he was appointed assistant Government medical officer at Seychelles Islands. In 1874 he went to Mauritius as surgeon to the Civil Hospital, Port Louis, and in 1875 he became chief medical officer in Fiji. He was receiver-general and administrator of the Government, and for a time he acted as High Commissioner and Consul-General for the Western Pacific. In 1888 he went as administrator to British New Guinea, Queen Victoria's sovereignty of which he declared on September 4th. In 1895 he was promoted to be Lieutenant-Governor of the colony. So great was his success in that office that he was described by the Minister of Defence in a debate in the Australian Senate as standing "head and shoulders above all others who had administered the affairs of New Guinea." In 1899 he was appointed Governor of Lagos, a post which he continued to hold till 1904, when he was transferred to Newfoundland. There he remained till 1909, when he succeeded Lord Chelmsford as Governor of Queensland. He represented the West African colonies and protectorates at the coronation of King Edward VII in 1902. He retired in 1914.

Wherever Sir William MacGregor served as a pro-consul of the British empire he was universally acknowledged to have been eminently successful as an administrator. He was a man of versatile mind, and retained his interest in medicine. In 1892 he accompanied Sir Ronald Ross's expedition to Ismailia to investigate malaria. He was a Fellow of the Geographical Societies of England, Scotland, and Berlin, and was awarded the Founder's Medal of the English Society, and was a member of the Italian Anthropological Society. He presented valuable collections illustrating the life of the natives of West Africa, New Guinea, Newfoundland, and Labrador to the museum of the University of Aberdeen. In 1910 he was awarded the Mary Kingsley medal. He was an accomplished linguist, and in an opening lecture delivered at the London School of Tropical Medicine he surprised the audience by the number and felicity of his quotations from Dante, Homer, and other classics. He was a man of great personal courage and powerful frame, although he adopted a colonial career in the belief that it was necessary for the preservation of his health. He was awarded the Albert Medal of Queen Victoria and the Clarke Gold Medal by the Australian Government for saving life at sea. He was also a recipient of the Watson Medal in 1872.

Many honours were bestowed on him. He was created K.C.M.G. in 1889, G.C.M.G. in 1907, and C.B. in 1897. He became a Privy Councillor in 1914. Cambridge conferred on him its D.Sc. in 1895; in the same year Aberdeen made him an honorary LL.D., and a like distinction was bestowed upon him by Edinburgh in 1902, and afterwards by the University of Queensland, of which he was the first Chancellor.

Sir William MacGregor was a man of whom the medical profession may justly be proud. He was a fine example of the Scotsmen who have done such good service in the expansion and administration of the empire.

FRANK NICHOLSON, M.D., C.B.E.,

Senior Physician, Hull Royal Infirmary.

On June 19th the medical profession of East Yorkshire and North Lincolnshire suffered a great loss in the death of Dr. Frank Nicholson, at his home at Tickton Grange, Beverley.

It was only a few months ago that he began to suffer from cardiac irregularity and dyspnoea, though with characteristic energy he continued to attend to his duties as usual until Easter, when he was reluctantly compelled to take to his bed. Even then he would not admit that his work was done, and on days when he suffered less distress he spoke hopefully of taking up his practice again after a short rest.

As a student of St. Thomas's Hospital he had a brilliant career, and was awarded the Mead medal in medicine and the Cheselden medal in surgery. In the examination for M.B. at the University of London in 1878 he won the Gold

Medal in medicine, first class honours in forensic medicine, and honours in obstetric medicine; in the M.D. examination he distinguished himself further by winning the Gold Medal.

He settled in Hull in 1878, his only backing being his record as a student, and a year later, after a stiff fight, was appointed honorary physician to the Hull Royal Infirmary. From this time success came steadily.

Though he did not contribute much to the scientific journals his diagnostic skill and clarity of thought won him a great reputation as a consultant.

Dr. Nicholson had few interests outside his work, which remained his incessant passion to the end; however numerous the calls on his time he never allowed the demands of his private practice to interfere with the regular performance of his duties as physician to the infirmary. He was a jealous guardian of what he regarded as the great privileges of this position, and the efficient administration of the hospital was ever a subject very near his heart.

As a clinical teacher Dr. Nicholson was brilliant, and the post of his house-physician was much sought after. He spoke with the authority of a wide and mature experience, and though always eager to apply the latest methods of diagnosis and treatment he reserved his judgement until they had been thoroughly tested at his own hands. If in his opinion an "innovation" failed he poured unmeasured scorn on its adherents. He had the intolerance of a strong man who does not fear to voice his opinions.

During the war Dr. Nicholson was physician to the Hull Voluntary Aid Detachment Hospital and the Brooklands Hospital for Officers. This work was recognized by the award of the C.B.E. at the beginning of this year.

He had held the office of president of the East Yorks and North Lincolnshire Branch of the British Medical Association, and at the time of his death was a member of the managing committee and senior physician to the Hull Royal Infirmary and a Justice of the Peace for Hull.

Dr. Nicholson was a widower, and leaves a son and two daughters.

R. D. PUREFOY, M.D., LL.D. (HON.),

One-time Master of the Rotunda Hospital, Dublin.

DR. RICHARD DANCER PUREFOY died at his residence in Dublin on June 27th. He was a son of the late Dr. Thomas Purefoy of Lucan, and was born on August 4th, 1847. He was educated at Bective College and Raphoe Royal School, and entered the Dublin University, where he obtained the licences in medicine and surgery in 1871, and graduated B.A. and M.B. with honours and a moderatorship in natural science in 1872. In 1875 he took the licence of the Royal College of Surgeons, and the degree of M.D. in 1892. He was a member and past President of the Royal Irish Academy of Medicine. At the bicentenary of the Medical School the University of Dublin conferred on him the honorary degree of LL.D. He was a Fellow and member of the Council of the Royal College of Surgeons and president 1912 to 1914, and a member of the Royal Dublin Society.

Dr. Purefoy was for two years house-surgeon at St. Mark's Ophthalmic Hospital and for three years assistant master of the Coombe Lying-in Hospital. He was then appointed assistant master at the Rotunda Hospital. In 1879 he was appointed lecturer in materia medica to the Peter Street School of Medicine. He was obstetric surgeon to the Adelaide Hospital for twenty-one years, and acted as examiner in midwifery and gynaecology in the University of Dublin. From 1896 to 1903 he was master of the Rotunda Hospital. While there he threw himself heart and soul into the clearing of the hospital debt by organizing a big bazaar. On the termination of his mastership he was unanimously elected a governor of the hospital. And to-day a bronze bust by Oliver Shepherd, presented to him by the nursing staff, stands in the entrance hall. Dr. Purefoy was an old member of the Grand Master's Lodge and a member of the Friendly Brothers' Club. Last December he was elected president of the Catch Club.

He was a man of deep sympathy, never sparing himself, giving the greatest care and kindly attention to the poorest of his patients. His death will be felt as a great loss not only among his colleagues but also among all ranks in Dublin.

The Services.

R.A.M.C.

WAR BONUS IN INDIA AND MESOPOTAMIA.

CORRESPONDENCE which has reached us shows that doubt has arisen in the minds of some whether the provision that R.A.M.C. officers are automatically entitled to the bonus as from February 1st applies equally in India or Mesopotamia, where the system of demobilization and retention for the armies of occupation is not precisely the same as in Europe. This matter is governed by paragraph 4 of Army Order 54 of 1919, which reads as follows:

The bonus will be issuable to British Service troops serving in India under the same conditions as those applicable to troops serving elsewhere.

Officers in Mesopotamia, we are informed, come under Indian rates of pay.

TERRITORIAL DINNER.

It is proposed to hold a dinner of Territorial Force medical officers in London at a date to be fixed. Those who are interested in the proposal are invited to communicate with Lieut.-Colonel A. R. Hinchley, D.S.O., R.A.M.C.(T.F.), care of Holt and Co., 44, Charing Cross. It is intended to form a committee to make the necessary arrangements.

Universities and Colleges.

UNIVERSITY OF OXFORD.

At a congregation held on July 5th the following medical degrees were conferred:

D.M.—C. J. G. Taylor.
B.M.—N. F. Smith, L. B. Chavasse,* J. C. Dixey, H. S. Jefferies, O. B. Pratt, F. G. Hobson.

* In absence.

UNIVERSITY OF MANCHESTER.

The following candidates have been approved at the examinations indicated:

M.D.—J. W. Bride, T. H. Oliver, C. R. Sandiford.
FINAL M.B., CH.B.—Kathleen Doyle, Olive M. Gimson, A. Harris, J. G. Nolan, Olga G. M. Payne, F. L. Pickett, Effime Ratner, A. E. H. Sadek, Annie G. Thompson, Marie Wardman, Ruth A. Wilson.

Medicine: Elizabeth C. Davies, *Doris M. R. Tompkin.

Obstetrics: Doris M. R. Tompkin.

Forensic Medicine and Toxicology: S. Adler, May Blakiston, Phyllis M. Congdon, J. W. Crawshaw, K. Deakin, A. M. El Aguizy, F. R. Ferguson, P. Fildes, Evelyn A. Garnett, E. M. Greaves, J. Harris, G. E. Hayward, Sylvia K. Hickson, J. B. Higgins, F. S. Horrocks, Irma M. C. Jéhansart, F. C. Jones, Gertrude B. Leigh, H. A. Lomax, W. E. Mason, Doris B. Norman, Emily M. Peach, H. Rosenthal, Annie Rothwell, G. Sheehan, Annie E. Somerford, G. L. Taylor, H. Tomlinson, Mary I. Turner, F. A. Van Collier, R. Williamson, J. B. Wright.

* Doris M. R. Tompkin and Ruth A. Wilson were awarded distinction in medicine, and J. G. Nolan was awarded distinction in surgery.

† Awarded distinction.

THIRD M.B., CH.B. (*Pharmacology, Therapeutics, and Hygiene*): S. Almond, G. V. Ashcroft, Nancy E. Bleakley, T. E. Coope, Muriel Coope, Eugenia R. A. Cooper, S. W. Drinkwater, Dorothy M. L. Dyson, Winifred M. Edgehill, T. N. Fisher, E. S. Frisbman, E. Gleaves, W. H. Gratrix, A. Haworth, Ruth Hill, C. D. Hough, Marguerite F. Johnstone, E. Jones, J. I. Kelly, R. R. Lane, J. Leather, G. H. Lees, W. L. Martland, A. Maude, Eva le Messurier, P. B. Mumford, C. Nelson, T. O'Brien, L. S. Potter, W. E. Powell, Margaret Pownall, J. S. Robirzon, F. H. Scotson, H. L. Sheehan, Margaret Single, J. W. Smith, Constance Snowden, H. Stafford, S. N. Taylor, S. Wand, Norah M. Walker, S. Waterworth, R. Williamson, J. R. Wright. (*Hygiene*): R. S. van Aalten, Margaret McF. Corbold, Caroline M. Edwards-Evans.

UNIVERSITY OF DURHAM.

At the convocation held on July 1st the following degrees were conferred:

M.D. (*Essay*).—Jessie M. Murray.
M.D. (*for Practitioners of Fifteen Years' Standing*).—T. B. Sellors, A. F. Tredgold.
M.S.—W. R. E. Unthank.
M.B., B.S.—Dorothy O. S. Blair, Sujjan Raj Chatterji, E. D. Charles, W. D. Forrest, A. T. Harrison, J. R. Hughes, L. W. Hearn, Rami Mansoor, H. L. P. Peregrine, T. N. V. Potts, W. Reynolds, R. Sanderson, A. H. Whyte, H. Williamson, G. R. Woodhead.
B.S.—W. O. F. Sinclair.
D.P.H.—E. W. Todd.

The following candidates have been approved at the examinations indicated:

THIRD M.B. (*Materia Medica, Pharmacology and Pharmacy; Public Health; Medical Jurisprudence, Pathology, and Elementary Bacteriology*).—Oliver Colville, *Dorothy A. Dixon, S. E. H. Anderson, J. S. Brogdon, J. S. Clark, E. T. Colville,

R. C. Davison, T. W. K. Duncombe, Eskander Girgis, Barbara M. Gringing, D. F. Hocken, W. E. D. Hodgson, H. Houlby, H. N. C. Jaffé, G. McCoull, R. T. E. Naismith, C. D. Newman, T. S. Severs, L. W. Studdy, W. A. Tweddle, W. C. Wardle, Edith S. Williamson.

* With second-class honours.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

The annual election by the Fellows of members of the Council was held on July 3rd. 673 Fellows voted, 667 by paper and 6 in person. The result was as follows:

Candidates.	Votes.	Plumpers.
SIR BERKELEY G. A. MOYNIHAN ...	404	20
SIR CUTHBERT S. WALLACE ...	274	33
Francis James Steward ...	168	51
William Francis Victor Bonney ...	130	15
Alfred Herbert Tubby ...	114	7
John Frederick Jennings ...	113	17

The President (Sir George Makins, G.C.M.G.) declared Sir Berkeley Moynihan duly re-elected and Sir Cuthbert Wallace duly elected to the vacancies created by the retirement in rotation of Sir B. Moynihan and the death of Mr. L. A. Dunn.

Medical News.

DR. THOMAS LUMSDEN has been appointed Medical Referee to the Ministry of Pensions, for Westminster.

THE Lord Lieutenant has nominated Colonel Sir Robert Armstrong-Jones, C.B.E., M.D., to be one of his Deputy Lieutenants for the county of Carnarvon.

DR. JAMYE DE MORAES, a medical officer of the Portuguese navy, has been appointed Governor-General of Goa, the most important Portuguese settlement in the East.

AT the "Victory meeting" of the American Medical Association held at Atlantic City last month Dr. William C. Braisted, Surgeon-General of the Medical Department of the United States Navy, was elected president of the association.

THE following members of the medical profession have recently been called to the Bar:—Middle Temple: Major M. Dick, M.B., LL.B., I.M.S. (ret.), and Major H. J. McGrigor, M.D., R.A.M.C. Reserve of Officers. Gray's Inn: Surgeon Commander J. Stoddart, R.N., and Captain G. A. Borthwick, M.B., R.A.M.C.

CAPTAIN R. A. JONES, late R.A.M.C., who has been transferred at his own request from the presidency of the Bury (Lancs) Medical Pensions Board to that at Warrington, was recently entertained by the members of the Bury board at a complimentary dinner, when a silver cigarette box and leather suit case were presented to him.

DR. ARMLY ASHKENNY (Brockenhurst) invites the attention of assistant medical officers of health and of school, tuberculosis, and other health service officers who are Fellows of the Society of Medical Officers of Health to the draft new Articles of Association published in *Public Health* (July), especially section 4 (b) and section 19, which are to be proposed for confirmation at an extraordinary general meeting in London on July 18th at 5 p.m.

AT a general meeting of the medical practitioners in the Cheltenham area held at the General Hospital on July 7th, at which 27 were present, 11 of whom were demobilized doctors, the meeting resolved, *nemine contradicente*, that they were willing to act on pension boards at a rate of either one guinea per session, dealing with not more than five cases per session, or two guineas per session lasting two and a half hours.

THE Friends' War Victims' Relief Committee, in consequence of representations received from the Polish Ministry of Public Health to the effect that typhus fever was very prevalent, recently sent representatives to Poland, who reported that the statements received in this country were by no means exaggerated. There were one hundred thousand cases of typhus fever in March, and tuberculosis had greatly increased. The Polish Ministry of Public Health has undertaken a cleansing campaign throughout the country, and has invited the Friends' Committee to send a mission to that country to work in this campaign and afterwards, when help will be needed in various directions.

THE National Baby Week celebrations have been held this year in London from July 1st to 7th. On the morning of July 1st a three days' conference on infant welfare was opened by Dr. Addison, Minister of Health, at the Kingsway Hall. During the week a large number of infant welfare centres, schools for mothers, day nurseries, and kindred institutions were open for the inspection of visitors, and there was an exhibition of mothers'

handicrafts at Kingsway Hall, where mothercraft and baby competitions also were held. On July 3rd a meeting was held at the Royal Institute of Public Health for medical officers of infant welfare and maternity centres. On July 5th a health and child welfare exhibition was given in the Presbyterian Church Hall, Upper George Street.

A COMPLIMENTARY dinner was given at the Grand Hotel, Harrogate, on July 1st, by the members of the Harrogate Medical Society who had stayed at home to those who had served in His Majesty's Forces. About sixty sat down, thirty of whom were guests. The chair was taken by Dr. John Gordon Black, who proposed the loyal toasts. The toast of the evening, "The Guests," was in the hands of Dr. D'Oyly Grange. Surgeon Lieutenant O'Beirne Ryan responded on behalf of the Naval Medical Service, and Lieutenant-Colonel R. J. Morris, Major Ernest Solly, Major M. B. Ray, D.S.O., and Captain Shepherd Boyd for the R.A.M.C. The proceedings terminated with the toast of "The Chairman," proposed by the President, Dr. Bertram Watson.

THE annual meeting of the Medico-Psychological Association of Great Britain and Ireland will be held at York under the presidency of Dr. Bedford Pierce on July 21st and three following days. Dr. Pierce will give an address on the afternoon of July 22nd, and on that day papers will be read by Dr. Jeffrey on a case treated by hypnotic suggestion, and by Dr. G. L. Brunton on the cytology of the cerebro-spinal fluid. In the evening, for the first time since 1914, there will be an annual dinner. On July 23rd Dr. J. W. Astley Cooper will read a paper on the value of treatment by psychological analysis, and Dr. J. E. Middlemiss will contribute an analysis of 200 cases of mental defect.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

The postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand, London*; telephone, 2631, Gerrard.
2. ACTING FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

INCOME TAX.

Z.—A doctor who served in the R.A.M.C. from December, 1914, to February, 1919, has bought a partnership which begins to run as from July 1st, 1919. His emoluments while in the R.A.M.C. were approximately £500 per annum. The emoluments of the partnership (half-share of the practice), taking the average of the last three years, are £720. He asks whether he can fill up his return for 1919-20 on the basis of his army pay.

* * It is not competent for him to average his army pay for the purpose of the assessment of his civil income; that income is to be taken for income-tax purposes as one-half of the average of the previous three years' profits of the practice. If the previous proprietors were employing a locum tenens, it is possible that the depressed profits of those years may furnish a basis for assessment as favourable to our correspondent as the one he desires.

LETTERS, NOTES, ETC.

EX LIBRIS.

DR. MACDOWEL COSGRAVE (5, Gardiner Row, Dublin) will be grateful for book-plates of medical men, and will gladly give his own in exchange. Dr. Cosgrave has recently published a list of book-plates of Irish medical men.

THE MEDICAL DIRECTORY.

MESSRS. J. AND A. CHURCHILL (7, Great Marlborough Street, London, W.1) write: The annual circular has been posted to each member of the profession. If it has not been received, a duplicate will be forwarded on request. We shall be grateful if the recipients will return the form by an early post.

RABELAIS AND AERIAL WARFARE.

DR. PERCY ROSE writes: Besides the quotation from Rabelais which Professor Osler utilized at Oxford in describing aerial warfare, as reported in the BRITISH MEDICAL JOURNAL for July 5th, there is another phrase in that author which sounds equally prophetic, though its adaptation was possibly too frivolous for use in a presidential address. *Chimaera bombinans in vacuo* is the phrase in question. Most civilians who have been visited at night by Handley Pages or Gothas would say that Rabelais has in those words correctly anticipated their feelings during the experience.

PROPOSAL TO SCHEDULE ALCOHOL WITH NARCOTIC POISONS.

At the annual conference of the British Temperance League, held at Bradford, the following resolution was carried unanimously on the motion of Professor Sir G. B. Woodhead, K.B.E., M.D., F.R.S.Edin., seconded by Mr. F. W. Richardson, F.L.C., F.R.M.S.:

This conference notes the pronouncement of the scientific committee appointed by the Central Control Board (Liquor Traffic) that the action of alcohol, taken in intoxicating liquors, is that of a narcotic drug not a stimulant.

This position the League has expounded since 1838, and the conference appeals to the medical profession for collective action calling for the scheduling of alcohol with opium, chloral, cocaine, and other narcotics, and its prescription only on the lines of those drugs.

That it (alcohol) is from first to last a narcotic drug.—*Alcohol: Its Action on the Human Organism*, p. 38.

DIAGNOSIS OF TUBERCULOSIS BY THE COMPLEMENT DEVIATION METHOD.

DR. CHUNG YIK WANG desires to make some amendments to the text of the article on this subject published in the JOURNAL of July 5th (p. 7). After explaining that circumstances had prevented him correcting the proof which had been sent to him, he continues as follows:

In Table I of the paper the incubation time given for the fixing of the complement is "quarter of an hour at room temperature, then half an hour at 37° C., followed by a quarter of an hour at room temperature." This incubation period was adopted when the test, on which the results of the cases recorded were based, was conducted at a room temperature below 55° F. Subsequent practices have shown that in the summer where the room temperature is above this point the incubation need be shortened, for here the combination between the antigen and antibody takes place much sooner. I now, therefore, allow for the fixation twenty minutes at 37° C. in the summer and thirty minutes at the same temperature in the winter, the preliminary and subsequent incubation at room temperature being dispensed with altogether in both cases.

In Table II the figures given for the amount of complement to be employed in the test tubes denote the numbers in drops, and not in doses, as erroneously inserted.

The serum to be tested should not be much haemoglobin stained, and preferably be clear, as the presence of a large amount of this pigment has an appreciable effect on the doses of complement absorbed.

Lastly, when mention was made of the mechanical mill for grinding the tubercle bacilli I have inadvertently omitted to make acknowledgement to my friend Dr. J. P. McGowan for use of the mill which he himself devised.

THE following appointments of certifying factory surgeons are vacant: Basingstoke (Hants), Newport (Pembroke).

THE Dunlop Rubber Company are now producing Dunlop grooved tyres with an improved non-skid tread design in which it is sought to obtain the maximum durability by disposing of the bulk of the tread rubber along the line of maximum wear. This Dunlop 1919 grooved pattern will be supplied to all future orders for grooved tyres as rapidly as stocks become available.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
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All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *posto restante* letters addressed either in initials or numbers.

A Lecture ON THE SYMPTOMS, CAUSES, AND PREVENTION OF ANOXAEMIA

(INSUFFICIENT SUPPLY OF OXYGEN TO THE TISSUES),
AND THE VALUE OF OXYGEN IN ITS TREATMENT.*

BY

J. S. HALDANE, M.D., F.R.S.

In this lecture I propose to review briefly what is known with regard to the physiology of anoxaemia, and the means by which it may be prevented. Our knowledge on this subject is as yet imperfect, but has quite recently developed very rapidly; and the development, as I shall try to show, has the closest bearing on a number of everyday problems in practical medicine.

DEFINITION.

Anoxaemia may be defined as a condition in which the rate of supply of oxygen to the tissues by the blood in the systemic capillaries is insufficient for the normal carrying on of life. Its existence is shown by the abnormal symptoms produced, and by the fact that these symptoms are annulled by increasing the rate at which oxygen is supplied.

Clinically the condition is very common. It is a very dangerous complication in pneumonia and in bronchopneumonia, especially the very fatal pneumonia of influenza. It occurs in bronchitis and in asthma, and is constantly in existence in many chronic cardiac cases and in congenital heart disease. It is the cause also of Cheyne-Stokes breathing.

I need hardly remind you that the place of oxygen in the life of a warm-blooded animal is altogether peculiar, since the body has practically no storage capacity for oxygen, but depends from moment to moment for its supply from the air. If we cut off this supply loss of consciousness is only a matter of seconds, and death of minutes. As Paul Bert was the first to point out, the immediate cause of death is practically always anoxaemia. But death is not the mere stoppage of a machine; it is also total ruin of the supposed machinery. Similarly—and this is a lesson which I wish to emphasize as strongly as I can—partial anoxaemia means not a mere slowing down of life, but progressive and perhaps irreparable damage to living structure.

MAINTENANCE OF NORMAL SUPPLY OF OXYGEN TO THE TISSUES.

To grasp the causes of anoxaemia it is necessary to understand quantitatively the means by which the rate at which oxygen is given off from the blood towards the tissues is normally kept sufficient. As is well known, the available oxygen present in the blood is in two forms. A small part (about 10 per cent. in normal human arterial blood) is present in free solution in the blood. By far the greater part is combined with haemoglobin as an easily dissociated compound, oxyhaemoglobin, which dissociates, and so

yields free oxygen, as the oxygen in free solution is used up. Human arterial blood is almost (about 95 per cent.) saturated with oxygen. The readiness with which oxygen is supplied towards the tissues depends on the partial pressure, or diffusion pressure,† of the oxygen in free solution. Thus it is the oxygen in free solution, and not the total available oxygen in the blood, that is of immediate importance. In proportion as oxygen is taken up from the blood in the systemic capillaries the amount of oxygen in free solution, and consequently its diffusion pressure, tends to fall, but is, under normal conditions, kept from falling too low by oxygen flowing out from the oxyhaemoglobin in the red corpuscles. Fig. 1 (after Christiansen, Douglas, and Haldane) is a curve showing the percentage to which the oxyhaemoglobin in human blood is dissociated with varying partial pressure, or diffusion pressure, of the free oxygen present. The peculiar form of the curve with its evident physiological significance was discovered by Bohr of Copenhagen, while Barcroft and his pupils showed that the peculiarity depends upon the salts present in the red corpuscles.

CAUSES OF ANOXAEMIA.

Anoxaemia, or excessive fall of the diffusion pressure of oxygen in the systemic capillaries, is due to one or more of the following causes:

1. Defective saturation of the arterial blood with oxygen.
2. Slowing of the circulation, so that an excessive proportion of oxygen is used up in the systemic capillaries.
3. Defective proportion of available haemoglobin in the blood.
4. Alteration of the dissociation curve of oxyhaemoglobin, so that it gives off oxygen less readily.

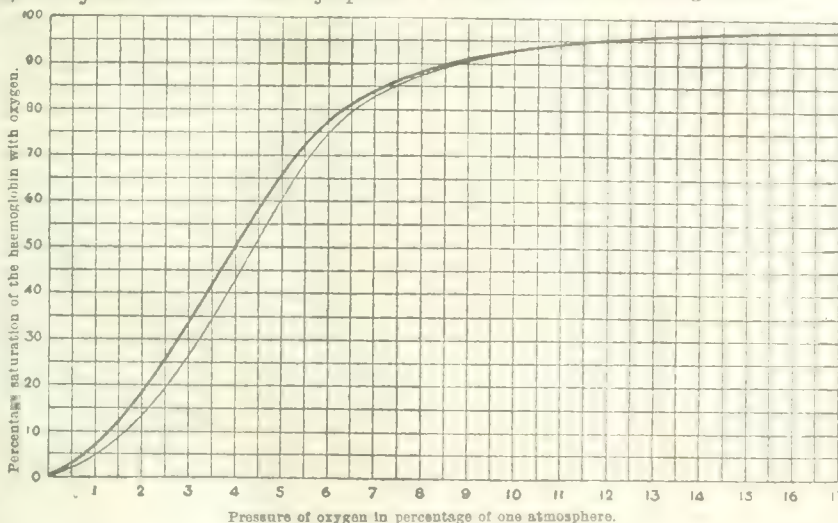
Of these causes the last has hitherto hardly been recognized, but is of great importance, as

will be shown. I shall first discuss briefly these four causes and their mutual relations.

1. Defective Saturation of the Arterial Blood with Oxygen.

This depends on one or other of two circumstances. Of these, one is that the partial pressure of oxygen in the lung alveoli may be insufficient to produce normal saturation of the haemoglobin with oxygen. A glance at Fig. 1 will show that if either the percentage of oxygen in the alveolar air, or the barometric pressure, falls sufficiently, defective saturation of the arterial haemoglobin must result unless active secretion of oxygen inwards by the alveolar epithelium redresses the balance. The other is that, owing to swelling, exudation, or other abnormality in or around the alveolar walls, oxygen cannot diffuse inwards quickly enough to saturate the blood during the limited time which it takes to pass through the alveolar capillaries. When the air supply is completely cut off from alveoli, they of necessity collapse, owing to diffusion of nitrogen out of them; and it appears that in this case, or if they are completely filled by exudation, the pulmonary circulation through them practically ceases, so that they do not pass onwards any considerable proportion of venous blood. For this reason, apparently, the

FIG. 1.—Curves representing the percentage saturation of haemoglobin with oxygen in blood of J. S. H. and C. G. D. with different partial pressures of oxygen at 38° C. Thick line in presence of 40 mm. pressure of CO₂ (the pressure in alveolar air); thin line in the blood passing round the circulation, with a varying pressure of CO₂. (1 per cent. of atmosphere = 7.6 mm. of mercury.)



† In a recent paper on the extension of the gas laws to liquids (*Biochemical Journal*, xii, p. 488, 1918) I have endeavoured to define diffusion pressure and point out its fundamental significance in physiology.

* Delivered at the Physiological Laboratory, Guy's Hospital, June 26th, 1919.

arterial blood may remain of a bright red colour, in spite of extensive consolidation or collapse of the lungs.

2. Slowing of the Circulation.

The effects of anoxaemia due to slowing of the circulation are seen in ordinary fainting from sudden diminution of the heart's action, or from rapid loss of blood. In the latter case the supply of blood to the right side of the heart fails, so that not sufficient blood reaches the left side to maintain the arterial blood pressure. The blood supply to the right side of the heart may also fail from other causes, such as excessive filling of vessels in some part of the body, or rapid loss of blood plasma. The heart itself may also fail from various causes, primary or secondary. In any case the certain result is anoxaemia, with all its urgent dangers.

3. Defective Proportion of Available Haemoglobin.

Anoxaemia due to a defective proportion of available haemoglobin in the blood is seen in extreme cases of primary or secondary "anaemia,"* or in the action of poisons which, like carbon monoxide, nitrites, or arseniuretted hydrogen, combine with, chemically alter, or destroy haemoglobin or red corpuscles. Owing to the defective reserve of combined oxygen in the blood, the partial pressure of free oxygen in the systemic capillaries falls excessively, so that anoxaemia is produced.

4. Alteration of the Dissociation Curve of Oxyhaemoglobin.

It was discovered by Bohr of Copenhagen and his pupils that when the partial pressure of CO_2 in blood is altered the dissociation curve for oxygen is also altered. The general nature of this alteration is shown in Fig. 2, after Bohr. It will be seen that as the partial pressure of CO_2 is diminished the dissociation curve of oxyhaemoglobin moves to the left. In other words, the haemoglobin holds on more tightly to the oxygen. Barcroft has shown that other acids in minute quantities have the same effect as carbonic acid.

It is thus in virtue of its acid properties that carbonic acid alters the properties of haemoglobin. Now we can diminish the normal proportion of carbonic acid in the arterial blood by over-ventilating the lungs, as when breathing is voluntarily forced. It will be seen at once that the effect of this must be to make the haemoglobin in the systemic capillaries hold on more tightly than usual to the oxygen. In this way we can produce anoxaemia with the blood of a normal red colour. Forced breathing produces a train of symptoms which are very similar to those produced by a pure anoxaemia, such as that due to reduced atmospheric pressure. It was also discovered by Hill and Flack that when the forced breathing is performed, not with air but with pure oxygen, these symptoms are greatly diminished. As when pure oxygen is breathed the proportion of free oxygen in the blood is much increased, the inference seems plain, in the light of Bohr's discovery, that by forced breathing we actually produce anoxaemia. This is one of Nature's many ironies, and has a far-reaching significance in connexion with our subject.

THE EFFECT ON THE RESPIRATORY CENTRE.

When the respiratory centre is short of oxygen it instantly responds with increased activity, and the corresponding increased breathing brings more oxygen to the lungs. Now when along with deficiency of oxygen there is excess of CO_2 in the lungs, as is usually the case, the increased breathing brings relief in the normal way. But when there is no excess of CO_2 the increased breathing washes out an abnormal proportion of CO_2 from the blood.

* By anaemia is here meant deficiency in the percentage of haemoglobin in the blood. This is often associated with a great increase in the volume of the blood, as Lorrain Smith showed.

and, owing to this, produces a secondary anoxaemia. The result is that there is little relief to the primary anoxaemia. Hence a simple anoxaemia of this sort cannot be annulled by mere increased breathing. Similarly, if anoxaemia is due to some cause not associated with increased pressure of CO_2 , it cannot be annulled by simply increasing the rate of circulation; for the increased circulation, just like the increased breathing, removes CO_2 as quickly as it brings more oxygen.

These considerations explain why it is that in many cases there is very little increase in either the breathing or the circulation during dangerous anoxaemia. For example, we can understand, from a teleological standpoint, why there should be so little increase in the circulation rate or breathing at very high altitudes or during CO poisoning, and why there should be so little real increase in the lung ventilation in uncomplicated circulatory anoxaemia.

SYMPTOMS PRODUCED BY ANOXAEMIA.

The symptoms of anoxaemia, and the response generally of the body towards it, must now be considered.

When anoxaemia is produced by lowering rapidly either the percentage of oxygen in the inspired air, or the atmospheric pressure, the first definite symptom is usually an increase in the breathing; but unless the anoxaemia is great the breathing soon quiets down again more or less.

If the anoxaemia has been gradually produced and is not excessive, the increase in breathing is not noticeable, though a definite increase can be recognized from the diminished partial pressure of CO_2 in the alveolar air.

Under normal conditions the activity of the respiratory centre, as Priestley and I discovered, is regulated with astounding exactness by the partial pressure of CO_2 in the alveolar air; and evidence has since then gradually accumulated that it is simply in virtue of its acid properties that the carbonic acid carried from the lungs to the respiratory centre acts on that centre.

It is thus variations in the hydrogen-ion concentration of the blood that normally determine the degree of activity of the centre. Moreover, these variations are for the most part so extraordinarily minute as to be undetectable by the existing methods, whether electrometrical or chemical.†

The significance of this latter fact has not hitherto been realized by medical writers, nor the serious sources of error involved in methods used for comparing the hydrogen-ion concentrations in samples of blood of varying composition. As a result, there is at present a chaos of confused opinions which I cannot stop here to criticize. It is clear, nevertheless, that the hydrogen-ion concentration of the blood is regulated with almost incredible delicacy, and that the respiratory centre does the comparatively rough and immediate work necessitated by rapid variations in CO_2 production within the body, while the kidneys, liver, and probably other parts, do the finer but far slower work.

When want of oxygen comes in as an additional stimulus to the respiratory centre, the result is that if no excess of CO_2 accompanies the want of oxygen, more CO_2 than usual is washed out of the arterial blood. Hence the hydrogen-ion stimulus to the centre becomes latent, and a state of "alkalosis" is produced in the blood. The action of the centre, therefore, quiets down again as soon as time has been given for washing down to a lower level the relatively large quantity of CO_2 contained in the blood and body fluids; and the net final result in increasing the breathing is comparatively small, as Poulton and I showed in 1908. Moreover, the anoxaemia is, for the reasons already given, not much relieved, and certain amounts of both anoxaemia and alkalosis remain.

† Campbell, Douglas, Haldane, and Hobson, *Journ. of Physiol.*, xlv, p. 316, 1914.

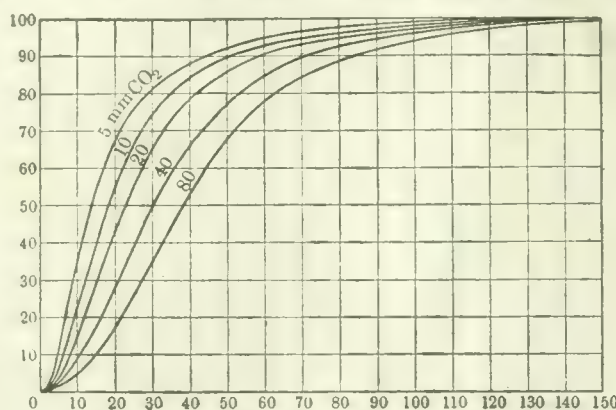


FIG. 2.—Curves representing the percentage saturation of haemoglobin with oxygen at different partial pressures of oxygen and CO_2 . Dog's blood at 38°C . Ordinates = percentage saturation with oxygen; abscissae = partial pressures of oxygen in millimetres of mercury.

"ALKALOSIS."

For the existence of the anoxaemia we have other evidence, to which I shall refer presently; but what direct evidence have we for the alkalosis? Clear physiological evidence has been furnished in the course of a quite recent investigation by Dr. Kellas, Dr. Kennaway, and myself (at present in course of publication) on the effects of very low atmospheric pressure in the steel chamber at the Lister Institute. Dr. Kennaway's analyses of the urine showed that the excretion of acid at once falls to a very low figure at the low atmospheric pressure, while the excretion of ammonia diminishes also, as Hasselbalch and Lindhard had, indeed, already found. These diminutions indicate that the blood is abnormally alkaline during the anoxaemia, and that the kidneys and liver are doing their best to redress the balance, just as they would under normal conditions. If the blood is the least bit too alkaline the kidneys excrete alkali; if it is the least bit too acid they excrete acid. Moreover, if the blood is the least bit too acid the liver produces ammonia instead of urea. Another reaction to too great acidity is that the breathing is increased, which washes out carbonic acid.

In this connexion I have to confess to joint responsibility for originating an erroneous interpretation. On first noticing in 1908 that, after experiments at low pressures in the steel chamber, the alveolar CO_2 pressure remained low for a time after the subject had returned to normal atmospheric pressure Boycott and I drew the not unnatural conclusion that owing to the anoxaemia lactic acid had been produced in the body, and remained in the blood for some time after the anoxaemia had ceased, and thus helped to stimulate the respiratory centre by producing an acidosis. Douglas and I had already found that after any severe muscular over-exertion there is a similar effect, which we attributed to lactic acid produced in the muscles during the over-exertion, the oxygen supply to them by the blood being totally insufficient to balance the enormously increased oxygen requirements. This interpretation was afterwards verified at Guy's Hospital by Ryffel, who made use of his now well known and very beautiful method for estimating lactic acid. But the acidosis of muscular over-work passed off much more quickly than that apparently produced by a pretty long exposure to moderate anoxaemia. The lactic acid was apparently oxidized rapidly, while the apparent acidosis of ordinary anoxaemia was very persistent.

In other respects also the lactic acid theory was unsatisfactory. In the report on the Pike's Peak expedition of 1911 we therefore put forward the conclusion that the acidosis of moderate anoxaemia is a compensatory phenomenon which tends to relieve the anoxaemia by producing increase of the breathing, and is due to a special response of the kidneys and liver, which, as already mentioned, normally regulate the alkalinity of the blood. Meanwhile, Ryffel found that no lactic acid to speak of was present in the blood or urine during exposures to moderate anoxaemia in a steel chamber, or even on the summit of Monte Rosa.

The hypothesis of a special adaptive reaction appears now to be quite unnecessary. The kidneys and liver are apparently reacting during anoxaemia in their normal manner to an alkalosis; and this alkalosis is produced by the increased breathing due to the anoxaemia. The apparent acidosis which develops during anoxaemia is thus not an acidosis in the sense of a shifting to the acid side of the normal physiological balance, but the partial compensation of an alkalosis; and this compensation, as it slowly progresses, makes it possible for the breathing to respond more and more fully to the stimulus ultimately due to anoxaemia, without the compensating disadvantages produced by alkalosis in the manner already described. From the same point of view we can now understand much better why CO_2 acts so effectively in staving off anoxaemia. This effect is not merely due to increase of the breathing. It is seen strikingly, for instance, in CO poisoning under conditions where mere increase of the breathing could give no relief to the anoxaemia.

TREATMENT OF THE (SUPPOSED) ACIDOSIS OF
ANOXAEMIA.

At this point I should like to say that it seems to me a gross mistake to treat the supposed acidosis of anoxaemia

due to gas poisoning, "shock," and other conditions by the administration of alkalis. The body is calling for both oxygen and acid. I should also like to enter my protest against the unintelligible physical chemistry and physiology of the common assumption that because the "alkaline reserve" of the blood is found to be diminished an acidosis is necessarily present.* The greater the anoxaemia, the greater is the permanent increase of breathing, and the greater also must be the alkalosis produced. At very low atmospheric pressures, for instance, the permanent increase in lung ventilation is quite noticeable subjectively.

"PERIODIC" BREATHING.

I must now refer to another respiratory phenomenon shown by many, but not all, persons as a response to anoxaemia. The breathing becomes, or is very apt to become, periodic, as in ordinary clinical Cheyne-Stokes breathing. A relation between Cheyne-Stokes breathing and anoxaemia was first discovered in the wards of Guy's Hospital by Pembrey and Allen in 1905.† They showed that Cheyne-Stokes breathing could be abolished by giving oxygen, as well as by adding CO_2 to the inspired air, or diminishing its oxygen percentage. Douglas and I then found that periodic breathing is easily produced in normal persons after forced breathing or in other ways. We also showed that its production depends upon the fact that when want of oxygen acts on the breathing, the action and cessation of the stimulus occur much more sharply than when CO_2 is the stimulus. Thus the respiratory governor becomes too sensitive, just like the governor of an engine when there is no fly-wheel or an insufficient load, and begins to "hunt," the oxygen supply to the centre becoming, when the anoxaemia is not too considerable, alternately so small as to cause urgent breathing, and so great as, in the absence of the CO_2 which has been washed out, to produce apnoea.

Periodic breathing is thus always a symptom of anoxaemia, and is most easily produced by moderate anoxaemia, as at a fairly high altitude. When the anoxaemia is great the breathing becomes regular again, since even during the hyperpnoea the breathing cannot relieve anoxaemia. It is also easy to see why CO_2 stops the periodicity. The reason why the periods tend to be shorter in healthy persons than in ordinary clinical Cheyne-Stokes breathing will appear later. We can understand why want of oxygen should act far more promptly than the increase of hydrogen-ion concentration through which CO_2 acts on the centre. The blood and body as a whole are full of "buffer substances" which make changes of hydrogen-ion concentration a comparatively slow matter; but for changes of oxygen concentration there are no corresponding buffer substances between the blood and the tissues. In this connexion I should like to make another recantation—of the suggestion, namely, that want of oxygen acts by causing liberation of lactic acid within the living substance of the respiratory centre and thereby producing a hydrogen-ion stimulus.

RESPONSE OF THE CIRCULATION TO ANOXAEMIA.

The response of the circulation to anoxaemia appears to be on the whole similar to the response of respiration; but we know so little as yet of the physiology, as distinguished from the physics, of the circulation, that I can say very little definitely on the subject.

When anoxaemia is rapidly produced there is at first a marked increase of pulse rate and some increase of blood pressure; but, as in the case of respiration, this increase soon moderates, though the pulse rate remains above normal, and the more the greater the anoxaemia. The causes acting on the circulation seem to be, in the main, similar to those acting on the respiration, though they are less easily accessible to accurate observation and measurement.

The colour of the lips, tongue, and face gives us some indication of the degree of anoxaemia. If anoxaemia is produced rapidly, or produced in such a way that CO_2 is not removed in excess from the blood, there is a blue flush of the lips and face—the typical "blue" cyanosis. If, on the other hand, the anoxaemia is produced gradually and in such a way that CO_2 is removed in excess from the

* Some very important experiments published a year ago by Vandell Henderson and Haggard illustrate in a striking manner the fallacy of this assumption, as I recently pointed out in a short article on acidosis in *Nature*, May, 1st, 1919.

† *Journ. of Physiol.*, xxxii, Proc. Physiol. Soc. p. xvi. 1905.

blood the cyanosis is usually less evident, and of a duller colour, tending if the anoxaemia is very extreme to a leaden colour. Nevertheless, among different individuals there is marked variation in the relation of the colour to the general symptoms. In myself, for instance, the general symptoms are very marked by the time that the lips show distinct blueness, whereas in some other persons there is more blueness with only very slight general symptoms. In others, again, both the blueness and the general symptoms are more marked than in myself when the same air is breathed in a steel chamber at a low pressure. The shifting of the dissociation curve of oxyhaemoglobin will explain the fact that a man may be suffering considerably from anoxaemia although his lips are of a fairly good colour. To explain the differences in different individuals it would probably be necessary to know more than we yet do about how the circulation regulates itself in different persons in response to anoxaemia and alkalosis.

EFFECTS OF ANOXAEMIA ON THE NERVOUS SYSTEM.

The effects of anoxaemia on the nervous system are characteristic. A rapidly produced anoxaemia causes, of course, temporary disturbance; but when the onset is gradual there is little or no discomfort, and for this reason anoxaemia is an insidious and therefore dangerous condition, as is well seen in CO poisoning or in ascents to very high altitudes in aeroplanes or balloons. The senses become dulled without persons being aware of it, and if the anoxaemia is suddenly relieved by administration of oxygen or other means the correspondingly sudden increase in powers of vision and hearing is an intense surprise. Powers of memory are greatly affected, and are finally almost annulled, so that persons who have never lost consciousness can nevertheless remember nothing of what has happened. Powers of sane judgement are much impaired, and anoxaemic persons become subject to fixed ideas which afterwards appear to them quite irrational, and to unrestrained emotional outbursts. I could occupy a whole lecture with anecdotes of the vagaries of my own friends and acquaintances, and myself, under the influence of anoxaemia.

ACCLIMATIZATION TO ANOXAEMIA.

When a cause of anoxaemia is persistent there can be only one or other of two terminations. Either the person becomes adapted or acclimatized to a greater or less extent, or he becomes progressively worse. Let us first glance briefly at acclimatization. To one side of this I have in reality already alluded. The alkalosis of anoxaemia is gradually dealt with by the kidneys and liver; but several days are usually needed for this, and quite clearly the process can never result in a complete restoration to the previous normal; otherwise there would be no stimulus to the maintenance of the new condition. When, however, the alkalosis has been sufficiently diminished it has also become possible so to increase the breathing that the oxygen saturation of the blood, otherwise imperfect, can be largely increased without compensating ill effects from shifting of the dissociation curve of oxyhaemoglobin. In a precisely similar manner the alkalosis and correspondingly increased anoxaemia would be more or less compensated in a case where the anoxaemia was due to a lasting deficiency in the circulation, or to a rapid diminution in the proportion of available haemoglobin, though in the former case the blood in the systemic capillaries would remain abnormally blue. There would seem here to be an indication for the administration of acid in suitable form and amount, with a view to hastening the adaptation.

The second side of adaptation consists in an increase in the facility with which the alveolar epithelium responds to the stimuli which originate in anoxaemia of the tissues. It responds by active secretion of oxygen inwards. I know that many physiologists still remain sceptical as to oxygen secretion in the lungs, and I shall not attempt in this lecture to go into the subject fully. It seems to me, however, that the direct quantitative evidence in favour of oxygen secretion is absolutely unshaken, while the indirect evidence is now practically overwhelming. But I hope to have another opportunity before long of examining this old controversy in the light of the new evidence.

The third side of adaptation is an increase in the percentage of haemoglobin. This is well seen at high

altitudes and in chronic—particularly congenital—heart disorder. With the increased charge of combined oxygen in the blood the rate of fall in the diffusion pressure of free oxygen in the capillaries is, of course, diminished, and in this way anoxaemia is mitigated. Whether the tissues of a warm-blooded animal can adapt themselves to live with a lower diffusion pressure of oxygen than usual is an interesting question on which we have as yet no clear evidence.

The adaptive responses to anoxaemia have hitherto been studied only in connexion with acclimatization to high altitudes, but I am convinced that they are of great significance in practical medicine. It is particularly important to realize that they require time, and that measures which afford a patient the requisite time may save his life.

IMPERFECT ADJUSTMENT: MOUNTAIN SICKNESS.

Let us now look at the other mode of termination. Whenever a comparatively slight anoxaemia, such as that produced when a person not in good physical training goes to a height of about 10,000 ft., or stays in air containing more than about 0.02 per cent. of CO, is continued for several hours, the common result is nausea, headache, and general depression. This "mountain sickness" may only come on after the anoxaemia has ceased, but is unmistakable evidence of temporary damage, however slight, affecting the nervous system. Different persons are susceptible in very different degrees to mountain sickness. The usual ending of mountain sickness is that acclimatization gets the upper hand and complete recovery ensues; but sometimes the fight is long, or even dangerous.

FAILURE OF ADJUSTMENT: PROGRESSIVE DAMAGE TO TISSUES.

When the anoxaemia is more severe, the evidence of progressive damage becomes more and more marked, so that even when the cause of anoxaemia is completely removed grave symptoms may remain. Thus, in severe CO poisoning, when the patient has remained unconscious for several hours, it is always a matter of doubt whether recovery will take place, or how many days, weeks, or months it will require. The CO diffuses off comparatively quickly through the lungs as soon as the patient is in pure air; within two or three hours very little CO is left in the blood. But the damage has been done—damage in the central nervous system, and very probably also in the heart and various other organs. It is often only by the most careful nursing and attention to every symptom indicating nervous and other forms of breakdown in different directions that such a patient can be saved.

IMPORTANCE OF ACTIVE TREATMENT.

I shall not attempt to describe or analyse in detail the general picture of the progressive damage from serious and prolonged anoxaemia; but I wish to emphasize very strongly the existence of this damage, and the consequent need for cutting anoxaemia short or preventing it if this is at all possible. Perhaps no cases have presented a more impressive picture of the dangers of anoxaemia and the advantages of preventing it than the cases of poisoning by lung-irritant gas during the war.

THE BREAKDOWN OF THE RESPIRATORY CENTRE.

To one all-important aspect of the general breakdown during anoxaemia I should like to direct special attention. This is the breakdown of the respiratory centre. A forthcoming paper by Davis, Priestley, and myself deals fully with this subject, and it was also partially dealt with by Meakins, Priestley, and myself in a paper which has just appeared in the *Journal of Physiology*. The whole of this work was undertaken under the auspices of the Medical Research Committee. The result on which we lay emphasis is that when anoxaemia exists the centre very readily shows signs of the same sort of exhaustion as is caused by excessive resistance to breathing. That is to say, the breathing becomes progressively shallower and more frequent, just as happens so commonly in a dying man.

Now it has been generally assumed—by myself among others—that so long as a sufficient total quantity of air reaches the lung alveoli it does not much matter in itself whether the breathing is deep and slow, or shallow and frequent. A study of cases of chronic neurasthenia, and

particularly those caused by irritant gas poisoning, led Meakins, Priestley, and myself, however, to note that not only were there symptoms of anoxaemia in many of them, but that the breathing, particularly on exertion, was abnormally frequent and shallow. We then investigated the effects of shallow breathing in normal persons, with the help of the apparatus described and figured by Meakins, Priestley, and myself, in the *Journal of Physiology*, 1919, lii, p. 433. The result was that we could easily produce periodic breathing and other symptoms of anoxaemia by so limiting the depth of the breaths that rapid shallow breathing had to be substituted for normal breathing. Moreover, the periodic breathing was in comparatively long and stately periods, just like ordinary clinical Cheyne-Stokes breathing. Yet when samples of alveolar air were taken in the ordinary way the oxygen percentage was somewhat above normal.

THE FAN-LIKE EXPANSION OF THE LUNGS.

To cut a long story short, we were forced to the conclusion that the key to the anoxaemia was furnished by the fact, clearly formulated by Professor Arthur Keith ten years ago,* that in the living body the lungs do not expand evenly and simultaneously at all parts, but open out part by part, somewhat similarly to the opening of the leaves of a lady's fan. When the breathing is shallow only certain of the leaves open, so that only certain parts of the lungs are properly ventilated, though in these parts the ventilation is quite abnormally increased owing to the increased frequency of the breathing. Now this increased ventilation must wash out from the blood a correspondingly increased proportion of CO_2 , but cannot put in any appreciably increased quantity of oxygen, since the haemoglobin would be already almost saturated with oxygen by normal breathing. On the other hand, in the parts of the lungs where the air is left more or less stagnant there will not be nearly enough oxygen to saturate the haemoglobin. The net result will be that the mixed arterial blood will be deficient in oxygen, but will not contain more than the normal proportion of CO_2 . If the proportion of CO_2 were abnormally high the breathing would immediately increase till the balance was at least redressed; and actually the balance will be more than redressed, since the anoxaemia produced by the deficiency in oxygen will itself stimulate the breathing to some extent.

CLINICAL SIGNIFICANCE OF VARIATIONS IN RATE AND DEPTH OF BREATHING.

This discovery has of course thrown an entirely new light in all directions on the physiology and pathology of breathing, and particularly on the clinical significance of variations in the rate and depth of breathing. It has also shown that administration of air enriched with oxygen, or even simply with CO_2 , as recommended by Yandell Henderson, may be of essential service in a great variety of clinical conditions accompanied either by rapid and shallow breathing, or by breathing in which, owing to uneven resistances in the bronchi or other causes, the expansion of the lungs is uneven. For, clearly, it is only necessary to increase the oxygen percentage in the air, or the depth of breathing, in order to get sufficient oxygen into the badly ventilated alveoli; and we actually found that only a small addition of oxygen to the inspired air was needed in order to abolish the symptoms of anoxaemia in our experiments.

A VICIOUS RESPIRATORY CIRCLE.

To return to the exhausted respiratory centre in cases of anoxaemia: it is evident that when the breathing becomes shallow from this exhaustion a dangerous vicious circle tends to be produced, since the anoxaemia makes the breathing shallow though rapid, and the shallow breathing increases the anoxaemia. This is a vicious circle which leads straight towards death, and it now seems probable that one of the most common immediate causes of death is failure of the respiratory centre rather than of the heart. The heart must, of course, always fail in the end if the respiratory centre has failed; but in the case of the heart itself there does not seem to be so great

and immediate a danger from a vicious circle.† Ordinary clinical Cheyne-Stokes breathing, with its stately rhythm owing to the shallow breathing, is usually a sign of advancing failure of the respiratory centre.

OTHER CAUSES OF PARTIAL FAILURE OF THE RESPIRATORY CENTRE.

Partial failure of the respiratory centre, with consequent secondary anoxaemia, has of course many other causes besides primary anoxaemia. Among these causes are toxic substances circulating in the blood, anaesthetics and other poisons, or the various causes of which the effects on the nervous system are classified as fatigue, shock, or neurasthenia. But the vicious circle of anoxaemia is always there to some extent, and may easily become dangerous. In breaking or preventing this vicious circle there is evidently a very wide field for the administration of oxygen.

IMPORTANCE OF BREAKING THE VICIOUS CIRCLE EARLY.

I wish also to emphasize the fact that the sooner the vicious circle is broken the more striking will be the immediate effects. With long-continued anoxaemia a patient's condition tends to become hopeless. One of the most important effects of prolonged or extreme anoxaemia is a temporary partial failure of the respiratory centre, so that oxygen or even artificial respiration may be required for many hours.

With the help of the apparatus already referred to we discovered the fact that restriction of the depth of breathing produces anoxaemia far more readily in the recumbent than the upright position. This explains the existence of the orthopnoea which is so prominent a symptom in many cardiac and respiratory cases. A patient with shallow breathing due to impaired vigour of the respiratory centre cannot lie down because the anoxaemia is at once increased by this, and he must therefore sit up in bed if he is breathing ordinary air.

THE VALUE OF OXYGEN INHALATION.

The effects produced by temporary oxygen administration in some cases have been known for long. The observations on this subject by Pembrey in the wards of Guy's Hospital were particularly striking. As it is now evident, however, that oxygen administration has a far wider and more important field of application in practical medicine than was previously suspected I will refer shortly to methods of administering it. My own attention was directed to the subject by the practical difficulties, with existing methods, of giving oxygen continuously in cases of irritant gas poisoning. It was evidently necessary to cut down all waste, and simplify the mode of administration as far as possible. As regards waste, there seemed to be no necessity for the patient breathing pure oxygen; and in any case the continuous inhalation of pure oxygen was excluded, owing to the fact that even 80 per cent. oxygen was found by Lorrain Smith to produce fatal pneumonia within three or four days. It seemed evident that only as much oxygen ought to be added to the inspired air as would suffice to relieve the anoxaemia. It was also evident that if the oxygen was delivered to the patient in a continuous stream half would be wasted, as it would come to him during expiration.

METHOD OF ADMINISTERING OXYGEN.

I therefore devised an apparatus so arranged that by a simple device the patient inspired through a face-piece the whole of the added oxygen, without waste during expiration, while the proportion of oxygen could easily be cut down or increased, according as was needful. The original form of this apparatus was described in the *BRITISH MEDICAL JOURNAL*, February 10th, 1917, p. 181, after it had already been supplied extensively to the army in France. Its use there for gas cases was initiated, and the best mode of managing it carefully investigated, by Lieut.-Colonel C. G. Douglas of Oxford. Other well known medical officers have also made very valuable

† Owing to the coincidence of anoxaemia with too high a venous pressure and consequent over-distension of the right side of the heart, the heart itself may enter a vicious circle. Even if the anoxaemia is not relieved this vicious circle can often be broken by free bleeding, the beneficial effects of which in many cases of irritant-gas poisoning were first pointed out by Irvine and myself.

* Keith, *Further Advances in Physiology*, p. 182, 1903.

observations on the effects of oxygen inhalation.* The results, particularly in gas cases, were very striking; but unfortunately at that time, as will be seen from my own paper of 1917, the symptoms and significance of a failing respiratory centre were still unknown, so that the wide applications of oxygen in a great variety of medical and surgical cases were not realized. The apparatus was afterwards simplified, with the immediate object of making it both easy to handle and available for front-line and stretcher work, including treatment of "shock" cases. The apparatus in its latest form can now be obtained from the makers, Messrs. Siebe, Gorman and Co., of London.

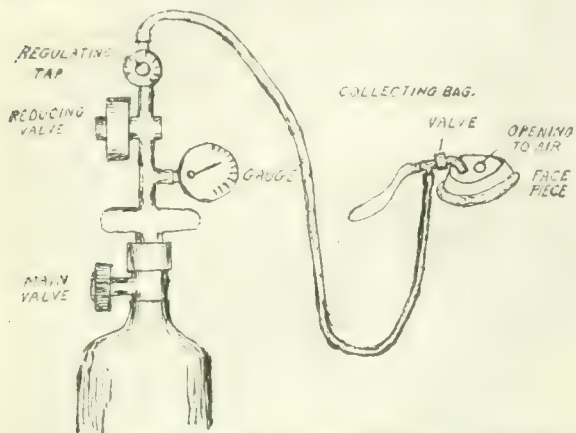


FIG. 3 shows the arrangement of this apparatus. It consists of (1) a pressure gauge showing how much oxygen is in the cylinder; (2) a reducing valve which reduces the pressure to a small amount which remains constant till the cylinder is exhausted; (3) a graduated tap indicating the flow of oxygen in litres per minute; (4) light thick-walled rubber tubing conveying the oxygen to the patient; (5) a small flexible collecting-bag connected with the face-piece through a non-return mica valve which prevents expired air from entering the bag; (6) a face-piece provided with elastic straps and a rubber pneumatic cushion which can be taken off for disinfection. The patient can inspire and expire freely through an opening in which there is a rubber flap to cause a very slight resistance. During expiration the oxygen collects in the bag, and is sucked into the face-piece at the beginning of inspiration. From the movements of the bag it can be seen at any moment whether the patient is receiving the oxygen. To put the apparatus in action the main valve is opened freely and the tap adjusted to give 2 litres a minute, or whatever greater or less amount suffices. With a delivery of 2 litres a minute a 40-foot cylinder would last nearly ten hours.

To make oxygen really available for ordinary medical work it is essential not only to prevent waste of oxygen but also to cut down as far as possible the weight of oxygen cylinders and the difficulties with stiff or leaky valves and other defects. A nurse must be able to handle the whole apparatus with ease and administer oxygen at once at any hour of the day or night. The question of cutting down the weight of cylinders to the minimum which is perfectly safe is now being investigated and reported on by a committee of the Department for Scientific and Industrial Research. The old regulations necessitating very heavy cylinders appear to be out of date in view of the great advances in steel manufacture. The Air Force succeeded in getting this problem practically solved for war purposes, so that an aeroplane could easily carry a large supply of oxygen; and the light cylinders adopted by the Army Medical Department for stretcher work are of this pattern. The improved patterns of valves and other fittings simplify greatly the handling of the apparatus.

TWO TYPES OF OXYGEN APPARATUS.

For both hospitals and ordinary medical practice it seems to me that two types of oxygen apparatus will be required—one for continuous administration with cylinders as large as a nurse can manage. The other will be a very light apparatus with no mask, to be used in sudden emergencies by simply letting the oxygen blow into the patient's mouth. From the little I have had the chance of seeing I feel pretty certain that failure of the respiratory centre often occurs with dramatic suddenness, usually in the night, and requires to be dealt with by administering

oxygen without the slightest delay. We now know from experiment how quickly the vicious circle of respiratory failure may produce its effect in a normal healthy person. In a person whose respiratory centre is already weakened by the results of infection or other causes the failure may be far more rapid, and the recovery on giving oxygen equally rapid.

OXYGEN CHAMBERS.

An entirely different method of continuous oxygen administration was initiated last year at Cambridge by Mr. Barcroft and Dr. Hunt of Guy's Hospital, and has also been used recently at Stoke-on-Trent. The patient, together with his bed, is kept in an airtight chamber, the air of which is enriched to any desired extent with oxygen; this enriched air is purified and dried continuously by pumping it through suitable absorption vessels. The great advantage of this plan is that the patient is quite unhampered by a face-piece or tube, and can, if necessary, move about freely within the chamber. In this connexion it must also be remembered that in many cases the restorative effects of oxygen will only be very gradual. On the other hand the cost is heavy, and danger from fire has to be most carefully guarded against, for clothes, etc., will burn fiercely in the enriched air. It is also difficult to alter rapidly the percentage of oxygen according to the requirements of the patient.

I hope that chambers of this kind, with, perhaps, simplifications in detail, will be tried soon in a variety of cases. The results hitherto obtained in chronic gas cases, asthma, etc., seem to be most promising; but a great deal of further observation is evidently needed, and has, of course, been interrupted at Cambridge owing to closure of the Military Hospital there. I venture to hope that the whole matter will be actively taken up and carried further at Guy's Hospital, where Dr. Hunt's knowledge and experience would be invaluable. Along with the trials of oxygen there will, I hope, be trials of CO₂.

SOME OTHER USES OF OXYGEN.

On many points connected with the uses of oxygen I have been unable to touch—for instance, the use of oxygen with anaesthetics and for preventing or mitigating "shock" after operations. I have endeavoured, however, to place before you the main known physiological facts as to oxygen administration.

Although imperfect oxygenation of the arterial blood is a far more frequent primary or secondary cause of anoxaemia than was formerly suspected, there are, of course, other causes, as already mentioned. One of these is failure in the supply of blood to the right side of the heart, with consequent fall in arterial blood pressure. To what extent this condition may be secondary to defective oxygenation in the lungs is not as yet clear. In any case the failure in blood supply can be effectively combated by intravenous injection of gum saline solution, as recommended by Bayliss.† The experimental evidence which he has brought forward on this question seems to me conclusive.

Another of the causes that has been mentioned is a defective proportion of available haemoglobin in the blood. To combat this condition the most effective remedy may often be transfusion of blood, carried out with the necessary precautions; but another powerful remedy is the administration of pure, or nearly pure, oxygen. The object of giving the oxygen is to increase very greatly the amount of oxygen in simple physical solution in the arterial blood. As I showed many years ago, an animal can by this means be tided over the emergency while its haemoglobin is for the time thrown out of action by carbon monoxide or by one of the methaemoglobin-forming poisons; and anaemia from loss of blood could doubtless also be combated temporarily in a similar manner till adaptation had time to occur.

CONCLUSION.

In conclusion, let me say that it is cure and not mere temporary palliation of symptoms that should always be kept in view in connexion with the treatment of anoxaemia. The object of breaking the vicious circle of anoxaemia is to give the body time for adaptation or recovery.

Both the physicist and the physiologist or physician deal with "Nature" (*φύσις*). But it is with Nature as

* See *The Administration of Oxygen in Irritant Gas Poisoning*. Report No. X of the Chemical Warfare Committee. Issued by the Medical Research Committee, 1918. With full illustrations of apparatus and directions for use.

† Bayliss, *Intravenous Injection in Wound Shock*. 1918.

Democritus and Empedocles saw her that the physicist deals, while the physiologist and physician deal, or ought to deal, with that truer and deeper vision of her as she appeared to Hippocrates. On the practical side the physicist aims at guiding and controlling Nature, whereas the physician aims at helping her. The object of this lecture will have been attained if I have succeeded in indicating how we may help in one of her tight places that ever more marvellous "Nature" which the keen intellectual vision of Hippocrates first began to reveal definitely to the world.

WAR LESSONS AS APPLIED TO CIVIL PRACTICE.*

By ROBERT SANDERSON, M.B., B.Ch.Oxon.,

CAPTAIN R.A.M.C.(T.F.).

PRESIDENT, SUSSEX BRANCH, BRITISH MEDICAL ASSOCIATION.

In the limited time at our disposal I propose to select a few subjects only which seem to me to have some bearing upon practice in civil life, and which suggest some modification of previous principles and methods of treatment.

Wound Treatment.

With regard to wounds, it will suffice to describe all gunshot wounds as potentially septic wounds. Potentially septic wounds are by no means uncommon in civil life also—for instance, abraded, contused, lacerated, incised, or punctured wounds received by workers on the soil, especially made soil containing manure, bicycle and motor accidents, and street accidents generally, where any of the above types of wounds may be contaminated by mud, dust, or dung, and are often complicated by fracture of bone; bites of animals, hunting accidents, and the like—all such wounds are potentially septic, and, in so far as they are potentially septic, they resemble the wounds of war, and should be treated on the same lines. If we do so treat them, our results should be better than under war conditions, because we can get at them soon, whereas during heavy fighting forty-eight hours, or even more, often elapsed before the casualty clearing station was reached by the wounded soldier.

During the four and a quarter years of actual fighting the treatment of wounds was revolutionized, and the results showed a marvellous improvement as time went on. The researches of the pathologists laid the foundation, upon which the surgeons built new methods, and we must briefly trace the more important of these in order that we may apply the lessons to be learnt from them.

In the early part of the war tetanus was alarmingly frequent. A large and constant supply of antitetanic serum was then organized, and for the last three years every wounded man received 750 units of serum at the dressing station and another 750 in seven days' time. As a result tetanus became rare, and such cases as were seen were of the modified or so-called local type. Now and again by some oversight a man did not get his injection—I saw such a case in France. He arrived late at night, three days after being wounded, at the base hospital, and there was no record on his field card of his having had an injection. He was given 1,500 units early the next morning; but acute tetanus began that evening, and ended fatally on the seventh day.

It is perfectly true that tetanus is a rare disease in this country, but when it does occur, it is so dangerous and so often fatal that we should, I think, as a routine practice always give an injection of serum as soon as possible after the infliction of wounds such as I have described above. And it is the duty of the sanitary authority or of the Government to provide us with this serum. This, however, is only a preliminary to the actual treatment of a potentially septic wound.

The facts in connexion with such a wound are these: On the one hand, the tissues have been laid open by some contaminating agent, the wound surfaces have not only been contused, injured, or in part devitalized by that agent, but they have had implanted on them a bacterial infection, whether *Bacillus tetani*, staphylococci, streptococci, gas forming anaerobes, *Bacillus coli*, or what not. On the other hand, there is an exudate from the wound surface, consisting primarily of blood and blood serum.

The bacteria thus implanted require for their growth disorganized albumin, such as is afforded by devitalized

tissues, and also the presence of trypsin, which trypsin is formed by the fermentative action of bacteria. If there has been much devitalized tissue, or if there has been much loss of blood, or shock, or there is general debility and malnutrition, the bacteria multiply rapidly and the wound quickly becomes septic. If, on the other hand, there is no devitalized tissue and the vascular supply is uninjured, it comes to be a direct conflict or trial of strength between the invading bacteria and the natural defences of the body fluids.

The weapons of the invading bacteria are three:

(1) Their proteolytic action or power of disorganizing the body albumin; (2) their power of producing trypsin by their fermentative action; (3) their power of producing toxins.

The natural defences of the body are in the main two:

(1) The antitryptic power of the blood serum; (2) the phagocytic action of the living cells.

So that if the antitryptic action of the blood serum is able to keep pace with and to neutralize the trypsin formed by the bacteria, and the phagocytic action of the body cells is able to destroy them, repair sets in without suppuration—and this, indeed, is what usually takes place in wounds of the face, owing to the free vascularity of the tissues. The defence therefore has the advantage in wounds of the face. If, on the other hand, the trypsin and broken-down albumins increase and leucocytes are killed by the toxins the defence is beaten. There is suppuration and all the local signs of acute sepsis, with unknown dangers ahead in the shape of toxæmia, septicaemia, secondary hæmorrhage, and the like. The vital reaction has failed and the invader has conquered.

To put the case briefly, except in the case of wounds in the face, it may be said to be "a toss up" in potentially septic wounds as to which will win, the invaders or the defence. I submit that the war has taught us how to help the defence so that in the majority of cases it wins, and I further suggest that in civil practice we should adopt the methods which have been so successful in war. To acquiesce in it being "a toss up" is no longer either prudent or justifiable.

The problem, therefore, is how best to aid the defence in the case of a wound which is contaminated, the walls of which are possibly in part devitalized, and which forms, therefore, a very favourable soil for the growth of bacteria.

Since Colonel Sir H. M. W. Gray published his paper on excision of gunshot wounds, in the *Journal of the R.A.M.C.*, vol. xxvi, in 1916, it has been universally acknowledged that excision is the best prophylactic method of avoiding suppuration; it has been recognized, further, that the sooner a wound is excised after the receipt of the injury the more certainly is infection avoided. By excision we remove entirely, or aim at removing entirely, the wound surfaces which are sown with bacteria, as well as all devitalized tissue and shreds which are cut off from their blood supply, leaving a clean wound relatively free from contamination and capable of healthy reaction.

The procedure, in superficial wounds which do not extend beyond the deep fascia, is comparatively simple.

The skin is shaved and swabbed with iodine, or a 5 per cent. solution of picric acid in spirit, and the tissues infiltrated with novocain and adrenalin. The wound itself is then wiped out with a swab soaked in either iodine or the picric acid solution, and dried; the ends of it are clipped up with Lane's or other forceps so as to put the tissues on the stretch, and with a sharp scalpel the wound is excised completely at a distance of one-third to half an inch from the wound surface. Care is taken to prevent the clean new surface from being touched or contaminated by the original wound surface.

In deep wounds total excision may be anatomically impossible, but the skin and more superficial parts can be excised, and injured muscle removed, loose bone fragments picked out, and a careful toilet of the wound made under a general anaesthetic.

If immediate primary suture is not employed—and in the majority of cases this is too risky—the wound is packed with gauze well soaked in flavine; then in forty-eight hours, if the bacteriological findings are favourable, the wound is sutured carefully so as to bring all surfaces into contact and leave no cavities. This is called delayed primary suture.

There are two classes of wounds where primary or immediate suture has been found to be advisable—namely, in wounds of the scalp, and wounds of the knee-joint. In scalp wounds primary suture after excision is employed in order to attain immediate aseptic union, so as to give an aseptic field for any subsequent operation if such should

* Address delivered at annual meeting of Branch, June 26th, 1919.

be necessary owing to fracture or symptoms of compression. In wounds of the knee-joint the wound is excised down to the capsule and sutured, with or without previous flushing of the joint cavity with normal hot saline. In all other wounds, except those of the face, excision and delayed primary suture has been found to be the safest and best course. I submit statistics of 150 consecutive cases of delayed primary suture which were performed in May, June, and July, 1918, at a base hospital in France, which will give you some idea of the proportion of successes to failures, and the bearing of bacteriological findings on results. You will note that suture was employed in eleven cases of compound fracture; and that with one exception they all healed *per primam*. As to the other 139 cases you will see that failure was rare, that the minor bacteriological risks were a few colonies of skin cocci, and that the major risks were streptococci, or massive infections by *Staphylococcus aureus*.

I may say that these cases were the work of several different surgeons, being all the cases of suture from the different surgical wards; and I suggest to you that they afford evidence of the desirability of treating all potentially septic wounds in civil practice, except wounds of the face, by excision and primary or delayed primary suture.

Delayed Primary Suture.

No. of cases, 150.

Superficial, 35.	All healed p.p. Sterile, 19; cultures, 7; no report, 9.	Cultures, <i>Staphylococcus aureus</i> or <i>albus</i> .
Deep, 115—		
(a)	Healed p.p., 97 (complete suture 82; partial suture 15).	
(b)	Failures, 18 (complete failure 13; partial 5).	
Of 82 complete sutures—successes:		
3	Major risks (2 profuse <i>Staph. aureus</i> ; 1 <i>B. coli</i>).	
15	Minor risks (<i>Staph. aureus</i> or <i>albus</i>).	
39	Sterile.	
25	No report.	
Of 15 partial sutures—successes:		
3	Major risks (2 streptococci; 1 profuse <i>Staph. aureus</i>).	
0	Minor risk.	
8	Sterile.	
4	No report.	
Of 13 complete failures:		
4	Major risks (1 streptococcus—amputation of arm; 2 massive <i>Staph. aureus</i> ; 1 multiple mixed infection).	
2	Minor risks.	
3	Sterile.	
4	No report.	
Of 5 partial failures:		
3	Major risks (all abundant <i>Staph. aureus</i>).	
1	Minor risk.	
0	Sterile.	
1	No report.	
Compound fractures sutured, 11:		
Humerus (sterile; p.p.)	...	2
Clavicle (sterile; p.p.)	...	1
Radius (sterile; p.p.)	...	3
Ulna (sterile; p.p.)	...	1
Ulna and radius (few <i>Staph. aureus</i> ; p.p.)	...	1
Tibia and fibula (sterile; p.p.)	...	1
Os calcis (sterile; p.p.)	...	1
Metacarpal (<i>Staph. aureus</i> ; healed with superficial suppuration)...	...	1
		11

I well remember some years ago a case of a young lady whose right shoulder-joint was dislocated by a motor accident, and there was a confused laceration just below the insertion of the deltoid muscle where the arm which she had stretched out as the landaulette fell sideways against the bank became squeezed between the frame of the door and the ground. The wound extended through the deep fascia although its entrance was small, and when I first saw her three days afterwards the wound was very septic. High fever, abscess, tracking pus involving the shoulder-joint, profuse secondary haemorrhage, amputation, septicæmia, and death, all followed with tragic and uncontrolled rapidity.

I am convinced that with the knowledge we now possess this life would have been saved by immediate excision of the wound, and delayed primary suture.

Antiseptics.

The war has also revolutionized our ideas about antiseptics. When a wound is really septic, and the colonies of bacteria have penetrated deeply into the tissues of the wound, no antiseptic quā antiseptio is of any avail. But when a wound is fresh, and has been excised wholly or in part, and is awaiting early suture, a suitable antiseptic is of value. For in this case we may imagine that there are

a few bacteria scattered superficially over the wound surface. The question is what is a suitable antiseptic?

The ideal antiseptic should have certain qualities.

1. It should be a powerful germicide in the presence of blood serum.
2. It should be non-poisonous.
3. It should not hinder or destroy the antitryptic power of the blood serum.
4. It should not injure the phagocytes or hinder phagocytosis.

The antiseptics upon which we relied in pre-war times have been found to fail notably in one or other of these qualities—for example, carbolic acid inhibits leucocytosis in a lower concentration than that required to kill organisms. Again, mercuric chloride is a very powerful germicide *in vitro*, but it loses much of its power in the presence of serum, and it not only inhibits leucocytosis but is poisonous.

Browning and his fellow workers investigated the relative values of various antiseptics, old and new, and deduced what they called a therapeutic coefficient for each, which they arrived at by a certain ratio. The ratio being—

Concentration which reduces phagocytosis by 50 per cent.
Lethal concentration in serum.

Take, for instance, carbolic acid against the coccal and *Bacillus coli* groups respectively.

	Cocci.		<i>B. coli</i> .
Carbolic acid ...	1:500 = 0.5	...	1:500 = 1
	1:250		1:500

So that the therapeutic coefficient of carbolic acid is said to be 0.5 and 1 respectively in regard to these two groups. Similarly the coefficients of mercury perchloride and the hypochlorites are also a little under or a little over unity. Brilliant green has a coefficient of 15 against the coccal group but drops to 1.7 against the *Bacillus coli*. Flavine, on the other hand, has a large therapeutic coefficient of 400 against the coccal group and 200 against the *Bacillus coli* group.

We see, therefore, that flavine is by far the most efficient antiseptic which we possess—its peculiar quality being that it is very powerful in high dilution against both the coccal and *B. coli* group, and that its power is greatly enhanced in the presence of serum. The hypochlorites, eusol, Dakin's solution, and the like, have a low therapeutic coefficient, but they possess the useful quality of destroying trypsin. They are, however, soon decomposed by contact with the wound secretions and continuous renewal by some irrigation method is necessary for their efficient action. This, therefore, rather limits their usefulness, except in hospitals. A solution of flavine in normal or hypertonic saline 1 in 1,000 or 1 in 2,000 is by far the safest and best antiseptic with which to dress our freshly excised wound preparatory to suturing it. Gauze saturated in this solution is lightly packed into the wound and kept moist by adding flavine to it from time to time. In the case of a hopelessly septic wound antiseptics are of little or no avail. Besides the well known boracic fomentation, which encourages vascularity, I would draw attention to two dressings of value—namely, the salt pack, and the bismuth, iodoform and paraffin paste. The former has been shown by Sir Almroth Wright to produce a copious flow of lymph, and so facilitates the reaction of the tissues against the invading bacteria. The latter, Professor Rutherford Morison's device, acts we know not how, but it stimulates the tissues to form granulations rapidly. The wound should be dried out with methylated spirit before the paste is rubbed in. This dressing does not need daily renewal; it is merely necessary to add more gauze soaked in spirit if the discharges come through the dressing.

Transfusion.

Transfusion for haemorrhage and shock is another subject for our consideration. There can be no doubt that the transfusion of human blood is the ideal method—but this necessitates the presence of a suitable donor or at any rate a store of citrated blood; it is therefore not suitable for ordinary practice.

The effect of the usual transfusion of normal saline has been found to be transitory in cases of haemorrhage and shock, owing to the rapidity with which the fluid transudes through the capillary walls by diffusion into the perivascular tissues. But if the saline is thickened by adding gum arabic in the proportion of 0.9 per cent., the tendency to transude is greatly diminished, and the beneficial effects of the transfusion are much more lasting. So far as my experience goes, the addition of the gum is a

great advance in the treatment of all cases of haemorrhage combined with shock. The solution can be easily made and sterilized and stored in suitable glass bottles.

The Value of Team Work.

The last lesson from the war to which I should like to draw attention is the extreme value of what I can only call team work in research, diagnosis, and treatment; and I think that perhaps this is the most important of all the lessons which the war has to teach us, and not only us as a profession but the Government, or rather the Ministry of Health, also. Consider for a moment the disadvantages under which we at present labour. We are the victims of a half-fledged, inadequate piece of legislation which is founded apparently upon the supposition that disease can be dealt with effectually by giving bottles of medicine or liniment to the sick, or that if this fails and the sick get worse they can be sent to one of the overcrowded voluntary hospitals with which the Legislature has nothing whatever to do. Anything more unsatisfactory to the sick, or demoralizing to us as a profession, it is hard to imagine.

I should like to bring to your notice an able and altogether admirable letter in the *Lancet* of June 14th last, by Dr. Flemming of Bradford-on-Avon, entitled "The general practitioner's hospital," in which he puts his finger on the crying need of the present day, namely, the establishment of an adequate number of what might be called auxiliary hospitals throughout the country, staffed by teams of general practitioners, to which all practitioners can have access, and to which they can send cases requiring clinical observation of any kind, rest, or treatment which cannot be carried out in the sick person's home. The present general and special hospitals would still be amply filled by cases of severity or difficulty, but they are essentially and always will be the hospitals of the specialist and consultant, and should be reserved as such. He demonstrates that no medical service insurance scheme can be efficient without such provision—provision to enable the general practitioner to diagnose, observe, and treat his cases adequately and to the satisfaction of himself as well as of the sick.

War has shown the extreme advantage of men in this way working together, not in rivalry but for a common end, helping to solve knotty problems, picking each other's brains, and not only gaining valuable knowledge, but conferring untold benefits upon those under their care.

That which is new and up to date to-day is old and obsolete to-morrow, and it is only by some such means as Dr. Flemming has described that we can keep our heads above water, maintain our interest in our work and our cordial co-operation with each other. Let us insist, then, that this is our due, that we should be given opportunity to meet and work together for the common good more often than is ever now possible, so that it may be less hard to maintain our self-respect and our pride in a profession which at the best is most arduous, which, speaking generally, is inadequately paid, and which makes a very great demand on the qualities of unselfishness and self-sacrifice.

The outlook for our future is surely encouraging. The nation and the Government know full well that they owe a great debt to the medical practitioners of this country and of the empire; without them war on a large scale would have been impossible, and the record of their work and its results will for all time be a reminder of how large a part is played by our profession in the welfare, prosperity, and happiness of all. Moreover, there is, and will be in the future, a department of State and a responsible Minister with whom we can deal.

No doubt the aftermath of war will bring us anxieties—these are universal; we must, however, possess our souls in patience, and remember Bacon's dictum that the greatest innovator is time. Do not let us be in a hurry, but study to preserve that unity which is the only sure measure of success.

PROFESSOR A. HOPEWELL-SMITH has received the honorary degree of D.Sc. from the University of Pennsylvania.

AT the recent elections in Germany only one member of the medical profession, Dr. Hartmann, was returned to the National Assembly. Three physicians, Drs. Abderhalden of Halle, Schlossmann of Düsseldorf, and Struve of Keil, were elected to the Prussian Assembly.

NOTE ON RE-AMPUTATION.

BY

A. E. CHISHOLM, F.R.C.S. EDIN.,
LATE CAPTAIN R.A.M.C.,
EDINBURGH.

UNFORTUNATELY a primary amputation frequently fails to yield a satisfactory result. One main cause is, no doubt, that the circumstances under which the first amputations were done did not tend towards good healing. Patients brought to the casualty clearing stations were often in a low condition, and infection was always present. In many cases the amputation was performed above the zone of infection, but this was not always a reasonably correct procedure. Very often the wound was wisely left open and packed. The resulting delayed union tended towards cicatrization and contraction, and the scar was apt to become adherent to the end of the bone. Should sepsis develop, the result must often be imperfect healing with possibly sequestrum formation and sinuses.

Some Reasons for Re-amputation.

1. Adherent scar with weak or partial healing. If the scar is terminal, and especially if adherent to bone, it is apt to become irritated by pressure of the artificial limb. If lateral and adherent to the bone near its end, there is apt to be trouble from dragging. Such scars may break down. "A large or a small adherent scar is not necessarily an indication for re-amputation. Many cases with an adherent thin scar do well—in fact, far better than they would do with a better scar and a shorter stump. It is when the stump is conical and has a large terminal scar or ulcer that a re-amputation may become necessary" (Huggins).

2. A chronic granulating surface, especially if terminal and near the end of the bone, is very likely to lead to weak and unsatisfactory healing with adhesion to the end of the bone, or healing may fail altogether.

3. The presence of sinuses. Huggins says: "No aseptic operation should be performed on a stump until all sinuses have been healed for two or three months." I hesitate to express an opinion contrary to one with so large an experience, but I think that at least in cases with very mild sepsis in the sinuses, much time may be saved and a good result obtained by re-amputation, provided certain precautions are observed.

4. Sequestra. It is usually wiser to re-amputate than to be content with removal of the terminal sequestrum; time will thus be saved as the separation of the sequestrum need not be waited for, and if removal of the sequestrum alone be performed, the resulting end of the bone is likely to be irregular and ill adapted for weight bearing. Further, the sinus leading to the site from which the sequestrum has been removed will be somewhat septic, in many cases terminal or nearly so, and will tend to heal rather slowly with an inclination to form a cicatrix firmly fixed to the bone.

Although sequestrectomy, in the lower limb at least, should rarely be considered a final operation, it is a very sound procedure when active sepsis is present, and when it would be unjustifiable to re-amputate. The sequestrum may be removed and the track cleaned and the wound left open. When the sepsis has abated the radical operation may be performed. In the upper limb, where end bearing is not required, sequestrectomy may be found sufficient.

Prevention of Haemorrhage.

It is rarely, if ever, necessary to employ a tourniquet in re-amputating. If the main vessel be properly controlled by digital pressure, very little blood should be lost. There is good evidence that there is not only an immediate reaction of hyperaemia when the tourniquet is removed, but that there is a greater liability for reactionary bleeding to take place several hours later if a tourniquet has been used than if digital pressure has been employed alone. The main vessels should be cut through late and clamped early. It is well to superimpose the fingers of the two hands in controlling the femoral artery, so that alternate relief may be given without changing position.

In amputating through the thigh without a tourniquet some slight haemorrhage may take place from the uncontrolled terminals of the obturator and sciatic arteries, but these can be quickly clamped.

In operating below the knee pressure on the femoral artery in the groin, if properly applied, should satisfactorily control bleeding. It is more difficult to find the main vessels in this region than in the thigh, because of their proximity to the bones and because of the tendency to retract, but the difficulty is not great. In the upper limb there should be no difficulty in obtaining a good purchase over the brachial artery digitally. It is common to find a good deal of firm fibrous tissue extending for some distance up the line of the greater vessels. This causes so great a diminution of the lumen that no digital pressure may be required at all, but it is wise for someone to be ready to apply it in case of need.

The Operation.

I have found the following points of practical value in re-amputating:

1. Avoid a terminal scar. It is usually easy to achieve this in the thigh, but it is otherwise in the leg, if amputation has previously been performed fairly high up. Sometimes, owing to lack of skin, it is not possible to avoid a terminal scar and yet retain enough bone for the fitting of the artificial limb. The scar must take its chance, so as to preserve the joint, in such a case. But troublesome adherence may be avoided by guarding against infection, and also, possibly, by including a thin layer of muscle in the flaps; a retention suture left in for a few days will tend to prevent the scar from adhering in the wrong way to the bone; the retention suture should be guarded with rubber tubing to prevent it from cutting into the skin.

2. It is rarely necessary, and probably rarely wise, to include muscle in the flaps. A good fibrous pad is formed between the skin with its integuments and the sawn end of bone.

3. Re-amputate clear of the disability for which re-amputation is being performed, and try to make sure that no further operation will be necessary. The object of re-amputation is to get a good sound serviceable stump. It is far better to sacrifice a little extra bone, provided it can be spared, as it usually can, than to risk a poor result with the possibility of yet another re-amputation having to be performed some weeks or months later, just because the operation has been too close to or within the danger zone. Therefore the flaps should be cut clear of the scar unless there is some real reason in a special case against such a procedure. The scar especially should be avoided if there is the slightest suspicion of sepsis.

It would appear that pathogenic micro-organisms may lie latent in scar tissue for considerable periods. According to Huggins, the clinical evidence that a stump is ready for re-amputation is the disappearance of oedema from the skin and deep structures. It may be necessary to cut through and often include in the flaps the deeper scar tissue and sometimes lateral scars, but the scar in relation to the end of the bone should be avoided.

For the thigh I have usually employed antero-posterior flaps, the anterior one being the larger and forming the pad for the newly sawn bone end. Rarely if ever is it good treatment to dissect the adherent scar off the bone end, undercut the skin, and suture, leaving the bone intact. Even if the end of the bone be healthy, such a scar is likely to be terminal and to re-adhere, thus reproducing the former disability.

4. In dealing with terminal sequestra a difference must be made between those cases in which there is little or no active sepsis present and those in which sepsis is pronounced.

5. Re-amputation should not be performed in presence of a really actively septic wound. Healthy granulation is not a contraindication, but a really septic granulation surface should be considered a danger signal. The folly of hastening matters in such cases has been proved. The new wound, in spite of the greatest care during operation, is very likely to become septic, the lymphatics presumably being loaded with micro-organisms. The patient may develop general toxæmic symptoms, and the wound will in all probability break down. In many such cases another re-amputation will be necessary at a much later date. Thus time will be lost, an unnecessarily short stump will result, and health will be at least temporarily impaired. In operating on cases where healthy terminal granulation existed, I have been in the habit of swabbing it with pure carbolic, and then covering it over with gauze clipped on to the skin before starting to cut the flaps.

6. If the wound fills up with clot—for example, after a reactionary hæmorrhage—it is well to open it right up under a general anaesthetic, clear out the clot, re-suture, and drain in the usual way. Otherwise there will be great risk of a septic state ensuing.

7. If skin is scanty, and if it is important to preserve the length of the stump with a view to future function and fitting, extension may be applied by means of glue or strapping stretching from the stump to some form of wire splint. This may be in use for days or even for weeks, prior to operation, and a considerable gain may be achieved.

8. In amputation a short distance below the knee it is well to apply a posterior splint before the patient comes out of the anaesthetic, for there is a great tendency for the knee to assume the flexed attitude of rest, and, if convalescence be delayed, a certain amount of contracture of the hamstrings, often difficult to overcome, may take place.

9. If sepsis appears in a mild form after operation, fomentations or Carrel's treatment may be applied for a few days.

10. If re-amputation has to be performed in presence of a sinus only very mildly septic, or if the muscles do not look very healthy on section, a flavine pack will be found of value, the wound being left open with a view to delayed primary or secondary suture later. Or bipp may be applied, suturing the wound and providing drainage for serous oozing for a few days.

11. In amputations below the knee the anterior edge of the tibia should be bevelled so as to prevent the sharp edge from pressing on the anterior flap. It is important also to divide the fibula about a quarter of an inch higher up than the tibia, otherwise fitting of the artificial limb will be interfered with. According to Huggins it is important to preserve the interosseous membrane so as to prevent outward displacement of the fibula.

12. My usual routine, before suture of the wound, has been to swab the fresh raw surface with ether, which, besides acting as an antiseptic, tends to encourage bleeding, so that small vessels which might lead to troublesome bleeding later on can be ligatured at the time of operation. Ether tends also to show up unhealthy muscle by the fact that it may not react so well to the stimulus. This especially applies to avascularized damaged muscle seen soon after the infliction of the primary wound. The wound is then closed and sutured accurately. A narrow rubber dam is introduced at each end of the wound. These drains are left in for two or three days and then removed provided no sign of infection has appeared. A thin rubber dam provides very efficient drainage and is much to be preferred to tubing in most cases.

In my series of cases the average time of operating since the last amputation has been about six months, ranging from two to thirteen months. No doubt time is an important factor from the point of view of latent sepsis, but my experience tends to show that the clinical condition of the stump is of even more importance.

It cannot by any means be claimed that all wounds heal up by first intention. But if these rules are adhered to there will be few, if any, failures. Many cases will heal right away. Some will show a mild reaction which will soon subside.

ACCIDENTAL TRANSFERENCE OF THE MALARIAL PARASITE IN THE COURSE OF TRANSFUSION.

BY ALFRED S. GUBB, M.D.,

SURGEON TO AUXILIARY HOSPITAL No. 102, ALGIERS.

THE following notes seem to point to the transference of the malarial parasite in the course of the operation of transfusion of blood, and as instances of such accidental contamination appear to be extremely rare—in fact, I know of no other example—I have thought it worth while to place the case on record:

A soldier back from Salonica arrived in Algiers in November, 1918. While in Salonica he had suffered a good deal from a pernicious form of malaria, and when sent into Hospital No. 102 he was profoundly anaemic, his blood only containing some 2,220,000 red corpuscles per cubic millimetre. At first he appeared to be gaining ground; he was cheerful, his appetite was good, and there was no fever.

Ten days after admission he suddenly became feverish, the temperature running up to 40.4° C., with headache and marked vertigo. This did not yield to doses of 2 grams of quinine a day and injections of hectine. The report on his blood stated that it contained *Plasmodium praecox*, with numerous young forms and nucleated red corpuscles. The anaemia became still more intense, and on December 13th he became semicomatose. It was then decided to perform transfusion as a last resource.

One of the sisters was good enough to place her services at our disposal, and transfusion was carried out on December 14th by the aid of Jeanbrau's apparatus. The operation was performed by a *confère* who had had considerable experience of this apparatus. After duly sterilizing his hands and putting on sterile gloves, he began by exposing the median cephalic vein in the sister's arm, and when this had been accomplished he did the same for the patient who had been placed in close proximity. Everything being ready, he opened the donor's vein, aspirating the blood into the recipient *ad hoc*, and infusing it in due course into the patient's vein. The operation having been carried to a successful conclusion, it only remained for him to suture the incisions in donor and patient.

On December 29th the sister was seized with a violent rigor, accompanied by general aching and pain in the limbs. Her temperature rose to 40.2° C. As we were in the midst of an epidemic of influenza she was naturally thought to be suffering from an attack of the prevailing malady, but a few days later the periodicity of the attacks of fever suggested the possibility of malaria, and examination of the blood revealed the existence of *Plasmodium praecox*. She remained in a precarious state for several weeks, but eventually improved under combined quinine and arsenical treatment.

It is to be noted that the sister had never suffered from malaria, and was to all appearances in excellent health at the date of the transfusion. For that matter it was not the season for malarial attacks to develop; moreover, the disease is virtually unknown in Algiers proper, though common enough in the neighbouring districts. Then, too, the interval that separated the transfusion from the onset of the feverish attack roughly corresponds to the period of incubation of the fever. We are therefore justified in suspecting that the disease was conveyed at the time of the transfusion, especially as it turned out to be the same type of disease. With regard to the possibility of the transfer there were two occasions in the course of the operation when the transfer might conceivably have taken place: one when after isolating the patient's vein the surgeon proceeded to tap the donor's vein, and again when, after injecting the blood into the patient, he sutured the incision in the donor's arm.

The mere possibility of such a mishap renders it desirable to point to the importance of guarding against contamination by special precautionary measures to prevent any accidental transfer of infective material.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

APPENDICAL PUS IN A HERNIA SAC SIMULATING STRANGULATED HERNIA.

WHEN the points of the following case are reviewed in the light of facts exposed by the operation, it would seem theoretically possible to have established an exact diagnosis at the time of examination; but the actual difficulties of differentiation were so marked that the case is, in my opinion, worthy of note.

On August 17th, 1917, a young man, who gave the following history, was admitted to the Western Infirmary, Glasgow. Since childhood he had suffered from a right inguinal hernia which had on several occasions been so difficult to reduce as to require manipulation by his medical attendant. On the day previous to admission the patient was seized with pain in the right iliac region, and vomited once or twice. A few hours later his hernia, as he thought, became again irreducible because there was a very painful swelling in the scrotum which he could not put back. As on former occasions, therefore, he had to summon his doctor. Efforts to reduce the supposed hernia were unavailing, and the patient was sent into hospital.

I examined him shortly after his arrival and found a tense, elastic, inguino-scrotal swelling, which was so tender that any handling was intolerable. The temperature was 99.4° and the pulse rate about 96.

When the patient was anaesthetized I found the scrotal swelling to be irreducible, and on palpating the abdomen

detected distinct resistance in the right iliac fossa, suggestive of an abdominal abscess. It seemed best to open up the inguinal region first; when this was done I discovered a hernia sac full of pus, which had the odour characteristic of *B. coli* infection. The neck of the sac was found to be sealed by the inflammatory process, thus accounting for the irreducibility of the sac contents. The sac was ligated at the neck, after the adherent structures had been stripped off and excised. The inguinal wound was partially closed and drained by a rubber tube.

Using McBurney's method, I then opened the abdomen and found a gangrenous appendix surrounded by an abscess, fairly well walled off. The usual treatment was adopted for this and the patient made an excellent recovery.

Glasgow.

CHARLES BENNETT, M.B.

HALLUX VALGUS OPERATION.

SEVEN years ago I operated on a lady for an exaggerated condition of hallux valgus of both feet, the great toes crossing completely over the second toe. The deformity of the left metatarso-phalangeal joint was very marked. The operation performed was that recommended by Mayo.

At the present time there is excellent movement of both great toe joints, and the inner side of the feet remains absolutely in a straight line; an x-ray photograph demonstrates the very excellent result obtained by adhering strictly to the technique of the operation as laid down by Mayo.

The only disability (so to call it!) is the necessity of wearing a shoe following the outline of a normal foot, the modern boot-maker's enormity not being tolerated.

W. B. COSENS, Major R.A.M.C.

Reviews.

STERILITY IN WOMEN.

THERE is no doubt that from the general point of view the time is ripe for the appearance of a monograph on *Sterility in Women*.¹ Unfortunately there has been no advance in our knowledge of the subject which makes such a book essential from the strictly professional point of view. Dr. GILES's little book with this title is, however, none the less assured of a welcome, for at a time like the present the general or social point of view must predominate. In the aftermath of the greatest war in history the subject of sterility assumes a national importance to an unexampled degree. The blight of unproductive marriage must be prevented or cured if the nation is to make up in numbers what, unfortunately, it can never wholly replace in quality.

But there is still another reason why the attention of the profession and of the public may well be drawn to the subject, namely, the prevalence of venereal disease. Syphilis and gonorrhoea between them account for an enormous proportion of sterility, and for what is so closely allied to it—pre-natal mortality. The dangers of syphilis are now being more fully realized by the public, but what is not recognized as it ought to be is that in the woman gonorrhoea, so often regarded by the male as a mere trifle, is on the whole the more serious disease of the two. This has become increasingly true in recent years with the great advances made in the treatment of syphilis. There is no disease more likely to doom a woman to either absolute or relative sterility than gonorrhoea—and to sterility combined with years of chronic ill health and constant suffering.

Dr. Giles's book is of necessity mainly a summary and digest of the best that has been written on the subject. Incidentally it may be noted that he has collected an admirably arranged bibliography, which will be of the greatest use to other investigators. The profession already knows and appreciates Dr. Giles's unusual capacity for reducing his facts to tabular form, and in the present volume he has compiled several interesting statistical tables in regard to sterility. His investigations have led him to a confirmation of his conclusion that fibroids are not so much the cause as the result of sterility. He also draws attention to a point of some importance—namely,

¹ *Sterility in Women*. By Arthur E. Giles, M.D., B.Sc., F.R.C.S. Edin. London: Henry Frowde, and Hodder and Stoughton, 1919. (Demy 8vo, pp. xv + 227; 11 figures. 10s. net.)

the effect of recurrent attacks of appendicitis in causing sterility. It is, of course, only in the last few years that appendicitis has been generally recognized as a source of pelvic infection, but the author's experience has led him to regard it as a not very infrequent cause of a degree of pelvic infection leading to the sealing up of the tubes and consequent sterility. This is a point of some significance which should not be overlooked by the practitioner.

The author very properly emphasizes the need for excluding the possibility of the husband being responsible for the sterility of unproductive wedlock before submitting the wife to anything of the nature of operative treatment. This golden rule is one that can bear endless repetition.

The section on treatment is rather disappointing, but in justice to the author it must be admitted that the intention of the book was not to describe methods of treatment so much as to indicate the extent to which most of the causes of sterility are amenable to treatment. At the same time there are some striking omissions. So far as we have observed there is not a word about the influence of the internal secretions in the female, or as to the indirect effect upon fertility arising from some disturbed conditions of the endocrine balance.

It is sincerely to be hoped that the publication of this book will have the effect of drawing increased attention to a problem of outstanding importance to our generation with a view to both prevention and cure.

NUTRITION AND DISEASE.

In his interesting and well written little book on *The Newer Knowledge of Nutrition*² Dr. E. V. McCOLLUM gives an admirable account of our present knowledge of the use of a varied diet in the preservation of health and vitality. In his first chapter he reminds his readers that the chemical analysis of a food or diet is not in itself adequate to answer the question whether it is suitable for nutrition, but must be supplemented by the biological method—that of feeding experimental animals; and he criticizes the hypothesis by which it is sought to account for beri-beri, scurvy, pellagra, and rickets as due to the lack of a specific chemical substance (or vitamine) in the diet. But it is not clear how far his criticism applies merely to the term "vitamine," which, so far as we are aware, nobody defends, and how far to the substance of the hypothesis. The "water-soluble B" substance he admits prevents the development of beri-beri, and "fat-soluble A" the form of malnutritional disease of the eye called xerophthalmia; but he seems to think that scurvy is not a deficiency disease, and to hold that the exact relation of rickets to diet is not yet clear.

The second chapter deals with experimental scurvy and the dietetic properties of vegetables; emphasis is laid upon the importance of eating the leaves as well as the seeds of plants. In the third chapter he points out that there is nothing in a vegetarian diet *per se* that makes it inadequate to nourish an omnivorous animal in a satisfactory manner, but admits that it is difficult to choose an adequate vegetarian diet. The fourth and fifth chapters deal with foods of animal origin and the diseases referable to faulty diets. The last two chapters are devoted to the needs of the nursing mother as reflected by the nutrition of the suckling, and to the practical considerations which should determine the planning of diets. The book forms stimulating reading, and should be studied by all, whether medical practitioners or not, who are directly interested in diets and feeding. But the author's theories and conclusions should be accepted only after critical examination.

INFECTION, IMMUNITY, AND SPECIFIC THERAPY.

THE success of Dr. KOLMER's textbook³ on the principles and essential details of the processes of infection and immunity, which was favourably reviewed in our issue of August 28th, 1915, has been shown by the necessity for a

second edition in 1917, though it may be mentioned that the volume did not reach us until late in the following year. The present edition is on the same lines as the first, but contains eighty more pages and three additional coloured illustrations, and has been thoroughly revised. Thus, the Schick toxin test for immunity in diphtheria and active immunization in diphtheria with toxin-anti-toxin mixtures receive special attention, the Schick reaction being illustrated by two figures. The section on the vaccine treatment of various infections has been enlarged, and after giving the evidence that vaccines may exert a non-specific influence—for example, the benefit resulting from typhoid vaccine in other diseases and the effects of protein "shock" therapy—the author expresses his opinion in favour of adhering to auto-genous vaccines, and while admitting that their use may stimulate non-specific agencies of therapeutic value he considers that trust in the specific effects of vaccines should be maintained. The various skin reactions are fully described, and are illustrated by coloured plates. In the interesting chapter on chemotherapy the administration of salvarsan, which is perhaps the most complex drug employed in medicine, is described in detail, and the causation of the toxic effects discussed; jaundice being stated to be much more frequent after intramuscular than after intravenous injection. Analyses of salvarsan made by the author confirm the view that it cannot be regarded as an absolutely pure compound, and that it contains from 1 to 2 per cent. of sulphur which is not represented in the formula, and probably becomes attached to the arsenic during the process of reduction. This work is well written and admirably produced, and the high opinion of its merits expressed when the first edition was reviewed may be cordially endorsed.

DISEASES OF HEART AND AORTA.

CARDIOLOGISTS will welcome the third edition of Professor HIRSCHFELDER's work on *Diseases of the Heart and Aorta*.⁴ The form of the book is not appreciably altered, but the matter has been brought up to date by the incorporation of recent results. As in former editions, the book consists of four parts. The first is concerned with physiology and methods of diagnosis, the second and third with organic disease of the heart and aorta, and the fourth with functional cardiac disorders. The prominent place given throughout the work to physiological and experimental considerations will be appreciated by clinicians, who will here find up-to-date information in convenient form. The value of the book as a work of reference is thus enhanced. Clinical conditions are carefully described, and some excellent chapters are devoted to treatment. Many valuable hints are given on the management of cases, the sound principle of treating the patient according to "his own condition, sensations, and general appearance" being especially insisted on.

The bibliography at the end of each chapter should prove useful to many workers, though reference would be easier if the lists had been arranged in alphabetical order. British authors, too, are somewhat scantily represented. For example, in the discussion on the causes of angina there is no mention of Sir Clifford Allbutt's views, nor is there any reference to Professor Starling's work in the pages devoted to a consideration of the heart's output. The author has entirely failed to grasp the significance of the researches of Dr. Lewis and his co-workers on so-called "soldier's heart" or "effort syndrome." The condition is included by him under the heading of "primary cardiac overstrain," to which he devotes five pages. He begins by speaking of "functional weakness of the heart," and then proceeds to describe cases of obvious myocarditis—in one of which, indeed, a fibroid heart was found at autopsy.

Nevertheless, a vast amount of material has been used, and this probably accounts for a certain disjointedness, especially marked in the first half of the book. A summary of another writer's views is often inserted without an adequate effort to blend it into a harmonious whole with the rest of the text. In some places the effect is rather too obviously that of an interpolation made to bring the subject matter up to date.

² *The Newer Knowledge of Nutrition*. By E. V. McCollum, School of Hygiene and Public Health, the Johns Hopkins University. New York: The Macmillan Co. 1919. (Cr. 8vo, pp. ix + 199; illustrated. 6s. 6d. net.)

³ *A Practical Textbook of Infection, Immunity, and Specific Therapy*. With Special Reference to Immunologic Technique. By John A. Kolmer, M.D., D.P.H., M.Sc., Assistant Professor of Experimental Pathology, University of Pennsylvania, etc. Second edition. Philadelphia and London: W. B. Saunders Co. 1917. (Roy. 8vo, pp. 978; 147 figures, 46 in colours. 32s. 6d. net.)

⁴ *Diseases of the Heart and Aorta*. By Arthur Douglas Hirschfelder, M.D. Philadelphia and London: J. B. Lippincott Company. 1918. (Med. 8vo, pp. xxviii + 732; 20 plates, 325 figures. 30s. net.)

These defects are, however, outweighed by the large amount of information contained in the volume. Praise must be given to the numerous excellent illustrations and diagrams. By means of the latter, which are original and most ingenious, Professor Hirschfelder has succeeded in making clear many difficult points. The book is well worth perusal by all who are interested in the heart and its disorders.

NOTES ON BOOKS.

IN his book on *Modern Medicine and Some Modern Remedies*⁵ Dr. T. B. SCOTT has put together some interesting generalities on heart disease, arterio-sclerosis, chronic bronchitis and bronchial asthma, and therapeutic speculations and doubts mainly connected with the influence of the organs of internal secretion. His notes represent the life's experience of a busy practitioner of medicine; such men, as Sir Lauder Brunton pointed out in his preface to the book, too rarely find time for the responsibilities of authorship. It is of interest to read that Dr. Scott has often hit the mark by aiming at random with thyroid extract in obscure medical cases; and in chronic bronchitis and asthma he has seen good result from vaccine treatment. His book may be cordially recommended to the attention of his fellow practitioners. The fact that it has reached a second edition is proof that it has met with much appreciation.

The Venereal Diseases Problem,⁶ by Dr. J. K. WATSON, is a serviceable little book for nurses and midwives, and gives a good account of what they should know about the matter. It is clearly written, and may be recommended. Dr. CARLETON's picture-book on *The Seriousness of Venereal Disease*⁷ may be described as a two-shilling shocker composed, firstly, as an active deterrent for laymen who might be likely to expose themselves to the infection, and, secondly, as an encouragement to induce the infected to seek for adequate medical treatment. The book should prove effective.

The fifth edition of PALMER's *Lessons on Massage*⁸ has been brought up to date and contains an adequate account of the theory and practice of massage suited to the requirements of those about to take it up for a living. About half the book is devoted to an outline of the anatomy and physiology of the body; the rest deals briefly with the methods of massage and gymnastic treatment. The volume may be recommended to those for whose use it is designed.

⁵ *Modern Medicine and Some Modern Remedies*. By T. B. Scott. With a preface by Sir Lauder Brunton, Bt., F.R.S. Second Edition. London: H. K. Lewis and Co. 1919. (Cr. 8vo, pp. 198. 6s. 6d. net.)

⁶ *The Venereal Diseases Problem*. By J. K. Watson, M.D. Edin. London: Baillière, Tindall, and Cox. 1917. (Cr. 8vo, pp. xii + 54; 16 figures. 2s. 6d. net.)

⁷ *The Seriousness of Venereal Disease*. By Sprague Carleton, M.D., F.A.C.S. New York: Paul B. Hoeber. 1918. (Cr. 8vo, pp. 67; 26 figures. 0.50 dol.)

⁸ *Lessons on Massage, including Swedish Remedial Gymnastics and Bandaging*. By Margaret D. Palmer. Fifth edition. London: Baillière, Tindall, and Cox. 1918. (Demy 8vo, pp. x + 340; 135 figures. 10s. 6d. net.)

MEDICAL AND SURGICAL APPLIANCES.

LIQUID AIR AS A SOURCE OF OXYGEN.

AIR was first liquefied nearly thirty-five years ago as a laboratory experiment; by 1891 it could be produced in quantities large enough for scientific research. Now it is manufactured as a commercial product, and has been much used by the Air Force to supply oxygen to aviators at high altitudes where the partial pressure of oxygen in inspired air was so low as to produce symptoms of anoxaemia.

To liquefy a gas it must be cooled below its critical temperature, and to maintain it in the liquid state it must be protected from external heat. In 1892 Sir James Dewar first used a two-walled glass vessel to overcome this second difficulty, making the vacuum flask which has since become a household article. In the liquefaction of air the nitrogen and oxygen come down together as a homogeneous liquid, but as the nitrogen evaporates first the liquid becomes gradually richer in oxygen. In recent years liquid air machines have been used for obtaining oxygen from the atmosphere and by fractional distillation a liquid can be obtained containing proportions of oxygen up to 80 per cent. Oxygen so produced is used in the arts, especially in the process of welding, but during the war it was found that as the liquid can be conveniently enclosed in a vacuum vessel made of copper it afforded a light,

portable, and convenient means of supplying oxygen to aviators at high altitudes.

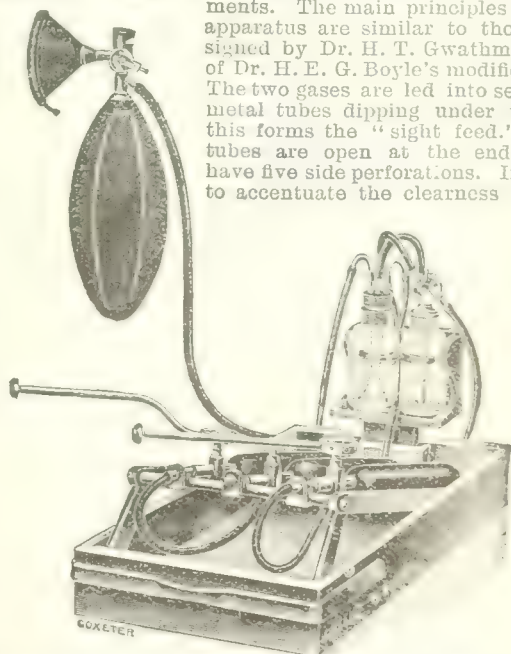
The Liquid Air and Rescue Syndicate (Park Royal, Willesden, London, N.W.10), a company from which the Air Force obtained supplies, is now considering the possibility of placing liquid air containing up to 70 or 80 per cent. oxygen at the disposal of the medical profession. The great advantage claimed for the liquid air container over the oxygen cylinder is that it is lighter and more portable and convenient. It is calculated that a cylinder of oxygen, yielding six cubic feet of gas, weighs 9½ lb., and that a spherical container for liquid air which will yield 57 cubic feet of gas containing 70 to 80 per cent. of oxygen weighs 8½ lb. At present the price of a quantity of liquid air yielding 600 cubic feet in a gaseous state is about 20s., but it is believed that if the demand is considerable the price can be materially reduced. The cylinder, of course, cannot be closed, so that there is a continual loss of gas, which amounts, we believe, to about 5 per cent. in twenty-four hours.

GAS-OXYGEN APPARATUS.

Mr. GEOFFREY MARSHALL, M.B., B.S., whose paper on the administration of anaesthetics at the front, published in our columns on June 2nd, 1917, will be remembered, writes:

The chief requirements of an apparatus for the administration of gas-oxygen anaesthesia are easy control, simplicity, and clear indication of the relative proportions of the gases administered. Portability is also of great importance for work outside hospitals. In the apparatus illustrated I have endeavoured to meet these requirements.

The main principles of the apparatus are similar to those designed by Dr. H. T. Gwathmey and of Dr. H. E. G. Boyle's modification. The two gases are led into separate metal tubes dipping under water; this forms the "sight feed." The tubes are open at the ends, and have five side perforations. In order to accentuate the clearness of this



indicator I have had the tubes curved so that the streams of bubbles from consecutive holes ascend separately to the surface of the water; the first and third holes are marked by bosses. The perforations in the N₂O feed tube are twice as large as those in the O₂ tube, and the N₂O feed is capable of a greater delivery of gas than previous models of this type. The advantages are that it is less often necessary to supplement the anaesthesia with ether, and that rebreathing may be dispensed with if thought undesirable. Excessive rebreathing is known to result in headache and nausea; I also found that it led to an after-fall of blood pressure when dealing with exsanguinated patients.

The stand consists of a light wooden box shaped like a suit case, with leather handles for carrying. It is just wide enough to accommodate three cylinders side by side, two 50-gallon N₂O and one 15-gallon O₂—that is, sufficient for about one and a half hours' anaesthesia. A larger model takes cylinders of twice this capacity. The nozzles of the cylinders are fixed to a metal bar by flanged connexions, the bar is raised on hinged struts when the apparatus is in use. The rest of the apparatus, sight feed, ether bottle, bag, mask, etc., fit into the lid for packing; there is also room for a small spare cylinder. A spirit lamp keeps the N₂O tap from freezing. Fine adjustment valves are dispensed with, as I have found that long lever keys on the

cylinder taps give a control of sufficient delicacy for all occasions; we thus save considerable weight and at the same time avoid the main source of gas leakage. The gases are led first to the sight feed, thence to a graduated three-way cock on the ether chamber, and finally by a long flexible tube to the Hewitt valve on the face-piece. The freshly mixed gases are therefore delivered in front of the rebreathing bag and as near as possible to the face-piece, with the advantages that a modification of the mixture affects the patient promptly, also that when rebreathing is employed the current of freshly delivered gases entering close to the mask prevents excessive concentration of carbon dioxide and obviates the laboured character of the breathing which is seen when gases are led directly into the rebreathing bag.

A larger apparatus intended for hospital use is of similar design, except that the stand will take cylinders of the larger sizes, up to 500-gallon N_2O and 40 ft. oxygen. The cylinders stand vertically on a base which moves on castors. I have given these two types of apparatus an extended trial in both military and civil work and found them satisfactory.

HARROGATE SPA.

THE word "spa"—or "spaw," as our forefathers sometimes wrote it—came originally from the Belgian town. As time went on it grew to be a general name, first for a mineral spring, and then for the locality in which such springs exist. The notion of a spa has widened in modern days, and it is well recognized now that for a successful mineral water health resort, climate and position and the organization of regimen and environment are as necessary as natural waters. "Spas need clinics, special hotels, and sanatoriums, all working together for a common object."¹

The Revival of British Spas.

While English physicians were pioneers in the medical uses of water, the science of hydrology was for many years studied and developed mainly on the continent of Europe, and British spas, though they possess unrivalled natural advantages, fell out of fashion. Great ingenuity and commercial acumen, and no little scientific skill, were employed in pushing the mineral water stations of Germany and Austria, with the result that before the war the habit of visiting foreign health resorts was firmly established among certain classes in this country. Now for five years the German and Austrian spas have been closed to British invalids; moreover, stringent restrictions were placed by the Permit Office upon those wishing to visit such French and Italian spas as remained open. In consequence, more and more attention has been directed towards the neglected merits of British spas. At the same time the needs of the wounded awakened an active interest in physical remedies, and the leading British spas have provided remedial baths and kindred forms of treatment for immense numbers of military patients.

Another useful outcome of the war has been the linking up of the seven principal home spas—Bath, Buxton, Cheltenham, Droitwich, Harrogate, Llandrindod Wells, and Woodhall—into the British Spa Federation. Its object is to bring before our own countrymen the legitimate claims of British mineral water health resorts, and by joint action to increase the efficiency of their organization and equipment.²

An important point, which we trust is appreciated by all members of the federation, is the need for placing the entire machinery for the good of patients under medical guidance. Powerful waters and many sorts of baths will not suffice unless attention is given to the whole course of the visitor's life in the spa, including his dietary. In this respect there is still a good deal to be learnt from our late enemies, and if British spas are to come into their own the lesson must be applied promptly.

Harrogate Mineral Waters.

Harrogate is remarkable for the number and variety of its mineral springs. The first of these, the Tewit chalybeate well, was discovered by Sir William Slingsby, of Bilton Hall, towards the close of the sixteenth century.

One by one further springs were found and described; the first of the saline-sulphur springs known as the "old sulphur well" was discovered about 1656. At the present time there are as many as eighty-seven known springs within the district, all differing in strength and quality. For a long while the progress of Harrogate as a health resort and spa was slow, but its popularity has increased enormously in the last thirty years. Readers of *Humphrey Clinker* who know Harrogate to day must smile at Matt Bramble's description of the place as a "wild common, bare and bleak, without tree or shrub, or the least signs of cultivation; and the people who come to drink the water are crowded together in paltry inns." A bracing site on an uneven raised plateau among the Yorkshire moors, and a comparatively dry climate give it great natural advantages. The town is handsomely built, with fine open spaces; the surrounding country is picturesque, and good roads lead to such beautiful places in the neighbourhood as Fountains and Bolton Abbeys. Moreover, for those in search of health, the means for outdoor and indoor recreation are provided on a lavish scale.

The many kinds of Harrogate waters fall into two main groups—the sulphur waters and the iron waters. Before the war Professor Arthur Smithells, F.R.S., of the University of Leeds, had undertaken to make a scientific survey of the mineral springs, but service in the army has delayed his report. On the basis of previous analyses made by chemists at various times, the waters from the eighty-seven springs have been classified for therapeutic purposes into the saline-sulphurs, strong and mild; the saline-iron group, the members of which contain varying amounts of ferrous carbonate; and lastly, the waters from certain wells containing very little sodium chloride, of which two sub-classes are recognized—the alkaline-sulphur waters rich in carbonates, and the so-called pure chalybeates wherein the sulphides are replaced by ferrous carbonate. By reason of the remarkable geological formation of the district, iron springs, sulphur springs, and pure saline springs, although arising within a few yards of one another, yet remain chemically distinct and have different therapeutic properties.

Of the mineral waters at Harrogate sixteen are used for internal administration; the rest are employed only for bathing. The strong sulphur waters are hypertonic as compared with the blood content of sodium chloride, and, as is well known, their effect when drunk is laxative, the volume and weight of the faeces being much increased. These waters have long been used in the treatment of metabolic disorders and affections of the alimentary tract. It is supposed that the absence of depression, after a few days of this aperient course, may be due to the barium chloride which the water contains. The diuretic effect of the saline-sulphur waters is most pronounced in that from the "magnesia well." The alkaline-sulphur waters are hypotonic, as also (though to a less degree) are the mild waters of the saline-sulphur group. All the waters of the alkaline-sulphur class tend to constipate; they are employed in selected cases of mucous diarrhoea and in chronic tropical dysentery, but for the most part they are used outwardly.

The Baths of Harrogate.

In order to make the best use of these mineral waters the Harrogate Corporation, in whom they are vested, has spent nearly a quarter of a million pounds on the provision of modern bathing establishments. Besides the local sulphur water baths, apparatus for almost every approved balneological and electrical treatment has been set up, and to these have lately been added a mechanotherapeutic installation on the Borderel-Zander system, from the Northern Command Dépôt at Ripon, thus making possible the combined application of physical agencies of various kinds. At the Royal Baths more than seventy different baths, packs, douches, massage-douches, electrical treatments, and accessory treatments are given by trained attendants. The Victoria Baths, near at hand, are somewhat less elaborate, and the prices are lower. The Starbeck Baths, where alkaline-sulphur waters can be used at the source, are mainly kept for skin cases, and for others in which isolation may be desirable. There is also a small sylvan bathing establishment at Harlow Ca, outside the town. One of the features of the main establishment is the peat bath. The ferruginous peat-moss of the neighbouring moors is ground up on the

¹ Sir Bertrand Dawson, G.C.V.O., M.D. *The Nation's Welfare*, p. 36.

² *British Spas and Health Resorts*, the official publication of the Federation of British Spas, prepared with the assistance of the Local Medical Committees, with an introduction by R. Fortescue Fox, M.D. London: E. J. Burrow. (2s. net.)

premises and mixed with plain or mineral water. This hot peat mash keeps up a nearly uniform temperature during the period of immersion, and has the effect of a universal poultice. Another well-planned building is set apart for the "Plombières treatment" by intestinal lavage with sulphur water, the internal douche being followed by immersion in a sulphur bath at 98° F., combined with a subaqueous or "Tivoli" abdominal douche at a higher temperature. Among the newest installations are aerated baths, "whirlpool" baths for stiff joints and contractures, and molten paraffin wax baths for treatment of the extremities.

More than twenty years ago Dr. Charles Gibson claimed in these columns that the reputation of Harrogate rested upon a solid foundation, "for nowhere will one find so many, so rich, and so varied springs within so small a space." But the Continental watering places, he remarked, had taken the cream of the patients and reaped a golden

harvest. Fashion, however, even then had begun to turn her face towards the neglected home health resorts, and many physicians were already sending patients to Harrogate, Bath, and Buxton. "We have no *kur twa*," Dr. Gibson added, "but our corporate authorities have built a magnificent suite of baths upon the most modern and up-to-date ideas."

From personal observation this summer we are satisfied that Harrogate has well maintained its progress since those lines were written. It may be added that, to induce members of the medical profession to test for themselves Harrogate's claim to rival the best of the Continental spas, the management of the baths and wells have made arrangements for visits at reduced tariff rates and for free trial of the baths and waters, and a short account of the mineral springs and treatments has been prepared for medical practitioners by the Harrogate Medical Society.



Institute of Tropical Medicine and Hygiene, Calcutta.

CALCUTTA SCHOOL OF TROPICAL MEDICINE AND HYGIENE.

RATHER over five years ago we recorded that Lord Carmichael, then Governor of Bengal, had recently laid the foundation stone of the School of Tropical Medicine in Calcutta, to be erected, with the assistance of the Government, by a fund founded by Sir Leonard Rogers, I.M.S., Professor of Pathology in the Calcutta Medical College. A little over three years ago we reported that the foundation stone of a hospital for tropical diseases, to be erected in the immediate neighbourhood of the school, had been laid by the Governor. Two years ago we mentioned that the hospital was nearing completion and that plans were in preparation to complete the north wing of the laboratory.

The opening of the whole institution is still delayed by the slowness of medical demobilization in India, which has recently been accentuated by the Punjab rebellion and Afghan war. In the meantime the extension of the laboratories to include a hygiene institute, which was under consideration when we last wrote, has been pushed on, thanks to the generous offer of the Indian Research Fund Association, on the recommendation of the late Sir Pardey Lukis, of a grant of one lakh on condition that the Bengal Government gave a like sum. This condition was readily accepted by the Governor of Bengal, Lord Ronaldshay. Further difficulties in finding a new site for the long condemned police morgue, which had to be removed to clear the site for the extension, having at length been overcome, the addition has been commenced; money has also been found by the Endowment Fund (which has now reached the equivalent of over £60,000) and the Bengal Government jointly, to complete the top floor of the whole building at the same time that the extension is being constructed. This will provide accommodation for additional research workers, for whom endowments have been obtained, and for future requirements.

The fine building of four stories shown in the illustration stands on the new 100-foot central road of Calcutta; it will have 220 feet of north light, and will be connected by a short footbridge with the present pathological laboratory and museum of the Medical College, a portion of which is seen on the left of the photograph. In this laboratory much research work on tropical diseases has already been done. The special hospital for tropical diseases, one end of which is seen on the right of the illustration, has been built entirely by public subscription. It contains 116 beds, and has been completed as a part of the school, at a cost of £30,000 at the present rate of exchange, while an equal sum has been invested as a permanent endowment of research in addition to the £5,000 a year promised for five years by the Calcutta commercial interests for the same purpose.

It was originally hoped to have opened the School of Tropical Medicine in Calcutta in 1915; it is now expected that things will be sufficiently settled to enable this to be done in June, 1920, when a short three months' course will be held; the full six months' courses for the diplomas in both Tropical Medicine and in Public Health will begin in the middle of October, 1920. The institution, it is hoped, will, when in full working order, have a staff of eight professors and four or more additional research workers in place of the one pathologist, who has laboured single-handed for so many years in the finest field for research on tropical diseases in the world, and who has had the good fortune to originate and carry the scheme through to its approaching completion.

We congratulate Sir Leonard Rogers on the completion of a task to which he set himself some ten years ago—the establishment of a really first-rate school of tropical medicine and hygiene in Calcutta. It will, we trust, be maintained on the line on which he has set it, and will always receive from the Government of India the encouragement and support it so fully deserves.

PRESENTATION TO SIR WILLIAM OSLER.

THE presentation to Sir William Osler, Regius Professor of Medicine in the University of Oxford, of a collection of essays in two volumes took place at the house of the Royal Society of Medicine on July 11th, the eve of his 70th birthday. The contributions to the volumes number 150, and include representative members of the profession on both sides of the Atlantic—physicians, surgeons, physiologists, anatomists, pathologists, and historians.

The large audience included, in addition to those mentioned in the course of the proceedings, Surgeon Vice Admiral Sir Robert Hill, K.C.M.G., O.B., Medical Director-General R.N., Lieut.-General Sir John Goodwin, K.C.B., Director-General A.M.S., and Major-General G. la F. Foster, C.B., Director-General Medical Services, Canadian Forces.

The presentation was made, in the name of the great body of subscribers on both sides of the Atlantic, by Sir CLIFFORD ALLBUTT, Regius Professor of Physic in the University of Cambridge, who said:

My dear Colleague,—To me, as one of your oldest friends in time, and perhaps the oldest in age, has fallen the honour of announcing our celebration of your seventieth birthday—one anniversary of many years of supreme service in two kindred nations and for the world. The last lustrum of your threescore and ten, if now merged in victory, has been a time of war and desolation, of broken peoples, and stricken homes; yet through this clamour and destruction your voice, among the voices in the serener air of faith and truth, has not failed, nor your labour for the sufferings of others grown weary.

But, while thus we celebrate your leadership in the relief of sickness and adversity, we are far from forgetting the sunnier theme—the debt, none the less, which we owe to you in other fields of thought. In you we see the fruitfulness of the marriage of science and letters, and the long inheritance of a culture which, amid the manifold forms of life, and through many a winter and summer, has survived to inspire and adorn a civilization which so lately has narrowly escaped the fury of the barbarian.

And now I will not avoid a topical allusion—an allusion to your recent presidential address to the Classical Association at Oxford; an address which, in its various learning, its wisdom, and its wit, brilliantly illustrated this fecundity of letters and science, embodied the common spirit of science and art, and conferred a distinction upon our profession.

In these volumes we hope you will find the kind of offering from your fellow workers which will please you best—immaterial offerings indeed, but such as may outlive a more material gift. As to you we owe much of the inspiration of these essays, and as in many of their subjects you have taken a bountiful part, so by them we desire to give some form to our common interests and affections.

We pray that health and strength may long be spared to you and to her who is the partner of your life; and that for many years to come you will abide in your place as a Nestor of modern Oxford, as a leader in the van of Medicine, and as an example to us all.

The speaker then handed the volumes to Sir William Osler amid prolonged applause.

SIR WILLIAM OSLER, whose speech at times betrayed his emotion, said:

Sir Clifford Allbutt, Ladies and Gentlemen,—As the possessor of a wild and wagging tongue that has often got me into trouble, I thought it would be better on such an occasion to make full notes beforehand of what I wanted to say. Two circumstances deepen the pride a man may justly feel at this demonstration of affection by his colleagues on both sides of the Atlantic—one, that amid so much mental and physical tribulation my friends should have had the courage to undertake this heavy two-volume task, and the other, that this honour is received at the hands of my brother Regius, a friend of more than forty years. (Applause.) There is no sound more pleasing than one's own praises, but surely an added pleasure is given to an occasion which graces the honourer as much as the honoured. To you, Sir Clifford, in fuller measure than to any one in our generation has been given a rare privilege: to you, when young, the old listened as eagerly as do now, when old, the young. (Applause.) Like

Hai ben Yagzan of Avicenna's allegory, you have wrought deliverance to all with whom you have come in contact.

To have enshrined your gracious wishes in two goodly volumes appeals strongly to one the love of whose life has been given equally to books and to men. A glance at the long list of contributors, so scattered over the world, recalls my vagrant career—Toronto, Montreal, London, Berlin, and Vienna as a student; Montreal, Philadelphia, Baltimore, and Oxford as a teacher. Many cities, many men. Truly with Ulysses I may say, "I am a part of all that I have met."

Uppermost in my mind are feelings of gratitude that my lot has been cast in such pleasant places and in such glorious days, so full of achievement and so full of promise for the future. Paraphrasing my lifelong mentor—of course I refer to Sir Thomas Browne—among multiplied acknowledgements I can lift up one hand to heaven that I was born of honest parents, that modesty, humility, patience, and veracity lay in the same egg, and came into the world with me. To have had a happy home in which unselfishness reigned, parents whose self-sacrifice remains a blessed memory, brothers and sisters helpful far beyond the usual measure—all these make a picture delightful to look back upon. Then to have had the benediction of friendship follow one like a shadow, to have always had the sense of comradeship in work, without the petty pin-pricks of jealousies and controversies, to be able to rehearse in the sessions of sweet, silent thought the experiences of long years without a single bitter memory—to have and to do all this fills the heart with gratitude. That three transplantations have been borne successfully is a witness to the brotherly care with which you have tended me. Loving our profession, and believing ardently in its future, I have been content to live in it and for it. A moving ambition to become a good teacher and a sound clinician was fostered by opportunities of an exceptional character, and any success I may have attained must be attributed in large part to the unceasing kindness of colleagues and to a long series of devoted pupils whose success in life is my special pride.

To a larger circle of men with whom my contact has been through the written word—to the general practitioners of the English-speaking world—I should like to say how deeply their loyal support has been appreciated. Nothing in my career has moved me more, pleased me more, than to have received letters from men at a distance—men I have never seen in the flesh—who have written to me as a friend. And if in this great struggle through which we have passed sorrow came where she had not been before, the blow was softened by the loving sympathies of many dear friends. And may I add the thanks of one who has loved and worked for our profession, and the sweet influences of whose home have been felt by successive generations of students?

To the Committee and the Editors I am deeply indebted for the trouble they have taken in these hard days, and to the publisher, Mr. Paul Hoeber, for his really pre-war bravery; and our special thanks are due to you, kind friends—and in saying this also I would associate Lady Osler with myself—who have graced this happy ceremony with your presence. (Loud applause.)

SIR D'ARCY POWER, in proposing a vote of thanks to Sir Clifford Allbutt, said that this was probably the first instance in which the two Regius professors of the great Universities of Oxford and Cambridge had come together on such an occasion.

SIR DONALD MACALISTER said that when it was known that the Regius Professor at Cambridge had undertaken to make the presentation to the Regius Professor at Oxford, all were sure it would be done in the most perfect possible way. The variety of learning, the wit, and the wisdom, and the deep feeling which characterized his utterance in making the presentation fully justified the expectations. As Cambridge and Oxford had joined in giving and receiving, it was fitting that Cambridge as well as Oxford should join in offering thanks to him who had graced the chair.

SIR CLIFFORD ALLBUTT said, in reply, that it was really for him to thank those who had given support on an occasion to be described, perhaps, as unique, and for having been permitted to voice their feeling.

[Subscriptions are still being accepted and may be sent to the English publishers of the essays, H. K. Lewis and Co., Limited, 136, Gower Street, W.C.]

British Medical Journal.

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THE THERAPEUTICS OF OXYGEN.

THE lecture by Dr. J. S. Haldane, in spite of the unhappy term anoxaemia in its title, should be read by every practitioner whatever his line of practice. It is not altogether easy reading, for the subject is complicated, and many of the facts are new even to physiologists; some of them, indeed, have not previously been published, but the matter it deals with is of fundamental importance. A man may go without food for weeks, without water for days, but without oxygen for seconds. It is therefore not surprising that an insufficient supply of oxygen to the tissues—a condition to which the term anoxaemia has been applied—should seriously interfere with the primary functions, although the reserve power is so great that the evil effects may be more or less completely compensated, at any rate for a time and after a time.

The purpose of Dr. Haldane's lecture is to explain the evil effects of an insufficient supply of oxygen to the tissues, the manner in which they are brought about, the bodily mechanism by which they are averted or diminished, and the means the physician can take to assist nature while the struggle is going on, the chief of these being the administration of oxygen by inhalation. The haemoglobin in human arterial blood is nearly saturated with oxygen. In addition to this chemically combined oxygen a very small amount of oxygen is present in free solution in the blood, and as the blood passes round the circulation this free oxygen is continuously being passed on to the tissues and being replenished at the expense of the oxyhaemoglobin. For the maintenance of the normal state in this respect certain primary conditions must be fulfilled—the breathing must produce sufficient ventilation of the lung, the alveoli must be in good order, the circulation must be effective, and the haemoglobin normal. Failure in any one or more of these respects tends to anoxaemia. Further, the respiratory centre must be in a state to respond to its normal stimuli. In toxæmic conditions the centre being poisoned responds less readily, and Dr. Haldane considers that the evidence now available makes it probable that one of the most common immediate causes of death is failure of the respiratory centre rather than of the heart, though if the former fails the latter must soon fail also.

An observation by Bohr of Copenhagen, on the great importance of which Dr. Haldane insists, is that if the normal proportion of CO_2 in the blood is diminished the haemoglobin holds on more tightly to the oxygen and the oxygen in free solution in the blood is diminished. Forced breathing, which by over-ventilation diminishes the normal proportion of CO_2 in the blood, produces anoxaemia, but Hill and Flack have shown that when the forced breathing is performed; not with air but with pure oxygen, the symptoms of anoxaemia are greatly diminished, no doubt because the proportion of oxygen in free solution is restored. It is owing to its acid properties that CO_2 acts on the respiratory centre, the activity of which is regulated with minute accuracy in relation to the proportion of CO_2 in alveolar air. But the respiratory centre is stimulated also by want of oxygen, to which it reacts still more promptly than

to excess of CO_2 ; the effect of the increased breathing due to this stimulation of the respiratory centre may be to take still more CO_2 out of the arterial blood, producing a condition in which the acid element is diminished—that is to say, the hydrogen-ion concentration is lowered; and to this condition the term alkalosis is applied. When this alkalosis is brought about the kidneys and liver at once begin to adjust the balance in the blood, the kidneys by excreting more alkali, and the liver by making ammonia instead of urea; but they need a relatively long time—several days—to produce their effects.

In uncomplicated anoxaemia there is a vicious respiratory circle. The respiratory centre is exhausted by the anoxaemia, and this exhaustion renders the breathing shallow, though it may be rapid; and the shallow breathing, as has recently been experimentally shown, increases the anoxaemia. Anoxaemia, however produced, is in itself a danger, causing damage to the tissues, which, as in poisoning by carbon monoxide, may persist and cause death even when the cause of the anoxaemia is completely removed. But in many of the acute conditions in which, as has been said, anoxaemia is set up it is not uncomplicated, for the respiratory centre is poisoned and its sensitiveness thereby diminished. The whole of the delicately adjusted mechanism for the maintenance of the oxygen equilibrium falls out of gear when the respiratory centre—the man in the car—ceases to maintain efficient control. It is in these circumstances that the value of oxygen inhalation becomes apparent; the defect in the amount of oxygen in the arterial blood can in this way be supplied. It helps to break the vicious circle of anoxaemia, and allows the crisis to be tided over—the oxygen exchanges of the organism working at a lower level—until the balance can be adjusted, thus giving the body time for adaptation or recovery.

A conclusion of administrative importance is to be drawn: it is that means for the efficient administration of oxygen should be at hand. Dr. Haldane tells us that failure of the respiratory centre seems often to occur with dramatic suddenness, usually in the night, and must be dealt with by administering oxygen without the slightest delay. The vicious circle of respiratory failure can produce its effect very rapidly, even in a normal healthy person, and it follows that in a patient whose respiratory centre is already weakened by the results of infection the failure may be far more rapid; fortunately, recovery on giving oxygen is equally rapid. This lesson was learnt during the war in the treatment of men suffering from irritant gas poisoning; the condition was met by the apparatus Dr. Haldane describes; but it may also be met, perhaps more effectively, by the oxygen chamber, with which experiments have been made at Cambridge and at Stoke-on-Trent.

THE REPRESENTATIVE MEETING.

THE constitutional unit of the British Medical Association is the local Division. For certain specific purposes under the requirements of company law the governing body of the Association is the general meeting in which every member has a right to take part. But for all other purposes the general control and direction of the policy and affairs of the Association is vested in the Representative Body, which is composed of members elected by the Divisions, and of members of the Council. Thus every member, through his or her Division, is entitled to a share in the government of the Association. Since the representative meeting which took place in 1902 it has been the

policy of the Association to reduce the duties of the general meeting to the least amount compatible with the law, and to place the bulk of the responsible deliberative work upon the Representative Body. The central executive of the Association is the Council, whose duty it is to carry into effect the resolutions of a general meeting or of the Representative Body, and to administer the affairs of the Association in accordance with the memorandum of association and the regulations and by-laws.

The basis of the discussions by the Annual Representative Meeting is the Council's report on the general state and proceedings of the Association for the past year, which is issued in the spring together with the balance sheet and financial statement and an estimate of income and expenditure for the coming year. The annual report of Council for 1918-19 was printed in the SUPPLEMENT of May 3rd, and a supplementary report appeared in the SUPPLEMENT of July 5th. At the forthcoming Annual Representative Meeting to be held in the Connaught Rooms, London, at the close of next week, the first business will be to receive these statutory documents; and the various recommendations contained in the Council's reports will come before the meeting as motions. The agenda will include also motions and amendments arising out of reports of Council or committees, and other motions found by the Agenda Committee to be in order. By-law 42 prescribes that "in speaking and voting upon any matter the representative, or representatives, of any constituency shall have regard and so far as may be conform to the preponderance of opinion of the members of that constituency so far as it is known to him or them." Upon this we may remark that the Council has drawn attention in its report to an idea prevalent in some quarters that the individual member has little or no voice in the conduct of the Association's affairs, especially when unable by reason of war conditions to attend a Division meeting, or record a vote by post. The Council expresses the view that there are few, if any, similar bodies in which the individual member who cares to take the trouble has greater power to influence the affairs and policy of the organization. Machinery exists for nomination by post of members for election as representatives or as Branch or Divisional office-bearers.

The question of trade unionism in medicine is referred to in the Council's report, and will no doubt be discussed by the Representative Body. The arguments for and against should be fairly well known by now. The Council has sought the advice of Mr. Gore Browne, K.C., and Mr. H. H. Slesser, standing counsel to the Labour Party, and their opinion¹ conforms with the legal advice previously received. In the opinion of these counsel a medical man, whether employed at a salary or practising in the ordinary way for fees, is not a person employed in trade or industry, and is not "a working man" within the meaning of the Trade Disputes Act, 1906; accordingly, a dispute as to the terms or conditions of employment of a medical man is not a trade dispute within the meaning of the Act. Little or no advantage, in their opinion, would be derived from registration as a trade union in a case in which claims were raised like those raised in the Coventry action. Lastly, a trade union has not the benefit of limited liability that is enjoyed by the British Medical Association so long as it remains a company registered under the Companies Acts. Such is the legal position as interpreted by lawyers specially conversant with trade union law; but had their opinion gone the

other way there would still exist the deep-rooted dislike felt by large numbers of our profession to the application to medicine of trade unionism and all that it implies. Notwithstanding the great activity of the advocates of a medical trade union during the past year, we would hazard the guess that the Representative Body, when this question has been debated, will once more reject the doctrine. The strength of trade unionism lies not in forms or laws, nor in any immunity from legal process, but in the solidarity and discipline it has bred and the power thus given to bring about a strike; but no one has yet been able to show how the medical profession could use the strike weapon even if the majority were willing.

During the past few months the conditions of service under the Insurance Acts have been discussed by the medical profession throughout the country, both in local meetings and in grouped conferences, and as we go to press the whole matter is under consideration by the special conference of representatives of Local Medical and Panel Committees which is being held in London. It is well recognized that these topics affect not only panel practitioners but the interests of the whole profession, and many of them will come up again for discussion at the Representative Meeting next week. In particular the Council holds it to be essential that the Representative Body should consider the memorandum of discussions lately issued by the Insurance Commissioners to all members of the profession, and paragraph 106 of the Insurance Acts Committee's report known as document M. 25, which deals with the conditions for extra services and raises important questions of general policy. The Council, therefore, recommends that each subsection of paragraph 106 should be discussed separately, and the opinion of the Representative Body expressed thereon.

INSURANCE FOR MEDICAL MEN.

THE Medical Insurance Agency, which was founded twelve years ago with the object of assisting medical men to obtain the best terms of insurance of all kinds, including life insurance, accident insurance, and the insurance of motor cars, has from the first kept in mind as one of its chief objects the assistance of the benevolent institutions of the profession. The managing committee of the Agency, at its half-yearly meeting on July 10th, was able to make interim allotments amounting to £455-£125 to the Royal Medical Benevolent Fund, £125 to the Royal Medical Benevolent Fund Guild, £105 to Epsom College Royal Medical Foundation, and £100 to the Royal St. Anne's School. The Royal Medical Benevolent Fund is one of the best known institutions in the profession, and its offspring, the Guild, is doing most admirable work, its special feature being the personal interest shown by individual ladies in its work. It has seemed to the Agency that one of the most practical means it could take to help less fortunate members of the profession was to contribute to the education of children. This it has done by subscriptions to Epsom College, where boys are received on the foundation, and by subscription to the Royal St. Anne's School, where girls receive an excellent education. This benevolent side of the Agency's work has commended it to many members of the profession, though not to so many as might have been expected to resort to it. Last year the total distributed from the Agency's medical benevolence account was £1,002 10s., included in which was a gift of £100 to the Belgian Doctors' and Pharmacists' Relief Fund, which was closed early this year. It also contributed £150 to the War Emergency Fund of the Royal Medical Benevolent Fund. It should further be understood that the insurer himself receives an advantage

¹ BRITISH MEDICAL JOURNAL, March 22nd, 1919, p. 348; SUPPLEMENT, May 17th, 1919, p. 100.

by the return out of the commission received by the Agency of certain sums which in 1918 totalled £697, bringing the whole amount returned since the foundation of the Agency up to £7,200, a sum which represents a direct saving to the profession. The Agency is not bound to any particular companies or forms of policy, and is able to advise medical practitioners contemplating insurance as to the best form of policy to suit their particular conditions. The life insurance business conducted through the Agency is considerable, and it is confidently anticipated that as the conditions disturbed by the war become more stable this part of its business will largely increase. The insurance of motor cars is becoming a very large part of the business; in spite of the difficulties in the way of motorists created by the war and the shortage of petrol and of cars the number of motor insurances has increased, and experience has proved that the Agency, owing to the amount of business it conducts in this direction, is able to assure to its clients that their claims shall be promptly and generously met. In presenting the financial report the chairman, Dr. G. E. Haslip, was able to speak in the most hopeful terms of the future of the Agency, and mentioned that vacancies, due to deaths of several members of the committee, had been filled by the election of Dr. E. Weaver Adams, Dr. H. A. Des Vœux, Lieut.-Colonel R. H. Elliot, I.M.S., Dr. R. A. Gibbons, and Dr. R. Langdon-Down.

A FLOATING SCHOOL OF TROPICAL MEDICINE.

A FEW weeks ago some account was given here of a lecture by Dr. Louis Sambon, in which he proposed the establishment of a floating school of tropical medicine. The general idea would be to charter a boat, and equip it suitably to make voyages with classes of students in tropical medicine to the West India islands. Dr. Sambon had previously brought his scheme to notice in Italy, where it won the support of the Italian Government and the Colonial Institute of Naples; and in France, where the Faculté de Médecine approved it, and where there is hope that Government assistance may be obtained. At a meeting in London last week a committee, with Dr. Andrew Balfour, C.B., C.M.G., as chairman, was appointed to consider the advantages that might be anticipated were such a scheme carried out and its probable cost. It would seem that the first duty of the committee will be to define the scope and purpose of any proposal made. Sea-going expeditions to the West Indies, or other places where tropical diseases prevail, might be concerned primarily with research, the staff including senior students. This was the thought that seems to have inspired some remarks Dr. Balfour made, in the third report of the Wellcome Tropical Research Laboratories, Khartoum. He there suggested the provision of a well equipped laboratory in a vessel of from 800 to 1,000 tons, carrying a staff of the best students in tropical medicine of any year. The trip would be a prize of diligence and ability, and in such a laboratory both tutorial and research work could be conducted during the voyage. A vessel of the size suggested would be able to visit any portion of the globe, could ascend large navigable rivers, and would be the means of bringing back valuable material both for museum and teaching purposes. The latter is a matter of importance. The need of specimens for demonstrations was urgent both in London and Liverpool nine years ago, and it is still greater now. Both schools have sent research expeditions abroad, which have carried out many important researches on the spot, but it is not easy to maintain the supply of class specimens. Biological work of the kind was done by the *Challenger* expedition, and the Prince of Monaco maintains a yacht equipped with a laboratory for oceanographic research. Dr. Balfour stated that the small floating laboratory the Khartoum school maintained on the Nile had proved very useful, and we believe that Dr. Leiper has done a great deal of collecting on native boats in the rivers of Southern China. Dr. Sambon's idea seems

to be rather different, for we gather that he would look upon the ship chiefly as a means for bringing students periodically into the tropics to study diseases in their natural habitats. The work apparently would be done on shore and not on the ship; he has, too, a secondary purpose in view, for he hopes that the visits of the classes with their teachers would stimulate the efforts of local authorities to improve the sanitation, and lead eventually to a pathological survey, of the Lesser Antilles. Both Dr. Balfour and Dr. Sambon are agreed as to the advantages of visits to hospitals and laboratories in the tropics. The former states that it is on the littorals of tropical countries that many important diseases occur, and suggests that in the event of epidemics the infected places might be speedily visited and perhaps materially aided. At all times the collection of specimens would form an important duty of the floating laboratory or school. Specimens could be brought back in good condition for teaching purposes at home, diseases could be studied on the spot, and parasites observed in a living state. The laboratory ship of Dr. Balfour's dream could be used for the study of zoology (especially economic entomology), botany, geology, and hygiene, all subjects more or less intimately connected with tropical medicine. To sum up, his idea would seem to be that practical experience should follow the theoretical foundation laid in a tropical medical school, and there is much to be said for it. Either scheme would cost a good deal of money, but the Colonial Office might properly be expected to contribute.

THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual report of the conservator of the Royal College of Surgeons of England relates the steps that are being taken to restore to their proper places the contents of the museum removed to the cellars and protected corridors in the basement when London was under aerial bombardment. On three occasions bombs were dropped in the neighbourhood of Lincoln's Inn Fields, but save slight damage from stray fragments of shell, the museum escaped unscathed. During the later years of the war much of the space of the museum was given up to the exhibition of war specimens. Altogether, down to the date of the armistice, 3,893 specimens had been received from military hospitals, all duly numbered and registered, and their histories collected and indexed. Over 1,200 had been examined, prepared, mounted, described, and placed on exhibition in the museum. A considerable number of the specimens were received on behalf of the Canadian and Australian forces. By the beginning of March last those belonging to the Australian Government had been packed under the supervision of Major Inglis, A.A.M.C., and shipped to Melbourne; a little later the Canadian specimens were shipped to Montreal by Captain Moreton Hall, C.A.M.C. The national collection belonging to the Royal Army Medical Corps is for the present retained in the museum and in the storerooms. Before the museum can be restored to its former purposes the destination of this national war collection must be settled. Pending a final decision one of the large rooms will be devoted entirely to such war specimens as are already mounted and described. Two other rooms will revert to their former purpose—the exhibition of specimens illustrating human anatomy and human pathology. Besides the war specimens prepared for exhibition by Professor Shattock and Mr. Cecil Beadles, there are still many hundreds of specimens in storerooms awaiting examination and preparation, which will involve the expenditure of a great deal of time, labour, and skilled technique. Professor Keith pays a special compliment to the skill shown by Mr. Beadles in the preparation of these specimens. Progress has been made in the restoration of the ordinary specimens, and the physiological and gynaecological series are already in place.

The anatomical and pathological specimens will be replaced during the present summer. It is hoped that by October the skeletons will have been attended to and the entire collection, with the exception of the teratological series, again made available for study. The space at disposal is being increased by the conversion of a basement room into a part of the museum, and to it the skeleton of the great Greenland whale, which formerly occupied a central place in one of the rooms on the ground floor, will be removed. In his report on the pathological department Professor Shattock enumerates the specimens presented during the year. Mr. Alban Doran reports considerable progress in the preparation of the descriptive catalogue of the collection of surgical instruments, to which many additions have been received, including a number of instruments belonging to the late Mr. Arthur Durham, among which were specimens from the surgical outfit of Mr. Aston Key and Mr. John Hilton, and the otolaryngoscopic mirror given by Señor Garcia to Mr. Durham. Sir Robert Jones has presented the instruments and apparatus invented and employed by his uncle, the late Mr. H. O. Thomas, including, in addition to the splints and appliances so well known by his name, a large hypodermic syringe used in the treatment of intestinal obstruction, a special two-way aspirator for the removal of fluid from the joints, and a set of singular instruments used by Mr. Thomas in cutting for stone. Mr. Stephen Paget has presented the microscope made by Andrew Ross about 1860, which was used by Sir James Paget during his pathological and physiological investigations.

ACCESSORY FOOD FACTORS.

THE Committee on Accessory Food Factors, appointed jointly by the Medical Research Committee and the Lister Institute, has issued a memorandum on the importance of accessory factors in food. The memorandum, which is signed by the chairman, Professor F. G. Hopkins, and the secretary, Dr. Harriette Chick, has been compiled in order to afford practical help to those occupied in the administration of food relief in the famine-stricken districts of Eastern Europe. It discusses the distribution and properties of the accessory factors, the antineuritic or anti-beri-beri factor (water soluble B); the antirachitic or growth factor (fat soluble A), and the antiscorbutic factor. Passing lightly over the antineuritic factor, the memorandum states that evidence is accumulating that rickets is caused by a shortage not of fat as such but of the fat-soluble growth factor, which is contained in certain fats only. It is absent from vegetable oils or present only in negligible amount, and is absent also from lard. It is present in notable quantities in cream, butter, beef fats, fish oils, such as cod-liver oil, and egg yolk. To prevent rickets in infants and young children, should full cream milk be unavailable, or its use thought inadvisable owing to risk of infection, the best sources of this factor are full cream dried milk or full cream unsweetened condensed milk. The dried milk is preferable to the condensed milk, but if either is used an extra antiscorbutic should be given. Green leaves are a cheap source of the fat-soluble vitamine. The loss in ordinary cooking is not serious, and adults can probably maintain good health when animal fats are replaced by vegetable fats provided green-leaf vegetables are consumed in fair quantity. To infants or very young children the juices expressed from cabbages and other green-leaf vegetables—raw or after steaming, but not boiling, for a few minutes—may be given, as also a teaspoonful a day of purées prepared from cooked spinach or lettuce. Pregnant and nursing mothers should have as liberal a supply of the fat-soluble factor as possible. It is thought that xerophthalmia may be due to want of it, and it is advised that, should this condition, or rickets or growth failure exist, a daily dose of cod-liver oil ought to be regarded as essential, in addition to all other procedures. For the

prevention of scurvy the use of germinated seeds is advised. The seeds should be soaked in water for a day and kept moist with access of air for one to three days more, by which time they will have sprouted. It is the sprouted material which possesses antiscorbutic value. It should be cooked in the ordinary way, but for as short a time as possible. The richest sources of the antiscorbutic factor are cabbages, swedes, turnips, lettuce, watercress, lemons, oranges, raspberries, and tomatoes. Potatoes, carrots, French beans, beetroot, mangolds, and lime juice are inferior. The antiscorbutic factor is destroyed by heat, drying, or other methods of preservation, and all tinned vegetables and tinned meat are deficient in the antiscorbutic principle. The acidity of fruit increases the stability of the accessory factor, and to some extent prevents its destruction during the sterilization by heat and subsequent storage of tinned fruits. Artificially nourished infants should receive an extra antiscorbutic. Cow's milk, even when raw, is not rich in the antiscorbutic factor, and this is still further reduced by heating, drying, and preservation. The most suitable antiscorbutic material is fresh orange juice, 1 to 3 or 4 teaspoonfuls daily, according to age. Raw swede juice is said to be a potent antiscorbutic and an excellent substitute for orange juice. The clean cut surface of the swede, or if that is not obtainable, of the turnip, is grated and the pulp squeezed in muslin. Inquiries may be addressed to the Secretary of the Committee at the Lister Institute, Chelsea, S.W.1.

INTERNATIONAL PRIORITY.

It may at some time be found possible to constitute an international medical tribunal before which claims to priority in medical and scientific discoveries might be discussed and adjudicated upon. At present each nation grabs the credit for its respective children. For instance, was exophthalmic goitre first described by Graves or—as the French name for the disease would imply—by the American Basedow? Did Wassermann really elucidate the test of the deviation of the complement known by his name or was it really to Dr. Bordet that the achievement should be attributed? As we showed some years ago, Bordet's claim to priority is clear. Nobody, so far, has laid claim to priority over Roentgen in the matter of x rays, but Ehrlich's claim to having discovered arsenobenzol is challenged by Armand Gautier and, incidentally, by Dr. Mouneyrat. In France antidiphtheria serum is currently known as Roux's serum and the hypodermic syringe which serves for the injection as Roux's syringe, ignoring Professor Behring altogether. We might get to hear something about Dr. Pravaz, who has given his name to the ordinary hypodermic syringe, at any rate in France. The man who introduces a new instrument into his country often gets the credit for having invented it, and the same remark applies to novel methods of treatment. It would save some confusion and much heart-burning if these matters were properly cleared up, so that Caesar should be credited with what belongs to him.

THE CIVIL LIST PENSIONS.

AMONG the recipients of Civil List pensions during the year ended March 31st, 1919, is Lady Turner—"in view of her late husband's, Sir George Turner's, services in the investigation and prevention of rinderpest, and in consideration of his death through contracting leprosy in the public service." Sir George Turner, M.D., became medical officer of health for Cape Colony in 1895, and as the result of his investigations a severe epizootic of rinderpest was stamped out by his method of simultaneous inoculation with virus and serum. For seven years he worked devotedly at the Pretoria leper asylum, and thus contracted leprosy. He resigned his appointments in South Africa in 1908, and spent the remainder of his life in Devonshire. On the direct initiative of the King the honour of knight-

hood was conferred upon him in 1913, two years before his death. Mrs. Harrison is granted a pension of £50, "in consideration of the services rendered by her late husband, Colonel W. S. Harrison, in connexion with inoculation against enteric and typhoid fevers, at considerable risk to his own health." Lieut.-Colonel William Sandilands Harrison, R.A.M.C., died in 1915 at the early age of 43. He did valuable research work while assistant professor of pathology at the Royal Army Medical College, and shortly before his death was appointed professor of tropical medicine. Pensions are also granted to the widow of Professor A. E. Mettam, President and professor of pathology and bacteriology in the Royal Veterinary College of Ireland; and to Miss Helen Tichborne, in view of the late Professor Tichborne's discoveries in chemistry and pharmacology.

Medical Notes in Parliament.

National Insurance Bill.

THE INCOME LIMIT.

THE National Insurance Bill to raise the income limitation of insurance for non-manual workers from £160 to £250 per annum, was taken in standing committee of the House of Commons on July 16th, Mr. T. P. O'Connor in the chair. Only one amendment was moved; this was by Major Farquharson, to provide that

Nothing in this Act shall be construed as entitling to insurance benefit any person employed otherwise than by way of manual labour who at the date of the coming into operation of this Act is not an insured person and whose income exceeds one hundred and sixty pounds per annum, and that any such person claiming to be entitled to insurance benefits shall make a declaration accordingly.

The case for the bill as presented last week was that, unless the higher income limitation were established, between half a million and a million insured persons whose wages or salaries had been raised to meet the increased cost of living would be cut out of the Insurance Act. It was admitted, however, that the new bill would bring into the scope of possible insurance a number of persons, roughly estimated by Major Astor at 20,000, whose income at the time of the passing of the last Act was above the limitation then fixed. Dr. Farquharson's amendment was designed to strike at this defect of the bill, but Major Astor, on behalf of the Government, said that it was impracticable and that all that could be done had been done to meet the case of the medical profession. In the end the amendment was rejected by 18 votes to 3.

Money Resolution.

On report on the Money Resolution for the National Insurance Bill, on July 11th,

Mr. Hogge said it seemed anomalous that while the income tax began at a basis of £130 the Government should raise the rate at which persons should be brought under the National Insurance Act from £160 to £250. He did not wish to argue whether £160 or £250 was a proper limit, but obviously the proposal was brought forward because of the rise in wages and food prices—temporary reasons—and he wished to know whether it was the intention of the Government permanently to draw the insurance line at £250, because, if so, it would alter the whole conception of national insurance.

Mr. Tyas Wilson, speaking as a Labour member, was not sure he agreed with Mr. Hogge's suggestion that as the rise in prices was reduced wages would come down to pre-war level. He thought there was a disposition amongst those he had met in favour of the present proposal. But if wages came down it might be necessary to reduce the income limit.

Major Hurst said that the effect of the bill would be to bring in two large classes—first, the class who had never been under the National Insurance Act before, and secondly, those whose rises in wages during the last few years had carried them beyond the present limitation. He felt certain that neither of these classes had expressed any opinion as to whether they wanted to come under this provision or not.

Dr. Addison said that all the care that could be taken to consult the representative societies concerned was taken before the proposal was submitted to the House. The new classes which might be brought in were entitled individually to claim exemption. The proposal was brought forward because, owing to the increase in wages, between half a million and a million persons who had paid their contributions regularly under the Insurance Act would be automatically deprived of any benefit which might arise from their contributions. It was therefore necessary to increase the wage limit. As to whether the proposal was temporary or not he could not say anything very definite. He was inclined to agree with Mr. Wilson that there was no reason to suppose there would be a return to pre-war level. It was true that the bill revealed nothing of a temporary

nature, but it provided that those not hitherto included should have the right to contract out. The terms of the bill were very generous, and it could be amended in Committee to suit any particular cases. They might leave to the discretion of future Parliaments any action that might be thought necessary if the general rate of wages altered.

The resolution was agreed to.

Date of Termination of the War.—Dr. Addison informed Sir Kingsley Wood, on July 10th, that the National Registration Acts would expire on the date of the termination of the war. The date, as soon as it had been determined by an Order in Council, would be made known to local registration authorities. These authorities were, in the meantime, being informed that all duties under the Act might properly be suspended. It may be added that the Act passed last November provides that His Majesty in Council may declare what date is to be treated as the date of the termination of the present war, and the date so declared shall be as nearly as may be the date of the exchange or deposit of ratifications of the treaty or treaties of peace. Further, an Order in Council may similarly declare what date is to be treated as the date of the termination of the war between this country and any particular state.

Ministry of Health: Consultative Councils.—Mr. W. R. Smith asked the Minister of Health, on July 10th, whether, having regard to the importance of matters relating to the hygiene and health of animals used for human food, the provision of milk from cows free from tuberculosis, and the diseases of animals communicable to man, he would consider the advisability of putting at least one veterinary surgeon on every consultative council to be set up. Dr. Addison replied that the suggestion would be borne in mind in considering the composition of councils or special committees dealing with medical or sanitary administration, but he could not agree that such an appointment would be desirable in the case of every consultative council to be set up under the Ministry of Health.

Death after Arsenic Treatment for Syphilis.—Mr. Waterson asked, on July 4th, whether the Ministry of Health was taking any action in regard to the recent death of a girl in St. George's Hospital while undergoing treatment for congenital syphilis; and whether there had been a crop of such cases at Cambridge and Dublin during the war. Major Astor, in a written reply, stated that the case was under inquiry by the special committee appointed by the Medical Research Committee to investigate the results of the treatment of syphilis by salvarsan and its substitutes. The drug used was novarsenobillon, which is one of the drugs approved by the department for the treatment of syphilis, and tested under arrangements made by the Medical Research Committee. The coroner's finding at the inquest on this case was that this drug was properly administered and in proper amount. There had been several fatal cases following though not necessarily caused by the administration of these drugs in military hospitals at Cambridge and Dublin during the war, and these cases also were under investigation by the special committee. No precise information was at present available as to the number of deaths which had occurred in England and Wales since the beginning of the war, but the total number was of course very small, especially in proportion to the very large number of injections of such drugs taking place daily.

Tuberculosis Cases in London.—Replying to Mr. Freeman, on July 14th, Major Astor said there were approximately, so far as the County of London was concerned, some 1,700 persons, including children, in residential sanatoriums, and 500, of whom more than half were children, awaiting admission. Steps were being taken to increase the accommodation, including the adaptation of buildings that were provided for war purposes, so far as these were suitable.

Tuberculous Discharged Soldiers.—Mr. Devlin asked a question as to discharged soldiers suffering from tuberculosis who were unable to procure employment, as no employer wanted consumptive workmen, and inquired whether these men would therefore be allowed the full 100 per cent. disablement pensions to help them to exist during the few years they might expect to live. Sir James Craig said the question of tuberculosis as affecting discharged soldiers had recently been considered in all its aspects by an Inter-Departmental Committee. Its report, which was expected within the next fortnight, would be immediately taken into consideration.

Improvements in Artificial Limbs.—In reply to Sir Donald Maclean, who asked whether the Pensions Minister would publish in the daily press photographs or sketches of the latest improvements in artificial limbs for the information of disabled men, Sir James Craig said the Ministry would consider how far it would be practicable. Arrangements were being made to exhibit at repair depôts the various artificial limbs available, so as to give a choice of limbs within limits approved by the surgeons to the disabled men. A list of repair depôts would be published.

The Scottish Board of Health.—Mr. Munro (Secretary for Scotland), on July 14th, in answer to Mr. Macquistin, stated that the Scottish Board of Health had been duly constituted, with powers duly exercisable as from July 1st. Until the personnel was complete only duties of routine kind had been discharged.

Antitetanic Serum.—In reply to Mr. Gilbert, who asked as to a rider by the jury at an inquest conducted by Dr. Waldo recommending that antitetanic serum should be supplied to medical officers of health, Dr. Addison said that steps were being taken in this direction.

MEDICAL BOARDS OF THE MINISTRY OF PENSIONS.

MEDICAL practitioners wishing to serve on the Boards of the Ministry of Pensions, and especially those who have had practice and experience in the diagnosis and treatment of war diseases, such as trench fever, dysentery, malaria, etc., are requested to communicate with the Commissioner of Medical Services of the region in which they reside. We are informed that the remuneration will be one guinea per session of two and a half hours for ordinary members of the Board and two guineas per session for specialist members of the Board.

The names and addresses of the Commissioners and the boundaries of their regions are given below:

London and South-Eastern Region: Dr. H. J. Neilson, Hotel Windsor, Victoria Street, S.W.1. Boundaries: The City of London and Metropolitan Police Districts, and the Counties of Kent, Surrey, and Sussex.

Eastern Region: Dr. T. Basil Rhodes, 80, Westbourne Terrace, Paddington, W.2. Boundaries: Norfolk, Suffolk, Cambridgeshire, Oxfordshire, Huntingdonshire, Bedfordshire, Berkshire, Buckinghamshire, Northamptonshire, Leicestershire, Rutlandshire, Hertfordshire, and Essex (except the portion of the two latter included in London and South-Eastern Region).

South-Western Region: Dr. J. Young, 5a, Union Street, Bristol. Boundaries: Gloucestershire, Wiltshire, Dorset, Somerset, Devonshire, Cornwall, Hampshire, Isle of Wight.

West Midland Region: Dr. F. R. Hill, Queen's College, Paradise Street, Birmingham. Boundaries: Staffordshire, Shropshire, Herefordshire, Worcestershire, and Warwickshire.

East Central Region: Dr. Gibbs Lloyd, Acting Commissioner, Basinghall Buildings, Basinghall Street, Leeds. Boundaries: Yorkshire (except the Cleveland district on the north which is included in Northern Region, Middlesbrough area), Derbyshire (except district included in Chester (new)), Nottinghamshire, and Lincolnshire.

North-Western Region: Dr. A. H. Williams, 1, North Parade, Deansgate, Manchester. Boundaries: Lancashire, Cheshire, Isle of Man, and portion of Derbyshire embracing Glossop and New Mills.

Northern Region: Dr. W. Lloyd Reade, 47, Pilgrim Street, Newcastle-on-Tyne. Boundaries: Northumberland, the town of Berwick, Durham, the Cleveland district of Yorkshire, Cumberland, and Westmoreland.

Welsh Region: Dr. Bickerton Edwards, 30, Park Place, Cardiff. Boundaries: The whole of Wales and Monmouthshire.

Scottish Region: Dr. G. H. Gibson, 59, Cockburn Street, Edinburgh. Boundaries: The whole of Scotland.

Irish Region: Dr. D. A. Carruthers, 41, Upper Fitzwilliam Street, Dublin. Boundaries: The whole of Ireland.

THE BRITISH FEDERATION OF MEDICAL AND ALLIED SOCIETIES.

A MEETING of the Medical Parliamentary Committee was held at the College of Ambulance, Vere Street, London, on July 11th. Dr. ARTHUR LATHAM presided over an attendance of about forty-seven representatives of medical and other societies interested in national health.

The CHAIRMAN stated that Sir Watson Cheyne had for physical reasons resigned his membership of the Committee, but his departure indicated no difference of opinion.

Dr. N. HOWARD MUMMERY, honorary Organizing Secretary *pro. tem.*, read a list of forty-seven societies which had signified their willingness to be represented on the Committee. Other bodies had not yet had an opportunity of consulting their members or had waived the matter for the present. The Council of the British Medical Association had decided not to be represented, but this decision was subject to the approval of the Annual Representative Meeting.

The CHAIRMAN said, in reply to two representatives who asked whether the new organization was in opposition to the British Medical Association, that there was no opposition on the part of the Medical Parliamentary Committee. A number of members of the British Medical Association and of its Council were in favour of joining forces, and he still hoped that the co-operation of the Association would eventually be secured.

The report of a subcommittee estimated the annual expenditure of the Committee (including the salaries of organizing secretary, clerk, and lobby correspondent) at £2,092. The subcommittee suggested that the title of the organization should be altered to "The British Federation of Medical and Allied Societies," and that it should be an incorporated association, limited by guarantee, under the Companies' Acts, 1908-1917, and registered under the Board of Trade (Section 20) with limited liability, but without the word "limited" after its name. Its Council should consist of representatives of affiliated and allied

bodies and co-opted members, and an executive committee should transact its ordinary business.

The CHAIRMAN explained that the reason for the suggested change of name was that the title "Medical Parliamentary Committee" had given rise to such frequent misunderstandings. The change of name did not indicate any change of policy. Sir RONALD ROSS moved that the title be "The British Federation of Medical and Allied Societies," and this was unanimously agreed to.

After some discussion on finance it was decided to leave it to the Executive Committee to draw up a financial scheme and submit this to the various societies with a request for their opinion before the next meeting.

The following nominations were then submitted from the chair for the Executive Committee:

Chairman: Sir Malcolm Morris.

Vice-Chairmen: Dr. Arthur Latham, Dr. E. H. M. Stancomb.

Honorary Secretary: Dr. Charles Buttart.

Honorary Treasurers: Sir Thomas Horder, Dr. Gordon Dill.

Executive Committee: Dr. Rashell Davison (Association of Medical Officers of Health), Dr. H. J. Cardale (Association of Panel Committees), Mr. C. F. Rilot (British Dental Association), Sir Ronald Ross (British Science Guild), Mrs. Bedford Fenwick (Central Committee for State Registration of Nurses), Mr. Comyns Berkeley (College of Nursing, Limited), Dr. Frank Coke (Medico-Political Union), Miss Rosalind Paget (Incorporated Midwives Institute), Dr. Jane Walker (Medical Women's Federation), Dr. R. H. Cole (Medico-Psychological Association), Mr. E. B. Turner (National Council for Combating Venereal Diseases), Dr. Edwin Smith (National Medical Union), Mr. Rowsell (Pharmaceutical Society of Great Britain), Professor E. H. Starling (Physiological Society), Dr. A. Withers Green (Poor Law Medical Officers' Association), Dr. W. Pasteur, C.M.G. (Royal Society of Medicine), Dr. Mary Chalmers Watson, C.B.E. (Scottish Union of Medical Women), Dr. Halliday Sutherland (Tuberculosis Society), Dr. Squire Spriggs, Dr. Arthur Shadwell.

Representatives of the National Association for the Prevention of Tuberculosis and the British Postal Medical Officers' Association put forward claims for their respective bodies, but it was agreed, on the motion of Sir RONALD ROSS, to adopt the list as it stood, on the understanding that with the growth of the Federation it would be possible to make the Executive Committee more inclusive.

It was announced that the office of provisional organizing secretary had been accepted by Dr. N. Howard Mummery, who was serving in an honorary capacity until the Executive Committee could be got together.

England and Wales.

HOUSING IN LONDON.

THE Housing Committee of the London County Council has presented a scheme to provide 29,000 new houses, to accommodate approximately 145,000 persons, within five years. The total capital expenditure will be about 31 millions, including a little over 5 millions for slum clearances and rehousing. An economic and remunerative rent is not expected; it is, in fact, estimated that the annual deficit on the first 10,000 cottages will be nearly half a million, or on each cottage from £45 to £48 a year, according to the number—20 or 15—to be provided to the acre. On the remaining 19,000 cottages the deficit is expected to be about £600,000, or from £30 to £33 a year on each cottage. To this is to be added the annual deficit of over £100,000 on block dwellings to be provided for rehousing in connexion with the clearance of insanitary areas, which cannot be undertaken before some progress is made in the provision of new accommodation elsewhere. The ultimate annual deficit when the scheme is completed is estimated to be one million and a quarter. The Finance Committee pointed out that the rents on which the estimates were based were less than half the remunerative rents, so that the other half would have to be borne by public funds. The committee expressed the opinion that from a general financial point of view it is undesirable that so large a proportion of the cost should fall on public funds. The proposal, however, was approved, and over half a million is to be expended immediately on the erection of 650 cottages and two shops.

DR. CAMPBELL OF BRADFORD.

Dr. H. J. Campbell, who twenty-four years ago went from Guy's Hospital to be physician to the Bradford Infirmary, has resigned that office, and is retiring from practice. On July 4th he was entertained by the medical practitioners of Bradford and all parts of the surrounding district at a complimentary dinner. The chair was occupied by Dr. Kitchin, president of the Bradford Medico-Chirurgical

Society, and after dinner Dr. Rabagliati made a presentation on behalf of many subscribers. He said that the departure of Dr. Campbell was a matter of great regret to all who had been associated with him and had had opportunities of estimating the excellence of the work he had always done. Some years ago Dr. Campbell had said to him that in a consultation there were three things to be considered: First, the good of the patient; secondly, the position of the family doctor; and thirdly, the position of the consultant. Throughout his life in Bradford Dr. Campbell had always followed out this rule, ever considering the patient first. Dr. Campbell in his reply said that he had always endeavoured to be loyal to those with whom he was associated, and they had always been loyal to him. He thanked the givers most warmly for the handsome presentation, but still more for all the kindness and consideration they had always shown him. Dr. Campbell has been an active member of the British Medical Association, as secretary and treasurer of its Yorkshire Branch, as a member of the Central Council, and as chairman of the Hospitals Committee. During the war he was visiting physician to the War Hospital and chairman of the Local Medical Committee. All through his career in Bradford he showed an interest in the life of the city outside medical work, in art and literature, and in all matters connected with health, and had served upon a number of committees. He will be much missed by his colleagues and the public in Bradford.

Scotland.

CHAIR OF CLINICAL SURGERY, EDINBURGH.

SIR HAROLD STILES has been appointed Regius Professor of Clinical Surgery in the University of Edinburgh, in succession to Mr. F. M. Caird. His selection by the Crown will command universal approval. He was born in England, but has been identified with Edinburgh all his working life. He was the most brilliant scholar of his year, and won many academic distinctions. Most of his work has been done at the Royal Edinburgh Hospital for Sick Children, but he is also surgeon to the Chalmers Hospital. During the war he did a great amount of military work and is inspector of military orthopaedics in Scotland. When the Army Medical Advisory Board was reconstituted he was appointed a member along with Sir Berkeley Moynihan, Sir Robert Jones, Sir Bertrand Dawson, Sir Havelock Charles, and Sir W. H. Horrocks. He holds the rank of colonel in the army and received the honour of knighthood last year.

SIR THOMAS FRASER.

Sir Thomas Fraser, who recently resigned the Chair of Materia Medica in the University of Edinburgh, was on July 11th presented by colleagues and friends with his portrait, a three-quarters length painted by Mr. Robert Home. Sir Thomas Affleck, in making the presentation, said that from the beginning of his career Sir Thomas Fraser's work had marked him out for great things; this promise was early fulfilled, so that when in 1877 he was called to succeed his eminent master and friend, Sir Robert Christison, the medical world felt that the right man had been chosen. His work had shed lustre upon the university, and in the Royal Infirmary he had proved himself a clinical teacher of the first order; thousands of his former pupils in all parts of the world were now practising those precepts of thoroughness, accuracy, and honesty in the investigation and treatment of disease, of which he himself was so conspicuous an example. Sir Thomas Fraser, in expressing his thanks, said that during his tenure of forty-two years he had shared in the training of between 6,000 and 7,000 men, who constituted as a body the best qualified practitioners of medicine and surgery in the British empire. The high professional value of original research in all departments of medicine had been recognized during the last twenty years, whereas at the time of his appointment there was an almost total want of provision in respect of accommodation and equipment. Of the researches in which he had engaged he mentioned especially that with regard to the alkaloid of physostigma, the first substance found to contract the pupil, and now in everyday use by the ophthalmologist. On the previous day, as noted in the column of university intelligence, Sir Thomas Fraser received the honorary degree of LL.D. from the University of Edinburgh.

Correspondence.

RECONSTRUCTION OF THE TERRITORIAL MEDICAL SERVICE.

SIR,—I had hoped that the excellent article on the future of the Territorial Medical Service, in the *BRITISH MEDICAL JOURNAL* of May 3rd. would have aroused some interest amongst R.A.M.C. readers. So far no responses are forthcoming. It is sincerely to be hoped that the various points to which your "well informed correspondent" drew attention will not now be lost sight of, especially in view of the fact that the War Office has called a Committee of R.A.M.C.(T.F.) Officers to make recommendations for the reconstruction of the medical services of the force, and that the British Medical Association has appointed Major E. G. Annis, R.A.M.C.(T.F.), to attend the meetings as representative. The drawing up of a "General List" in August, 1918, was a step in the right direction, but I think the principal weakness in the old Territorial Force Medical Service was ascribable, partly to the method of training, which was that of the particular unit the officer belonged to, and partly to the system, by which officers were posted to a particular unit, and seldom or never moved from it, during all their service. Most Territorial officers when they took a commission were relegated to a unit, where they remained during all their service—in fact would have remained there still if the war had not come along and jolted things up a bit.

One good thing the war did was to move officers about more freely amongst variously constituted units on the different fronts, so that they received in war time a training which they should have received in peace times. For example, your correspondent says—and rightly, too—that "the Territorial Regimental M.O. was a 'backwater man' with very little opportunity for training, and practically no executive experience, and so was retarded in promotion." This was evidently the view taken by Mr. Churchill's committee, to judge from their report, after they had inquired into the system of promotion in the R.A.M.C.(T.F.); but your correspondent might also have added that, even when Territorial Regimental M.O.s had made themselves efficient in executive work and demonstrated their proficiency therein by passing examination D for promotion (from Major to Lieutenant-Colonel), they were still "held up," or, rather, "turned down."

What is required in the new T.F. Medical Service is a good all-round training for officers. Part of that training might be during their student days at the universities and hospitals, but during the annual training an officer should not go year after year to the same unit and go through the same routine. He should be shifted about and made competent to act in any unit, whether as Regimental M.O., or with a field ambulance or casualty clearing station. Due attention should be paid to hospital work (clinical and administrative) and to sanitary duties.

If the training were developed on the "all round" lines I have indicated, the service would be vastly improved, and it would be found on mobilization that officers would be more easily posted to duties suitable to their capacities. There would not be so much attempting to fit square bolts into round holes! Any one can understand what I mean if it ever was his lot to see a highly trained scientific gynaecologist delving for fragments of a high explosive shell in the deep lumbar muscles—an occupation at which he looked, and, I have no doubt, felt, as much at home as a mermaid in a hayfield! No, Sir, what is required is a universally adaptable bolt to fit any hole, guaranteed reliable in all climates and under all conditions. It would be helpful to see discussed in these columns the experiences and suggestions of Territorial officers who have served on the various fronts.—I am, etc.,

June 30th.

TERRITORIAL FORCE.

MEDICAL AND SURGICAL DIRECTORATES FOR THE ARMY MEDICAL SERVICE.

SIR,—Those interested in the development of the Military Medical Service will read with great satisfaction of the appointment of directors of hygiene and pathology in the Army Medical Department.

The initiation of the scheme for the creation of these

directorates is no doubt made possible at this time by the fact that the two very distinguished officers who have been appointed directors have been permitted to "carry on" in their respective specialties, instead of being switched into the usual channel of advancement in administrative posts.

To a civilian observer of medical and surgical arrangements during the war it seems strange that similar schemes for medicine and surgery should not have been brought into being at least *pari passu* with those for hygiene and pathology. Strange, too, that these two youngest born subjects, so to speak, should receive such preferment while the older should still be left under the thumb of administrative departments, which should be subservient to them!

While every one acknowledges the incalculable value of the work done by hygienists and pathologists in the prevention and cure of disease, yet the experience of the war showed how essential the advice and influence of specialists, represented by consultants and others, were. Sir George Makins, in the lecture published in the *BRITISH MEDICAL JOURNAL* on June 28th, has shown very clearly the part which consultants actually played in the war.

The creation of the directorates in hygiene and pathology will, without doubt, result in the best men rising to the highest ranks without having to desert the professional work in which they show greatest proficiency. There is no reason why the physician or surgeon should receive different treatment and be compelled to step into administrative appointments, in which the routine work usually depends on the efficiency of trained clerks, while unusual problems depend for their solution on common sense. Under present conditions, the professionally employed officer may be, and often has been, curtailed in good work by an unsympathetic administrative officer of superior rank.

Medicine and surgery require directorates as clamantly as did hygiene and pathology, and it is to be hoped that the Director-General is of this opinion and will set machinery in motion to establish them without delay.

The consultants in this war were virtually directors. As in war, so in peace a similar system should prevail. The hospital specialist would then have a channel of communication in connexion with his purely professional work through subdirectors to the chief director of the department concerned (medicine, surgery, hygiene, pathology, etc.), and should have a chance of promotion to the highest ranks on professional standing, instead of, as in the past, with extremely rare exceptions, on administrative capacity only. How often, during the war, was a man of high professional attainments diverted from his work to an administrative appointment which really required special training for proper performance!—I am, etc.,

Aberdeen, July 8th.

H. M. W. GRAY.

KALA-AZAR IN MESOPOTAMIA.

SIR,—The very important question whether kala-azar may be contracted in Mesopotamia has been recently raised by Dr. Low¹ and by Dr. Hamill,² and while the latter offers a guarded opinion, the former considers, from the evidence adduced by him, that the question may be answered in the affirmative.

While in Baghdad, I lived with Dr. Low's case during the greater part of his stay in that city up to the time of his admission to hospital for the complaint, which was only definitely diagnosed in England six months later. He arrived in Mesopotamia about the end of July, 1917, after about four or five months' residence in India, during which he had been stationed in Bombay and Karachi and had visited Bangalore for a brief period. According to Dr. Low's statement the patient enjoyed good health till the following March (1918), and he was admitted to hospital in April. I cannot agree that the patient's health was satisfactory during the whole period of my stay with him (November, 1917, onwards). Though he was able for work, and indeed was a most energetic laboratory worker, he was constantly complaining of headaches, especially in the evenings, and he was troubled with a persistent hard cough of an asthmatic character. The possibility of a tuberculous basis was often suggested in conversation with himself and his colleagues. If these premonitory symptoms be regarded

as evidence of specific infection acquired in India, the incubation period would work out at five or six months.

A history such as this would be quite common in kala-azar, and when one considers the generally insidious onset of this disease, short incubation periods can be satisfactorily determined only by actual demonstration of the parasite at a time when symptoms are probably too slight to suggest a specific infection with *Leishmania* or to warrant spleen or liver puncture.

In the spring of 1918 we had two proved British cases of kala-azar in Baghdad, one of which was diagnosed by Dr. Low's patient shortly before he himself was admitted to hospital. Another occurred since and was only diagnosed at autopsy, spleen puncture during life having been negative. One of these cases acquired his infection almost certainly in India. He had been invalided from Mesopotamia to India in October, 1916, and resided successively at Deolali, Lahore, Belgaum, and Bombay till the beginning of May, 1917, when he left again for Basra. He returned to his unit, and thereafter was continually reporting sick. "He did not feel fit for anything," but had no definite complaint beyond increasing lassitude. In November, 1917, he was admitted to a Baghdad hospital for malaria (unconfirmed), and in March, 1918, he was again admitted, when the true nature of the disease was revealed by liver puncture. The patient himself dated his illness from his stay in Belgaum. This case improved under antimony, and was sent down the line.

The second case, confirmed by spleen puncture in March, 1918, ended fatally in April. His condition on admission was serious. Though parasites had been very numerous in the liver juice taken during life, they were exceedingly scarce both in the liver and spleen after death—a circumstance which was attributed to the sterilizing action of the few doses of antimony administered. This man had arrived in Mesopotamia from Bombay about the end of May, 1917, but the official records make no mention of movements in India. I gathered from the patient, who was a regular soldier, that he had not resided in India, but had been in various parts of Africa. In this case the records of movements are unsatisfactory.

The third case, diagnosed only *post mortem*, had been, I understand, in India, but I have not yet obtained an official record of his movements.

My object in mentioning these cases is to submit that, before satisfying oneself that kala-azar may be contracted in Mesopotamia, one must have definite evidence of its occurrence among natives. My inquiries of civil surgeons lent no support to that view, but, naturally, one must wait until new diseases have been more carefully inquired into.

If kala-azar occurs in Mesopotamia, this country would form an exception to the rule that *L. tropica* and *L. donovani* do not prevail in the same geographical areas. The rule, however, I admit, is not absolute. I also admit that places I have mentioned, such as Lahore and Belgaum, are not generally regarded as kala-azar foci. On the other hand, I am informed by officers with Indian experience that sporadic occurrence of kala-azar in districts remote from Bengal, Assam, and Madras is not unlikely.

A Syrian bacteriologist who was taken prisoner at Kut, and who later did good service in a British laboratory in Mesopotamia, informed me that he had diagnosed a few cases of kala-azar by spleen puncture among Turkish soldiers at Kut, and that he had heard of many more cases among the Turks. I am inclined to believe that these Turks brought the infection with them from Asia Minor, a definite focus of *L. infantum*. The possibility also is not excluded that the British cases I have mentioned, who were all serving in the forward area, may have acquired their infection from a Persian or Caucasian source.—I am, etc.,

J. C. G. LEDINGHAM,

Lister Institute,
London, July 10th, 1919.

Late Consulting Bacteriologist,
Mes. Ex. Force.

ACCESSORY FOOD FACTORS AND THE INTESTINE.

SIR,—I have read with great interest and appreciation Lieut.-Colonel McCarrison's article on deficiency of accessory food factors, and welcome any observations that may have bearing upon coeliac disease.

¹ *BRITISH MEDICAL JOURNAL*, June 7th, 1919.

² *Ibid.*, July 5th, 1919.

This condition, in which I have been interested for many years, and upon which I have seen *post-mortem* examinations made, both in the ascitic and non-ascitic stage, presents, among many problems, one which seems to me of outstanding interest. A child who has been thriving upon a milk diet suitable to an infant of the particular age, has, for example, an attack of bronchopneumonia or whooping-cough complicated by diarrhoea, and from that time we find ourselves in this dilemma: We stop the diarrhoea by restricting diet and by suitable drugs, and then, when we attempt to return by stages to a suitable diet, we find intolerance of milk and a return of diarrhoea, with passing of peculiar pasty stools and rapid wasting. We are perforce compelled to seek for some food or foods that can be tolerated, and are then met with the fresh obstacle that the moment we attempt to improve this diet from one of near starvation we find after a short interval of success another breakdown—more diarrhoea and more collapse. Further, the article of food that suits one case is harmful to the next, with the result that, however much we dislike it, we are forced to build up, by sheer experiment, a diet at once empirical and unsatisfactory. In the very severe cases I have been struck again and again by the mother's statement, somewhat to this effect: "I have learnt by bitter experience what you told me—that until I practically starved my child no signs of recovery would commence to show themselves." In a recent very striking case the mother, by weighing daily the food and faeces, anticipated the earliest sign of an outbreak of diarrhoea, and eventually there was an excellent recovery.

Here again we meet with a remarkable fact—that these children, many of them, begin to recover about the sixth year without any obvious reason. It is clear that during the long period of inadequate and often unbalanced diet many of the changes described by Colonel McCarrison might well arise as secondary events. Yet how are we to avoid these dangers? It would seem that in some children, whether on account of some peculiarity in constitution or in the original illness, there results a widespread destruction of nearly all digestive power. Yet not from any *gross* lesions, for there is apparently none in these cases of coeliac disease. We are left with the problem of finding out, in the circumstances of grave illness, what food can be tolerated and, of equal importance, how much. If we succeed in keeping body and soul together over a sufficient length of time the digestive powers begin to develop again and eventually all kinds of food may be taken; but so slow is the recovery and so prolonged the stage of partial starvation that secondary results, often of serious importance, are grafted on the original illness. In Colonel McCarrison's researches it may well be that we shall learn how to diminish these dangers.

While one thinks over these most interesting problems one cannot help recalling another well known and curious group of cases in infancy, in which a change of food produces for a short time an immediate improvement which quickly ceases, to be replaced by a downward step. I have no doubt that every doctor of any experience has been worried to distraction by these infants and must feel there is some peculiar character in this type of mal-assimilation.—I am, etc.,

London, W., July 11th.

F. JOHN POYNTON, M.D.

HYPERPYREXIAL HEATSTROKE.

SIR,—I was much interested to read the article on hyperpyrexial heatstroke, in the *BRITISH MEDICAL JOURNAL* of April 26th last, and having had experience of such cases in a general hospital in Mesopotamia I feel prompted to make one or two observations in this connexion.

With regard to etiology, while I agree with Dr. Hearne regarding sequelae once "suppression of sweating" is established, I feel assured that this condition is brought about by the toxin of some primary morbid condition, and that "hyperpyrexial heatstroke" should not of itself be considered a disease.

Certain diseases, including malaria, have from time to time been suggested as causal agents, but there is another disease, both little understood and little respected, which is to my mind worthy of special consideration as an etiological factor, at least in Mesopotamia. I speak of sandfly fever, one of the most characteristic symptoms of which is

a marked "suppression of sweating," and, given suitable atmospheric conditions, I consider the whole train of symptoms constituting the phenomenon of hyperpyrexial heatstroke to be peculiarly liable to develop during the course of this disease.—I am, etc.,

H. C. SINDERSON,
Captain R.A.M.C.(S.R.).

Baghdad, May 16th.

TOXIC SYMPTOMS FOLLOWING ASPIRIN.

SIR,—I have met with cases similar to that carefully recorded by Dr. W. A. E. Karunaratne in the *BRITISH MEDICAL JOURNAL* of July 12th. In my cases the patients have taken soda water or an alkali after the aspirin. We have long been warned of the risk of taking alkalis after aspirin. I usually advise patients to whom I prescribe aspirin *not* to take soda water or alkalis after this drug, and also emphasize the word "not," as in one case, on returning home, the patient forgot whether he had not to take soda water or to take it after the aspirin, and, after much hesitation, took the soda water and suffered badly from the toxic symptoms described by Dr. Karunaratne. It would be interesting to know, in the case he has reported, if soda water or an alkali had been taken after the aspirin, as it is a point of practical importance to learn if these symptoms are always due to the taking of alkalis after the drug, or to idiosyncrasy in some cases.—I am, etc.,

Manchester, July 12th. R. T. WILLIAMSON, M.D., F.R.C.P.

PREVENTION OF HYDROPHOBIA.

SIR,—It is reassuring to read in your article in the *BRITISH MEDICAL JOURNAL* of June 21st, on the prevention of hydrophobia, that you advocate the Muzzling Order being extended. As at present applied the regulations of the Board of Agriculture give the maximum of inconvenience to the owners of dogs in an infected area, with the minimum assurance of an early stamping out of the disease.

Although the penalty for smuggling dogs into England is severe, the drastic regulations as regards quarantine must tempt many owners of dogs to avoid it, and unless the military authorities are preventing this the smuggling of a dog with large parties of men returning from abroad must be a comparatively easy matter. There is the danger that these dogs may be taken to all parts of the country, the uninfected counties being naturally preferred by the owners, and no county can be excluded from this possibility. No mention is made in your article of the quarantining of dogs from infected parts of England; as the regulations stand at present no exception is made in the case of removing a dog from the outskirts of an infected district to the centre of another infected county, no proof of the impossibility of the dog being infected is accepted, and quarantine for six months on the premises of a veterinary surgeon approved by the Board of Agriculture is strictly enforced. The prohibition preventing me as a medical officer from isolating my own dog appears to me to be a reflection upon my training.—I am, etc.,

R. D. JAMESON,
Surgeon Commander.

Devonport, July 12th.

SUDDEN DEATH UNDER AN ANAESTHETIC.

SIR,—The correspondence in the *JOURNAL* concerning the risks of anaesthesia in tonsillectomy is most interesting and instructive.

As a general practitioner of twenty years' standing I thoroughly endorse Dr. Gunewardene's opinion that tonsillectomy is done far more frequently than is necessary. Almost daily I emphasize to mothers the importance of teaching their children the proper method of breathing.

It has often struck me that the operation is frequently undertaken at a too tender age. Only recently I called, in my capacity of public vaccinator, at a house for the purpose of vaccinating the baby, and was requested by the mother to call again at a later date as the baby was going to have its tonsils out. The child was 12 months old. As many cases of enlarged tonsils, with their accompanying disabilities, subside with time, care, and treatment, I always insist on seeing the child two or three times—say, at intervals of a few weeks or a month—before recommending tonsillectomy.—I am, etc.,

Birmingham, July 14th.

ERNEST J. BEARDS.

SIR,—I have followed this discussion with much interest, and should like to endorse most cordially the very apposite remarks of my friend Dr. Blomfield in your issue of July 12th.

For the sake of the argument one may assume (though it is a very large assumption) that nearly all the fatalities occur during a stage of comparatively light anaesthesia. Even if one accepts this view, however, it does not really help us very much, for Dr. Levy cannot but admit that every patient who inhales chloroform must of necessity pass through such a preliminary stage. I rather gather that Dr. Levy claims for himself that he is able to curtail this stage, and to minimize the dangers to which he refers. But this is not enough; we want to be able to minimize the risks run by patients at the hands of anaesthetists who are less experienced and less competent than Dr. Levy, and from a rather exceptional and very large experience of this particular class I am firmly convinced that nothing short of giving up the use of chloroform by itself will do this. In short, I look upon Dr. Levy's teaching as retrograde rather than as a step in advance.

To those who are prejudiced against the use of ether pure and simple in these cases I would recommend a trial of the modification suggested by me in your columns of a few weeks ago (May 24th).—I am, etc.,

London, W.1, July 12th.

J. FREDK. W. SILK.

SIR,—Whilst agreeing with Mr. Tilley and Dr. Rood that ether should be the main anaesthetic in the ether-chloroform sequence in the operation of removal of the tonsils, I venture to doubt whether it is the best anaesthetic for induction. The unpleasant odour and slow action of open ether are disadvantages both for the adult and the child.

It should be the endeavour of the anaesthetist to overcome them, whilst retaining the advantage which ether offers of being a safe anaesthetic. This can be done, either by preceding the administration by C.E. for the first two minutes, or by dropping or spraying ethyl chloride on the mask until the breathing becomes regular and then changing to open ether. The latter sequence is the more difficult, but is specially useful when dealing with the fractious, nervous, or highly-strung child. It is an advantage to drop a little eau de Cologne on to the mask at the beginning of induction.—I am, etc.,

London, W., July 5th.

FRANCIS E. SHIPWAY.

SIR,—The question of anaesthetic in the removal of tonsils is most important. With the evolution of the pathological and etiological outlook, it is now practically established that sepsis of these lymphatic tissues must be held responsible for many grave arthritic and systemic infections. Since the only rational treatment for sepsis is efficient drainage or removal of the focus, we have passed on from tonsillotomy to tonsillectomy and enucleation by dissection as the only means of dealing surgically with certain types of sepsis-bearing tonsils.

The latter procedure in particular should be placed under the category of major operations for at least two all-sufficient reasons: (1) The degree of anaesthesia is equal in depth to that required for any abdominal operation; (2) the technique in many cases is difficult, requiring considerable experience and manipulative skill, and has to be carried out in a region where there may be many pitfalls of a serious nature. In my opinion it is easier to give a successful anaesthetic for many types of abdominal operation than it is for the enucleation of difficult tonsils.

If this method of operation is to become that most commonly adopted, I would unhesitatingly advocate the use of "open ether," and venture to say that in a few years its use will be as universal in this country as it has been for some years in America.

Personally, I find that once the anaesthesia is pushed sufficiently deep to cause the complete relaxation necessary for an abdominal operation, I have about eight or nine minutes in which to dissect the tonsils, without the use of any further anaesthetic, and this will prove ample for any surgeon experienced in this class of surgery, so for this reason I have dispensed with the use of Junker's apparatus for the past two years.

Atropine is strongly recommended by some anaesthetists and not at all by others, whom I regard as equally, if not more, skilful. I have met and worked with many of both

schools, and must say that, as the surgeon, I am unconvinced as to its value in tonsil operations, and consequently I leave this matter to the anaesthetist's choice.—I am, etc.,

JOHN F. O'MALLEY, F.R.C.S.,

London, W., July 5th.

Temporary Major R.A.M.C.

EFFICIENT TREATMENT OF THE CHRONIC RUNNING EAR.

SIR,—Captain Wilson's paper in the BRITISH MEDICAL JOURNAL of May 24th is surely of more than passing interest. The number of cases and the considerable time the report covers constitute a strong piece of evidence. The two principles enunciated—(1) cleanse by swabbing and avoid syringing, (2) avoidance of the mastoid operation—offer marked encouragement in aural treatment; (a) the treatment, though simple, is to be thorough, and then (b) no mastoid operation is required, save as a rare exception.

Probably others have noticed that the mastoid operation has, in a number of cases, not cured the discharge, and its violent and difficult character are marked features in its performance.

Personally I can appreciate fully the favourable results of simple treatment thoroughly carried out, so well and wisely recorded by Captain Wilson.—I am, etc.,

E. DUKE,

Hove, June 5th.

Captain, late R.A.M.C.

INFECTIVE CATARRHS—SO-CALLED "COLDS."

SIR,—The recent proposal made in the correspondence columns of the BRITISH MEDICAL JOURNAL, to abolish the popular diagnosis of "chill" as a means of combating the idea that a "cold" is caused by cold, seems to me to be ill advised. Were it possible to educate our patients to use the term "infectious catarrh" instead of "chill," and to make them understand the significance of the word, there is no reason to think that a change of term would produce a change of habit. A busy man with engagements will keep them, even at the risk of infecting his friends. The fact that catarrhal diseases occur and take on an epidemic form with the first seasonal changes at the commencement of winter cannot be ignored. Apart, however, from the application of the word "chill" to catarrhal diseases, there are people to whom a sudden lowering of the temperature, especially if accompanied by a cold dry wind, is not only disagreeable but a source of illness. Most such persons are the subjects of mild septic poisoning, and will be found to be susceptible to any form of draught or north or east winds, of which they have great horror. This fear is well founded, for the lowering of the temperature checks the elimination of the poisons which are circulating in their blood, and produces illness. The septic foci producing this condition are found in various parts of the body. The commonest sites are the accessory cavities of the nose (rhinitis), the gums (septic gingivitis), the urinary tract (coli bacilluria), or even the kidneys when there is any deficiency in their action, such as may exist in gouty subjects.

After exposure to sudden cold, a person subject to these conditions feels ill (malaise), with a disinclination for exertion (mild neurasthenia), gets a nasty taste in the mouth (chill on the liver), often associated with biliousness or diarrhoea, and if suffering from rhinitis may experience an attack of asthma. For these symptoms he will take a hot bath and possibly send for his doctor, who will be informed that the patient has a "chill." The cause of truth will not suffer if the patient's diagnosis is accepted and further help rendered to restore the cutaneous excretion.—I am, etc.,

Sevenoaks, July 14th.

JAMES E. BLOMFIELD, M.A., M.D.

INSURANCE TERMS AND CONDITIONS.

SIR,—Loss of liberty, the twenty-four-hour-day contract, is to me the most objectionable feature of insurance work; and if midwifery is to be added to this contract our serfdom will be complete.

Can we not put up a fight for freedom, declining any contract except for ordinary work, due notice of which is received before 10 a.m.? and if the Government wish to provide for emergency, night, or for midwifery, let them do so by means of coupons attached to each insured person's card and available for any doctor. If they are

made valuable enough, a patient will always obtain medical attention—in most cases from his own doctor. But the doctor will feel that he is free and can decline a night call or a midwifery contract when he wishes.—I am, etc.,

July 7th.

GENERAL PRACTITIONER.

SIR,—It must now be obvious that this document (M. 25) is unacceptable to a large proportion of our members, and I would urge the Association to make radical alterations without delay.

The initial step should be to insist on the payment to every practitioner of a fixed and previously agreed sum for ordinary general attendance upon each person on his list.

The Commissioners, evidently obsessed by the idea of central and area pools, would talk of inflation, but that should be allowed for in determining the *per capita* sum. They have arrived at the number of insured persons; they can know the aggregate of names on practitioners' lists from the Insurance Committees, and so estimate the percentage of inflation to be allowed for in fixing this rate of payment. In the few localities where payment by attendance is the basis, the sum due at this fixed rate would of course be distributed from an area pool. Temporary residents should be paid for according to an agreed scale. There should be a definite addition to the capitation fee for rural districts to cover expense of travelling and loss of time. Any addition to or extension of the present range of service could then be arranged for either by separate payment or by an increase of the capitation fee.

In short, since the contract is between the authorities and each individual practitioner, so the payment should be a definite one to each practitioner, and no proportion or fraction of a general fund. It is obviously not the concern of panel practitioners whether the sum accruing from the sale of insurance stamps suffices or not. There is another Government department whose revenue is derived from the sale of stamps—the Post Office—but I cannot imagine its staff accepting as salary a variable fraction of a common pool, or being satisfied, when applying for an increase, with the assurance that for any increase extra duties must be performed.—I am, etc.,

Bourne, Lincs, July 14th.

W. J. GILPIN.

SIR,—At a meeting held yesterday at Brighton to consider a report on the revision of conditions of service under the National Insurance Acts, Dr. Cox, speaking on behalf of the British Medical Association, stated that up to the present no negotiations had taken place between the Government and the Association as to increasing the rate of remuneration under the National Insurance Act.

However, I see in the *BRITISH MEDICAL JOURNAL* for this week that Major Astor stated in the House of Commons on July 3rd that "at the present moment and for some time past the department had been discussing with representatives of the medical profession the rates of remuneration for the future."

Perhaps Dr. Cox will explain the discrepancy? I cannot.—I am, etc.,

Worthing, July 13th.

T. P. GOSTLING.

* Dr. Cox states in reply: Major Astor was probably thinking of the negotiations about the war bonus for 1919 and the mileage grant. There have been no negotiations of any kind with regard to next year's capitation fee.

REFORM OF PUBLIC HEALTH ADMINISTRATION.

SIR,—To everyone concerned in public health administration in England it has now for long been evident that a radical reform is needed in the general methods of management of public health affairs throughout the country. This idea has been at the base of the movement to establish a central Ministry of Health, though single items of the general business such as "Housing" and "Infant Welfare" have been particularly used to help forward the movement by exciting a sufficiently pronounced public opinion.

The question now is: Are we going to get the reform which will go to the base of things and largely reconstitute the whole public health service? The most important initial proceeding required is the proper division of the

country into districts of such extent and population as can be conveniently administered by a committee and staff appointed for that purpose in each such district.

The question of the position henceforward to be held by the medical officer of health is not second in importance to the reconstruction of districts. It is under his leading and advice that public health work proceeds and advances, and if this be true it must be openly recognized, and we must have done with the fiction that the work is wholly due to the committee or council, and that the medical officer of health is a mere dog under the table, who may be kicked but must never be heard to growl. To maintain this fiction is to court failure. The service of the medical officer of health will always be affected and modified by its recognition. It may be argued that this is small stuff, but it is human nature. In connexion with local councils the medical officer of health has suffered much, partly from his ill-defined duties and equivocal position, partly from the representation of private and trade interests upon local councils, and the personal prejudice which any active medical officer of health raises against himself in attacking subjects that touch local private interests. In regard to professional prestige and credit, and in his dependence upon the local council for appointment, permanence of office and proper payment, the position of the medical officer of health is intolerable, and his public service can never be satisfactorily rendered so long as such conditions of office are perpetuated. The new Health Ministry must make up its mind to that.

On the other hand, how is the new ministry going to be effective in local administration in order that henceforward the numerous laws and regulations shall not only come into existence but shall everywhere be put into effective operation? It can be best done by the medical officer of health becoming a State official, centrally appointed and controlled.

The medical officer of health, therefore, should cease to be subject to the control of the local council. Through and by him the central authority may hope to see administered the Public Health Acts and the regulations it formulates. With these officials its own, locally placed, the new central Health Ministry can be effective. Otherwise hardly so, even with an expensive duplicate staff, to be sent about the country to get what information they can at short notice by questioning local officials. The taking over of the medical officer of health by the State need not remove the consideration and execution of public health works from the local council or committee, which could exist much as hitherto, or in such form as may best be invented in regard to mode of election and powers. But the medical officer of health should be the adviser, reporter, and go-between, who would enlighten the central Ministry with exact information of local affairs, and authoritatively carry the views and recommendations of the central authority to the local council.—I am, etc.,

June 26th.

M.O.H.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

SIR,—I also am a pre-war Territorial. I was in camp at annual training when mobilized, having made temporary arrangements for a fortnight's absence from my practice. Subsequently I sold out—at a loss of £1,000. I served overseas for over a year, until invalided home; since then I have held the appointment of officer in charge of medical division at two large military hospitals for eighteen months, and have recently attended a fortnight's post-graduate course on war injuries and diseases, bringing my knowledge up to date on all war disabilities. During the past three years I have been president of medical boards, so that my acquaintance with board routine is fairly thorough.

I applied to the Ministry of Pensions for an appointment; was requested to call when next in town. I made a special journey to Millbank, was told that they had no whole-time appointment available, and was advised to call on the Commissioner of Medical Service of the area in which I proposed to settle in private practice. Another journey; the Commissioner gave much information, especially as to the "region" I had selected, and advised me to visit the Deputy Commissioner for that "region," telling me there was a scarcity of men on his board panel and that I should get a fair amount of work there. Still

another journey; I found my letter of ten days earlier lying on the D.C.M.S.'s table—he "was going to answer it to-day." He had quite a full panel; I could take my turn with the others—about one session a week (£1 ls.). This D.C.M.S. had had no military service, but had qualified for his permanent appointment by serving under the National Service Ministry on recruiting boards. Of eight names on his panel, which I recognized, seven had never left their practices during the war. He called my special attention to three of them—"Good men; of course I could not displace them"! Total result, four days and five guineas wasted.

A similar case is that of my friend A. B., F.R.C.S. Edin. He threw up his good operative practice in the colonies on the outbreak of war, came home, joined up, served in Gallipoli six months until invalided home; has since been surgical specialist in military hospitals for two years, treating war wounds and their resultant disabilities. He also called at the Ministry of Pensions; he also was told that no whole-time appointments were available, and he was recommended to a certain medical agency, who "would perhaps find him a nice little practice somewhere." He took the kind official's letter of introduction to the agent, but has heard nothing further from either.

I ask: "What is the Association doing to help us?"—both old members. What is the Association doing to get into touch with us, and with the hundreds of R.A.M.C. officers serving in England, most of them non-members of the Association, and seeing nothing to be gained by joining it? Frankly, I must confess that I have great difficulty in proving to them any advantage in membership. I presume that meetings of Divisions and Branches are being held in the neighbourhood of our huge camps, but I have never seen any invitation to the R.A.M.C. officers stationed in these camps to attend any meetings. What lost opportunities for recruiting members!—I am, etc.,

July 8th.

ANOTHER TERRITORIAL.

SIR,—I was interested in the letters on this subject in the JOURNAL of June 21st, p. 784, and July 5th, p. 27. Each one has stated a case for himself. But surely there is a very important "third party" who deserves consideration—I mean the pensioner.

"In Arduis Fidelis" has apparently forgotten that some of us who stayed at home did so by reason that we were not accepted on account of some infirmity, but that, nevertheless, we carried on important work at home. I myself did some eight or ten hours' recruiting every day for many months, in addition to working a fairly large general practice, the latter suffering very considerably thereby. We often examined sixty or eighty recruits for the pay of sixteen out of pure loyalty.

Now it is not given to every medical man (be he service man or civilian) that he should have the qualities necessary for a chairman of Pensions Board, nor even for an ordinary member of the board. The duties call for knowledge in a particular branch of our profession—for tact, discrimination, and sympathy (not sentiment). Are these attributes easily found? Do they happen to each man who has served, or who, by accident, has been relegated to "civilian" duty? "I hae ma doots."

Then, again, is it advisable for any young man to enter into this *cul-de-sac*? If I were the Minister of Pensions I should make my selection as follows:

1. Men who are serving in this capacity—who volunteered for service, and have given satisfaction.
2. Men who have received injuries or incapacities.
3. Older men who have served.

But I should endeavour, above all things, to get hold of the right men, both as chairman and member.—I am, etc.,

July 8th.

NOT A CHAIRMAN.

SIR,—As a service man who has recently held an appointment under the Ministry I think the list suggested by "In Arduis Fidelis" should contain the following information:

1. How many medical officers are employed who have never held a commission in either navy or army.
2. What financial loss these gentlemen have sustained by such employment being given to them.
3. Is every medical officer employed of pure British descent and birth?

The correct answers to these questions would be enlightening and instructive.—I am, etc.,

July 8th.

FAIR PLAY.

PROFESSIONAL FREEDOM.

SIR,—The menace of the Insurance Act to medical interests was so flagrant that for very shame the Government felt bound to devise machinery to protect us against themselves. The product of their ingenuity and of their justice was the Panel Committee; for which we, not they, must pay, however expensive our own means of defence may be; and for which many, if not most of us, must vote (if at all) by the scriptural method of the lot and prayer. Strangers to their very names, we have no other means of knowing their opinions and their capacities.

The particular committee which defends me has sent me a circular urging me to join a trade union. It is characteristic of the Insurance Act that it makes the pay a more prominent question than the patient. But it is none the less a shock to find the position that we are a class apart, whose interests are in conflict with the State's, frankly accepted by men who represent that tradition of self-effacing service which distinguishes a profession from a trade.

The man is blind, either wilfully or through political obsession, who does not see the superiority, from a public health point of view, of that system which, while exacting fees from the individual, raises his standard of living, and so tends to raise—and has in the past raised—the wage rate of his class, over that system which, while pretending to grant him medical attendance free, really exacts back the whole cost with cruel interest, and so tends to depress—and does in the present depress—the wage rate of his class as a whole.

When a man is paid by the State, unless his work is essentially a part of State function, as, for example, a soldier's or a judge's, his interests must conflict with those of the community especially of the poorest part thereof, who feel taxation most. It is the most malign feature of the Act that it establishes this conflict between us and the poor, of whom we have hitherto, we may justly boast, been reckoned the firm friends.

No right-minded man can bear, at this crisis especially, to think that he is adding one penny to the burden of the State. His first and overwhelming duty is to save for it every penny he can. Into this atrocious dilemma the Act has forced us: We must either submit to underpay, or we must add to the burden of the poor. We do not get enough; they already pay too much.

The medical trade union is avowedly to be modelled on the "workers'" union. We have had examples. We all know what suffering has been inflicted, as well on its own members as on the poor, by the up-to-date political trade union, and how menacing has grown the tendency to exploit the nation for the benefit of individuals. We most of us suspect the suffering to have been futile—for example, it is almost certain that recently the miners actually lowered their real wages by insisting on higher money wages. That working men newly conscious of political power should attach a false importance to parliaments is a pardonable and a pathetic error. That we, educated in the observance of natural law, should imagine, in defiance of all history, that governments can directly raise or lower wages is childish folly.

My protectors tell me we are helpless without a trade union. Well, it is disagreeable to feel myself a puppet; but it is ridiculous to be a puppet in a fume. It is mean to revenge myself for puppetdom by filching from puppets more helpless still. The working class, like the scorpion under the burning glass, is striking out blindly in its agony at every object near, often—nay, always—wounding itself. It is this tragic folly they urge me to copy.

Seven years ago in this paper, I believe, it was prophesied that we would shortly be demanding an increase of pay by reason of the depreciation of money through taxation. The trade union scheme is but drawing the vicious circle with a larger and larger radius. Nay, it is playing the Government game. What could they ask better than to have a united and disciplined body to bargain with, at which they could point the finger of scorn on occasion, as advancing a sectional against the public interest? It would embarrass them far more if most of us refused to be bound either by a panel committee, or even the Association.

Thus, for any lasting results the trade union, for all its plausible sound, is an unpractical method. It will be up against natural law, and natural law will win. If it were not, it is up against the Government, and Government, with popular support, will also win. Herein we see the Nemesis of the mean and pettifogging attitude which the profession has generally adopted to the Act. We have treated it as a matter affecting our pockets and conditions of service rather than as a matter vitally affecting the nation. The men who have let loose this Prussian plague upon us have dressed themselves in the commandeered plumes of our charity, and acclaim themselves as benefactors to the race. We have let them do so. When we oppose any obstacles in their way, they are not slow to point the inference that we are enemies. We have given them a formidable start, but our position is still strong. No unbiassed man can look at our social history from 1896 onwards and not see that bureaucracy is under a terrible indictment. To attack that part of this policy which concerns us most nearly—the Insurance Act—for having increased poverty, disease, and death among the poor, and caused a moral deterioration not confined to the poor, is at once to alter the position entirely. The phenomena were patent before the war; now that the artificial demand for labour with its sequent high wages is past, they are re-emerging. It is very certain that our enemies could not be urging these extensions of baleful State control if, in season and out of season, they had to prove absence of complicity. But the phenomena are there; make them explain them away if they can, and keep them busy till they do. Attack is the best defence.

To make the Act voluntary would make it possible for us again to obtain proper pay without oppressing the poor, and make it once again possible for the poor to provide for themselves. The Council could do this in twelve months if they would, but they have fallen sick with the prevalent bulimia for officials. It remains for us of humbler pretensions but of more knowledge of the problems of the poor to see that Germany, vanquished in the military, does not win in the political, field. It does not even need a united profession for that. A hundred men, joining in various quarters in a fierce systematic and sustained attack on the Act, especially using the lay press, can create a suspicion and a mistrust which will make voluntarism a test question at the next election. I appeal for helpers. —I am, etc.,

Rayleigh, Essex, July 3rd.

B. G. M. BASKETT.

Obituary.

FREDERICK PAGE, M.D. EDIN., M.A., D.O.L. DURHAM,
F.R.C.S.,
Newcastle-upon-Tyne.

On July 3rd Mr. Frederick Page passed quietly away at the ripe age of 79. He had been in indifferent health for the last few years, so that in one sense the end was not unexpected. By his death Newcastle and the north of England have lost a distinguished surgeon. He was the son of Dr. Frederick Page, who many years ago was surgeon to the Portsmouth, Portsea, and Gosport Hospital, and may be said, therefore, to have been born with a taste for surgery.

The future Professor of Surgery at Newcastle was educated at the University of Edinburgh, and for a time held office in the Colonial Hospital, Perth, Western Australia. In 1870 he was appointed house-surgeon to the old Newcastle Infirmary, and when, four years later, he left the infirmary he was the recipient of many presents from patients and friends. Becoming associated with the late Mr. Septimus Raine, then surgeon to the North-Eastern Railway Company, whose jurisdiction extended from Berwick to Yorkshire, Mr. Page was frequently brought into public notice. On his appointment a few years later to be surgeon to the Infirmary he found the opportunities for which he had been waiting. It was in the operating theatre that he was seen to greatest advantage. A skilful and a quick operator, his results were extremely satisfactory. He was equally successful as a teacher, both in the wards of the Infirmary and in the College of Medicine. For several years he was lecturer in the college on medical jurisprudence. His lectures, which were carefully prepared, were enriched by facts drawn from experience. On the death of Professor

G. Yeoman Heath, Mr. Page was appointed joint professor of surgery along with the late Professor Arlison. Page was nothing if not dogmatic, and to this circumstance he owed much of his success as a teacher, but it sometimes brought him into conflict with his colleagues.

The University of Durham in 1888 conferred upon him the degree of M.A. and subsequently the honorary degree of D.O.L. For a period he acted as examiner in surgery in Edinburgh University; he was consulting surgeon to several of the hospitals in Newcastle, was a J.P. for the city and county of Newcastle, and for several years vice-chairman of the local Licensing Committee.

To the medical journals Mr. Page was a frequent contributor. His written articles, like his lectures, were concise and to the point. As he was house-surgeon in the Infirmary when Lister's principles were fast coming into application, he had the opportunity of comparing the older methods of surgical treatment with the more recent. This experience he embodied in an interesting paper, "The results of the major amputations treated antiseptically in the Newcastle Infirmary, 1878-98."

Mrs. Page, who was the daughter of Mr. John Graham and niece of Professor Graham, F.R.S., a well known chemist and at one time Master of the Mint, predeceased her husband. Their family consisted of one son, Colonel Outhbert Page, who is in the artillery, and two daughters, both of whom were married. After the sudden death of his younger daughter in Australia a few months ago, Mr. Page was never quite the same. In the later weeks of his life he was buoyed up by the hope of seeing his elder daughter, who also lived in Australia, but he died while she was on the voyage homeward. A halo of sadness encircled the passing of Mr. Page, for of his relations only his sister was with him; and Colonel Page, who is at present ill in a London hospital, was unable to be present at the funeral. All that was mortal of Frederick Page was laid to rest in Jesmond Old Cemetery on July 5th, amid indications of the deep respect in which he was held by his colleagues, friends, and admirers.

ROBERT CRAIG MACLAGAN, M.D., F.R.C.P. EDIN.,
Edinburgh.

DR. R. CRAIG MACLAGAN, who died at his house in Edinburgh on July 12th, was a son of the late Sir Douglas Maclagan, professor of medical jurisprudence and public health in the University of Edinburgh, and one of a highly distinguished and gifted family of brothers, one of whom was the late Archbishop of York.

Dr. Craig Maclagan was born in 1839, was educated at the Royal High School and University of Edinburgh, graduated M.D. in 1860, became a Member of the Royal College of Physicians of Edinburgh in 1865, and a Fellow in 1867, and was also elected a Fellow of the Royal Society of Edinburgh. Early in his medical career he made special investigations in connexion with the arsenic eaters of Styria, to which Sir Thomas Fraser in his lectures on materia medica used to refer as of high scientific value; the results were published in the *Edinburgh Medical Journal* in 1864 and 1875. For a time he practised as a physician in Edinburgh, but of late years his deafness and his interest in many other matters took him out of the ranks of the medical men in active practice. Among the other matters may be named Dr. Maclagan's early and long-continued interest in the Volunteers, his name being the first on the list which became the roll of the University or No. 4 Company Volunteer Battalion, Royal Scots; he became colonel of the 5th Battalion, and afterwards honorary colonel, a rank which he resigned in 1909. He was also greatly interested in folk-lore and anthropology, and wrote on these subjects. He was likewise one of the founders of the Scottish Association for the Medical Education of Women.

He had a singularly attractive manner, an air of distinction, an energetic way, and an upright carriage, which all combined to make him an easily recognized figure in the streets of Edinburgh. His death in his 81st year makes a gap in the ranks of the modern Athenians who were born in the first half of the nineteenth century.

ROBERT ABERNETHY, M.D., F.R.C.P. EDIN.,
Edinburgh.

DR. ROBERT ABERNETHY, whose death at the comparatively early age of 52 took place at Bridge of Allan on July 8th, was a nephew of the late Dr. Brakenridge, one of the

physicians to the Edinburgh Royal Infirmary. He graduated M.B., C.M. in Edinburgh University in 1888. M.D. in 1893, and became a member of the Royal College of Physicians in 1892 and a Fellow in 1893. On Dr. Brakenridge's death in 1895 Dr. Abernethy succeeded to his practice, and for many years held an honoured position among the physicians of Edinburgh. Some months ago he suffered severely from influenza, and from this he never completely recovered. He was one of the physicians of the New Town Dispensary, honorary physician to the National Society for the Prevention of Cruelty to Children, and held other appointments in the city. He was the author of a communication on a case of dwarfing, with peculiar deformity of the hands and feet, published in 1898.

He will be greatly missed, for his quiet, kind, and courteous way had made him many strong friends. He was buried in the Dean Cemetery, Edinburgh, on July 11th, after a funeral service at St. John's Episcopal Church, Princes Street.

Universities and Colleges.

UNIVERSITY OF OXFORD.

At a Congregation held on July 5th the degree of Master of Surgery was conferred upon Ronald Ogier Ward.

UNIVERSITY OF MANCHESTER.

THE following gentlemen have obtained the diploma in Public Health:

A. W. Baker, G. H. T. N. Clarke, C. J. Crawford, C. C. Hargreaves, A. Heath, J. L. Meynell, E. N. Ramsbottom, H. F. Sheldon, E. H. Walker.

UNIVERSITY OF BIRMINGHAM.

THE registrar of the University of Birmingham gives notice that the Walter Myers Travelling Studentship of the value of £150 a year, tenable at a university or hospital not in Great Britain or Ireland, is open to candidates of either sex under 30 years of age who are graduates in medicine of the University of Birmingham or graduates in science of either Birmingham, London, Cambridge, or Oxford.

UNIVERSITY OF BRISTOL.

THE following candidates have been approved at the examinations indicated:

FINAL M.B., CH.B. (*Part I only—including Forensic Medicine and Toxicology*).—Hilda M. Brown.
D.P.H.—A. E. Wilson.

UNIVERSITY OF EDINBURGH.

THE summer graduation ceremony took place on July 10th, when a large number of ordinary degrees and thirty-six honorary degrees were conferred. Among the recipients of the honorary degree of LL.D. were Sir Thomas Fraser, Professor Rutherford Morison, Professor Noël Paton, and Dr. A. R. Ross.

Of Sir Thomas Fraser the Dean of the Faculty of Law said that no single sentence could sum up all that Sir Thomas Fraser's forty years' tenure of the chair of materia medica had meant to the Edinburgh medical school. It had shared the credit of his original investigations and beneficent discoveries, it had enjoyed the advantage of his inspiring teaching and great clinical skill, and owed much also to the constructive faculty and strong personality he brought to bear on all administrative problems.

Of Mr. Rutherford Morison it was said that, initiated into surgery under Dr. Heron Watson, he rapidly made a name as a fearless and skilful operator and a pioneer in certain departments of practice. He had recently retired from the chair of surgery in the University of Durham College of Medicine, Newcastle, after a long and distinguished career, during which he made many valuable contributions to the science and practice of his art and had introduced improvements in the treatment of septic wounds which had proved efficacious in military surgery.

To a name famous in the annals of Victorian art Professor Noël Paton had added fresh lustre in the realms of science. The Edinburgh medical school which reared him did not grudge the sister school in the west the advantage it had reaped from the full fruition of his powers in the chair of physiology at Glasgow.

The Dean, in presenting Brigadier-General A. R. Ross, C.B., C.M.G., said that he had seen service first as a private and then as a surgeon in the South African war, and in 1914 had quitted his chair at Kingston to accompany the first Canadian Division to France, where he shared its fortunes at Ypres and the Somme and was wounded during the magnificent assault on Vimy Ridge. He had been advanced step by step until in August, 1918, he became D.M.S. Canadian Section G.H.Q., France.

The following medical degrees were conferred:

M.D.—*A. C. Alport (Captain R.A.M.C.), *R. G. Archibald, *D.S.O. (Major R.A.M.C.), *R. G. Bannerman, F. A. F. Bernardo, C.I.E. (Colonel I.M.S.), *E. Bramwell, F. R. Bremner, A. W. T. Buist

(Lieut.-Colonel I.M.S.), *D. M. Callender, *D. H. D. Cran, *G. Fitzgerald, W. B. Harry, K. G. Hearne, J. B. Hogarth, *M. J. Johnston, *R. Lawson, E. L. Middleton, R. R. Murray, *W. H. Parkes, C.B.E., C.M.G. (Colonel N.Z.M.C.), Dhanavada Samuel Ramachandra Rao, A. Romanes, A. W. S. Sichel, R. S. Stevenson, S. H. Stewart, *E. L. White, M.Ch.—J. M. Graham.

M.B., CH.B.—H. M. Anderson, A. Armit, A. Badenoch, H. Berelowitz, J. J. R. Binnie, *Alice Bloomfield, G. G. Booker, *P. M. Brodie, C. C. Brown, R. M. C. Burnie, *L. S. P. Davidson, F. J. Deane, A. A. Denham, R. L. Galloway, K. Gillis, *M. Goldberg, *T. Harris, Marjorie Harris, C. E. L. Hole, Jiwanda Ram Katariya, Marjorie H. King, *R. L. Langley, R. Kho Seng Lim, *H. S. Lucraft, J. C. Macartney, J. M'Intyre, Ella G. F. MacKenzie, R. D. Mackenzie, R. Macnair, Mona Macnaughton, Elizabeth M'Vicker, Mabel S. Martin, G. H. H. Maxwell, J. H. Meiring, A. M. Moll, J. O. Murray, A. V. T. Musto, E. P. O'Dowd, Acraath Narayanan Nanoo Panikkar, C. W. Patterson, J. R. Payn, H. S. Plowman, E. H. Ponder, Mary S. Poole (*née Paterson*), *W. G. Robson, Beatrice A. S. Russell, R. Sandilands, Mahmoud Zaky Sheriff, B. S. Simpson, W. A. Black, V. A. Stooks, A. K. Towers, Maung Sein Tun, B.A., P. C. Uys, J. R. de Villiers, G. B. Waller, R. B. Watson, A. G. N. Weatherhead, J. S. Westwater, J. L. Wilson, D. F. Yuille.

D.T.M. AND H.—A. Bremner.

* Commended for thesis.
† Highly commended for thesis.
‡ Awarded Gold Medal for thesis.
§ Passed with first class honours.
|| Passed with second class honours.

The following prizes and scholarships were also presented:

Thesis Gold Medallist and Chiene Medal in Surgery.—J. M. Graham.
Ettles Scholarship and Leslie Gold Medal.—R. L. Langley.
Allan Fellowship in Clinical Medicine and Clinical Surgery.—P. M. Brodie.
Beane Prize in Anatomy and Surgery and Mount Scholarship in the Practice of Physic.—R. L. Langley.
Conan Doyle Prize.—M. Goldberg.
Annandale Gold Medal in Clinical Surgery, James Scott Scholarship in Midwifery, Scottish Association for Medical Education of Women Prize, and the Dorothy Gilfillan Memorial Prize.—Alice Bloomfield.
Buchanan Scholarship in Gynaecology.—H. S. Lucraft.
Pattison Prize in Clinical Surgery.—J. L. Wilson.
Cunningham Memorial Medal and Prize in Anatomy.—J. R. M'Donald.

UNIVERSITY OF GLASGOW.

THE following candidates have been approved in the examinations indicated:

THIRD M.B., B.Ch. (M.—*Materia Medica and Therapeutics, P.—Pathology*).—A. G. Aitken (P.), W. R. Allan (M.), A. R. Black (M.), J. J. Black (M.P.), A. W. Borland (P.), R. K. Duguid (M.), P. A. Faichney (M.), P. B. Farrar (M.P.), W. J. Ferguson (M.P.), R. Fletcher (M.), C. Glen (P.), C. N. Gordon (P.), A. Gray (M.), J. M. Hain (M.P.), W. M. Hamilton (M.P.), J. K. Holmes (M.P.), T. O. Howie (P.), H. W. Howieson (P.), *P. Hutchison (P.), T. T. Hutchison (P.), B. Isaacs (P.), L. M. Johnston (M.), W. L. Kennedy (M.P.), J. Leishman (M.), A. L. M'Adam (P.), H. J. Macbride (P.), J. W. M'Conville (M.), J. Macfarlane (P.), W. M. MacFarlane (M.), K. MacKenzie (P.), H. M'Kerlie (M.P.), H. H. MacKinnon (P.), A. H. M'Lean (M.P.), J. C. M'Naught (P.), A. M'C. Macqueen (M.P.), T. D. Marshall (M.P.), C. Melville (M.), P. Milligan (M.P.), J. T. Moffat (M.), G. W. Murray (P.), J. S. M'L. Ord (M.P.), J. Prentice (P.), T. D. Pyle (M.), D. Reid (M.), I. O. Robertson (P.), K. M. Rodger (M.P.), I. MacR. Sandilands (P.), T. S. Sargent (P.), W. H. Scott (M.P.), J. Shulman (M.), A. W. Sinclair (M.), H. V. Sweeney (M.P.), G. Tudhope (M.P.), J. O. Watt (M.), C. M. Whiteford (M.P.), R. H. Williamson (P.), J. D. Whiteford (P.), G. S. Wilson (M.P.), J. H. Wilson (M.), J. Wilson (M.), Alice A. Alexander (P.), Annie M. Alexander (P.), Rosa Bassi (P.), Elizabeth E. Brown (P.), Elizabeth M'V. J. Currie (M.P.), Margaret Davidson (P.), Lillian M. Dickson (M.P.), Mary D. Gilhoun (M.P.), Mary A. Grant (M.), Beryl Grieve (M.), Marion H. Hogg (P.), Annie W. Humble (P.), Susan M. S. Jamieson (M.P.), Elizabeth K. B. Loomie (M.P.), Edith M. F. M'Gill (M.P.), Janet S. S. Mackay (P.), Mary H. MacLachlan (M.P.), Grace M'Lintock (M.P.), Asbie Main (M.P.), Laura M. D. Mill (P.), Hettie M. W. Miller (M.P.), Margaret R. Oulton (M.P.), Catherine A. B. Pettigrew (P.), Annie G. Pollock (M.), Annabella A. Reid (M.), Egid A. Robertson (M.P.), Rebecca E. Roulston (P.), Jessie G. Service (M.P.), Marion Smellie, M.A. (M.P.), Margaret Sprout (P.), Janet F. Steel (M.P.), Jane W. Stocks (M.P.), Christina S. Stoddart (P.), Eva M. Sturrock (M.P.), Edith I. Thornley (M.P.), Eleanor M. Torrance (M.), Elizabeth Wheatley (M.P.), Janette R. Wilson (M.), Elizabeth R. Willie (M.P.), Elizabeth Young (P.).
Medical Jurisprudence and Public Health: Helen F. Allison, *J. W. S. Blacklock, G. M. Cooper, Elizabeth S. Inglis, A. B. Macdonald, A. M'C. Macintosh, D. MacKenzie, T. S. Stirling, N. E. Stone, J. L. Turpie, J. D. Williamson.
Anatomy (with distinction): J. R. Learmonth, A. L. Taylor.
Physiology (with distinction): T. M. Burton, L. P. Foyer, R. C. Garry, J. Grant, E. E. Henderson, J. R. Learmonth, Catherine M. Buchanan, Catherine Harrower, Ellen D. Morton, Elizabeth C. Rodger, Mary M. Stevenson.

UNIVERSITY OF ABERDEEN.

A GRADUATION ceremony was held on July 11th, when the following degrees were conferred:

LL.D. (*Honoris Causa*).—Sir James Cantlie, K.B.E., Emeritus Professor John Theodore Cash, F.R.S., Sir David Hardie, M.D. (Brisbane, *in absentia*), Surgeon Vice-Admiral Sir James Porter, K.C.B., K.C.M.G. (late Director-General, Naval Medical Department), John Scott Riddell, M.V.O., C.B.E., M.B. (Director of the North-Eastern District, Red Cross Society, Scottish Branch).
M.D.—*F. J. Browne, †W. W. Ingram, †A. G. B. Duncan (Captain R.A.M.C.), †A. R. Fraser (Captain R.A.M.C.), G. Adam, Ratan Edulji Dastur, A. S. Leslie (Major I.M.S.), D. M. Marr (Major R.A.M.C.), C. M. Nicol (Major R.A.M.C.), T.F.F.).

* Highest honours for thesis. † Honours for thesis.
‡ Commendation for thesis.

M.B., Ch.B.—†* E. A. Gammie, †* C. O. Gordon, †* G. A. Shepherd, J. Allan, Annie Anderson, W. Anderson, Margaret M. Chapman, J. S. Cook, J. C. T. Crowden, * Elizabeth M. Dow, Dorothy M. J. Emble, W. A. Falconer, J. Fiddes, A. O. Fowler, J. I. Hutchison, Mary V. Littlejohn, Bethia M. Newlands, Margaret Porteous, L. S. Robertson, K. S. Rodin, Irene T. J. Ruxton, H. Third, A. Thomson, Louise Tomory.

* With "distinction." ** With "much distinction."

† With second class honours.

The John Murray Medal and Scholarship, granted to the most distinguished graduate (M.B.) of 1919, has been awarded to G. A. Shepherd.

UNIVERSITY OF DUBLIN.

TRINITY COLLEGE.

The following candidates have been approved at the examinations indicated:

FINAL M.B., PART I.—*Materia Medica and Therapeutics, Medical Jurisprudence and Hygiene, Pathology*: *A. V. J. Russell, *G. H. Davis, *T. Radloff, *E. C. Smith, *F. V. Small, J. Hirschmann, H. O. Hofmeier, J. F. Wicht, M. E. McBrien, Margaretta T. Stevenson, C. E. McQuade, Essie S. Smyth, Emily E. G. Baillie, B. Moshalowitz, T. F. L. Cary, Nannette Norris, W. R. Burns, J. H. B. Crosbie, W. B. Briggs. *Pathology only—completing examination*: J. A. Acheson. *Materia Medica and Therapeutics, Medical Jurisprudence and Hygiene*: J. R. Craig, F. Y. Pratt, R. S. Chapman, T. G. Warham, J. D. Thompson, A. S. Bredlaw, W. H. Smith, R. V. Dowse, J. C. Brennan, H. A. Lavale.

PART II.—*Medicine (M.B.)*: C. D. Brink, J. C. J. Callanan, W. F. McConnell, J. S. Quin, G. F. Keatinge, L. J. Nugent, Jessie Gilbert, Mary C. Sheppard, T. J. R. Warren, E. S. E. Mack, A. W. D. Magee, S. J. Laverty, *H. B. Van der Merwe, V. G. Walker. *Surgery (B.Ch.)*: J. S. Quin, A. H. Thompson, R. Counihan, C. J. Quinlan, T. J. R. Warren, Gertrude Rice, B. Fitz-J. Haythornthwaite, F. W. Godbey, C. G. Ambrose, W. J. Hogan, T. Madill, P. Casey, F. J. Dymoke, A. W. D. Magee. *Midwifery (B.A.O.)*: *L. Abrahamson, *F. W. Robertson, *J. G. Holmes, J. H. Coolican, Janie M. Cummins, H. Cohen, C. D. Brink, Eileen H. Dowse, T. Madill, R. E. Murphy, T. D. Gordon, F. J. G. Batterby, A. R. Aidin, S. R. Hill.

D.P.H., PART I.—*Chemistry, Physics and Meteorology, Bacteriology and Pathology*: H. C. Mulholland, B. Lyons, G. Marshall, C. E. Moore, C. W. C. Robinson.

PART II.—*Sanitary Engineering, Vital Statistics and Public Health Law, Hygiene and Epidemiology*: H. C. Mulholland, B. Lyons, R. Condy, G. Marshall, C. W. C. Robinson, C. E. Moore.

* Passed on high marks.

QUEEN'S UNIVERSITY, BELFAST.

The summer graduation ceremony was held on July 9th, when the following degrees and diplomas were conferred:

Honorary.

LL.D.—The Earl of Shaftesbury, Viscount Bryce, Sir John H. Macfarland, Chancellor of the University of Melbourne, and the following members of the medical profession: Lieut.-Colonel Robert McCarrison, I.M.S., a graduate of the university, in recognition of his investigations into the causes of goitre and cretinism. Dr. Johnson Symington, for twenty years Professor of Anatomy in the University, and now Emeritus Professor.

D.Sc.—Sir David Semple, late R.A.M.C., a medical graduate of the university, formerly assistant of pathology in the Army Medical School, Netley, and director of the Pasteur Institute, India.

M.D.—Professor J. G. Adami, F.R.S., Vice-Chancellor of the University of Liverpool, and lately Professor of Pathology in McGill University, Montreal, in recognition of his researches in pathology. Dr. Alexis Carrel, Director of the Rockefeller Institute of Experimental Medicine, New York, and during the war medical officer of the Special Research Hospital of the French Army. Professor Harvey Cushing, of Harvard University. Lieut.-Colonel J. A. Sinton, V.C., I.M.S., formerly Riddell Demonstrator in Pathology at Queen's University, in recognition of his early distinctions and of his valour in the field while engaged in the treatment and succour of the wounded.

Ordinary.

M.D.—Eileen M. Bell (with distinction and gold medal), N. Beattie, J. Corker, Caroline V. Lowe, J. Lyons, P. P. Wright.

M.Ch.—R. J. M. McConnell (with distinction), T. P. M. Murray, W. A. Thompson.

M.B., B.Ch., B.A.O.—*H. M. Calwell, *S. Simms, †J. Camao, †R. N. Deane, †A. M'Faul, †H. I. Taggart, W. R. Abernethy, S. Ballantine, H. Carson, T. J. A. Connolly, E. A. Davison, S. Hall, B. Herbert, J. M. Hosey, D. J. M'Gurk, W. C. M'Kee, T. H. M'Kenna, Mary M. Merrick, R. Nimmons, D. G. Roulston, A. M. W. Sengedal, Ruth M. Slade, H. W. Wild.

D.P.H.—Ivrie Aird, J. B. Alexander, S. T. Beggs, J. Boyd, L. D. I. Graham, W. M'Dermott, E. B. C. Mayrs, T. Milling, F. A. E. Silcock, J. Tate, P. S. Walker, G. Wilson.

* First class honours.

† Second class honours.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY Council was held on July 10th, when Sir George Makins, President, was in the chair.

Diplomas of Public Health were granted to twelve candidates found qualified at the recent examinations.

Sir George Makins was re-elected president, and Sir Anthony Bowby and Sir John Bland-Sutton were elected vice-presidents for the ensuing year.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

The following gentlemen, having passed the requisite examinations, have been admitted Fellows:

J. I. Baeza, R. Chalmers, J. Erlank, A. S. Gillett, E. S. B. Hamilton, M. B. Lawrie, G. Miller, Sengarapillai Ponniah, A. T. Roberts, G. J. C. Smith, H. E. V. Walsh, J. B. Young.

The Services.

HONOURS.

BAR TO MILITARY CROSS.

A BAR to the Military Cross has been conferred by Major-General Maynard in pursuance of powers vested in him by His Majesty the King upon Captain Frederick George Flood, M.C., R.A.M.C.(S.R.), for conspicuous gallantry and devotion to duty in North Russia. The following is the official record of the act for which the award has been made:

During operations at Vigozero and Petrovski Yam on March 18th, 1919, he dressed wounded under heavy machine gun and rifle fire, and under most trying conditions saved many lives. After the action he successfully evacuated all the wounded over sixty versts of most difficult country without losing a case. He showed great gallantry and marked ability and devotion to duty. (M.C. gazetted June 18th, 1917.)

Mentioned in Dispatches.

A series of Supplements to the *London Gazette* have been issued containing lists of names of those deserving special mention, in continuation of Field Marshal Sir Douglas Haig's dispatch of March 16th, 1919. In addition to 23 consultants mentioned, the number of officers of the Army Medical Service and the Royal Army Medical Corps, Special Reserve, Territorial, and Temporary, is 535. A subsequent list contains the names of 77 officers of the Canadian Army Medical Corps, 75 officers of the Australian Army Medical Corps, 7 officers of the New Zealand Medical Corps, 4 officers of the South African Medical Corps, and 10 officers of the Medical Corps of the American Expeditionary Force.

Foreign Decorations.

The following are among the decorations and medals awarded by the Allied Powers for distinguished service during the course of the campaign:

Conferred by the President of the United States of America.

American Distinguished Service Medal.—Lieut.-General Sir T. H. J. C. Goodwin, K.C.B., C.M.G., D.S.O., K.H.S., Director-General Army Medical Service; Major-General (temporary Lieut.-General) Sir C. H. Burtchell, K.C.B., C.M.G., K.H.S.

Conferred by the President of the French Republic.

Légion d'Honneur: Officier.—Major-General Sir Menus William O'Keeffe, K.C.M.G., C.B.

Croix de Guerre.—Major-General Sir Harry Neville Thompson, K.C.M.G., C.B., D.S.O.

Conferred by the King of the Belgians.

Croix de Guerre (Belgian).—Captain Douglas Stuart Stevenson, M.B., M.B.E., 217th Squadron.

Conferred by the King of Hellenes.

Officer of the Order of George I.—Surgeon Commander Edward C. Sawdy, R.N.

Medical News.

DR. GEORGE A. BUCKMASTER, assistant professor of physiology in the University of London, has been appointed Henry Overton Wills professor of physiology in the University of Bristol.

DR. THOMAS LEWIS, F.R.S., lecturer in cardiac pathology at University College Hospital, has been appointed by the Minister of Pensions an honorary consultant physician to the Ministry.

A MEETING of the Section of Surgery of the Royal Society of Medicine will be held on Tuesday next at 5 p.m. to consider the propriety of forming a subsection of urology.

THE Right Hon. Christopher Addison, M.D., M.P., Minister of Health, has provisionally promised to deliver the inaugural address at the opening of the session at the London (Royal Free Hospital) School of Medicine for Women on Wednesday, October 1st, at 3 p.m.

THE Welsh Consultative Council under the Ministry of Health is to consist of not more than thirty persons, who will advise in connexion with matters relating to national insurance (approved societies' work), medical and allied services, local health administration, and general health questions in Wales.

THE Royal Society announces that two John Foulerton studentships will shortly be awarded for original research in medicine, the improvement of the treatment of disease, and the relief of human suffering. Researches must be carried out under the supervision and control of the Royal Society. The studentships are of the value of £400 each, and are tenable for three years, but may be extended to a total period of six years. Candidates must be of proved British nationality; both sexes are eligible. Particulars can be obtained from the assistant secretary of the Royal Society, Burlington House, Piccadilly, W.

THE annual dinner of the West London Medico-Chirurgical Society, which had been suspended during the war, was held at Pagani's Restaurant on July 10th, under the chairmanship of the President, Lieut.-Colonel E. M. Wilson, C.B., C.M.G., D.S.O., R.A.M.C. More than 100 members and visitors were present. After the loyal toasts had been honoured, the health of the Imperial Forces was proposed by Dr. Seymour Taylor, consulting physician to the West London Hospital and a former president of the society, who paid a tribute to the fighting men of the empire and to the work of the medical services throughout the war. The toast was responded to by Sir Peter Freyer, K.C.B., who spoke of his visit to the Grand Fleet and of the paternal care of the Indian Medical Service officers for the native troops, who came 6,000 miles across the "black waters" to fight for England and freedom. Dr. George Pernet proposed the toast of "Kindred Societies and Guests," and Mr. Spencer Leigh Hughes, M.P., made a witty reply. Sir Humphry Rolleston, K.C.B., President of the Royal Society of Medicine, in submitting the toast of the West London Medico-Chirurgical Society, spoke in sympathetic terms of the good done by the society in fostering comradeship among its 500 members, and paid a tribute to the work of two who in their lifetime did much for the society and the West London Post-Graduate College—Mr. C. B. Keetley and Mr. Leonard Bidwell. The President made an appreciative speech in reply, and an extremely enjoyable evening was brought to a close with the toast of "The Chairman," proposed by Dr. H. Chambers, editor of the *West London Medical Journal*.

Letters, Notes, and Answers.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

The postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitology*, Westrand, London; telephone, 2631, Gerrard.
2. ACTING FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate*, Westrand, London; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra*, Westrand, London; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

"M.D.," who is acquainted with ordinary literature on hydatis, asks whether any recent therapeutic measures have been introduced, such as x rays, "606," or antimony.

MUCOUS COLITIS.

"PERPLEXED" would be glad to receive suggestions for treatment in a case of mucous colitis of several years' duration in an unmarried woman, aged 23 years. Lavage of the colon, intestinal antiseptics, etc., have only partially relieved the symptoms, and an exploratory laparotomy, during which the appendix was removed, showed no lesion which would explain the condition otherwise.

VACCINATION AGAINST CORYZA.

DR. J. TEARE.—The percentage of successes and the length of immunity after vaccination against coryza are very variable with any stock vaccine, and autogenous vaccines are the best, but many failures occur. The inoculations should be made, say, once a week, and may be begun during the later stages of an attack of coryza. There is rarely any reaction, but occasionally the coryza is exacerbated. Vaccines (autogenous) are not often of much use in bronchitis, except in cases of infection by Friedländer's bacillus. Our correspondent may consult R. W. Allen's *Practical Vaccine Treatment*. (London: H. K. Lewis. 1919. 7s. 6d. net.)

CRANIUM AND PELVIS.

A. C.—The lower jaw and zygoma have nothing to do with the shoulder girdle, they are developed in the branchial arches. The mandible, or lower jaw, has long been known to have its origin, very early in fetal life, in the first arch, the hyoid in the second, while the cartilages of the larynx—of which there is no homologue in relation to the pelvis—are formed within the fourth or fifth arches. The superior maxillary process, or protuberance on the first arch, gives origin to the malar, (superior) maxillary, and other bones. The sacrum and coccyx are vertebral bones, like the cervical vertebrae, part of the same column, but not "homologues." No vertebrate animal, not even *Amphioxus*, is so simple that the caudal end of the body is the same as the cephalic, so that the coccygeal bones, or the soft structures in relation with it, are not in the least like the cranial bones, or the cerebrum and

organs of sight, hearing, smelling, and tasting for the benefit of which the skull is developed. The relation between the nasal and genito-urinary tract can in no sense be anatomical, as the development of the nasal fissure is quite different from the evolution of the structures which form the kidneys, prostate, testes, ovaries, uterus, and vagina.

LETTERS, NOTES, ETC.

MEDICAL FEES.

DR. GEOFFREY PRICE (Kineton, Warwick) writes to suggest that the time has come for the British Medical Association to institute a general advance of 50 per cent. in medical fees for the present standard of work.

FATHER AND SON.

DR. MICHAEL GRABHAM, who from St. Thomas's Hospital took his first diploma fifty-eight years ago and became a Fellow of the Royal College of Physicians of London forty-two years ago, has recently been presented by the British community of the island of Madeira, where he has practised so long, with a silver casket containing an illuminated address. Dr. Grabham very hospitably entertained his friends on this occasion, for is not his cellar of Madeira as rare as his skill on the organ? Almost at the same time his son, who is medical officer of the Jubilee Hospital, Kingston, Jamaica, received from the members of the staffs and nurses of that hospital and of the public hospital an address, accompanied by a present, on the occasion of his coming on leave to England. The address recalled Dr. Grabham's long connexion with these institutions and the pains he had taken in giving instructions to the nurses in the maternity hospital. In response, Dr. Grabham gave an outline of the history of the hospital from its inception twenty-seven years ago, when he first became connected with it.

PROFESSIONAL CONFIDENCE.

V. N. R. writes: The case which forms the subject of an editorial article and a letter from Sir John Tweedy in your issue of July 5th is interesting. Here is another, which brings in another element, but is, I think, worth quoting:

A friend of mine serving in the forces in a part of the country where civilian practitioners were very few, was called out to see a woman who was said to have had a miscarriage. He arrived and found his patient moribund, and, in spite of his efforts to resuscitate her, she died very shortly after his arrival. He saw, if I remember rightly, a fully-formed placenta but no fetus. He did not feel justified under the circumstances in giving a certificate of death, and on the police making inquiries, a full-term child was found with a ligature round its neck.

Following the argument of the previous case, then, had this woman lived he would have been wrong to take any action, even though he knew or suspected that a crime had been committed. The woman's death brought in a different element, but did it free the medical man from the obligations of professional confidence? Fortunately, such cases are not common, but any medical man may be caught unawares by one. It is well to know, therefore, in cases where professional duty and the law seem to conflict, which should the medical man follow. And if he follows his duty, even to becoming accessory after a crime, is he liable to legal proceedings, and, if so, is the plea of professional confidence a good defence?

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 35, 39, 40, 41, and 42 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 36, 37, and 38. Among the announcements of appointments vacant will be found a long list from the Egyptian Government School of Medicine, Cairo, including professorships in chemistry, anatomy, biology, pharmacology, and surgery, and lecture-ships in biology, anatomy, physiology, and pathology.

THE following appointments for certifying factory surgeons are vacant: Ascot (Berks), Dundee (Forfar), Falkland (Fife), Lavenham (Suffolk), Llanfair Caereinion (Montgomery), Newhaven (Sussex), Nottingham North (Nottingham), Scarborough (Yorks, North Riding), Tynemouth (Northumberland), Wallsend (Northumberland), Yetholm (Roxburgh).

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A LECTURE ON HOSPITALS FOR TREATMENT OF PULMONARY AND OTHER FORMS OF TUBERCULOSIS:

A NATIONAL NEED.*

BY

H. BATTY SHAW, M.D., F.R.C.P.,

PHYSICIAN TO THE BROMPTON HOSPITAL FOR CONSUMPTION AND
DISEASES OF THE CHEST AND TO UNIVERSITY
COLLEGE HOSPITAL.

THE subject of this lecture is of interest not only to the medical profession exercising family or consulting practice, or carrying out the duties of medical officers attached to the various public services of the country, but to the community at large. Members of the medical profession who have to deal with tuberculosis in any of its forms know only too well the importance of having hospitals for the observation of these cases, and for watching the results of the numerous forms of treatment of the disease, whether medical or surgical. The community at large feels the need most acutely, more especially with regard to those of their members who are in the final stages of the disease and require nursing for months, and it may be years. The need is not restricted to the poor; it is felt by the rich as well, because if there is a tuberculous subject being nursed in a home of the well-to-do there is such fear of the spread of tuberculosis to other members of the household that the patient is shunned by the relatives, and the domestic servants refuse to stay. During the war it was frequently impossible to find nurses for ordinary patients, and for the tuberculous the difficulty was still greater. The patients' friends have asked for nurses skilled in the nursing of tuberculous patients, but they were not to be found. Even before the war it was difficult to supply the need of nurses thoroughly acquainted with the management of a tuberculous patient.

The present is an opportune moment to ventilate the subject, because so many traditions in medicine and so many of the past methods of dealing with disease have, when scrutinized in the fierce glare of war, been found wanting. Old problems have to be faced again in view of the unsatisfactory nature of the methods used in the past. To no form of disease does such a remark more aptly apply than to the treatment of tuberculosis, and more especially to pulmonary tuberculosis. Many warnings and rules, some shibboleths, have been uttered:

If curable, why not cured?

Passengers are requested not to expectorate in public conveyances for fear of spreading tuberculosis.

The expectoration coughed up by patients suffering from consumption and the discharges from tuberculous abscesses are sources of infection for other healthy people.

Consumptives should expectorate into a sputum flask containing a strong disinfectant.

A consumptive, when coughing, should guard the mouth by a handkerchief or a clean rag, the former after use being disinfected and the latter burnt.

A special set of cups, saucers, etc., should be set aside for the use of the patient only.

If consumptives will carry out these rules they will assist not only in their own recovery but also in preventing the spread of the disease to those closely associated with them in their homes or at work.

Some of the requests contained in these admonitions are little more than are required of a decently behaved community; some of them are direct advertisements to a patient's fellow-creatures that he or she is a danger to the community, and dismissal may follow if an employed person is seen expectorating into a sputum flask. The danger arising from association with a tuberculous subject has been made such common property that the lot of the tuberculous subject has become most distressing. If able to work, he is shunned by his associates, or if skillful enough to hide from them the fact that he is tuberculous, he may be sowing tuberculosis broadcast; if as the result of the advice given to him he changes his occupation, he may find himself at a most unsuitable age frightened out of his office or warehouse work, and driven into an outdoor occupation which in the winters of this country may be most uncomfortable and may even become disastrous to him.

* Delivered at the Brompton Hospital for Consumption and Diseases of the Chest.

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Every medical man or woman who is an earnest student of pathology, and whose judgement has not been biased by alleged therapeutic wonders and clinical proofs of infection by contact, realizes that the tubercle bacillus gains access to the human body at an early stage of life; for our present purposes it matters little how or where the organism enters. A large number of children who die of some other disease are found also to show evidence of reaction to the tuberculous invasion, either by revealing an active or a healed tuberculous lesion.

We may assume that to those children who were found to have an active tuberculous lesion, had they not been carried off by some other disease, several courses would have been open. They might, for instance, ultimately have dealt with the tuberculous infection successfully and rendered it obsolete; others would have continued with less success and the tuberculous process would have mastered them at some date or another; still another group may show that a lifelong continuous civil war had gone on between the tuberculous infection and the patient's resistance, and that the patient ultimately died of some other disease.

The due appreciation of the statements made in the last paragraph compels us to take quite different views as to the real time of onset of pulmonary tuberculosis. Many of us believe that when we find tubercle bacilli in the expectoration, with no or slight signs in the lungs, the case is one of early pulmonary tuberculosis; but this should not make us think that the process of tuberculosis, whether general or pulmonary, so far as that patient is concerned, is really in its early stages. It is more probable that the apical rales and tubercle bacilli in the sputum are relatively late manifestations of tuberculosis of the body, and possibly of tuberculosis of the lungs. It is a familiar fact that these cases of early pulmonary tuberculosis commonly manifest themselves in the young adult. That is the period at which those who have been infected with the tubercle bacillus in childhood reveal their tuberculosis in the special form known as pulmonary tuberculosis—a clinical and pathological fact; it looks as if lung tissue was specially susceptible to the tubercle bacillus. Pulmonary tuberculosis may not reveal itself until the age of 40, 50, and even 80 or 90 years of age; in such latter cases the battle between the tubercle bacillus and the patient's resistance has been long and slow, and the patient has been able to live a long life and discharge all his duties.

It really does look as if the statement made many years ago that everyone has tuberculosis, has been confirmed by more modern investigation, and may have a new significance. To the layman such a remark comes as a shock; he feels that so long as he avoided infection by the tubercle bacillus he would never contract it. He has to learn that the *post-mortem* room teaches that he cannot avoid being infected in early childhood; that a robust-looking subject may be a case of active tuberculosis; that the constant struggle between the infection and the patient may end in the defeat of one or other at any period of life, and that when the micro-organism wins, and the seat of battle is in the lungs, the combat is discoverable at any period from early childhood to extreme old age. Because the seat of the combat is in the lungs, the existence of the tuberculosis may be more easily detected than if the combat were elsewhere, owing to the material results of the combat, the coughed-up debris showing entangled tubercle bacilli.

Have we, or have we not, as members of the medical profession, insisted upon these points properly, or do we still believe that adults catch pulmonary tuberculosis from other cases of pulmonary tuberculosis? There can be no denying that many do actively teach it, or the whole of their actions passively support the idea that they believe it. Other medical men accept the different idea that the pulmonary tuberculosis is merely the terminal expression of a lifelong tuberculosis. I fear others want to adopt the comfortable parts of both views, and shut their eyes to those parts which are unpopular. Let us think for a moment how our management of tuberculosis as a whole would be influenced if we held one or other of these views absolutely.

1. The Tubercle Bacillus gains First Access to the Body at different Stages of Life.

We should, then, as in the case of typhoid infection, endeavour to trace every tuberculous subject. We should

isolate and nurse him till he was cured of his tuberculosis, or until he died. We should have special hospitals and institutions for the care of such patients, all sputum or tuberculous discharges would be destroyed, all cases would be notified, all patients would be thoroughly studied, when apparently cured, to see that they were not "carriers," so that on their return to civil life they should not infect other people. Lastly, we should attempt to carry out prophylactic vaccination with tuberculin, hoping for the excellent results that have been obtained by the army authorities by prophylactic vaccination against typhoid. All nurses and practitioners in special attendance upon tuberculous subjects would certainly be prophylactically inoculated; indeed, the method would be thrown open to the whole community, as in the case of small-pox vaccination. As in typhoid fever, the protection might wear out, and we should have to repeat it. It is conceivable that the enormous numbers of cases of proved tuberculosis would make future generations feel that preventive inoculation against tuberculosis should be compulsory.

Finally, every one who was found to be tuberculous would be provided with sanatorium benefit *until he was cured*, or hospital treatment *until he died*. Common fairness would say that if a man or woman was found to be tuberculous, was notified, and was sent to special institutions for cure, he or she should be protected from any subsequent disabilities that would arise when people found, as they do now, that alleged cures were not cures at all, and object as they do to associate with such alleged cures.

Judging by our present knowledge, the cures of tuberculosis of the lungs in the only sense which warrants the use of such a term, are so few and far between that physicians recommending sanatorium treatment know that they cannot promise a cure; they can only say "It may cure you"; they cannot in any form of tuberculosis, as in typhoid fever, say what the percentage of cure is. The returned patient would be a menace to his fellow creatures; they would shun him in the workshop or the house or office; the outlying parts of our empire would refuse to accept him, and such a man would have the right, as one of your number has already heard it insisted, in his own State, to demand lodging, food, and general maintenance, not only for himself, but for those dependent upon him. If such a man is a danger to the community he should be separated from it; but he should not be penalized. An effort might then be made to set apart some district as a colony only for tuberculous subjects. This ostracism must be complete; but can we imagine such a plantation of tuberculous men, or tuberculous women going on for long? It would be bearable of course if such men or women had their dependants near them, living with them in the colony, but then this would defeat the very purpose for which the colony was established—the isolation of the infected individual.

It is seen from the above sketch that only too soon we are brought to an *impasse*. The final result would be that we should not try to establish a scheme of treatment of the tuberculous patient based on the idea that tuberculosis is caught, as typhoid fever is caught, at any period of life; any plan of treatment based on such idea would be as unstable as an inverted pyramid.

As a profession at the present day we are not at all satisfied with the management and treatment of the tuberculous subject; but so much momentum, however, has been given by the Insurance Act to the crusade to pick out and isolate the tuberculous subject that to change it all will only be possible when the public knows the truth. Further, if every tuberculous subject in England at the present day could be brought into this scheme of isolation there would probably be such an upset, socially and economically, that there would be a revolution. The country could not afford it, and human nature would not stand it. Let us look again at the fundamental pathological belief that all this superstructure is built upon.

Is it true that we first contract tuberculosis by infection from one another at any stage of life? Let us confess at once that this view no longer holds water and that the plan of dealing with tuberculosis based upon it has failed. On *prima facie* grounds many of us say that it is very likely we infect one another through the respiratory tract; yet the actual experiments carried out in the laboratories do not carry full conviction that this is the way human tuberculosis is spread, and it is common knowledge that

the entrance may be by the food through the alimentary system, and animal experiments prove that this is a very probable point of entrance. While there is this fully admitted divergence of opinion as to how the tubercle bacillus gains access to the body, it is freely to be admitted that we might act on the mere *prima facie* idea and allow that part of the Insurance Act dealing with the tuberculous subject to be tried. It has been tried, and the many failures are obvious. The present-day dissatisfaction is based not only on the paucity of the results secured under the Act, but on the failure to pursue such methods logically and completely. We know it is logically impossible to carry out the lines of prevention. If the child's milk is boiled to kill all tubercle bacilli, would the housewife or the cook boil the separated cream as well? If all cases of pulmonary tuberculosis showing tubercle bacilli in the sputum are dangerous to the community, should they ever, while they are in that state, be allowed to go back to their families, or even to their civil occupation? If the respiratory route is the one by which human tuberculosis is engendered, we have no right to ask a number of perfectly healthy men and women to act as physicians, nurses, ward-maids, and hospital orderlies in institutions for the care of tuberculous pulmonary disease. It should be criminal for children to be allowed to play on the pavements and streets of our cities, inhaling tubercle bacilli laden dust, brought into existence by bad-mannered people expectorating instead of swallowing, or collecting in a special pot, the sputum laden with tubercle bacilli. It should be criminal for the housewife to send handkerchiefs and pillow cases to the laundry which have been rendered dangerous by cases of pulmonary tuberculosis without previously sterilizing them.

One particular school has endeavoured to make us easy in our minds about the infectivity of dust by reminding us that sunlight soon leads to the death of the tubercle bacillus; but how does this help us in a climate like that of the British Isles, where the sun is so often obscured? What scheme is there going by means of which those who are infected with the tubercle bacillus and have tuberculous discharges are compelled to go to, or even given the option to live in, parts of our empire where the sunlight more fully exerts its beneficent power? The long and short of the position appears to me to be this: that if the care of our tuberculous patients is to be based upon the belief that those suffering from pulmonary tuberculosis especially have caught the infection at a comparatively short time before they develop the signs, it is absolutely impossible to be logical; however enlightened a community may be, it could not stand the application in every detail of rules for the prevention of the spread of pulmonary tuberculosis according to such a belief. Such an enlightened community would try to escape, and would say: "You are attending too much to the seed, why not attend to the soil." Indeed, this is what is happening at the present moment, and we have a great outcry for the clearing out of slums, the object being to raise the defence against infection from the organisms of disease. We have accepted the pleasant parts of the Act, such as the stay in the country in a sanatorium for the poor, who hitherto have never had such a treat; but we have woefully failed to provide proper treatment for the poor man or woman who may not go to a sanatorium, and who has failed to respond to treatment. We can no longer ignore and neglect such cases; they have as much right to help as the so-called early case of pulmonary tuberculosis.

Can we find at the present moment room in sanatoria for all who are entitled to it? And can we find accommodation for them long enough for their active signs to subside completely? It is well known that we cannot. All that we can do at present is to allow some tuberculous subjects to rest in healthy surroundings for a too brief period, trusting that even this short stay will work what many of us, alas! know to be impossibilities. The fate of these patients is most sad. They have to return to their work; they become "taboo"; often they have become exceedingly nervous about themselves. In some cases they become wilfully indolent and defend themselves by saying that if they do too much they may damage themselves. In many the disease progresses further and further and at last they become bedridden. What do we do with them then? We are obliged, on economic grounds, to condemn them to domiciliary treatment. But if the theory above mentioned is correct, we are undoing all that

we tried to do. The bedridden patient is put back into his or her home, and can infect the family as badly as ever. The position would be a laughable one were it not so serious. We do not forget that there are health visitors and tuberculosis officers who visit these homes; no doubt they are most serviceable, but they cannot always be on the spot, and those of us who have knowledge of the homes of the poor can guess what happens—in the intervals between such visits it can be seen that the visits might never have been made!

So far as this particular doctrine is concerned, both medical and lay folk give lip-service to it. We doctors merely carry out parts of the plan of treatment which the doctrine requires; just as much as we may. As soon as a practical difficulty arises we beat a retreat and tell our patients to act up to the ideal as much as they can. We admit that the doctrine is largely a creed, and is not based on demonstrated facts, and our patients wonder whether we are doctors scientifically trained, or whether there is not a great deal about us of the dogmatic religionist. I have heard it said, "Don't be critical about the imperfections of the present attitude towards tuberculosis, because what we are doing now is more active than it used to be"; or again, "Even if we are not curing consumption, yet under the cloak of our present activities and propagandism, we are stirring up the public conscience and using it as a lever; we are going to get the poor to hate to live in slums, to want to go back and live on the country-side, to be more decent in their manners, and we are giving them, when we send them to the country for three months to a sanatorium, an escape from the miseries of town life"; and "we are showing the working classes that politicians have a real and abiding interest in them, and that the health of the poor is of national importance."

2. Everyone is Infected in Early Life.

Now let us turn our minds to the way we should tackle the tuberculosis problem if we accept the view that every member of society, *nolens volens*, is infected with the tubercle bacillus in early life. This has been demonstrated in the dead bodies of children dying of some other disease. This view, therefore, has much surer pathological foundations than the first, which we have seen assumes as true something which it is very difficult to prove. It is certain now that tuberculosis in childhood is universal. It looks from the evidence as though the tuberculosis was brought about through food. It may also have been brought about through the respiratory tract. It does not seem that high social status, perfectly healthy surroundings, unimpeachable companions and food, can prevent the child of civilized parents from taking tubercle bacilli into its system. We have not the same access to the results of the *post-mortem* examination of the children of the well-to-do as we have to those of the poor; but judging from the fact that tuberculosis hits the well-to-do so hard, it may be assumed that the same widespread infection, universal in type, affects even that class of society. A corollary is that since infection by the tubercle bacillus is universal in childhood, we can at once allay the fears of a large number of nervous people, who in the ordinary course of life have to meet and deal with people who are suffering from active pulmonary tuberculosis. The very fact that they have reached their particular age without developing tuberculous disease shows that the soil of their bodies is, to date, so strongly hostile to the growth of the tubercle bacillus that though it has found a lodgement it has not produced disorder, organic or functional.

If we ask what proof we have that one tuberculous person has caused tuberculosis, whether of the lungs or of any other tissue, in another person, I think I am right in saying that the evidence rests largely upon data which have not been sufficiently controlled. For example, on one occasion there came under my observation a family of children, nearly a dozen in number. More than half of these children had either died of pulmonary tuberculosis, or had suffered from, or were suffering from, tuberculosis in some other part of the body. In those days, like many others of our profession, I was enthusiastic in tracking the individual who was the source of infection. I examined both father and mother: the mother revealed no evidence of any kind of disease; the father resented coming to the hospital to be examined, because, as he said, he had reached the age of 54 and had never had a day's illness in his life; the only symptom he had ever had was slight

cough in the winters, but that never caused him to stop work. On examination, I found that this spare man, whose weight had never been up to standard for his height and age, was suffering from pulmonary tuberculosis, involving two or three lobes of his lungs. Strange to say, he died of his disease within about eighteen months. This little story may be made to answer all sorts of questions connected with tuberculosis. According to one school of thought, it is almost certain—

1. That this man infected his children, and that had his disease been discovered earlier, and had he been dealt with logically, he might not have married at all. Suitable methods would have rendered him safe to the community, and by so much the mass of tuberculous material in the world would have been reduced.

2. That if he had only been diagnosed early he might have been cured, or he might have been shown a new mode of life by which his children would have escaped infection.

3. That it was an argument for the routine examination of the whole nation, ill or well, so as to find out those who are infecting their children unwittingly.

4. That when the father was found to be tuberculous he should have been taken from his work and given an outdoor occupation, or even been encouraged to leave England for a more suitable climate.

5. That each child who had become infected should have been treated as the father was and cured, and also have been given outdoor work, or sent to a more healthy country.

But another school answers questions raised by this story in quite different ways. It would argue—

1. That when one thinks of the number of tuberculous parents who have children who never develop tuberculosis, it is reasonable to ask whether the above story does more than exemplify the possibility that, seeing that all his children were infected by the tubercle bacillus, like the children of the rest of the community, only those succumbed to the disease who had inherited from the father a non-resistant soil. The rest of the children had inherited the mother's healthiness, and they were able to resist the disease. Further, if the father was so infective, surely he would have infected his wife! So far as could be ascertained she was, and had been, perfectly healthy all her married life.

2. That seeing how little agreement there is in our profession as to whether we possess a certain cure for tuberculosis of the lungs, it really did not matter that the father had not been found out to be tuberculous years before; indeed, from the economic point of view it was better that he should have worked on for so many years, despite his disease, instead of being a charge to his family or the state by adopting long periods of treatment which took him from his work.

3. On the same lines there would be no argument for the routine examination periodically of the whole nation, because in the present state of legislation a subject could not be compelled to allow himself to be examined, and accept medical treatment, or to live apart from his family and to give up work. He could only be notified, which might lead to him being dismissed from his work, in the event of his being unable to find other occupation; he ought, strictly speaking, to have the right to look to the state to support him and his family.

4. That since the man was able to carry on, and only had slight cough in the winters, it was just as well to leave him at work, helping him with advice and medicine till the time came when he could work no longer and needed complete nursing.

5. Each child which had been found infected should be placed under symptomatic treatment, including the change from a slum home; if the child required nursing it should be sent to a hospital; if all means failed at home to improve its appetite, a trial should be made of institutional treatment at the seaside or in the country. If such trial failed, and nursing became essential, the child should be sent to a hospital near its parents' home. If the parents wished it, and could manage the nursing, the child might stay at home.

By thus stating these two views of how and when tuberculosis of the lungs is laid down in the human body, and by sketching what would be the logical method of dealing with the disease according to the particular view accepted as a basis, I hope I have shown that the first

view, which is based rather upon assumptions than upon facts, and is the one we are trying to use as a basis for treatment under the Insurance Act, is only being used in part. We dare not, and even if we dare we could not, carry out treatment completely based upon such a view; in the meantime, so eager is the pursuit of cases of early pulmonary tuberculosis, that very much injustice is inflicted upon those unfortunate sufferers from the disease who do not come under such a favourable category; moreover, the great purpose of the Act, based upon the above view, of trying to stamp out tuberculosis by prevention, is rendered null and void by making the advanced tuberculous subject live in his own home.

I think it is more reasonable to base our treatment upon the second view. By doing so we shall get rid of much of the unnecessary terror and ostracism which tuberculous people encounter. We shall in no way minimize any alleged benefit that sanatorium treatment confers upon its patients; we can give such a scheme of treatment more years to run, with the hope of obtaining figures which will justify the belief that open-air treatment of consumption cures it; but at the same time this view will lead to our holding what I think is a more correct idea as regards the treatment of the patient. We shall not be so certain that early diagnosis of pulmonary tuberculosis means more certain cure, and we shall try under the Act to spread out the benefits of sanatorium treatment more evenly, and allow the advanced consumptive more benefit than he receives at present. I am trying, through this lecture, to secure more help for the advanced consumptive.

A few days ago my house-physician, Dr. Karunaratne, took a census of the cases under my care in the wards of this hospital who were suffering from symptoms which led to their being admitted to the hospital. The proportions of the various groups were as follows:

- | | |
|---|------|
| (a) Patients suffering from tuberculosis of the lungs, as shown by active signs in the lungs, and by the presence of tubercle bacilli in the sputum | 64% |
| (b) Patients who before admission were found to have tubercle bacilli in the sputum. Some of these cases had signs in the lungs suggestive of tuberculosis in an active stage; others had signs which indicated that in the past they had had active tuberculosis of the lungs, but that at present there was no active disease of the lungs; still another part of this group showed no signs of disease of the lungs whatever. The common feature of the whole of this group was that with repeated examination in the hospital of the expectoration tubercle bacilli could not be found. This group formed | 17½% |
| (c) A third set of patients included those whose expectoration, whether outside the hospital or within it, was always found to be free from tubercle bacilli; in some of these cases there were signs suggestive of active tuberculous disease of the lungs, and in others signs of arrested tuberculous disease of the lungs | 17½% |
| (d) A last category is that of a patient whose only claim for admission to the hospital was that he or she had had symptoms of pulmonary tuberculosis; no one had ever been able to detect, either outside the hospital or within its walls, any physical signs of the disease | 1% |

With reference to Class (c), it is pertinent to recall that subacute and chronic disease of the apices of the lungs is not necessarily due to tuberculosis; in the absence of tubercle bacilli in the sputum, such cases must not be necessarily considered to be tuberculous in origin.

This analysis of the cases in the wards has its analogue in ordinary practice, with this qualification, that owing to selection and concentration there is relatively a larger proportion of proved cases of pulmonary tuberculosis in the wards and a relatively smaller proportion of "suspect" cases. Particular practices will include the same category of cases, but the percentages will differ. I venture to think that the last category of 1 per cent. will be swollen enormously if the view that mere symptoms are a safe guide in the diagnosis of pulmonary tuberculosis be entertained. Into this category will be put every one who has a cough, and who as well has bodily wasting, anorexia, night sweats, debility, hæmoptysis, diarrhoea, pleurodynia, anaemia, dyspnoea, or amenorrhoea. Under the present legislation the doctor may try to secure state sanatorium benefit for them, or in the case of the richer classes treat the patient in his own home on sanatorium lines, or send him or her to a sanatorium. If the cases have access to this hospital they will be responsible for the last two categories above

mentioned—that is, for the 18½ per cent. of the cases above referred to. I am setting the rest aside for the moment—that is to say, 81½ per cent. of the cases—because tubercle bacilli have been found at some time or other in their sputum, but not in the 18½ per cent.

What I want particularly to point out is that by having hospitals like the Brompton Hospital these doubtful cases may be placed under observation without doing them harm, which may follow socially and economically when it is known that they have been under treatment for consumption. Patients of this class leave the hospital knowing that they were only sent in for observation, and a large proportion of them learn that they have no pulmonary tuberculosis. They have also learnt on coming into such an institution that they do not run the risk of catching pulmonary tuberculosis, because in common with every other human adult, they have already taken the tubercle bacillus into their systems in childhood. I have heard it said that we must continue to avoid contact with tuberculous subjects, to destroy every trace of tuberculous discharge and sputum, to boil all milk (and cream), to "sterilize" all tuberculous subjects, because though it is true we have all contracted tuberculosis in childhood and many of us have survived the attack, yet we are likely to succumb to future invasions; if such an argument is sound, we should not only avoid hospitals for consumption where the inmates are on guard and being guarded, but we should avoid churches, theatres, concert rooms, restaurants, trains, and public conveyances, where we must come in close contact with consumptives, who may or may not know that they are consumptive. I am told by tuberculosis officers and others that one of the crying needs of the day is the provision in every large populous centre in the United Kingdom of similar institutions to this for the admission of difficult cases. Indeed I have heard some whisper that it would be far better to spend money in the erection near all populous centres of similar institutions, rather than to continue building and maintaining in the depths of the country sanatoriums whose value as a certain cure is problematic. It is rather difficult to know how to label such institutions. Of course it would be most inadvisable to use as part of the nomenclature the words "tuberculosis," "consumption," or "sanatorium." They might be called "observation hospitals."

I have one more point. Before I cease my lecture I want again to give expression to a very abiding hope, and it is this: I want to consider the 64 per cent. of patients at present in the wards who have tubercle bacilli in the sputum. Two-thirds of them have to spend their days in bed; one-third of them are able to be up and about. We hope that the two-thirds by resting will all, sooner or later, also be able to be up and about. We also hope that all who are up and about will be considered suitable for sanatorium benefit, but whatever our hopes are, we know for a fact that only some of the two-thirds will be able to go to a sanatorium in the country and enjoy such a country holiday as they have never known in their hard-working lives. A good number of them will never be able to leave their beds. For as long a time as we can manage for them we shall keep them there, but their temperature will not fall, their pulse rate will not become normal, their physical signs will increase, and to the lasting shame of those of us who are responsible for the management of this disease, these helpless men, women, and children will be sent home for domiciliary treatment, a burden to themselves and their relatives. Some of us would like more beds at this hospital made available for incurable cases, but funds are hard to come by, and we have to follow the fashion of the day. If we find after a good trial that cases do not improve, we send some home, some may be sent to homes for the dying, some may go into infirmaries!

I do most sincerely hope that each one will work to secure provision, in the shape of institutions like this, as

(1) A means of carefully studying "suspect" cases of pulmonary tuberculosis, and

(2) Institutions, call them Invalid Homes if you like, or by any other euphemism, where patients who are suffering from pulmonary tuberculosis and are rendered incapable thereby, may be nursed and treated until they are fit to earn their living, because even that happy issue is well known to all workers here, or until they die.

Other advantages will follow indirectly. Such institutions being in the heart of populous centres, and not buried in the country, will allow these invalids to be near

their families, without being a burden to them. The opportunities for the study of the disease will be greatly enhanced, and the need for the discovery of better methods of treatment than the present will be better advertised. There will develop quite a definite body of nurses who have been trained in tuberculosis. A saner view will be held about the dangers of contracting the disease by contact, and nurses will not shun the work. The rich who do not wish to send their tuberculous relatives from their homes will be enabled to secure the help of these nurses for home treatment. The scheme would make no attack upon the present plan of providing sanatoriums for the poor, or for the rich. Lastly, though I admit it is a large undertaking, the provision of Invalid Homes for the permanent maintenance and nursing of tuberculous subjects who are incurable, may in course of time become extended most beneficently, so that Invalid Homes will be provided for the permanent reception of those who are incurable of other diseases which render the patient a complete invalid and a burden to his family. To the cry "decent homes for the poor" must be added "decent permanent hospital accommodation for those who are laid aside by pulmonary tuberculosis or any other disease which has reached an incurable stage."

ECLAMPSIA: ITS PREVENTION AND TREATMENT.

BY

A. LAPHORN SMITH, B.A., M.D., M.R.C.S.ENG.,

FORMERLY SURGEON-IN-CHIEF OF THE SAMARITAN HOSPITAL FOR WOMEN, MONTREAL, AND PROFESSOR OF DISEASES OF WOMEN AND ABDOMINAL SURGERY IN BISHOP'S UNIVERSITY, AND AT THE UNIVERSITY OF VERMONT AT BURLINGTON.

ECLAMPSIA, in my opinion, is a preventable disease, and one which in a few years, like many others equally fatal, might be made entirely to disappear. To show how this may be done is the main object of this article. In the meantime I believe that a great many of the lives which are now lost by the wait and see method of treatment might almost all be saved by a policy of prompt action. What this action should be is the second object of this paper. Most of what I am about to say is generally well known to specialists in this department of our art, but unless the views I am about to express are generally adopted and carried out by the rank and file of the profession who are engaged in general practice, and who are the first to see the patients, things will still go on in the way they are going. During the last three years 1,052 mothers in the British Isles have lost their lives from this cause, and approximately 600 children. The Registrars-General of England and Wales and of Scotland and Ireland have kindly furnished me with the following figures for the last three years available.

Deaths from Eclampsia (Three Years).

England and Wales	...	...	...	545
Scotland	...	...	...	311
Ireland	...	...	...	196
Total	...	...	...	1,052

There are no figures for the children, but 60 per cent. is a low average, and even that gives the 600 above mentioned; it is probably a great deal more. This is only for the British Isles. If we take the population of the empire as approximately ten times the population of these isles, we would have the death of 10,000 mothers in the last three years and at least 6,000 children. This number of lives of mothers and children is well worth saving. Owing to the partial acceptance of the views which I am about to advance, which have been adopted by many professors of midwifery, there has been a decrease of about 14 per cent. in the deaths from this cause in the last three years. In the first of the three years given me by the Registrars-General there were 374 deaths, while in the last of the three years the total deaths in these isles of mothers were 323, or about 14 per cent. less. This decrease is very gratifying and goes to show that the general adoption of prompt action following early diagnosis might do away with the death-rate altogether.

This improvement in the treatment of eclampsia is going on in other countries, as is proved by recent statistics of one of the largest maternally hospitals in the

world, the Sloane Hospital of New York. The director, Dr. Cragin, says that among 35,774 confinements in the last twenty years there were 389 cases of eclampsia. In the first series of 20,000 deliveries there were 231 cases of eclampsia with 28 per cent. of maternal deaths and 60 per cent. of fetal deaths. In the second series of 15,774 deliveries there were 138 cases of eclampsia, with 14 per cent. of maternal deaths and 44 per cent. of fetal deaths.

The first marked improvement took place when ether was substituted for chloroform. This is explained by the fact that prolonged chloroformization over many hours, as used to be the custom in convulsions, was very injurious to the liver, while at the same time the eclamptic condition had already seriously disturbed the functions of that organ.

The next great lessening of the death rate took place when it became generally recognized that once an eclamptic convulsion occurred the sooner the uterus was emptied the better. But it soon became evident that there was a great difference in the death rate depending on how much shock there was accompanying the speedy delivery. In other words, there was a much lower death rate when the speedy emptying of the uterus was accomplished by gentle means instead of by *accouchement forcé*, with its rapid dilatation of an undilated cervix, necessitating tears or incisions of the cervix and lacerations of the soft parts of the birth canal caused by rapid extraction, all of which led to shock.

Thus at the Sloane Hospital during the first period, when there was a death rate of 28 per cent. in 231 cases of eclampsia, the treatment had been by rapid dilatation and rapid extraction, or what is now known as *accouchement forcé*. In the second period, with 138 cases, the maternal death rate diminished exactly one half, to 14 per cent., while the child death rate fell from 60 to 40 per cent. In this second series delivery was also accomplished as quickly as possible, but by gentle means, and while these were being carried out everything was being done to lessen the toxæmia by favouring excretion and to diminish shock by quieting the nervous system.

I believe that by the general adoption by doctors and midwives of a few simple precautions the number of cases of toxæmia might be very greatly reduced and almost prevented altogether. My paper will be divided into two parts—prevention and treatment.

Prevention.

As the success of the preventive measures depends entirely upon their early application, how can we detect the cases which are going to be eclamptic ones in time to head the convulsive stage off, so to speak, and carry the woman on to full time without ever allowing sufficient of the toxic material to accumulate in her blood to cause an eclamptic explosion? The means of making an early diagnosis is well known—namely, to make an examination of the urine at the end of the sixth, seventh, eighth, and ninth months. If no albumin is present at any of these examinations, there is not one chance in a thousand that the woman will have puerperal convulsions. I therefore believe that the presence or absence of albumin is such a sure test that if it were carried out by every one of the thirty-five thousand doctors in practice in these isles, and if all the midwives and nurses would instruct all the women whom they were engaged to attend as to the importance of going to a doctor for examination of the urine three, two, and one months before delivery was due, practically every case would be detected in time to be treated so that convulsions would be prevented. A great many good doctors whom I have interviewed on this point have said that they had all been taught to take this precaution, but that they seldom or never took it because many of the women were not soon by them until they were called to attend them in labour or in convulsions, when, of course, it was too late to prevent the disaster. As for the woman who had engaged a midwife, the latter, it would seem, rarely if ever mentioned the subject of an examination of the urine. A general crusade carried on by thirty-five thousand doctors as well as by the highly intelligent midwives under the control of the Central Midwives Board would soon result in the mothers of the future realizing that a safe delivery is not a matter which should be left to chance, but that every precaution should be taken to place themselves under the care of a good doctor or midwife not later than the beginning of the sixth month, so

that the condition of the kidneys should be ascertained. The prenatal clinics, which are doing such good work in different parts of the country, would no doubt take this work in hand if they have not already done so. We who have the health of the nation in our charge should not rest satisfied until every woman has been trained to bring a sample of her water to her doctor not later than the end of the fifth month. This process of education should not be restricted to those married women who are actually five months pregnant, but every married woman of child-bearing age should have a minute or two spent on her in telling her that if ever she becomes pregnant, either at home or abroad, she should take this very important precaution.

Now supposing that a woman should come to us at the beginning of the sixth month or earlier or later with a small quantity of albumin in her urine, what must we do to save her from the risk of eclampsia? Supposing that this is her first pregnancy and the first time she has ever had any sign of albuminuria, it is evident that something has happened to her kidneys by reason of her pregnancy. What has happened? Some think that a toxin, normal or abnormal in character but in greater quantity than before pregnancy, has injured the tubules of the kidneys. Others think that the presence of the child and the gradually increasing bulk of the uterus is obstructing the return of venous blood from the kidneys to such an extent as to cause congestion and the beginning of inflammation or Bright's disease. It is difficult to say which are right. The mother *plus* the child might be expected to produce more of the toxins which are normally excreted by the maternal kidneys than would be produced by the mother alone. I am inclined to the view that the presence of the child and the distended uterus pressing on the large veins is the first cause, for the reason that it is the experience of all observers that the disease begins to get better almost from the moment that the uterus is emptied and the pressure on the abdominal contents is removed. Another argument in favour of the pressure theory is that eclampsia is not only more common with the first pregnancy but very much more common still when that first pregnancy is a twin one. The rigidity of the ever stretching abdomen in a primipara would quite explain that.

As we would not be justified in resorting to the emptying of the uterus in an early case, we must at least double or quadruple our vigilance. An examination of the urine every week would be a wise precaution. The next point which has been well established is that the amount of albumin in the urine can be greatly reduced, as well as the quantity of toxins, by a certain diet, while they are both increased by certain other articles of food. Still another point has come to be generally recognized—namely, that the toxin is either urea or one of the products of nitrogen. Abstention from fish, flesh, and fowl is at once followed by a marked decrease in albuminuria. One of my assistants, who is now professor of obstetrics and director of one of the largest maternity hospitals in the world, has practically abolished eclampsia in that district by making it widely known that he will admit pregnant women with albuminuria to the hospital, no matter how early in their pregnancy they may be. He has assured me over and over again that without any medicine, but only by dietetic and other hygienic treatment, he has prevented all of these women from having convulsions.

A great many doctors send such cases to him from a radius of about a hundred miles, and the only conditions are that they will examine the urine for albumin not later than the end of the fifth month, and that they send the women in as soon as albumin is discovered. In order to give the women occupation, as well as for financial reasons, there is a large and thoroughly up-to-date laundry in connexion with the hospital, where hundreds of private families send their washing, so that several favourable conditions are added to the carefully chosen diet. The women are kept warm with their skin acting freely in the coldest weather, and what nitrogen they get in their diet is rendered as harmless as possible by thorough oxidation. The nature of their work induces them to drink large quantities of water or weak tea, by which their kidneys are kept flushed and the poison is washed out. The severe cases are placed on an absolute milk diet until the albumin disappears. For all the others cereals and vegetables and fruit compose the bill of fare.

In private practice, as soon as albumin is detected in a

pregnant woman's urine in a slight amount, we can instruct her to dress warmly and to avoid cold and wet. We can teach her to drink larger quantities of water, and, if she can afford it, to give the preference to alkaline mineral waters such as Vichy, of which she should use not less than a bottle a day. If anaemic, we must give her mild preparations of iron to make up for the cutting down of her allowance of meat, although she may continue with fish as long as the albumin is lessening or absent. As there is generally a condition of acetonaemia, or at least a lessening of the alkalinity of the blood, we must give alkalis, a very useful one being the ordinary mist. rhei et sodae suitably flavoured and disguised. It has the advantage of being gently laxative, an important part of the treatment being to see that the intestines do all their own work and help the kidneys a little as well. With regard to exercise, this helps perspiration and should be encouraged either as work in the house or as walking out of doors; preferably the latter when the weather is warm.

Although all will probably agree that it is important to dilute the urine as quickly as possible if it is scanty and concentrated when the patient first comes under our notice, yet it is not always easy to get the patient to drink enough and quickly enough. Some years ago a woman made her first visit to the writer at the end of the fifth month. On boiling a catheter specimen the contents became solid in the test tube, so that the latter could be turned upside down without any running out. The patient was immediately put to bed and given copious draughts of lemonade and other things, the foot of the bed was raised, and she was given a continuous rectal enema of normal salt solution. There was a little increase in secretion of urine, but a few hours after she was first seen a convulsion came on. For this she received a hypodermic of morphine, half a grain. Almost immediately she began to pass water, and a few hours later she was delivered of a small dead fetus of about five months without a second convulsion. After the delivery she was put on large doses of sod. bicarb., and in less than a month the albumin had completely disappeared.

If a woman comes to us with a specimen of her water for the first time at the beginning of the sixth month and we find instead of a trace of albumin a very considerable amount, our activity must be great in proportion to the albumin. She should go to bed and be put on an absolute milk diet. When a patient suffering from albuminuria has been on a milk diet for one week she will almost certainly escape a convulsion. But an absolute milk diet is rarely necessary for the whole period of the remaining months of pregnancy. Sometimes a week or two of milk diet, followed by the other dietetic and hygienic measures will suffice to reduce the quantity of albumin to a comparatively safe amount. By examining a specimen every week one will soon perceive that the condition is improving. In that case we may safely extend the diet to milk foods or cereals with a large proportion of milk. Such, for instance, as purées made by boiling either potatoes, tomatoes, beans, peas, or artichokes until they are soft enough to pass through a colander and then mixed with sufficient hot milk to make it the consistence of cream. When flavoured with salt these purées are appetizing as well as nourishing, and as a full soup plate measures just a pint this is a good way of getting down liquids. Boiled rice and blancmange with fruit or jam are eaten with milk, and this latter supplies phosphates for the baby.

When we are hesitating about interrupting the pregnancy we must keep in mind the danger of injury to the brain. Quite a number of cases of paralysis are on record, and I have seen two myself due to brain lesions during the first convulsion. Some die in a few months, while others drag on a miserable existence, all of which could have been saved by following the rule to empty the uterus quickly.

Treatment.

Certain drugs that have been recommended I will mention only to condemn. At one time it was thought that veratrum viride would benefit every case, and two cases, in which I gave full doses hypodermically until the high tension of the pulse came down, recovered. But veratrum viride, by lowering the arterial tension, may bring about a condition akin to shock, so that the woman is in a bad condition to undergo any surgical procedure. Venesection should be abandoned for the same reason, and also because, though the woman may be congested in

the face during the convulsions she is pale between them, and very often there is general anaemia as well as anaemia of the brain. Chloral hydrate has been responsible for more deaths than is generally supposed, and chloroform I would forbid, being heartily in accord with the Mayos, who never allow it in their clinic. Ether lessens shock. There is no objection to bromides either by the mouth or rectum, but they are not curative, since they merely quiet the nervous system without removing the cause of the convulsions.

There are other procedures, however, which cannot be too highly recommended; and the first of these is a hypodermic of morphine. I have generally given just the one injection, the dose being one-half grain with one-hundredth of atropine. I cannot recollect a case in which a convulsion occurred after this had time to take effect. Many writers have objected to the use of morphine on the ground that it is likely to stop the secretion of urine. This may be true in normal conditions, but it is quite different in the condition of eclampsia. Here the secretions are already stopped, because there is a poison in the blood which has set up such a spasm in the arterioles, that the blood cannot get into the kidneys to be purified. Neither can it get into the arterioles of the brain, so that portions of it at least are anaemic, as in chorea. A full hypodermic dose of morphine will not only arrest the convulsions, but it will be almost immediately followed by the secretion of urine in comparatively large quantities.

If there is not enough water in the blood to flush out the kidneys we must promptly supply it by the mouth if the patient is conscious; otherwise, by the rectum. This may best be done by the slow continuous method, which consists in raising the foot of the bed on two kitchen chairs, each foot resting in the centre of a chair, and then, laying a rubber fountain syringe on the foot of the mattress, so that the reservoir is only a few inches higher than the rectum. This part of the bowel is capable of absorbing enormous quantities of normal salt solution, on the one condition that it enters slowly and under low pressure. If administered from a reservoir a few feet high the rectum will rebel and expel it. While in charge of a hospital in France I made frequent use of this method with the most gratifying results, and for many years before that I have employed it to prevent shock during and after severe abdominal operations. I cannot too strongly emphasize these two points. In every case since I have given morphine and administered water by the rectum the albumin has promptly disappeared from the urine, the colour and quantity of which has quickly improved. The water goes in clear and comes out loaded.

If after having done these things a convulsion comes on, all are agreed that there must be no further delay. The child must be delivered as quickly as possible with the smallest possible amount of trauma and shock. The dilatation of the cervix with Bossi's dilator, or any other procedure included under the term of *accouchement forcé*, must be discarded. If the os is dilatable, an attempt may be made gently to dilate it with the hand, but on the one condition of absolute asepsis, as though it were an abdominal operation, which may, indeed, become necessary a few minutes later; the success of the operation of Caesarean section depends on the uterus being aseptic. Rubber gloves must be used. If the child cannot be delivered with forceps in a few minutes, without tearing the cervix and without violent efforts, it is far better not to continue the attempt. We have another means of terminating the pregnancy which is unaccompanied by shock. Some think that if the child is dead or will die soon after birth, as many infants of eclamptic mothers do, we should break up the child by craniotomy, whether living or dead. I totally disagree. There are others who have advocated vaginal hysterotomy, which consists in cutting through the undilated cervix and delivering with forceps. But this means extensive tearing and bruising and much shock, and for this reason I am opposed to it. If the child cannot be delivered quickly, aseptically, and without injury to the uterus and soft parts, it is better to abandon the vaginal route altogether and at once, and resort to that method of delivery in which shock and sepsis and mortality for the mother are reduced almost to the vanishing point, the average for good operators being about 3 per cent., although there has been at least one run of a hundred cases without a death. This method is Caesarean section by the abdomen. At the same time by this

method the chances for the child's life are very greatly increased, for its journey from the womb to independent life occupies only a few seconds, and absolutely without the hardships of the natural process. With an ever-increasing number of teachers, I maintain that in a certain class of cases it is the only thing to do, and it should be done promptly before any vaginal manipulation. If the eclamptic woman is a primipara, or if she has a long rigid cervix, if the child is viable, if she is near term, in such cases delivery by the vagina owing to the trauma of dilatation, coupled with the shock of the long tedious labour and the risk of infection to which eclamptic patients are especially liable, is much more dangerous than Caesarean section.

Summary.

I may sum up as follows:

1. Do not fail to prevent eclampsia.
2. Do not fail to examine the urine at least four times at the end of each of the last four months, and if albumin is present put the patient on a milk or vegetable diet; give sodium bicarbonate and laxatives, and keep the patient warm, in bed if necessary.
3. If a convulsion occur, do not give chloral or chloroform, or veratrum viride, nor employ venesection.
4. Do not allow the pregnancy to continue when it is known that brain and kidneys are being irreparably damaged.
5. Do not forget that *accouchement forcé*, vaginal Caesarean section, and craniotomy, in the interests of the mother as well as of the child, are no longer justifiable.
6. Do not forget that abdominal Caesarean section performed by an experienced operator is one of the safest operations in surgery for the mother, and that it enormously increases the chances for the child if performed after the end of the seventh month when the child is viable. In one of the latest works on obstetrics D. Lees says that a well known operator had reported 550 cases of eclampsia operated on within one hour of the first convulsion without a single death.
7. Do not forget that the best time to operate is before labour begins and before the woman has been examined by an unglowed hand. The few deaths which now occur are due to infections of the uterus.
8. Do not look upon eclampsia as a one man case. There must be three doctors and a good trained nurse if every case is to be saved. If the proper conditions cannot be obtained at her home, it is better to send her to a good obstetric surgeon at a good hospital.

DENTAL CONDITIONS AT AN ANTE-NATAL CLINIC.

By J. W. BALLANTYNE, M.D., F.R.C.P.E.,
PHYSICIAN, EDINBURGH ROYAL MATERNITY HOSPITAL.

HAVING had my attention arrested many times by the bad state of the teeth of the patients coming to the ante-natal clinic in the Edinburgh Royal Maternity Hospital, I decided to make a systematic examination of the next hundred cases beginning on June 3rd, 1919. Nine meetings of the clinic served to supply more than one hundred cases of expectant motherhood, and the special inquiry into the teeth was closed on July 1st. The results more than fulfilled the forebodings, and the patients, speaking generally, revealed a most "imperfect dental exhibition."

There was no selecting of cases. The mouth of each patient was examined, and the first hundred were reported upon. Of course the few patients who paid a return visit during the month were only counted once. Some curious answers to questions were received. One patient said that she never suffered from toothache, and it emerged that she was wearing top and bottom plates, and had none of her own teeth left. Another expectant mother reported that her teeth were in very good condition; inspection of the mouth revealed a tell-tale plate.

The first and most outstanding result of the examination was that in only two patients were all the teeth present in an undecayed condition. The happy possessors of these complete sets were a primipara of 23 and a secundipara of the same age; but it was, perhaps, an ominous fact that the latter complained of toothache and earache. The remaining 98 patients all had more or less

defective teeth, and by far the commonest result was stated in the words "many decayed, some extracted." None of the women seemed in the least surprised at the condition in which the mouth was found to be.

The various matters ascertained with regard to each patient were as follows:

1. *Age*.—Eight patients were 20 or less. The youngest was 17, and she had already one or two decayed teeth. Forty-eight were between 21 and 25, fourteen being 22 years old and eleven 23. Twenty were between 26 and 30 years; twenty-two were between 31 and 40 years of age; one was 41 years old and one was 44. Fifty-six per cent., therefore, of these women were 25 years old or less, and only two of them had complete and undecayed sets of teeth.

2. *Number of the Pregnancies*.—Exactly fifty of them (50 per cent.) were primiparas, twenty were 2-paras, eleven were 3-paras, seven were 4-paras, seven were 5-paras, one was a 6-para, one was a 7-para, two were 8-paras, one was a 10-para, and one was an 11 para.

3. *Toothache or Neuralgia during Present Pregnancy*.—Twenty-two of the women had suffered from toothache or neuralgia during the present pregnancy and seventy-eight said they had been quite free from pain, but a few added that the reason was that they had no longer any teeth to ache. Only one of those who had toothache stated that she had suffered a great deal; she was a 3-para, aged 21, who had already had two teeth extracted and at the time had a decayed one in her mouth. Almost every one spoke of having had toothache at some time previous to the present pregnancy. Toothache and neuralgia in the present pregnancy, however, yielded only a comparatively small indication of the amount of decay in the mouth, as was proved over and over again by actual inspection of the teeth.

4. *Number of Teeth Decayed and Number Extracted*.—As has been already stated, only two patients had no carious teeth and had had none extracted. Four patients, all primiparas, had one carious tooth each; a fifth had had one bad one extracted, and now had a completely healthy mouth, she also being a primipara. All the rest—namely, ninety-three (93 per cent.)—had more than one decayed tooth or had had more than one tooth pulled. With most depressing regularity the report was, "Several now decayed, several have been already extracted." The following were the descriptions given by ten patients (Nos. 11 to 20):

"Two pulled"; "several diseased, nine pulled"; "several decayed, three extracted"; "several decayed, six extracted"; "several bad ones, one or two extracted"; several carious among the bottom teeth, all the top ones extracted"; "a beautiful set of teeth, none extracted"; "lost all her teeth either by decay or extraction save two"; "has had all her teeth extracted or reduced to roots, save five"; "has had three extracted, and one is now carious."

Among the remaining 83 the following were the worst so far as their dental conditions went:

Number 5, a 1-para of 30 years, had lost or had had extracted all her teeth. Number 6, a 1-para of 25 years, had had eighteen extracted and now had only five teeth left. Number 23, a 6-para of 29 years, had lost many, and had had all the top teeth pulled. Number 32, a 2-para of 33 years, had had all the top ones drawn and the back ones of the lower jaw. Number 33, a 10-para of 34 years, had had ten extracted at one time; the rest were all decayed. Number 35, a 2-para of 30 years, had had twelve pulled at one time and fifteen on a subsequent occasion. Number 38 had had eleven pulled at once.

Number 42, a 2-para of only 22 years, had had thirteen extracted, and had several bad ones. Number 45, a 1-para of 33 years, had had all her teeth pulled save four. Number 51, a 2-para of 32 years of age, had had ten extracted at one time, and six others at other times. Number 52 had had ten drawn at different times. No. 54, a 5-para of 31 years, had had ten extracted on one day, and seven a day or two later, soon after the birth of her last child. Number 55 had had twelve extracted. Number 56, a 1-para of 24 years, had had many teeth drawn when she was only 16 or 17 years old. Number 60 had only five teeth left. Number 66, a 7-para 34 years old, had had her top teeth and some bottom ones extracted during her last pregnancy (at fifth month). Numbers 67, 69, 71, 73, 74, 81, and 91 had had all their top teeth extracted. Number 79, a 1-para of 35 years, had only four teeth left.

Number 85, a 1-para of only 21 years, had had twelve teeth extracted, and several of the remaining ones were decayed. Number 90, who was, however, 44 years old, was quite toothless. Number 97, a 1-para 36 years old, had had 14 extracted at one time and eleven at another. Number 98, aged 24 years, had had twelve extracted at one time, and several were now requiring attention. Finally, Number 100, a 2-para of 27 years, had had all her teeth extracted save four.

Many of the other patients had mouths only a shade better than those singled out. Altogether this inquiry revealed an amount of dental incapacity which was really alarming, and in addition there were not a few cases of marked oral sepsis and a great many of slighter degrees of the same disorder. When it is remembered that 56 per cent. of the women were 25 years old or younger, and that 50 per cent. were pregnant for the first time, while 31 per cent. were pregnant for either the second or the third time, the whole clinical picture becomes dark in the extreme.

5. *Dental Treatment Previously Received*.—The investigation yielded evidence, further, as to the amount of treatment these women had received at the hands of the dentists. Wholesale extraction and the wearing of one or two plates was by far the commonest history furnished by the patients. Forty-eight (48 per cent.) were wearing false teeth, and of these eight were wearing upper and lower plates and a ninth was about to add a lower plate to her equipment. Thirty-eight had a single (top) plate. Fifty-two had no false teeth. Tooth-stopping had very seldom been resorted to; in only three cases was there a history of teeth being stopped, although it is possible that the question did not always elicit the facts about this dental operation. In a few instances there was the history of dental manipulation during pregnancy, but generally the prejudice against such interference in the expectant period seemed to have been acted upon and carious teeth left strictly alone.

CONCLUSIONS.

Here, then, were one hundred expectant mothers, drawn by no means from the poorest class—many of them had husbands well able to provide them with accommodation in the private wards of the hospital—most of them enjoying a fair measure of health, half of them primiparas, more than half of them under 25 years of age, and yet ninety-eight of them had more or less defective teeth, ninety-three of them had had more than one tooth pulled, or had lost more than one tooth by caries, and nearly half of them (48 per cent.) were wearing false teeth, eight having two plates and thirty-eight a single plate.

Dental Deficiency and Disease among Women.

Such a result suggests certain reflections. In the first place, it points to the existence among working-class mothers of an alarming amount of dental deficiency and disease with, in not a few cases, concomitant oral sepsis. These conditions cannot fail to react injuriously upon the mother's digestion, and through it upon the nutrition of her unborn infant. They may also retard the return to complete health and strength in the puerperium, even if they do not increase the danger which always exists then of septic infection. They cannot be helpful in lactation. They also represent an amount of suffering, if not in pregnancy at any rate at other times, which is far from negligible.

Need for Preventive Dentistry.

In the second place, it calls aloud for a campaign amongst the potential mothers of the nation for the saving of teeth by all the means with which preventive dentistry is furnished. This may take some time to get set agoing, although the need for caring for the teeth of the women of the population is no less acute than was that for the soldiers during the war, and in the meantime a beginning might be made by the temporary appointment of dental physicians to maternity hospitals not already furnished with them, so that before the women leave the hospital they may have their mouths inspected and what is necessary to be done told them, even if it be not convenient to have it carried through there and then. In particular the study of the cases at the Edinburgh Royal Maternity Hospital seems to point to the desirability of greatly increasing the facilities for tooth-saving by means of stopping, crowning, and the like, in place of the present system of wholesale extraction in comparatively young women.

Dental Treatment during Pregnancy.

In the third place, the results seem to point to a revision of the custom of giving a sort of "close time" for the teeth during pregnancy—a time during which dental disease is suffered to go on unchecked; until after labour is over the only possible treatment is extraction. Many teeth must have been lost in this way.

Of course, if it is a fact that tooth pulling or stopping is

dangerous during gestation to the extent of leading in even a small proportion of cases to abortion or premature labour, one must act warily; but is this a fact? Is it not rather the fact that nowadays the abdomen is opened for the relief of morbid conditions there during pregnancy, and that the uterus does not empty itself in consequence so long as assepsis is maintained. I have performed abdominal section in several different conditions during pregnancy, and have not had to deplore an interruption of pregnancy in any of them. The risk due to caring for the teeth and even of extracting them must be considerably less than that arising from operations situated so near to the uterus as, say, appendicectomy or ovariectomy. At any rate, it is surely well worth while to reopen this question and ask for cases in which modern dentistry is responsible for obstetric accidents. Until this has been done it is obvious that women who may at any time become expectant mothers should have their dental house, so to say, set in order.

In the last place, the further investigations of these and similar sets of cases at ante-natal clinics may throw some light upon the causation of dental caries in pregnancy. Certainly in some of the cases the bad state of the teeth coincided with heartburn, but whether as cause, effect, or mere concomitant, could not be definitely stated.

THE ACTION OF SYPHILIS ON NATIVE COMPLEMENT.

By B. H. SHAW, M.D.,

MEDICAL SUPERINTENDENT, COUNTY MENTAL HOSPITAL, STAFFORD.

WHEN studying the activity of human complement in various disorders, certain facts were elicited as regards syphilis which, so far as I am aware, have not previously been noted.

Syphilitic serum, it is already known, shows, as compared with normal serum, a diminution of complementary activity in varying degrees when incubated with sensitized cells. For example, normal serum showed complete haemolysis when incubated in a water-bath at 37° C. for six minutes (in the proportion of 1 vol. of 1 in 10 serum) with 1 vol. of sensitized cells 3 per cent. and 2 vols. of normal saline, whereas a similar amount of syphilitic serum under similar conditions took thirty minutes to bring about complete haemolysis. The specific serum in this instance was from a case of tertiary syphilis. I have noticed that in cases of early acquired syphilis after successful treatment by salvarsan, etc., and resulting negative reaction of the "Wassermann" test, the serums are also deficient in complementary activity to a very marked degree. The following illustrates this:

Complement fixation tests were done (Harrison's method) on a series of serums, from which I select:

	Result.
B. For diagnosis ...	Neg.
C. " " (general paralysis) ...	++
E. " " (locomotor ataxy) ...	±
G. " " (general paralysis) ...	+++
H. Early treated ...	Neg.
H.E. For diagnosis ...	Neg.

The fresh serums (1 vol. of 1 in 10) of these cases were put up with 1 vol. sensitized cells and 2 vols. of normal saline added to make up the total used in the ordinary test. The results after ten and fifteen minutes in the water bath are given in the following table:

	10 min.	15 min.
B. ...	C.H.	C.H.
C. ...	M.H.	C.H.
E. ...	V.M.H.	C.H.
G. ...	V.S.H.	M.H.
H. ...	M.H.	C.H.
H.E. ...	C.H.	C.H.

C.H. = Complete haemolysis.
M.H. = Marked haemolysis.
V.M.H. = Very marked haemolysis.
V.S.H. = Very slight haemolysis.

Here Case H., treated syphilis, shows complete haemolysis in fifteen minutes, whereas G. (general paralysis) untreated, only shows marked haemolysis. These serums, which were all drawn on the same day (day of test) and kept under aseptic conditions on ice, were again tested on

the fourth day afterwards, results on this occasion being as follow:

	15 min. in water-bath.	30 min. in water-bath.	Overnight incubation at 37° C.
B. ...	C.H.		
C. ...	C.H.		
E. ...	C.H.		
G. ...	N.H.	N.H.	*C.H.
H. ...	N.H.	N.H.	N.H.
H.E. ...	C.H.		

N.H. = No haemolysis.

* This was not apparently due to bacterial action.

The same series examined on the sixth day gave the following results:

B. ...	C.H. in six minutes.
C. ...	C.H. in fifteen minutes.
E. ...	C.H. in fifteen minutes.
G. ...	N.H. in sixty minutes.
H. ...	N.H. in sixty minutes.
H.E. ...	C.H. in fifteen minutes.

Guinea-pig serum kept under similar conditions and a like period showed complete haemolysis in six minutes.

Complementary activity of serum does not diminish so rapidly as is generally thought, when the serum is kept under suitable conditions, but this diminution is more rapid in proportion to the degree of positivity of the complement fixation test, and the return of a serum to normal conditions as regards the "Wassermann" test does not appear to effect any corresponding change in complementary activity. This result is not what would be expected on the supposition that deficient haemolysis is due to the presence of antigenic substances in the serum.

First, why does it persist after efficient treatment and in the presence of a negative Wassermann reaction? Secondly, when the serum is freshly drawn the complementary action is fairly active, more active in early treated syphilis than in tertiary untreated, and yet after a few days the reverse is the case, indicating a certain debility or fragility of complement (if one may use such a term), and not the presence of any anticomplementary substance.

It is important to ask what the relation is between the presence of syphilitic poison in the system and the lesion of complement; also, after recovery from syphilis, as evidenced by a negative reaction to the "Wassermann" test, does the serum recover its normal activity, and, if so, when? I have examined cases three months afterwards, but have not found that there has been much recovery in this respect.

I have not many opportunities for examining cases of early treated syphilis, but desire to bring to the notice of those who have the urgency of deciding what relation exists between complete recovery of complementary activity in syphilis and the disease process.

ANKYLOSTOMIASIS IN LONDON.

BY

CHARLES HORNE WARNER, M.B., B.Sc.,

CAPTAIN R.A.M.C.(S.B.),

HOUSE-PHYSICIAN, MIDDLESEX HOSPITAL.

THE occurrence of ankylostomiasis in a subject who has neither been abroad nor resided in a mining district does not appear to have been recorded. The following is a description of a case which was complicated by the coexistence of Addison's disease.

A boy, aged 15, who had been employed at the Admiralty, was admitted to the Middlesex Hospital under the care of Dr. A. F. Voelcker. He complained of fainting attacks, lassitude, headache, shortness of breath following exertion, and, latterly, of morning sickness and constipation. He was emaciated and the skin was somewhat yellow in tint without patent mummification. In hospital he usually vomited immediately after breakfast, but for the remainder of the day he could take food satisfactorily. The temperature had a subnormal tendency; there was no oedema, and the ophthalmoscope revealed no abnormality.

Examination of the blood showed red corpuscles 1,924,000 and white corpuscles 7,400 per c.mm., haemoglobin 60 per cent., and colour index 1.5. The differential leucocyte count was as follows: Polymorphonuclear cells 47.5 per cent., lymphocytes 30 per cent., large lymphocytes and transitional cells 15 per cent., eosinophiles 6 per cent., and mast cells 1.5 per cent. In view of the eosinophilia the typical ova of *Ankylostoma duodenale* were seen on several occasions; one

Thymol was administered in cachets, but the whole dose, apparently, was at once returned by vomiting. On the next day the patient became comatose with a scarcely palpable pulse. Under treatment with stimulants he regained his previous condition in the course of a day or two and no more thymol was given, but a week later a similar attack of collapse ended fatally. The duration of the illness was, in all, three months.

Post-mortem Examination.—Contrary to expectation, only one mature ankylostome was found in the intestine, and little or no change was seen in the lining mucous membrane. The increase in the number of lymphocytes had suggested the possibility of tuberculosis, and, in view of the history of fainting attacks, headache, and vomiting, it was thought that a tuberculous mass might be found in the cerebellum. The brain was found to be normal, but extensive tuberculous disease, with marked caseation, was found in both suprarenal bodies, and the symptoms were doubtless due chiefly to this condition.

The patient had never been out of England, nor had he visited Cornwall or any other mining district; he had not, in fact, travelled farther from London than Dover. The boy had, however, associated to a considerable extent with soldiers who had been abroad, and it is possible that he acquired the ankylostoma infection in this manner. The case is put on record on account of the clinical interest attaching to its rarity and obscurity. Whether as a result of the war ankylostomiasis will become somewhat less restricted in its incidence remains to be seen.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE CONE DIAPHRAGM IN X-RAY WORK.

THE localization of foreign bodies in the orbit by most of the ordinary methods is tedious and not always accurate. While in France I set about designing a new form of localizer. I was anxious to obtain the sharpest possible shadows and therefore investigated the question of diaphragms in x-ray work. I knew that the results obtained normally with a plane diaphragm were inferior to those obtained with the aid of a cylinder cone or tube diaphragm. The usual explanations of this phenomenon did not appear to me to satisfy all the facts, and I therefore carried out some experiments. From the results I obtained I convinced myself and several others who have repeated the work that

1. Most, if not all, of the general fog and blurring of the shadow of a foreign body in an x-ray negative is due to secondary rays set up in the tissues by primary rays arising from the anti-cathode.
2. The usual plane diaphragm is not opaque to all the hard rays from the A.C.
3. The tube cone or cylinder diaphragm is superior to the plane diaphragm only in so far as it is opaque to these primary rays owing to its greater thickness.
4. With a plane diaphragm of lead 6 mm. thick one obtains as good results as with any cone diaphragm.

Further, the amount of secondary rays set up in aluminium is less than that set up in human tissues, and therefore thin aluminium sheets may possibly be placed with advantage between the patient and the plate to filter off some of these softer fogging secondary rays with resulting greater contrast. An account of the experiments will shortly appear in the *Archives of Radiology and Electro-Therapeutics*.

B. T. LANG, B.Ch., F.R.C.S.,
London, W. Assistant Surgeon, Western Ophthalmic Hospital.

PURULENT MENINGITIS WITH RECOVERY.

ON March 23rd, 1919, a man was admitted to a casualty clearing station suffering from a lacerated scalp the result of a fall from his horse two days previously. The wound had been cleaned and sutured at the field ambulance. He complained of severe headache, and gave a history of having been unconscious for a short time after the accident. Temperature, pulse, and reflexes were normal. There was slight tenderness and suppuration around the wound, and the stitches were removed. Some hæmorrhage under the conjunctiva of the right eye externally came apparently from behind the orbit. The following day the temperature was 101.2°. He complained of headache, and pain radiating down the spine; the head was retracted, the pupils equal, the knee-jerks

brisk, and Kernig's sign was present. Under an anaesthetic lumbar puncture was performed. The fluid was under considerable pressure and opalescent; about one ounce was withdrawn. The pathological report showed "polymorphs abundant, and lymph cells; no organisms seen." The man's condition steadily improved from that time onwards. Urotropin was given, gr. x every eight hours. He was evacuated on April 5th, apparently perfectly well.

T. W. HANCOCK, Major R.A.M.C.(T.),
Surgical Specialist.

Rebiew.

IN FLANDERS FIELDS.

It is very meet and our bounden duty in these days of rejoicing to think of those who made victory possible, being mindful, not alone of their deeds and sacrifices, but of the spirit that impelled them—a spirit shared then by the nations of which they were the champions. Already it has become difficult to recapture the spirit of 1915, when all knew that the war would be long, though the fighting men were sure of the final result if only the civilians held firm. To those into whose hands shall fall a small volume, *In Flanders Fields*,¹ the memory of the spirit of 1915 will return, for John McCrae's poem, "born of fire and blood in the hottest part of the second battle of Ypres," gave "expression to a mood which at the time was universal, and will remain as a permanent record when the mood is passed." To a collection of some thirty of McCrae's poems Sir ANDREW MACPHAIL has added, not a formal biography, but "an essay in character," and vivid is his picture of the sterling qualities and lovable disposition of John McCrae. On one side of him he was a type of the physician of the twentieth century; beginning with pathology, he went on to be lecturer in medicine at McGill, working unceasingly in clinic, hospital, laboratory, and class-room, and with his pen. But he found time to make friends among all sorts and conditions of men, and the friends he made he did not lose. Through it all, like many another young physician, he found relief and solace in good books, and knew the rarer joy of creation. The poem that gives its title to this book was not his first, nor was it the first in a form which, as he devised and used it, has a haunting melody; all his early verses were contributed to the *University Magazine of Canada*, and Sir Andrew Macphail, who was its editor, writes that when he brought his work it "was finished to the last point." In July, 1914, McCrae completed the heavy task of revising for a new edition the *Textbook of Pathology* he had written with Professor Adami. He never doubted where his duty lay. But he went into the war without illusion, for he had served in South Africa and knew that this war would be terrible. His first experience of what it could be was with the artillery in the second battle of Ypres—"at the end of the first day if any one had told us we had to spend seventeen days there, we would have folded our hands and said it could not be done." General Morrison describes the circumstances: "My headquarters were in a trench on the top of the bank of Ypres Canal, and John had his dressing station in a hole dug in the foot of the bank. During periods in the battle men who were shot actually rolled down the bank into his dressing station." It was in this dug-out, a square hole, 8 by 8, roofed over with remnants to keep out the rain, and having a little sandbag parapet at the back to keep out pieces of back-kick shells, that he wrote the appealing piece of verse that was to stir so many hearts. It came straight from his heart, in its revolt, its doubt, and its hope. The effect it produced on both sides of the Atlantic is part of the history of the war.

Sir Andrew Macphail's essay is a joy and a consolation. He makes no attempt to impress his own estimate, but gradually, by a fine disdain of chronological order and seeming irrelevance of incident, he builds up in the reader's mind with cunning hand a conception of McCrae the more convincing that the building has seemed devoid of art.

¹ *In Flanders Fields*. And Other Poems. By Lieut.-Colonel John McCrae, M.D. With an Essay in Character by Sir Andrew Macphail. New York: G. P. Putnam's Sons. London: Hodder and Stoughton. 1919. (Demy 8vo, pp. ix + 141; 4 illustrations. 6s. net.)

BARBED WIRE DISEASE.

THE little volume by Dr. A. L. VISCHER on *Barbed Wire Disease*¹ is a useful contribution to the knowledge of psychogenetic factors in the production of psychoneurotic symptoms. The term is convenient to include the neurasthenic symptom-complex which occurs amongst prisoners of war as a result of their confinement. The abnormal reactions are thus definitely related to the situation in which the sufferers find themselves. Dr. Vischer's observations are based upon his work as a Swiss departmental surgeon in prison camps in various countries and upon conversations with a great number of prisoners. He does not claim an "exceptional knowledge of mental disease," but it is fortunate that he was drawn to devote special attention to the subject of his essay, as it is one that has been somewhat neglected, and some authorities have taken the view that neurotic symptoms are unusual in prison camps. It is hardly surprising that careful personal observation should lead to a different conclusion in view of the complete readjustment to life which prolonged confinement necessitates. Dr. Vischer states that very few prisoners who have been over six months in camp are quite free from the symptoms he describes.

The particular factors in the situation which the writer urges as productive of the symptoms are the dislocation of the habitual interests, the lack of privacy, sexual deprivation and difficulties, the indefinite duration of the imprisonment with the constantly frustrated wish for deliverance, and, "above everything else, the barbed wire which winds like a red thread through his mental processes." Dr. Vischer finds evidence of the mental stress which these factors create in the poetry, diaries, letters, journals, and daily reactions, and even amusements, of the prisoners. The quotations from some of these sources included in the essay are very illuminating and interesting. The chief symptoms described are increasing egotism, irritability, suspicion, a vaguely persecuted attitude, defects of concentration and memory, aimless restlessness and depression. There is no reference to any definite psychotic manifestations, and nothing analogous to the so-called "prison psychosis" is described by the author. This latter, of course, occurs in more degenerate types, and it is to a certain extent determined by the wish to escape from the painful situation. In the army this type of disorder is not unusual, even in peaceful mobilizations. Probably, however, Dr. Vischer has had no opportunity of ascertaining the incidence or types of mental disorder, and it may be that observations will be forthcoming from other sources on this matter. Dr. S. A. K. WILSON provides an introductory chapter, in which he includes some personal observations and some references to literature which Dr. Vischer had been unable to consult.

THE VENEREAL PROBLEM.

THE increasing attention that is being given on all hands to the various problems presented by venereal infection, more particularly in relation to the questions it raises in such matters as education, marriage, and prostitution, may be traced to the beneficent action of ventilation in the public press. Books on such subjects as these appear in increasing numbers; designed mostly for the lay reader, there can be no doubt that in many instances they fulfil a useful function. Mr. P. G. KAMMERER's *The Unmarried Mother*² is a painstaking study based on five hundred cases collected in the United States, and fully documented. The author found the mother mentally defective in 30 or 40 per cent. of his cases, and argues that such mothers should be protected by legislation; so, too, should the illegitimate child; and he looks for help in the future from both social betterment and the more careful education of young people in sexual hygiene. The abridged edition of Dr. A. FLEXNER's *Prostitution in Europe*³ shows how far attempts at repression and abolition have

succeeded in keeping prostitution in check in our continent. The success attained has not been striking; Dr. Flexner is no doubt right in pointing out that vice will flourish, in this as in other forms, until it is ousted by a more enlightened public opinion than any country yet can boast. Mr. CORBETT-SMITH's *The Problem of Sex Diseases*⁴ is a brave attempt by a layman to show how cant and the conspiracy of silence in such matters must give place to education and open discussion if sexual diseases are to be stamped out. To him the key of the problem lies in the one word "knowledge"—knowledge of the dangers, and how to avoid them.

THE MEDICAL ANNUAL.

THE *Medical Annual*⁵ is described as a year book of treatment and practitioner's index, a purpose it has long well fulfilled, for it is now in its thirty-seventh year. The volume for 1919 contains adequate and well-written summaries of the recent progress made in all the various branches of medicine, surgery, public health, administration as concerned with our general well-being, and kindred subjects.

The volume is divided into three parts. The first, on materia medica and therapeutics, contains two chapters—one a dictionary of remedies, by Dr. F. J. Charteris, the newly appointed professor of materia medica at St. Andrews, and the other an article on radio-activity and electro-therapeutics, by Dr. Thurstan Holland. The second part, a dictionary of treatment, fills the greater part of the book, and is written by many hands. The third part contains notes on medico-legal and forensic medicine, industrial diseases, and the school medical service. Lists of medical institutions, homes, spas, and of medical and scientific societies and periodicals, are given.

The design of the book is as excellent as its printing; its matter is thoroughly practical, well illustrated, and extremely well indexed—as is so often the case with books published by this Bristol firm. The coloured plates may be given a special word of praise for their excellence. The publishers have secured a large number of distinguished contributors to write the *Annual*; we wish it the large sale it deserves.

NOTES ON BOOKS.

WE have received a copy of the *Transactions and Seventh Annual Report of the London Dermatological Society*,⁶ containing a list of the officers and members of the society and an account of the cases shown and papers read at its meetings.

The first part of Dr. MOLONEY's book on *Irish Ethnobotany and the Evolution of Medicine in Ireland*⁷ gives a brief account of the native Irish materia medica of vegetable origin; the second part consists of notes on the history of medicine in Ireland. Dr. Moloney's book contains a great deal of interesting information on two little known subjects.

How the education of the young in sexual hygiene should proceed is laid down in Mr. GALLICHAH's *Textbook of Sex Education*,⁸ a rather wordy but well-meaning contribution to the literature of the subject, and not always, perhaps, very practical. *The Healthy Marriage*,⁹ by Dr. WRENCH, now in its second edition, gives a readable and sensible account of the subject, and is described by its author as a medical and psychological guide for wives, to whom it may be recommended.

¹ *The Problem of Sex Diseases. A Study in the Causes, Symptoms, and Effects of Syphilis and Gonorrhoea and the Education of the Individual Therein.* By A. Corbett-Smith, M.A. Oxon., Barrister-at-Law, Major R.A., F.R.C.S. Second edition. London: John Bale, Sons, and Danielsson, Ltd. 1919. (Med. 8vo, pp. xv+107. 2s. 6d. net.)

² *The Medical Annual. A Year Book of Treatment and Practitioner's Index.* Thirty-seventh Year. 1919. Bristol: John Wright and Sons, Ltd. 1919. (Demy 8vo, pp. cxxviii+675: 183 figures. £1 net.)

³ *Transactions and Seventh Annual Report of the London Dermatological Society.* With list of Officers and Members. London: J. Bale, Sons, and Danielsson, Ltd. 1919. (Demy 8vo, pp. 90.)

⁴ *Irish Ethnobotany and the Evolution of Medicine in Ireland.* By Michael F. Moloney, B.A. (Hon.) R.U.I., M.B., Ch.B., N.U.I., L.A.H. Dublin: M. H. Gill and Son, Ltd. 1919. (Cr. 8vo, pp. 36. 4s. 6d. net.)

⁵ *A Textbook of Sex Education. For Parents and Teachers.* By Walter M. Galliehan. London: T. Werner Laurie, Ltd. 1919. (Cr. 8vo, pp. viii+216. 6s. net.)

⁶ *The Healthy Marriage. A Medical and Psychological Guide for Wives.* By G. T. Wrench, M.D., B.S. London. Second edition. London: J. and A. Churchill. 1916. (Cr. 8vo, pp. 307. 3s. 6d. net.)

⁷ *Barbed Wire Disease. A Psychological Study of the Prisoner of War.* By A. L. Vischer, M.D. Basle, M.R.C.S. Eng. Introduction by S. A. K. Kammerer, M.A., B.Sc., M.D., F.R.C.P. Lond. London: John Bale, Sons, and Danielsson, Ltd. 1919. (Cr. 8vo, pp. 34. 3s. 6d. net.)

⁸ *The Unmarried Mother. A Study of Five Hundred Cases.* By Percy Gamble Kammerer. With an introduction by William Healy, M.D. London: W. Heinemann (Medical Books), Ltd. 1918. (Demy 8vo, pp. xv+342. 12s. 6d. net.)

⁹ *Prostitution in Europe.* By Abraham Flexner. Abridged edition. London: Grant Richards, Ltd. 1919. (Cr. 8vo, pp. 304. 6s. net.)

THE MINISTRY OF HEALTH.

ORGANIZATION OF MEDICAL STAFF.

We have received the following communication from the Secretary of the Ministry of Health:

On the establishment of the Ministry of Health the medical staffs of the Local Government Board and of the National Health Insurance Commission have been brought together to form the main portion of the Medical Staff of the Ministry, but on a newly organized system, and with considerable additional posts.

The Minister has appointed Sir George Newman, K.C.B., M.D., F.R.C.P., as Chief Medical Officer of the Ministry, with status corresponding to that of a Secretary of the Ministry. By arrangement between the President of the Board of Education and the Minister, Sir George Newman retains his position as Chief Medical Officer of the Board of Education.

Five new posts of "Senior Medical Officer" have been established, with status corresponding to that of Assistant Secretary. To these the Minister has appointed the following:

G. S. Buchanan, C.B., M.D.

Miss Janet M. Campbell, M.D., M.S. (who will, also by arrangement with the President of the Board of Education, act as Chief Woman Medical Adviser of that Board).

F. J. H. Coutts, M.D.

A. W. J. MacFadden, C.B., M.B.

J. Smith Whitaker, M.R.C.S. (who will also act as Medical Adviser to the National Health Insurance Joint Committee).

The whole of the rest of the established medical staff of the Ministry will be in one grade, to be known as "medical officers." They will comprise the remainder of the existing medical staffs of the Local Government Board and of the Insurance Commission, with the addition of new officers still to be appointed as the additional services may require. The following appointments have so far been made:

Miss Irene Cecil Davy Eaton, M.B., B.S., D.P.H.

Major Greenwood, M.R.C.S. (Medical Statistics).

Miss Florence Barrie Lambert, M.B., D.P.H. (Remedial Treatment).

Miss Jane Holland Turnbull, M.D., C.B.E. (Obstetrics and Gynaecology).

Besides this regular staff, arrangements have been made whereby the Ministry may secure the services, from time to time, of specialists and others on a part-time basis; amongst these are included at present the following:

Maurice Craig, M.D., F.R.C.P. (Psychological Medicine).

Colonel L. W. Harrison, D.S.O., M.B. (Venereal Diseases).

Sir David Semple, M.D., D.Sc. (Rabies).

Further appointments will be announced as they are made.

THE AMERICAN HOSPITAL FOR
GREAT BRITAIN.

THE foundation meeting of the American Hospital for Great Britain was held on July 17th, with the EARL of READING in the chair. It is proposed to erect on a site in the west-end of London a hospital of the most approved modern type, with wards for patients who can pay as well as for those who cannot, laboratories, a library, meeting rooms, and a conversation room. It is intended that the institution shall serve as a meeting place of American members of the medical profession who come to London for graduate instruction, and also as a hospital to which Americans will have the first claim for admission, and where they will be surrounded by conditions recalling those with which they are familiar in their own country.

The principal resolution, adopted on the motion of Mr. R. NEWTON CRANE, seconded by Sir ARBUTHNOT LANE, declared that the hospital was founded "In commemoration of the co-operation of the medical men of the United States and Great Britain during the European war, and to strengthen the friendship existing between the two nations." It further declared that the hospital shall be for the medical and surgical treatment of patients of all

classes, irrespective of creed or nationality and for the promotion of scientific study and research.

Lord READING, in opening the proceedings, laid stress on the international character of the proposal. The co-operation, he said, that had existed between Americans and Britons during the last two years of the war had been notably demonstrated in the relations between the physicians and surgeons of America and Great Britain, for there was no department in which this co-operation had been so marked by cordiality and goodwill. During the war American and British medical men had had special opportunities of coming into contact with each other, of learning each other's methods and appreciating the various standpoints. Out of these cordial relations had grown the idea of establishing this hospital and meeting place; the scheme had the support of physicians and surgeons and other distinguished citizens of the United States. In times gone by it had been the custom for Americans who desired to follow graduate instruction in medicine and surgery in Europe to resort to Berlin and Vienna; they were received with elaborate hospitality and found excellent opportunities for their further training, particularly in specialties. It was hoped that with the establishment of the American Hospital for Great Britain Americans who came to Europe to continue study would choose London and would find in the new institution a place where the welcome would be disinterested and the opportunities all that they could desire.

Mr. PHILIP FRANKLIN, F.R.C.S., who was afterwards elected honorary secretary of the hospital, read a report on the steps taken for its establishment. Although there were a few beds in several of the London hospitals specially endowed for the use of American citizens, it was considered that the time had come to establish an American hospital. Hitherto, when Americans had come to Europe and specialized in advanced medicine, study and research, London had not formed one of their centres, although the clinical opportunities offered in the London medical schools were unequalled in any city in Europe. That was the unanimous verdict of two hundred medical officers who had been working in London and attending the special emergency post-graduate course during the past six months. American medical men were likely to visit Europe more frequently in the future than in the past, and this hospital would be their head quarters in London and their medical home.

A resolution appointing a governing council, with the American Ambassador as chairman, was moved by Sir HUMPHRY ROLLESTON and seconded by Sir JOHN BLAND-SUTTON, who said that the new hospital would seek to achieve the aims which were those of every well-devised hospital—the relief of the sick and suffering poor, the education of doctors and nurses, and the advancement of medical science.

Two medical committees, one for Great Britain and the other for the United States, were then constituted as follows:

Medical Committee in Great Britain:

Sir William Osler, Bt., M.D., F.R.S., F.R.C.P., Regius Professor of Medicine, University of Oxford.
Sir Arbuthnot Lane, Bt., C.B., M.B., M.S., F.R.C.S.
Sir Humphry Rolleston, K.C.B., M.A., M.D., F.R.C.P., President of the Royal Society of Medicine.
Sir John Bland-Sutton, F.R.C.S., Vice-President of the Royal College of Surgeons.
J. Y. W. MacAlister, Esq., F.S.A., Secretary of the Royal Society of Medicine.
Philip Franklin, Esq., F.R.C.S., Joint Honorary Secretary of the Fellowship of Medicine.
With power to add to their number.

Medical Committee in the United States:

Dr. George W. Crile, of Cleveland, nominated by the American Academy of Science on International Relations.
Dr. W. J. Mayo, of Rochester, Minnesota.
Dr. Charles H. Mayo, of Rochester, Minnesota.
Dr. Albert J. Ochsner, of Chicago.
Dr. Rudolph Matas, of New Orleans.
Dr. Franklin Martin, of Chicago, nominated by the American Gynecological Association.
With power to add to their number.

A finance and appeal committee was appointed, as also a committee to draft the laws and constitution of the hospital.

British Medical Journal.

SATURDAY, JULY 26TH, 1919.

DELAY IN PROVIDING FOR MEDICAL EDUCATION.

DELAY in allocating the parliamentary grants to universities and colleges, including medical schools, is creating serious difficulties for these institutions, which, by this time of the year, should be in a position to settle the scope and details of the work to be undertaken in the autumn term. This they cannot very well do until they know approximately the amount they may expect to receive from Parliament. The Civil Service Estimates for the year ending March 31st, 1920, were issued early in April; the sum therein proposed to be voted by Parliament was a million and a half. Of this total the sum of one million was to be paid out in grants in aid of the ordinary expenses of the universities and colleges in the United Kingdom; it was rather more than twice as much as was voted in the previous year. The purpose of the special additional vote of half a million was to give assistance to certain of the universities, colleges, and other similar institutions, in order that they might as far as possible resume their full work under favourable conditions, and not be hampered by extraordinary expenditure due to the prolonged interruption of their activities and development caused by the war.

The new vote and the increase of the ordinary vote followed upon strong representations made to the Chancellor of the Exchequer and the President of the Board of Education last November by an important deputation from the universities of the United Kingdom. It was hoped that the allocation of grants would have been announced by this time, but last month the Treasury, after consultation with the President of the Board of Education, the Secretary for Scotland, and the Chief Secretary for Ireland, appointed a standing committee to inquire into the financial needs of university education in the United Kingdom and to advise the Government as to the application of any grants made by Parliament towards meeting them. The expressed intention of the Government is that the annual grants allocated to different institutions shall be inclusive block grants to be expended at the discretion of the governing bodies, that they shall remain fixed for a prescribed period of years, and that in the method of distribution the individuality of each institution shall have free play and university autonomy be safeguarded. By the appointment of the new "Universities Grants Committee," of which Sir William MacCormick is chairman, the Board of Education ceases to be the sponsor of the universities in their financial relation to Parliament, for the new committee is directly responsible to the Treasury. Whether or no this change is for the better we are not prepared to say, but it may be surmised that the setting up of this new body has had something to do with the delay of which complaint is made.

The delay is for many reasons particularly serious for medical schools. In the first place, the number of medical students has largely increased. In May, 1918, the number of first year students was 2,043; in January, 1919, it was 2,907. The number in each of

the other years of the curriculum has increased; the grand total in January, 1917, was 6,682; in October, 1917, it was 7,048; in May, 1918, it was 7,630; and in January, 1919, it was 9,490. This numerical increase is alone sufficient seriously to embarrass the medical schools. Detailed statistics have not been published, but both in Edinburgh and in Glasgow the teachers are overwhelmed, and Edinburgh has just given notice that it will not accept more than 130 new students in the medical faculty at the opening of the next session. But the difficulties of the medical schools do not end here. The scope of medicine is widened, its methods have become more precise and elaborate, and teaching, it is recognized, must be adapted to meet these changes; but funds have been lacking. The justice of the demands of the teachers in the medical schools has been recognized by the Board of Education, and Sir George Newman's memorandum, prepared a year ago, went into some detail as to the reforms which should be instituted. The necessity for providing universities, colleges, and medical schools with greater financial assistance is fully admitted, but action tarries. The difficulties arising out of the delay in the allocation of the increased grants and the special grants are felt by medical schools everywhere, but with particular force in London. It is generally recognized that there have been too many medical schools in London; efforts made towards reducing their number have not been without result, but proposals for consolidating and improving teaching during at least the first year or so in medicine and surgery, and for utilizing to the full at a later stage all the clinical hospitals, are held up until it is known what financial aid will be forthcoming.

The truth of the proposition that London affords unrivalled opportunities for clinical instruction, observation, and research, has been proved whenever put to the test. It has been illustrated during the Emergency Course of Graduate Study established by the Fellowship of Medicine, and was proved again the other day when the Association of Physicians met in London, for the wealth of material made that meeting one of the most successful ever held by it. It was at one time hoped that a certain number of clinical "units"—a professor, assistant professor, and demonstrators—for the teaching of medicine, surgery, and obstetrics and gynaecology, would be established in, perhaps, four centres in London, and would be ready to get to work in October; but this hope seems now to have died away, owing to the delay in letting the medical school authorities know what allocations to expect. It seems to us that a very favourable opportunity is being lost. Everybody is thinking about reconstruction, educational reconstruction in particular, and a good deal could have been done this summer. A new start after the dislocation of the war must somehow be made, for medical education must go on. Men's minds have opened to new methods, but the mood is passing, and delay will tend to send the schools back into the old ruts.

EARLY INTRATHECAL INJECTION OF ANTIMENINGOCOCCIC SERUM.

THE outbreaks of cerebro-spinal fever during the war, especially in dépôts and camps, have shown that the meningococcus is more frequently present in the circulating blood than was formerly known, and particularly that a blood infection may precede any demonstrable microbial invasion or inflammation of the meninges. This pre-meningitic or septicæmic

stage was recognized in 45 per cent. of 265 cases by W. W. Herrick, who put forward a strong plea for the treatment of such cases by intravenous injection of antimeningococcic serum so as to abolish the infection before the meninges became affected. In this way he was able to reduce the mortality from 62.5 per cent. to 18.5 per cent., a result contrasting very favourably with the 30.9 per cent. mortality among Flexner's 1,294 cases treated with extrathecal injections.

This septicaemic stage, however, is not constantly present; most observers do not obtain positive blood cultures in more than 25 per cent., and the meningococci are probably often present for a very short time in the blood, so that there is not a true septicaemia. Its existence may be suspected in patients with a petechial eruption, and assumed in the fulminating cases, which practically always have a purpuric eruption and may prove fatal before meningitis has begun. The incidence of the fulminating cases and the frequency of rashes vary in different epidemics, and probably the incidence of meningococcaemia varies in a corresponding manner. In France, according to Netter, meningococcaemia has become more frequent with the increased prevalence of cases due to the parameningococcus (Gordon's types II and IV). The healthy meninges and choroid plexus resist the passage of meningococci, but from experiments on rabbits Austrian drew the far-reaching deduction that, although meningococci injected intravenously do not cause meningitis, an aseptic meningitis produced by intrathecal injection of the rabbit's serum breaks down the meningeal defence so that meningococcic meningitis may now follow intravenous injection of meningococci. This sequence occurred in three out of twenty rabbits. As intrathecal injection of antimeningococcic serum may set up a chemical meningitis in man, it might appear a fair deduction that its intrathecal injection during the pre-meningitic stage might do harm by determining meningitis. But apparently the analogy is not without a flaw, for Flexner and Amoss had previously proved that, whereas a chemical meningitis induced by normal serum or other agents promotes poliomyelitic infection, the intrathecal injection of an immune antipoliomyelitic serum which equally sets up a chemical meningitis prevents the onset of poliomyelitis.

In order to throw light on the important problem whether or not an aseptic meningitis enables meningococci in the blood to pass through the meninges and set up meningococcic meningitis, Amoss and Eberson,¹ working at the Rockefeller Institute, have repeated Austrian's experiments on rabbits and have performed others on monkeys. In neither series were confirmatory results obtained. But they found that if the spinal cord of the rabbit was mechanically injured during the intrathecal injection of serum meningococci then escaped into the meninges; and they point out that as Austrian's typical protocol mentions that "injury of the cord caused twitching of the tail and spastic palsy of the left hind leg," this mechanical rather than any chemical injury may reasonably be regarded as responsible for the resulting meningococcic meningitis. They therefore conclude that their experiments do not lend any support to the view that intrathecal injection of antimeningococcic serum early in the course of meningococcic infection in man, and possibly before the meninges are inflamed, favours the passage of meningococci from the blood stream into the subarachnoid space. This obviously has a very important bearing on the treatment of this disease.

MEMORIAL TO H. O. THOMAS.

It is very appropriate that the Liverpool Medical Institution should take the lead in founding a memorial to Hugh Owen Thomas, for he spent the whole of his working life in that city. Of no man can it be more truly said that time has justified his teachings and practice. The experience of the war has proved that the principles he laid down for the treatment of injuries and deformities of the limbs were sound and the appliances he devised the best. Professor Arthur Keith devoted to Thomas one lecture of the course¹ he gave at the Royal College of Surgeons of England in the winter of 1917-18, on the anatomical and physiological principles underlying the treatment of injuries to muscles, bones, and joints. In it Professor Keith gave a short account of Thomas's laborious life, his theories, and practice. Thomas's realization that repair could be "fostered only by the patient, personal application of the surgeon's head and hand day after day, week after week, month after month, if necessary, year after year," was, he said, of even greater value than his discovery of the fuller meaning of the word "rest" and his genius in designing new means of giving rest. "No one who will take the trouble to ascertain what he did, and the circumstances under which he accomplished his life's work, will fail to see that he has earned himself a place among great British surgeons." In an interesting pamphlet relating Thomas's achievements, issued by the Liverpool Medical Institution in connexion with its appeal for subscriptions to the proposed memorial, it is asserted, as we believe with truth, that the appliances he invented and finally perfected have not yet been improved upon; they were based on such clear fundamental principles that modern so-called improvements have, without exception, been retrograde. Thomas was much more than a skilful deviser of ingenious appliances. In joint disease his splints enabled sufferers to enjoy fresh air and exercise, so that he was a true pioneer of the fresh air treatment of tubercle. His observations on paralysed muscles—that they are stretched by their opponents and that, to prevent this, position is of supreme importance—laid the foundation of the essential after-treatment of all motor nerve injuries. His treatment of delayed union of fractures by producing passive congestion—"damming the circulation"—anticipated the so-called "Bier's method" by many years, and his manipulative treatment of club-foot in infants was designated in error "Lorenz's bloodless surgery" twenty years later. His clinic became the resort of distinguished surgeons from all over the world; his ideas, in fact, at that time obtained more recognition abroad, especially in America, than in this country. He may truly be said to have been one of the fathers of orthopaedic surgery and the founder of the Liverpool school. No greater compliment, as the pamphlet says, could have been paid to his memory, ideas, and principles of treatment, than the selection of his nephew, Sir Robert Jones, for the important position of Director of Orthopaedic Surgery to the British army during the war. Thus has Thomas vicariously contributed to save many a wounded soldier from crippledom and done an immense service to the nation. The Liverpool Medical Institution has resolved to found an oration in that branch of surgery which Hugh Owen Thomas did so much to create, and if the memorial fund receives the financial support it deserves, to erect also a statue or bust. A committee has been formed in Liverpool with Mr. Thelwall Thomas (President of the Institution) as chairman, and Mr. D. Douglas-Crawford as secretary. Subscriptions may be sent to Dr. C. Thurstan Holland at the Medical Institution, and should be crossed "Hugh Owen Thomas Memorial Fund."

¹ H. L. Amoss, and F. Eberson: *Journ. Exper. Med.*, Baltimore, 1919, **xxi**, 605-618.

¹ The lectures have recently been collected into a volume entitled *Members of the Maimed*. London: H. Frowde, and Hodder and Stoughton. (16s. net.)

THE PROPOSED NATIONAL EYESIGHT TEST.

THE strike of the North-Eastern Railway men on the ground of alleged unfairness of the eyesight tests to which members of that service are subjected brings into prominence a very practical point of medical and economic interest, and one which has relation with similar problems affecting other services. The need for good average eyesight for men employed in modern methods of travel, whether by land, sea, or air, cannot be gainsaid. It is a necessity as much for the safety of the men employed in the services themselves as it is for that of the travelling public. The increasing complexity of modern transport conditions only makes the necessity more obvious. Granting these premisses, there arise the practical questions of how and by whom the various standards of vision and the tests for vision are to be determined. In the past these matters have too often been determined by lay officials or official advisers—able men without doubt, but, so far as we can judge, not always the most fitted by experience and training to arrive at such decisions on the many and varied aspects of these problems as will carry a conviction of their justice to the workman. The difficulty with the railway men is no new thing, and it has arisen time and again with men of the mercantile marine. The Board of Trade has now promised to establish a national eyesight test. As one of our daily contemporaries observes, "the promise is one that ought to have been made and carried out two generations ago." Our main concern for the moment is the method which may be contemplated by the Board of Trade for carrying out this promise. We would urge that advantage should be taken of the existing consolidation of ophthalmic experience as shown in the British Council of Ophthalmology. This council is the joint product of the several ophthalmological societies and sections of societies of the United Kingdom, and represents a weighty and judicial body of experience not only of the laboratory, but also of the daily practice of ophthalmic medicine and surgery and all that this implies in the investigation of daily working vision conditions. The services of this council of experts are at the disposal of the nation; it is to be hoped that the Board of Trade will take advantage of them.

TEMPORARY COMMISSIONS IN THE R.A.M.C.

In the JOURNAL of July 5th we gave an account of the terms offered by the War Office to those medical men willing to accept temporary commissions in the R.A.M.C. The invitation was addressed to newly qualified men, to medical officers now serving, and to those who have served before. We understand that the response so far has not proved satisfactory, although the pay offered is by no means inadequate in the case of newly qualified practitioners. Consolidated pay will be given at the rate of £550 a year, with rations or allowance in lieu thereof, and an outfit allowance to officers commissioned for the first time; there will also be the usual travelling allowance and expenses when travelling on duty. The statement that "no additional emoluments of any kind will be given" appears to need modification, and has probably given rise to some misapprehension. Beyond the pay of £550 per annum officers serving under the new contract will be eligible for divisional pay and specialist pay; also for charge pay, with pay and allowances according to rank, if these should be more advantageous than the contract rate of pay. The children's allowance also will be given so long as this is continued for army officers generally. It is true, as we showed in our previous article, that temporarily commissioned officers now serving who accept the new contract will receive £20 16s. a year less than (owing to the occupation bonus) they receive at the present moment, but it is equally true that they will receive £52 a year more than they received before February 1st, 1919. The army of occupation bonus comes to an end for all branches of the service on August 4th. It was a temporary bonus,

which was not intended to be continued after the end of the war, notwithstanding the fact that the cost of living has by no means diminished in recent months. The junior officers of the Territorial Force and Special Reserve, R.A.M.C., who have hitherto been at a considerable disadvantage, are eligible for the new contract, and will thus receive the same rates of pay as temporary officers. It is evident that the terms and conditions offered have not proved attractive to medical men in practice before the war who have served for several years in the army, but we would repeat that £550 a year is generous pay for the newly qualified, and every effort should be made to induce them to apply for commissions. A considerable number of medical officers are needed to replace those who have urgent claims for demobilization, and also to serve in India and Egypt.

THE CO-ORDINATION OF OFFICIAL STATISTICS.

THE council of the Royal Statistical Society some time ago appointed a special committee to inquire into the use at present made of official statistics, whether published or departmental, and into the national and imperial equipment for obtaining and publishing statistical data. This committee now proposes that a petition should be presented to the Government to set up a parliamentary committee to examine the whole question of the collection and presentation of public statistics. Mr. Drage, the chairman of the Royal Statistical Society's committee, has been a zealous advocate of reform for many years, and as recently as 1917 contributed to the journal of that society a paper on the subject. In that paper he pointed out that the returns of different departments were not co-ordinated, while with regard to many important topics no statistical information at all was available. As an example, Mr. Drage remarked that it might have been supposed that so important a datum as the number of trained British seamen could be easily extracted from blue books. Investigations showed that particulars were forthcoming with regard to two classes, British "seamen" and British "sailors." Under the former heading were included firemen, engineers, cooks, stewards, and even stewardesses, and cattlemen; under the latter, able seamen, seamen undefined, and ordinary seamen. Hence it was very easy to arrive, in each case starting from official returns, at contradictory results as to changes in the strength of the British mercantile marine. It also appeared that the allocation of responsibility for making statistical returns was unsystematic. Mr. Drage's remedy for this state of things was the creation of a central statistical department under an intelligence committee working on the lines of the Imperial Defence Committee, and he certainly made out a *prima facie* case in its favour. We are, however, less enthusiastic supporters of the proposal than some of those who took part in the discussion which followed the reading of Mr. Drage's paper, and should deprecate any attempt to concentrate all statistical work in a single department. It is very desirable that more weight should be attached to the possession of pure statistical knowledge in making appointments in the civil service than has been customary, but it would be disastrous to suppose that a practical acquaintance with the subject matter of statistical operations is unimportant. Highly trained theoretical statisticians who have cultivated one field of statistics might be very poor judges of some other field; it will always be necessary to reserve powers of initiative to the several departments. Vital statistics, for example, need for their proper compilation and analysis special knowledge and experience, and the department concerned with them must retain a full measure of independence.

THE EGYPTIAN MEDICAL SCHOOL, CAIRO.

THE development of the Egyptian Government School of Medicine at Cairo, checked by the war, is now about to be accelerated. The idea of founding a school at Cairo was

inspired originally by French surgeons in the time of Napoleon. It has recently done most excellent work under Dr. Keatinge, its director, who has had the reforms now about to be carried out in contemplation for some years. The school buildings at present only afford accommodation for fifty students a year, though the average number of applicants is 150, but it is hoped the Government will shortly sanction the erection of new school buildings to replace those erected in 1837. The hospital at present provides 600 beds, but has grown out of date, and is to be replaced by a new building. The curriculum will be extended from four to five years under a scheme drawn up and approved by a mixed committee of English and Egyptians. Steps are now being taken to complete the staff of the school by the appointment of incumbents of the chairs of chemistry, anatomy, biology, and physics, at salaries beginning at £E.1,000, rising to £E.1,200, with the right to pension. (The Egyptian pound is worth a fraction over the English.) An innovation is the offer of a whole-time appointment as professor of surgery at the salary mentioned. Private practice will not be allowed, and previous experience in a teaching post is essential. Another innovation is the appointment of a professor of pharmacology at the same salary; he will have a few hospital beds and a free field for research in the treatment of Egyptian diseases. The foundation of a university is contemplated, and in that case the professors would probably become professors of the university in the faculty of medicine. A number of lecturers are also required in biology, anatomy, physiology, and pathology; the salary offered is £E.600 without pension. The appointment will be for three years, and the holder will be expected to do a certain amount of teaching work and to conduct research. Other appointments are those of radiologist and lecturer in radiology, and anaesthetist and lecturer in anaesthetics, who would both be allowed private practice. Application in the first instance should be made to the Director, Egyptian Educational Mission, 28, Victoria Street, Westminster, S.W.1, but the appointments will be made on the recommendation of small boards in England. Further particulars will be found in our advertisement columns. The Acting Director of the school is Colonel Owen Richards, recently consulting surgeon with the British armies in France. No one can doubt that the appointments offer great opportunities for men of enterprise and energy, both for practice and research.

A DREAM LIBRARY.

THE first essay from the Osler birthday book which we have seen is a librarian's dream of an Osler medical library—a splendid building somewhere in Regent's Park, organized on a plan which seems rather to suggest a well-arranged factory. In the imagined library almost as much care is given to the preservation and custody of the books as to the arrangements for making them rapidly available. One of the great enemies of the librarian is dust, which accelerates the dilapidation due to hard usage. In the dream library there is not only a bindery for repair, but a dusting room, where the books are being cleaned day by day in regular rotation, so that the library need never be closed. The books are lifted gently from the shelves, placed on trolleys, and taken by a lift to the cleaning room, where an expert cleaner, holding the book tightly by the fore-edge, sprinkles the top with clean damp sawdust which licks up the dust, and is thrown on the floor; the binding and edges are then rubbed up. Fire, a nightmare for the librarian, is guarded against by using electricity for lighting and warming, and having shelves and furniture of steel, enamelled to look like grained oak—a rather sad expedient. There is one main reading-room, and other similar rooms for the use of readers engaged on research, so that they may work in seclusion and have their books kept together. The

classification of books in a library is a knotty point, but in this dream library the knot has been cut by placing the books in chronological order and depending entirely upon a card index printed on the spot, so that clichés may be preserved to be used in printing the general catalogue. Further, the library collects bibliographies and makes abstracts, and, finally, it has at the head of each of a series of departments an accomplished specialist. All this is very costly, and before the finance was entirely explained the dreamer, Mr. J. Y. W. MacAlister, woke up.

CANADIAN METHODS IN TUBERCULOSIS.

A VAST amount of practical experience is being accumulated by tuberculosis officers and health visitors as to the working of the present means for suppressing the disease. The reports that are being presented to the respective centres, however, are not being drawn up on any uniform plan, nor does there appear to be any general collation of the results that are being attained, in form available for public use. The practical value of such a collation of experience for purposes of comparison is well shown in the report of the Canadian Association for the Prevention of Tuberculosis for the year 1917. Therein is contained an account of the work done in about forty institutions, together with reports of the papers contributed and the discussions which took place at that gathering. A list is also given of all the existing institutions in Canada dealing with tuberculosis, affording the information, so often asked for, with respect to terms and conditions of admission, and also as to the names and addresses of responsible officials. As the broad facts of tuberculosis become better known to the community, there is less need for reticence as to the main points. The distinction between "open" and "closed" tubercle is well recognized in Canada. The main object of treatment of the closed cases is to prevent them from reaching the open stage. Persistence of bacilli in sputum is taken to be the test, and local authorities are urged to treat the open cases on the same lines as other infectious diseases. Segregation is insisted upon, and even imprisonment if precautions are neglected. Only by such means, it is believed, will the progress of the disease be checked. For lack of uniform records for comparison, and any power of enforcement, the work of the many tuberculosis centres in this country is not being fully utilized for study, nor are the powers invested in local authorities being effectively exercised. A more vigorous crusade and further legislation are called for to deal with a foe that so far is showing no signs of defeat.

SEPTIC PULMONARY EMBOLISM IN INFLUENZA.

EPIDEMIC influenza raged in Bologna, as in the rest of Europe, during the last three months of 1918, and a general account of the disease as it occurred in that town is given by Professor N. Samaja,¹ who draws particular attention to the frequency with which empyema, and also pulmonary embolism, were met. The deaths due to influenza among the Bolognese during these three months amounted to about a thousand; the soldiers and officials admitted for influenza to the military hospital in which Professor Samaja worked were 4,190 during October and November, with 554 deaths. He met with eight cases (out of how many patients he does not say) in which the signs and symptoms pointed to the occurrence of pulmonary embolism; the diagnosis does not seem to have been verified by *post-mortem* examination. The symptoms he describes as follows: The patient, suffering from influenza with a regular course and few bronchial symptoms, is suddenly seized with a very acute pain in the side—so acute as to keep him complaining of it uninterruptedly until he dies. The pulse at once becomes very small, almost imperceptible, and remains so. Soon haemoptysis begins, slight at first, later free. Death follows usually within twenty-four hours—always within forty-eight hours.

¹ *Bull. delle Scienze Med.*, ser. x, vii. Bologna, February, 1919.

The physical signs are not easily made out, as every movement augments the pain and dyspnoea; in four cases a zone of complete dullness, with absence of the breath sounds, could be made out over a large area at the base of the lung. Examining the literature of influenza, Professor Samaja has not succeeded in finding records of any cases such as he describes; he thinks that the occurrence of moderately large pulmonary embolisms must be taken as characteristic of the influenza epidemic of last year.

DR. LYMAN SPALDING.

DR. H. M. HURD,¹ for many years the superintendent of the Johns Hopkins Hospital and still a keen supporter of its historical club, has contributed an attractive sketch of Dr. Lyman Spalding (1775-1821), who originated and carried into execution the first national pharmacopoeia of the United States. This was printed in English and Latin, and was at once adopted as authoritative on its publication shortly before Spalding's death. There had previously been several local pharmacopoeias, and his motives in urging the production of a national pharmacopoeia were to secure uniformity and also to discard local remedies, which appear to have been used in different parts of the United States without any sufficient scientific authority; for example, scutellaria or skull-cap, a widely lauded cure for hydrophobia. The plan proposed by Spalding for the preparation of the pharmacopoeia was excellent, and has practically been followed since. About the same time he put forward a scheme for the establishment of what he called a medical police to have charge of all sanitary matters, but in this respect he was a voice crying in the wilderness. He began his professional training under Dr. Nathan Smith, the founder of a number of medical schools in New England, in whose steps he subsequently followed. He made himself an excellent physician, a remarkable surgeon and anatomist, and an inspiring teacher. His conception of the benefit of medical teaching to the teacher is set forth in an interesting letter, too long to give in full, to a colleague, Professor G. O. Shattuck, who intended to resign his post, and may perhaps appeal to those who at the present time contemplate a similar step: "Look at the Princes or rather Fathers of Physic. . . . What has put them at the head of the profession? Nothing but their being compelled to labour, and annually to review their profession, and incorporate with their old stock all the new improvements. Show me a man in private practice who does this annually. He is not to be found. But, your friends say that you can do this, yet stay at home. I acknowledge this, but tell me honorably, will you do it? No, sir, you have no inducement. For a man to be pre-eminently great, there must be a great occasion. What made Washington great? Opportunity. You are now on the same high road to reputation that every Prince of Physicians has travelled. If you turn aside, you are lost for ever." Soon after qualification Spalding had something to do with the introduction of Jennerian vaccination, obtaining in the first instance a small piece of thread which had been dipped in the vaccine lymph from Dr. Waterhouse, who received this from Jenner and appears to have had the monopoly of the introduction of vaccination into the United States. The abolition of this monopoly, which was run on commercial lines, was undoubtedly hastened by the frequent failures of vaccination by the thread method and by the obvious superiority of vaccination from arm to arm. Subsequently Spalding got into communication with Jenner and received a specimen of vaccine lymph direct from him.

INDIAN JAILS COMMISSION.

THE Indian Jails Commission has almost completed its visits to prisons, industrial schools, reformatories, and children's courts in England and Scotland, and expects to

start for the United States early in August. After a tour lasting for four or five weeks in the United States the Commission will proceed to Japan and to Manila, and expects to reach India early in November. In India it is proposed to visit as many prisons as possible in the various presidencies and provinces during the coming cold weather, including the penal settlement in the Andamans. The Commission has as its chairman Sir Alexander Cardew, K.C.S.I., I.C.S. The members are Sir James du Boulay, K.C.I.E., I.C.S., Sir Walter Buchanan, K.C.I.E., I.M.S.(ret.), Colonel J. Jackson, C.I.E., I.M.S., Dr. Doral Rajah, of Pudukota, and Khan Bahadur Shik. Ismail of Patiala. Both Sir Walter Buchanan and Colonel Jackson have been for many years inspectors-general of prisons in Bengal and Bombay Presidencies respectively. Mr. Mitchell Inness, of the Prisons Commission, Home Office, London, has joined as the Home Office expert; the secretary to the Commission is Mr. D. Johnstone, I.C.S.

MR. J. W. PRATT, M.P., Parliamentary Under Secretary for Health in Scotland, and Vice-President of the Scottish Board of Health, has appointed Captain W. E. Elliot, M.O., M.P. (R.A.M.C., S.R.), to be his parliamentary secretary (unpaid).

THE medical syndicate of the Seine department has notified the inhabitants of Paris that fees generally will be increased to double the pre-war scale. In addition, the charge for visits after 7 p.m. and on Sundays will be double, and between 9 p.m. and 7 a.m. treble, the ordinary tariff. In view of the difficult position of demobilized doctors the public are asked to settle their bills with as little delay as possible.

Medical Notes in Parliament.

Invalided Lieutenant's Case.—Mr. Bottomley, on July 21st, asked for an explanation of the circumstances in which an officer invalided out of the army, suffering from neurasthenia, was directed by telegram, sent to an hotel at which he was staying, to proceed to the London Lock Hospital, Harrow Road—an institution for women suffering from venereal disease; whether, having been certified by two medical men at his own expense as free from such disease, and having protested against being sent to the men's branch of the Lock Hospital in Soho, to which he had been referred from the women's institution, he was informed by the Ministry of Pensions that an officer's unreasonable refusal to undergo treatment rendered him liable to have his pension reduced by half. Sir Worthington Evans (Minister of Pensions) said he was glad to have the opportunity to express publicly his deep regret for the annoyance and trouble given to the officer. The doctors were not able to decide affirmatively the cause of the illness. The officer was examined by a tuberculosis specialist, but the report was negative; he advised that the officer should be admitted to hospital, and kept under medical observation in case the illness were occasioned by general paralysis. Arrangements were made for a private room at the Lock Hospital, where it was intended that specialists in general paralysis should make the desired observations so as to exclude general paralysis, as tuberculosis had been excluded. The telegram never ought to have been sent, although no serious consequences would have arisen if it had been opened by the officer himself. It was, however, opened at his request, and read to him on the telephone by someone at his hotel. With regard to the letter, the officer came to the Ministry after it was written and before it was delivered, and saw one of the doctors, who heard his explanation and withdrew the letter, and apologized for the telegram. The letter ought not to have been sent, but being in the post could not be recalled. There was no question of unreasonable refusal to undergo treatment; no treatment had been decided upon. The officer was asked to go to the hospital for observation; no treatment could be decided upon until after observation. The officer had since proved that there was not the slightest reason to suppose that he was suffering from general paralysis due to venereal disease. The conclusion was fully accepted. The clerk who was responsible for the letter would not in future be engaged in this class of work, and steps had been taken to ensure that no warnings of withdrawal or reduction of pension should be made until the case had been considered by a principal medical officer. Sir L. Worthington Evans added that he had personally expressed deep regret to the officer for both the telegram and the letter, and offered to refund the cost of the medical certificates. He trusted that the blunder made by an administrative clerk would not discredit the really excellent and efficient work done for thousands of officers and men by the medical officers employed by the Ministry.

¹ *Johns Hopkins Hosp. Bull.*, Baltimore, 1919, xxx, 125-9.

Appointments on Reassessment Boards.—In answer to Captain Coote, on July 17th, Sir L. Worthington Evans said that presidents of resurvey boards at the Ministry of Pensions were whole-time officials whose salaries varied from £550 to £800. Other members were part-time officials paid at the rate of one guinea for a session of two and a half hours. All the salaried officials who were whole-timers were entitled to holidays with pay. During the past month 321 medical men had applied for posts at the Ministry of Pensions. Asked whether he thought the salaries were sufficient to attract men of the highest ability, the Minister replied that the salaries were sufficient to attract men of capacity and standing. Preference was given in the appointments of medical men, first to those who had been overseas, secondly, to those who had given up their practices at home, and thirdly, to the ordinary civilian practitioner.

Rate of Work at the Pensions Ministry.—Sir L. Worthington Evans stated, on July 17th, that the staff at the Ministry of Pensions consists approximately of 15,000 persons. In May the awards branches, with a staff of 6,000, gave decisions in over 250,000 cases, and the number of pensions in payment at the end of the month was 1,300,000. The department dealt with an enormous amount of correspondence, about half a million letters being received every week.

Paddington Military Hospital.—Mr. Churchill, answering a lengthy question by Captain W. Benn suggesting that all military cases should be transferred from Paddington Military Hospital (which is a converted workhouse), said complaint had been made especially regarding the situation of this hospital. He hoped that arrangements might be made to enable the hospital to be vacated within the next few weeks.

The Training of Disabled Service Men.—Sir Robert Horne, in a written reply to Lieut.-Colonel Pinkham on July 21st, stated that the Ministry of Labour is largely extending the facilities for the training of disabled ex-service men. For the present these men should apply for training either to the Divisional Director of Industrial Training or the War Pensions Committee for their area, when they would be put in touch with the training authorities. On and after August 1st the allowances of men receiving training (other than those who required concurrent curative treatment) would be paid by the Ministry of Labour through the institution or firm where the training was taking place.

Sickness amongst the Salonica Force.—Major Waring, on July 17th, asked the War Secretary if the sickness in the Salonica campaign of 1916 transcended the record of any campaign in history, and whether an inquiry would be held when the war was over to apportion responsibility. Mr. Churchill said that the rate of admission to hospital at Salonica compared favourably with that of other recent campaigns, and the death rate very favourably. Therefore he thought that an inquiry was not required.

Rabies in the United Kingdom.—On an inquiry by Mr. Holmes, on July 21st, Sir A. Griffith-Boscawen said that during the period from June 18th to July 17th eleven outbreaks of rabies had been confirmed by the veterinary officers of the Board of Agriculture, and reports had been received of 74 suspected cases. The Minister added, in reply to Mr. George Lambert, that the Board held it would not be advantageous to impose a muzzling order over the whole of the country. The view was that as the only way in which a muzzling order could be effectively carried out was by having the general support of the public, it was best to confine the orders to areas in the neighbourhoods where cases had been established, as was done by Mr. Long at the time of the last outbreak. The present outbreak had, on the whole, been confined to three small areas.

England and Wales.

SANITARY CONGRESS AT NEWCASTLE.

THE thirtieth annual congress of the Royal Sanitary Institute will be opened at Newcastle-on-Tyne next Monday afternoon at 3 p.m., when the president, the Duke of Northumberland, will give an inaugural address. There are five sections—sanitary science, engineering and architecture, hygiene of maternity and child welfare, personal and domestic hygiene, and industrial hygiene. The sections will meet on four mornings—Tuesday, Wednesday, Thursday, and Friday. There will also be conferences of representatives of sanitary and port sanitary authorities, of medical officers of health, of engineers and surveyors, of veterinary inspectors, and of sanitary inspectors and health visitors. The maternity and child welfare exhibition of the National Council of Women will be displayed in Rutherford College; in the Northern Counties School of Cookery and Housewifery there will be an exhibition of labour-saving appliances and demonstrations of invalid cookery and of fruit and vegetable preservation. On the evening of July 30th Sir Robert Hill, K.C.M.G., Medical Director-General, R.N., will give a lecture on marine hygiene, and on the following evening Sir Robert Philip will give a popular lecture on the heritage of health. There will be many occasions for relaxations in the afternoons, including a garden party at

Alnwick Castle, given by the Duke of Northumberland, another in Jesmond Dene, given by the Sanitary Committee of Newcastle, and another in Leazes Park, given by the Lord Mayor. On Thursday afternoon there will be an excursion down the river to visit the new estate of the municipality of South Shields.

THE WELSH UNIVERSITY AND THE WELSH NATIONAL MEDICAL SCHOOL.

We gave some particulars a fortnight ago of the proposals which were being made with regard to the Welsh National Medical School; and it was stated that the University deprecates the proposal of the Royal Commission to make the medical school a separate constituent college of the University, thus severing the connexion which has hitherto existed between Cardiff College and the school. It is considered that anything which will tend still further to separate the medical students from the general body of students, or to discourage intercourse between the professors in the medical and other faculties, is undesirable from the educational point of view, and it is stated that both the bodies concerned—the University College and the hospital—are opposed to the change. At the same time the University is fully alive to the importance of organizing the medical school as an institution of national and not merely of local concern. It is believed that both these objects can be attained through the revised scheme in which ultimate control is reserved to the University. It is proposed that the College Council shall be the chief governing body of the School of Medicine, but that it shall delegate to the Board of Medicine wide administrative and executive functions and powers. Specific proposals have now been put forward with regard to the remuneration of professors; it is pointed out that the fall in the value of money and the increased scale of salaries now being adopted in England make it clear that unless the University of Wales is to be in a position of permanent inferiority to the modern English universities it will be necessary to fix a scale substantially higher than the minimum figures proposed by the Royal Commission. It is suggested that the figures should be—for professorial chairs £800 to £1,000, for independent lectureships £500, for lectureships £400, and for assistant lectureships £250. Certain special proposals are made with regard to chairs and lectureships in the Faculty of Medicine. The adoption of the "unit" system is advocated. The medical unit would consist of two full-time teachers, a professor with a salary of £1,500, an assistant professor with £500, and part-time lecturers on toxicology and forensic medicine, and on dermatology, £100 each. The surgical unit, it is suggested, should have three full-time teachers, a professor with a salary of £1,500, two assistant professors (one for practical surgery) £1,000; part-time lecturers on orthopaedics, genito-urinary surgery, ophthalmology, and diseases of the ear, nose, and throat, each to receive £100. The unit of gynaecology and obstetrics would have one full-time professor (£1,500) and one full-time assistant professor (£500). There would be also an electrical department with a medical superintendent (£500), and clinics for psychiatry and neurology, pediatrics, dermatology, and dentistry, which it is estimated will together cost £5,000 a year. The salaries of the professors and assistant professors have been fixed on the assumption that having regard to their professorial duties the incumbents would be very largely restricted in private practice.

PREVENTIVE TREATMENT OF VENEREAL DISEASES.

At the meeting of the London County Council on July 15th it was reported that the Council had been urged by the National Council for Combating Venereal Diseases to make provision for early preventive treatment, namely, treatment at an approved centre within a short time after exposure to possible infection. A deputation from the National Council, on presenting the case for such treatment, had drawn attention to objections on moral grounds to treatment before exposure, and had stated that in the case of syphilis six hours was the maximum period after exposure to infection within which such treatment could be effective, and therefore, if successful results were to be achieved, early preventive treatment under skilled supervision would have to be provided at a very large number of centres and would have to be available at practically all

hours of the day and night. With one exception, the hospital committees of all London hospitals at which venereal clinics were in operation had expressed the view that it would be impossible for them to introduce early preventive treatment. The Public Health Committee held that the medical advantage accruing from early preventive treatment would probably be nullified by a consequential increase in the number of cases of exposure to infection; in its view the public provision of early preventive treatment had not been satisfactorily proved to be desirable. Viscount Bury moved that the report be referred back. Dr. Haden Guest, who spoke in favour of the Public Health Committee's recommendation, said that among other practical difficulties was that doctors would probably decline to undertake the work and no other suitably trained persons were available. His own observation of preventive treatment of this kind in the army in Egypt led him to conclude that it was a failure. Mr. Anderton, the chairman of the committee, while resisting the motion to refer the report back, said that the committee had not closed its mind, and was ready to consider any other scheme that might be proposed. The motion to refer back was lost by a large majority, and the report of the committee was endorsed.

Scotland.

SCOTTISH BOARD OF HEALTH.

The Royal Faculty of Physicians and Surgeons of Glasgow has unanimously adopted the following resolution:

That the Royal Faculty of Physicians and Surgeons of Glasgow, being of opinion that the representation of members of the medical profession on the Scottish Board of Health as at first constituted in the bill to establish a Scottish Board of Health is inadequate, hereby represents to the Government that when any of the existing appointed members of the Local Government Board under the bill fail to retire from the Board of Health, the Secretary for Scotland should appoint thereto additional members of the medical profession representative of the curative as well as the preventive sides of medicine, in respect that the object of the Act is to deal with the public health of the population of Scotland in all its different aspects.

EDINBURGH ROYAL MATERNITY HOSPITAL.

The directors of the Edinburgh Royal Maternity and Simpson Memorial Hospital have appointed Dr. J. W. Ballantyne, whose term of office as one of the senior physicians expires on October 15th, to the post of special physician in charge of the ante-natal and venereal diseases departments in the hospital, the appointment to be in the present instance for a period of three years. The work of these departments is at present carried on in part in the annexe to the hospital at 1, Lauriston Park, and later will be wholly conducted there. The ante-natal section forms the head centre for the mother welfare work under the Corporation of Edinburgh maternity service and child welfare scheme; whilst the venereal diseases section provides accommodation and treatment for expectant mothers and women in labour suffering from these maladies under the scheme for prevention and cure of venereal diseases in Edinburgh, Leith, and the Lothians. Francis J. Browne, M.D. Aberd., F.R.C.S. Edin., has been appointed medical research officer to the hospital and assistant to Dr. Ballantyne in the two departments named. Dr. Browne holds a grant as research pathologist for ante-natal work under the Medical Research Committee for child-life investigation (ante-natal and post-natal).

WOMEN GRADUATES AT EDINBURGH UNIVERSITY.

One of the noteworthy features at the recent graduation ceremonial in the University of Edinburgh was the appearance of the name of a woman graduate among the awards of fellowships, scholarships, prizes, etc. Hitherto women have been awarded the prizes specially set apart for them—namely, the Dorothy Gillillan Memorial Prize and that given by the Scottish Association for the Medical Education of Women; but on the present occasion Miss Alice Bloomfield, M.B., Ch.B., not only gained both of these prizes, but also was the recipient of the James Scott Scholarship in Midwifery and the Annandale Gold Medal in Clinical Surgery. She also graduated with first class honours as M.B., Ch.B., being one of four who attained that distinction. Altogether there were ten women graduates among the sixty-one bachelors of medicine and surgery.

Correspondence.

MEMORIAL TO H. O. THOMAS.

SIR,—We beg leave to bring to notice a scheme for perpetuating the memory of the late Hugh Owen Thomas, a short account of whose life-work has been printed in a pamphlet issued by the Liverpool Medical Institution. The scheme, when brought before our society, received the whole-hearted support of the members present, and already a sum of about four hundred pounds has been subscribed in amounts ranging from one hundred pounds to one guinea.

While only too well aware of the many calls upon the profession, we are confident that it will readily respond to this appeal for subscriptions to endow a worthy memorial to one the application of whose pioneer work in orthopaedic surgery in the great war led to the saving of many lives and the alleviation of much pain and suffering.—We are, etc.,

W. THELWALL THOMAS, President.
D. DOUGLAS-CRAWFORD, Secretary.

The Medical Institution, Liverpool, July 17th.

ANOXAEMIA, ALKALOSIS, SHOCK, AND THEIR TREATMENT.

SIR,—So Dr. Haldane has discovered that anoxaemia tends to produce "a vicious circle which leads straight towards death"; although I am an Irishman I could not have expressed it more lucidly myself.

The inherent cause of this circle is that the organism, in trying to get in enough oxygen, dangerously breathes off its carbon dioxide, so that blood and tissues become too alkaline and there is change in protoplasmic aggregation, shock, and death.

All this I have pointed out in papers in the *BRITISH MEDICAL JOURNAL* in June and September, 1918, and in four communications to the Physiological Society in October, 1918, and in June and July, 1919. These communications contain the results of a considerable amount of experimentation carried out in collaboration with MacQueen, Webster, and Whitley.

The last of the series demonstrates that a very slight increase in alkalinity, or hydroxyl-ion concentration, of saline used to perfuse an isolated mammalian heart leads to typical shock, and heart failure in a few minutes.

The thing which tickles the imagination is that we all in Britain and America travelled so far on the wrong path, and thought and worked on the basis that pumping off carbonic acid produced acidosis. There could be no clearer proof of the way in which lack of clarity in physiology produces evil results in practice than the administration of sodium bicarbonate to organisms fighting their hardest against alkalinity.

It gladdens me so much, however, that this new knowledge is winning its way that I cry a truce to polemics. Dr. Haldane and myself have approached the problem from different standpoints, and I am pleased that we have independently confirmed each other.

This being so, I should like to suggest a new endeavour in treatment. The problem would appear to be that of supplying sufficient oxygen without undue denudation of carbon dioxide. This might be done by causing the patient to respire a mixture of oxygen and carbon dioxide for enriching ordinary air through the most ingenious apparatus of Dr. Haldane. A mixture of 90 per cent. of oxygen with 10 per cent. of carbon dioxide might be suggested because the mixture is only used to enrich atmospheric air, and so both oxygen and carbon dioxide become diluted on their way to the lungs.—I am, etc.,

Hampstead, N.W., July 20th.

BENJAMIN MOORE.

KALA-AZAR IN MESOPOTAMIA.

SIR,—I notice in Dr. Ledingham's letter, published in the *JOURNAL* of July 19th, that he seems doubtful whether the case of kala-azar recently reported by myself (*BRITISH MEDICAL JOURNAL*, June 7th) acquired his infection in Mesopotamia. The important dates in connexion with the case are as follows: The patient was born in England, and was never out of it till 1916. At the end of that year

he served a month in France, and then went on to India, arriving there in March, 1917. He was stationed first at Bombay then at Karachi. While at the latter place, he took some troops down in a troop train to Bangalore, and returned immediately. He had never visited any other parts of India. He arrived in Baghdad on July 30th, 1917, and remained there till invalided to Bombay in June, 1918.

If the onset of definite symptoms be taken as the starting point of the disease (general malaise and raised temperature occurring on March 25th, 1918), this would, if he acquired the disease in India, give an incubation period of practically eight months as a minimum. Dr. Ledingham, however, considers that headaches and a persistent hard cough, which were present in November, 1917, may have been premonitory symptoms, and that he may have had the disease at that time. This would reduce the incubation period to three months or so, as a minimum, for an Indian origin, which is within the bounds of possibility perhaps. Granting, for a moment, that the headaches and cough were premonitory symptoms—which I do not say I do—then the infection might still have been acquired in Mesopotamia, or, if in India, must have been acquired either at Karachi, Bombay, or on his short trip to Bangalore, in all of which places, as far as I am aware, there is no indigenous kala-azar. Still one cannot absolutely rule out the possibility of a sporadic infection, especially with so many troops moving about. I questioned the patient very closely as to his movements and as to all symptoms which might in any way have been considered premonitory, but he did not lay any stress on his headaches, which quite possibly may have been due to eyestrain from working too energetically in the laboratory. No records of his temperature were kept at this time. He was perfectly certain himself—in the many talks we had about where he acquired the infection—that he got it in Baghdad.

The other cases mentioned in Dr. Ledingham's letter tend, in my opinion, rather to support than otherwise the view of a Mesopotamian origin, though the records so far produced are not sufficient perhaps for absolute certainty. One would like to know, for instance, for what his first case was invalided to India in October, 1916. It is possible he was suffering from kala-azar at that date. The second case arrived in Mesopotamia from Bombay about the end of May, 1917. The diagnosis of kala-azar was made in March, 1918—nine months later. From this it seems very likely that he also acquired his infection locally, as otherwise the incubation period must have again been excessively long. Then we have the evidence of the Syrian bacteriologist, who diagnosed, by splenic puncture, a few cases amongst Turkish soldiers at Kut, and who had heard of many more cases amongst the Turks. It is presupposing too much, I think, to say that all these cases must have already been infected before arrival. I cannot be quite certain whether Dr. Hamill's cases (BRITISH MEDICAL JOURNAL, July 5th, 1919) are the same as those mentioned by Dr. Ledingham or fresh ones; but, if the latter, then they still further confirm my contention. Dr. Hamill thinks it is clear that both must have acquired the infection in Mesopotamia, and I see no guarded opinion in his note.

It is possible, of course, that the Turks introduced the disease from Asia Minor—if they actually came from there—and that these British cases acquired their infection from that source; it is equally possible that the disease has been present all along in Mesopotamia in a sporadic form.—I am, etc.,

GEORGE O. LOW, M.D.,
Temporary Major I.M.S.

London, W., July 21st.

SIR,—Negative evidence is usually of small value in a discussion of this nature. However, may I state that among some 1,500 Arabs, Kurds, and Jews from Labour Corps near Baghdad, who came under my care at No. 70 Indian Stationary Hospital, I never found a case of kala-azar? The disease must be rare in Northern Mesopotamia, where "Baghdad boils" are general.—I am, etc.,

E. BILLING
(late Captain, R.A.M.C.).

London, W., July 22nd.

EFFICIENT TREATMENT OF THE CHRONIC RUNNING EAR.

SIR,—In reply to Mr. Barford, in your issue of June 21st, p. 766, I desire to say that essentially my object was to

draw attention to the need of efficient treatment in this condition, and to the fact that for such efficiency a large number of beds for the observation and treatment of otorrhoea ought to be made available.

In civil life all must have noted the difference in the extent of intracranial involvement between cases met with in private practice and in hospital. The only reason for this great difference is the care taken by the educated patient in following up treatment. As a fellow surgeon remarked to me some years ago, "Most of these cases of otorrhoea in hospital practice sooner or later come to a radical mastoid operation." This is a confession of failure, for if the aural surgeon is not to prevent deafness what reason for an aural surgeon to exist at all?

Mr. Barford does not think my "experience as an aural surgeon in the army" is "sufficient to form an opinion of any value." I should indeed be foolish to claim that it were, if such were my only qualification to express an opinion. It is, may I state, merely a period during which I have been able to keep all my cases under personal observation and under perfect conditions, to observe them with a care which I have found impossible in civil life, where patients cease attending whenever they are so inclined.

My first statement was that *all* my cases of otorrhoea were admitted to hospital for treatment. Mr. Barford states that his have been so admitted for many years past; he has been very fortunate in having unlimited accommodation available in a civil hospital, but I should guess that he has not carefully read my remark, which was quite explicit.

It is quite new to hear that it has been the orthodox practice for a nurse to treat all cases of otorrhoea twice daily; in Manchester we can only give instructions for the treatment to be carried out at home, and this has been the case in all the ear departments with which I have been associated. Here, again, I think a perfectly explicit statement has been misunderstood.

Our practice was to teach the patient to clean his own ear down to the tympanic cavity and to mop out all secretion to the last drop before inserting spirit-carbolic drops. Many of our patients had been under treatment in civil hospitals "by the usual hospital practice for years past," but only a small minority had profited by it, as they had to be carefully taught all over again.

Mr. Barford gives no definite indication as to when a mastoid operation should be performed. He only explains the dangers and leaves the patient to decide. He will not allow that any ear which is dry and has no symptoms is cured. What, then, is to be done to the numerous patients who have recovered under treatment from double otorrhoea and have now dry ears with good hearing? Are they to have a double radical mastoid operation and to be rendered deaf for a problematic gain in safety? As a contribution to the serious question of preventable deafness this is a trifle drastic. Mr. Barford later states that he does not claim that operation is necessary in every case of running ear—from his previous remarks one would assume that, provided the patient consented, he would perform it in those cases where the running had ceased, as he thinks these are only quiescent. When, then, is the radical operation to be performed? My statements, if "sweeping," were not contradictory. I certainly cannot claim to know what is going on in the antrum or attic, but I can obtain some indication. If, for example, there are no discharge, no tenderness, no pain, no swelling, no pyrexia, no enlarged glands, no congestion of the optic discs, no tinnitus, no vertigo, and x-ray examination and caloric tests show nothing abnormal, I can say to the patient, "Keep up your treatment by mopping out the ear and inserting antiseptic spirit drops systematically and you will prevent the secondary infections, which I believe are the common causes of relapse." It is because we have treated these cases half-heartedly that the radical mastoid operation obtained such a vogue.

Let Mr. Barford treat a few patients on these lines in hospital beds and let him do the treatment himself several times daily, whilst the patient also follows the instructions at short intervals. Then from his results he will be able to decide whether there is anything in the method which may be of use in the treatment of these troublesome cases.—I am, etc.,

Manchester, June 22nd.

WILLIAM WILSON.

THE ETIOLOGY OF AORTIC REGURGITATION.

SIR,—Dr. Theodore Fisher does not now deny that endocarditis is a common occurrence in the course of an attack of scarlet fever, but asserts, without bringing forward any evidence in support of his contention, that it must be caused, not by the scarlet fever, but by one or other of its complications. This is a question, as it seems to me, simply of nomenclature, and is certainly of no practical importance.

The point is that the patient would not have contracted this endocarditis if he had not previously or at the same time suffered from scarlet fever.—I am, etc.,

London, W.C., July 16th.

A. KNYVETT GORDON.

SUDDEN DEATH UNDER AN ANAESTHETIC.

SIR,—Having performed many thousands of tonsil and adenoid operations with so far fortunately no fatalities, I have been led to the following conclusions:

1. Leave the choice of the anaesthetic or anaesthetics and the method of administration to the anaesthetist with whom you work and whom you trust.

2. See that the patient is not overgagged (a very common error) and that the tongue has not fallen back upon the larynx.

3. Avoid all preliminary swabbing of the fauces with cocaine, adrenalin, etc., drugs which under the particular circumstances are quite futile in their action and are at times actually dangerous.

4. Work with deliberation and not with undue haste (another very common error), and be careful to keep the operation area as dry as possible and well illuminated.

5. Avoid any undue traction upon the tonsil.

It is, I hold, a great mistake to regard either tonsillotomy or complete enucleation of the tonsils as a simple operation. In skilled and experienced hands probably all operations are relatively simple, but in my experience the operation of removal of tonsils and adenoids is an operation very frequently incompletely and badly performed, followed at times by post-operative deformities and permanent damage to the sense of hearing and the mechanism of speech.

Many hundreds of patients have to undergo a second operation, owing to the incompleteness of the first, and why? Because the profession and the public are led to believe that the operation is a simple one, which any one who has ever held a surgical instrument in his hand can perform—*hinc illae lacrymae*.

I have made it a rule to ask the anaesthetist to induce deep anaesthesia before commencing to operate, and have carefully avoided any undue traction upon the vagus by not over-extending the head.

About half of my operations have been performed under deep chloroform and half under open ether anaesthesia, and I have yet to make up my mind, notwithstanding the many letters and discussions upon the subject, as to whether there is any real difference in the relative dangers of the two drugs, provided that one operates in conjunction with an anaesthetist who knows his business and who sees that the patient is under the influence of the anaesthetic before the operation is commenced.—I am, etc.,

Manchester, July 20th.

WILLIAM MILLIGAN.

SIR,—As Major O'Malley pointed out in your issue of July 19th, there is no doubt that tonsillectomy, and in some cases enucleation by dissection, is the only efficient means of dealing with certain types of enlarged tonsils.

In order to carry out this treatment the operator requires from the anaesthetist—any way, in cases of enucleation by dissection—a deep anaesthesia. If this is given, my experience is that in most cases the operation can be finished without the use of the Junker apparatus. It is, of course, always as well to have one ready, or what is as well, a Wolf bottle containing ether, and to continue the anaesthesia, if needed, by pumping air, either over or through the ether, to a rubber tube inserted in the nostril.

The percentage chloroform inhaler I described in the *Lancet* of April 1st, 1916, gives an easy induction, especially if starting with half a drachm of chloroform in the apparatus, and gradually adding ether until a deep ether anaesthesia is obtained. A preliminary hypodermic injection of atropine by eliminating mucous secretion is a great advantage.

For children, as Dr. Shipway suggests, ethyl chloride greatly shortens the induction; 10 c.cm. in the percentage inhaler is usually all that is needed.—I am, etc.,

CHARLES T. W. HIRSCH,

Captain, R.A.M.C.; Anaesthetist, Metropolitan Ear, Nose, and Throat Hospital, etc.

London, S.W., July 21st.

SIR,—Always having given careful attention to the risks of anaesthesia in this special branch of surgery, and having had thirty years' experience of these operations on thousands of children without a fatality, I should like to add my quota to the contributions upon this subject in your columns.

Two conditions must be fulfilled to avoid the dangers always liable to arise in the course of the administration of an anaesthetic in throat operations—namely, experience and skill on the part of the anaesthetist, and expedition, gained by experience, on the part of the operator. In this large number of cases on which I have operated chloroform has almost invariably been the anaesthetic employed, and it has been administered to a degree in which both corneal and pharyngeal reflexes have been abolished, the one essential in this accomplishment being slow induction. The word being given by the anaesthetist to the operator, rapid action is at once taken and the tonsils quickly removed without any second attempt being allowed to increase the anaesthesia between the operation on the two tonsils. This is where the expedition and skill of the experienced operator comes in, as he should be so active in his movements as not to require any readministration. Team work is essential here, the operator, anaesthetist, assistant, and nurse all co-operating in thoroughly trained fashion, and working in unison. The one essential about which the operator must be particular is strictly to avoid dragging on the tonsil, remembering that the vagus is both the sensory nerve of the pharynx and the inhibitory nerve of the heart. This is probably how insufficiently deep anaesthesia, by not throwing out the sensory pharyngeal function, reflexly leads to the stimulation of the inhibitory cardiac action.

One of the chief objections to ether as an anaesthetic in throat surgery is the undoubted fact that bleeding is much greater under its use, and this is most undesirable, as it prolongs the operation, interferes with the skilful manipulations of the operator, and necessitates much unnecessary sponging by the assistant.

I am strongly inclined, from what I have heard and observed of fatalities, to reflect rather on the operator than on the long-suffering anaesthetist, who is almost invariably unadvised upon when an unfortunate result occurs, and I am sure that of the three factors—operator, anaesthetist, anaesthetic—the operator is the one on whom the equation of safety chiefly depends.

In conclusion, I would only ask, why do we never hear of a fatality under an anaesthetic during the course of a radical or cortical mastoid operation on a young person, where chloroform is almost invariably used, and the anaesthetist often not a very experienced administrator? Simply because there is no possible chance of the vagus being dragged upon or reflexly disturbed, and there is little additional risk if the operator be slow in his actions and the operation thereby prolonged.—I am, etc.,

London, W., July 14th.

WM. STUART-LOW.

SIR,—I heartily welcome the outspoken discussion on this subject, but I think there is only one argument which requires detailed comment. It is said that because every patient must pass through a stage of light anaesthesia during the induction of chloroform narcosis, therefore it is not possible to eliminate the danger of light anaesthesia, and the use of chloroform should be abandoned. The fallacy of this argument lies in the fact that light chloroform anaesthesia does not *per se* cause death; it is a predisposing condition only, and certain exciting causes are requisite to produce cardiac stoppage. During the operative stage traumatic stimuli may set up ventricular fibrillation through sympathetic reflexes in the lightly chloroformed subject, but it does not now appear to be called in question that this result may be obviated by full anaesthesia. During the induction stage the causes are different. First comes intermission of the administration; secondly, reapplication of a fairly strong vapour after an

intermission; and thirdly, struggling. Frequently the final catastrophe is due to a combination of these causes.

I certainly advise induction with a strength of vapour which will get the patient under quickly, for the sooner the patient is fully anaesthetized and thus protected the better, but continuity of administration is by far the more important technical consideration at this stage, and provided this be carried out, even the condition of excitement, with its occasional access of struggling, may be traversed with perfect safety. Having recognized the causes of sudden death in animals I find the avoidance of these causes reduces the death rate in cats from about 1 in 10 to *nil* in several hundred, and what is true for cats must be very many times more true for man, who is not nearly so susceptible to the form of cardiac failure in question.

Dr. Silk is mistaken in presuming that my conclusions regarding safe administration are derived from clinical experience, for I have not practised anaesthetics for many years past, but I think my former experience entitles me to express the opinion that the simple principles laid down from experimental investigation are not beyond the powers of clinical application by any person of average capability.

I may here repeat what I have said before—by all means use ether in cases in which it is suitable, for it is practically immune to the danger of sudden death. By all means likewise abolish chloroform entirely if it can be done without. But can it? So many of your correspondents covertly or openly advocate a mixture of chloroform with the ether that I doubt if they are really convinced that the abolition of chloroform is a practical policy; at least their attitude is entirely illogical.

Ether does not protect against chloroform fatalities, and a mixture of chloroform and ether possesses an insidious danger which it is difficult to guard against; the administration of pure chloroform in a proper fashion is infinitely more safe than juggling in the dark with sequences and mixtures.

I am surprised that Dr. Blomfield is inclined to disregard Mr. Waugh's series of 18,000 cases; he says they are "exceptional." Of course they are exceptional, for they are a series of designedly deep chloroform anaesthetics, and therein lies their value. Contrast this series with the 13,000 odd ordinary chloroform administrations collected by the Anaesthetics Committee of the British Medical Association, all conducted by experienced anaesthetists; the proportion of chloroform deaths works out at 1 in 1,339! Surely statistics of such large volume as these should be appreciated, and not lightly cast aside.

Further, I cannot admit Dr. Blomfield's contention that anaesthetists have always followed the principles I have enunciated for the safe administration of chloroform; or, if so, they have not taught them, for the prevailing teaching is in direct opposition to these principles. I am not aware of any textbook which directs attention to the dangers of restricted chloroform or of intermitted administration. It is, in fact, futile to argue that because the past experience of skilful anaesthetists has been unsatisfactory that the dangers of chloroform are insurmountable. It is not the skill which has been at fault but the principles, and I may here say I regret if I have inadvertently appeared to impugn the skill of Dr. Gabbett or any one else.

In conclusion, I do not wish to minimize the danger of using chloroform, but at the same time I do not want to see this exaggerated. I think chloroform has at present its place in the anaesthetist's equipment for inhalation anaesthesia, and that students should be taught to use it deliberately and with confidence, as was done in Syme's days, before Paul Bert taught, erroneously, that safety lay in the adoption of his method of "mélanges titres" and the strict limitation of vapour.—I am, etc.,

London, W., July 21st.

A. G. LEVY.

THE NEW R.A.M.C. CONTRACT.

SIR,—With reference to the new terms of contract for temporary medical officers in the army, there is one anomaly that requires to be drawn attention to, and it is that no difference in pay is made to those who have previous service during this present war.

In the R.A.M.C. (S.R. and T.F.), after a certain period of time, promotion almost automatically comes, and with it increased pay; surely the same principle should be applied to the temporary officers, for the trained and experienced

officer is worth more in every way than the recently qualified and joined up officer.

Another point worthy of consideration is that of the surgical specialists; they ought to be given a higher rank, and the pay that goes with it; if this is not done many of the best men will be lost to the army, and they alone have saved the State hundreds of thousands of pounds in so efficiently saving the lives of soldiers in this war. Moreover, if this were done, many of those who have left would be induced to return to the army.

There is another side to this matter, and it is that soldiers have not the choice of doctor that civilians have, and therefore the best available advice should be at their disposal; an arrangement such as this, added to the invaluable help and assistance of the full-time consultants, would be a wise step on the part of the army medical authorities.—I am, etc.,

July 14th.

MEDICUS.

MEDICAL RESETTLEMENT.

SIR,—It requires some special relevance to justify the appearance of personal concerns in your columns, but in view of recent correspondence the following may be of interest:

Just three months ago I was demobilized after three and a half years on active service abroad, including four areas of war in three continents, and a considerable variety of duties and experience. A few days after release I returned to my practice to commence the uphill work of reconstruction; and here I may say that I find my position, though scarcely to be envied, less critical perhaps than that of some others, my case having been favoured to some extent by the goodwill of my local colleagues and other circumstances. Now to the point: A large military hospital remains in the locality, staffed since its inception largely by part-time civilian practitioners; but only polite indifference is shown to those of us who are newly returned from abroad on our making direct application for employment.

The extra initial occupation and remuneration would naturally be opportune to those restarting practice; and their experience might even be useful publicly. Included in my own service, for instance, was a term of eleven months as M.O. of a forward labour group, implying intimate observation of partially disabled men numbering several thousands, and of their varying degrees and types of incapacity; and doubtless I am only one of a numerous class as regards past experience and present position. But there seems to be no opening, even in "pensions" appointments.—I am, etc.,

July 14th.

REVENU.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

SIR,—I have no wish to continue the correspondence unnecessarily, but certain remarks in letters published make it apparent that great misconceptions exist.

Dr. Cope says: "Every one has had some hardship to bear, and only rightly so, but what of those who have given their all?" This question has to me but one meaning, and the reply surely is that those who have indeed given their all are now sleeping their last sleep, and their names must be for ever honoured. Some of us seniors may perhaps be allowed to consider that we have given something approaching our all in the loss of sons, in some cases only sons, but each knows his own hardships best.

"Out of Work" says: "The men who stayed at home all had some reason (satisfactory to themselves) for doing so. They got what they wanted and the time has come for them to be made to feel that they have had their cake and cannot go on eating it."

Surely that is rather cruel towards those of us who were well over military age and still offered our names to our local committees. We could not all go, and it must have been in the best interests of the nation that the young should go first, as is the case in the combatant ranks, because youth is better able to withstand the necessary hardships of warfare.

Some of us would also be glad to know where the large portions of cake come in. Some of the work done has been entirely gratuitous. In the country, with increased running expenses, there has been no great return for the

help given to absent neighbours if we have behaved loyally to the latter.

Those who have disposed of their practices in order to take up public work have done so in a bad market because of the scarcity of buyers. This public work had to be done by someone—it could not wait till the war was over.

"Out of Work" appears to infer that the holders of these appointments are still in ("though declining the less delectable parts of") general practice. That is certainly not so in all cases.

There are evidently two sides to this as to every other question. Both sides can only hope that efficiency of administration and justice all round will be the guiding principles in the selection of all necessary staffs.—I am, etc.,
July 14th. SENEX.

SIR,—I think that what most riles the demobilized medical man is not the mere discovery that pensions boards are packed with non-service men, many of whom attend all, or nearly all, the eleven sessions per week. The peculiarly irritating part of the business lies in finding that men who only came into the district as a result of the war—for example, as locums for those serving—are not willing to face open competition now that the war is over, but have secured themselves by a quasi-whole-time service upon the boards.

I think the questions suggested by "Fair Play" in your issue of July 19th certainly ought to be put, and appropriate action then taken; but I should like to add a fourth question, namely, When and in what capacity did you come into this district?—I am, etc.,

July 21st.

DISGUSTED.

MEDICAL BOARDS OF THE MINISTRY OF PENSIONS.

SIR,—In the JOURNAL of July 19th details are given in regard to the medical boards of the Ministry of Pensions. The fees are said to be one guinea per session of two and a half hours for ordinary members of the board, and two guineas per session for specialist members of the board.

These fees are quite inadequate, and are, I think, lower than are paid for other medical work by Government authorities. I have had no experience of pensions boards, but have had considerable experience of medical boards on both officers and men in France. The work puts a heavy responsibility on each member of the board, and demands tact, skill, and sound judgement if the pensioner and the state are to receive justice. For such responsible work the medical officer should be paid a just fee.

During last autumn the doctors in Cheltenham refused to work for the above fees. It was intimated to them that on our return from the army we would jump at the opportunity of getting the same fee. It has not proved so. At a meeting on July 7th at the Cheltenham General Hospital attended by twenty-seven doctors, of whom eleven were demobilized, the following resolution was passed *unanimously*: "That they were willing to act on the pensions boards at a rate of either (1) one guinea per session dealing with not more than five cases per session, or (2) two guineas per session lasting two and a half hours."

I greatly dislike anything in the nature of trade unionism, but I hope that the profession generally will refuse the very inadequate fee that is offered. Cheap work is seldom good work, and is generally, in the end, far from economical.—I am, etc.,

Cheltenham, July 19th.

J. RUPERT COLLINS.

INCOME LIMIT FOR INSURED PERSONS.

SIR,—Parliament has referred to Standing Committee, after passing second reading, the bill keeping in insurance from June 30th a million insured persons receiving over £160, as well as adding to our panel 30,000 who were not insured before. Surely the same reasons that have caused her to do so are more efficient reasons at the same time to increase our capitation fee from 7s. to 10s.

The persons included are just that class of workers who cause most work for the insurance doctor and take up most of our time, justifying our demand for an increased fee, and are good private patients. Raising the income limit rides roughshod over the "scrap of paper" which constitutes our contract, and I think it should be met by passive resistance.

Every doctor should refuse to treat as insured patients persons to whose treatment our contract does not bind us.

Now we are getting perhaps 70 per cent. of 7s., which is 4s. 11d., to which the last bonus adds 10 per cent., making 5s. 5d. Measuring our 7s. in the same proportion as the income limit agrees fairly well with our demand for 10s., of which we might then get 7s. 8½d., which is not a large increase on the 7s. promised when the Insurance Act came into force. Personally I have not yet seen anything of the promised bonus payment.—I am, etc.,

Northwich, July 13th.

HENRY H. HAWARD.

THE INSURANCE ACTS AND THE PUBLIC HEALTH.

SIR,—Having regard to the very large number of letters which have been published in the JOURNAL in the past few months on the subject of the relations of the profession to the National Insurance Acts, it seems an impertinence to add to them, but I do so because a fairly careful perusal of them, and of articles in other journals dealing with the same subject, forces me to the view that in all of them the writers have concentrated on points of detail and have avoided the main broad principles, to the authority of which the whole administration of the Acts must bow and all effective and valuable criticism must conform.

The Insurance Acts are an instrument for the improvement of the public health, and in no other way can they be regarded by the Legislature, which before adopting any alterations which may be suggested must first test them by the question, "Will these amendments if made law be beneficial or detrimental to the public health and welfare?" To me it is inconceivable that the Legislature can adopt any other attitude, and yet the flood of correspondence in your columns practically ignores this point.

As an instrument of public health I have no doubt whatever in my own mind that the experiment, which the launching of the National Insurance Act was, has been justified. Even the worst administered sections, those relating to tuberculosis, have on a balance been beneficial, notwithstanding the obstacles created by leaden-handed, leaden-footed, and, I might add, leaden-witted administrative bodies; and, on the seldom mentioned side of research, the admirable reports issued by the Medical Research Committee set up under the Acts must be, I think, admitted to be an almost brilliant success.

The experience which has been gained in the eight years of operation of the Act puts our legislators in a position to effect necessary improvements and enables the medical profession to give valuable assistance, but whatever the advice or assistance given it must be tested by the public health and welfare touchstone. If it is inimical to these, however desirable its acceptance would be in the interests of some small section of the public, then it would be the duty of Parliament to reject such advice or assistance.

The experiences accumulated during mobilized service through the whole period of the war have made me realize as never before the paramount importance of the public health view of all medical questions, and in comparison such questions as whether the majority of the profession shall or shall not form itself into a trade union, and whether the cash on delivery principle should be adopted when a patient presents himself without a medical card, diminish into triviality.

It is necessary, of course, that adequate remuneration should be provided for doctors who work under the Acts—who serve the altar should live by the altar—and it may be safely left to the representative and capable existing committees of the Association to secure this on behalf of the profession as a whole, but it is essential that the profession as a whole should trust its representatives and not crab their efforts or disgust Parliament and the public generally by howling for legislation in the interest of small sections which would be definitely opposed to the public weal, and, at least, not any contribution to the advancement of public health.—I am, etc.,

Stafford, July 19th.

A. E. HOPPER.

REMUNERATION OF RURAL PANEL PRACTITIONERS.

SIR,—"Enslaved's" is certainly not an isolated case, but no doubt those of us who have country practices, in which there is no centre of population containing more

than a few hundred people, are a small minority; this accounts for the scant consideration which our case receives.

Panel pay under present values is ridiculously inadequate when time spent on the road and expenses are considered. Last year with an expenses account of some £600, I received £13 as mileage grant.

By each attendance on discharged soldiers coming under the attendance payment system I am out of pocket when time is allowed for. Should I unfortunately have to hire a conveyance to visit such a patient three or four miles away I have to pay more for the conveyance than I receive for the job!

Recently I have found my work considerably increased by attendances on demobilized soldiers (not those discharged as "physically unfit for war service") who return home to my panel list without disablement pensions but in impaired health.

I quite agree with your correspondents, Dr. Joseph Tucker and "Enslaved," that unless radical increases are made in our remuneration, purely country practitioners will be gradually squeezed out.—I am, etc.,

Turvey, Beds, July 14th.

L. G. NASH.

RECORD CARDS.

SIR,—I find that insurance practitioners have a decided objection to the keeping of record cards on the present system.

I think we may take it that the keeping of records in some form will be obligatory, and I therefore make the following suggestions: (a) That the name of the medical card be changed to "medical history card"; (b) that it contains a folded sheet with headings such as "date," "nature of disease," "number of visits," "any special treatment prescribed," etc.; (c) that the card be in the keeping of the insured person, whose duty it would be to produce it for "marking up" when necessary.

If this were done, (a) the possession of a medical card would be considered a matter of importance by insured persons; (b) a practitioner would have the previous medical history of his patient for reference, which would be especially helpful in the event of a person changing his medical attendant; (c) the practitioner would be relieved of the irksome duty of "fishing out" the patient's record card at each consultation.

Should the cards be required for statistical or other purposes they could be collected through the approved societies.—I am, etc.,

LUKE GERALD DILLON,

Chairman co. Durham Panel Committee.

Seaham, July 7th.

SUPPLY OF SERUM FOR INSURANCE PATIENTS.

SIR,—A few days ago one of my insured patients accidentally shot himself through the thigh with a rook rifle. I wrote a prescription on a National Insurance form; the chemist procured and I administered a prophylactic dose of antitetanic serum. Acting on my suggestion the chemist at once submitted my prescription to the clerk of the Local Insurance Committee, and he in turn submitted it to the National Insurance Commission for Scotland. I am informed that the supply of the serum is warranted.

In view of correspondence which appeared in your columns about a year ago regarding the supply of antitetanic serum and responsibility for its supply I shall be glad if you will allow me thus to report my experience. Some of your correspondents then did not seem to realize that the question was not whether the serum should be supplied or not, but whether a practitioner who had contracted to supply necessary remedies could refer to the Insurance Committee responsibility for supplying some expensive remedies which he himself thought necessary.—I am, etc.,

Duns, Berwickshire, June 29th.

A. J. CAMPBELL, M.D.

PROFESSIONAL UNITY.

SIR,—The Medico-Political Union is urging all and sundry to join its ranks, and denouncing the weakness of the British Medical Association because it is not a trade union. Another correspondent advises a referendum. I

can speak from experience. So marked is the apathy of the profession that a referendum will produce 25 per cent. replies—very often less.

So we fall back upon the British Medical Association. If I thought that the Association were in intrigue with the Government I should cease to be a member to-morrow. The Association possesses the machinery for a fight, if necessary, and the prestige; but every member of the profession is not a member of the Association. How, then, can we impress the unbelievers? It would not cost much to add to important memoranda: "The question under discussion affects the interests of every member of the profession. Therefore all non-members of the Association are invited to attend this meeting." Then the members could bring to bear upon non-members their influence and induce such non-members to join the fold. Again, many members at the last minute are prevented attending the meeting. There should be a notice that any member or non-member of the Association unable to attend the meeting is requested to write to the chairman of the Division expressing her or his opinion upon the matters under discussion. Then we should hear none of this grousing, "I was unable to attend the meeting, or I should certainly have opposed the resolution." These are simple, practical matters requiring remedy, and such remedies as I suggest would, I am sure, ease the situation.—I am, etc.,

Bedford, July 1st.

S. J. ROSS.

SIR,—It is reported in the SUPPLEMENT to the current issue of the BRITISH MEDICAL JOURNAL that on July 8th the Southern Branch carried the following resolution:

That this meeting of the Southern Branch is of opinion that the British Medical Association, as at present constituted, has been proved incapable of adequately assisting the profession with regard to the Insurance Acts. It therefore suggests that the Association should so alter its constitution as to be able effectively to deal with this and any similar legislation in connexion with national health, and, if this be impossible, that these matters should be left to a body possessing trade union power.

It is further reported in the same SUPPLEMENT that on June 17th the Brighton Division instructed its representative to move the following (*inter alia*) at the Representative Meeting:

That this Representative Body cannot approve the proposed National Insurance Defence Fund, and refers it back for further consideration.

I submit that the above resolution and instruction prove that there is grave dissatisfaction among the members of the British Medical Association at the manner in which the interests of the profession are at present being safeguarded, and I again appeal to those who control the affairs of the Association to allow the whole matter to be fairly and squarely thrashed out above board.

I think it is generally agreed that the profession should be absolutely united in the coming fight; and it may be urged that those who, like myself, attack the British Medical Association at the present time are doing the Association much harm, and that such attacks tend to promote discord instead of harmony.

But I contend that the Association, by circulating a private and confidential document to its officers and not to its ordinary members, and by refusing to allow its members to discuss the contents of this document, has invited such attacks; and that such action by the Association has caused far more discord and discontent than any attacks by individual members could ever have caused.

In view of the resolution and instruction previously quoted it is obvious that there are very many members of the Association who are extremely doubtful if the proposed Defence Trust is legal; it is also obvious that a number of members consider that our dealings with the Government should be in the hands of a body having trade union power. I submit that these matters are very fully and lucidly dealt with in D. 19, which can be procured on application to the Medical Secretary of the Association; but I further submit that it is the imperative duty of those who control the affairs of the Association to post a copy of D. 19 to every member of the British Medical Association, and also to instruct all Branches and Divisions to discuss it in open meeting and to forward their observations to head quarters.—I am, etc.,

Bere Alston, July 21st.

HORACE BROWN.

INSURANCE TERMS AND CONDITIONS.

SIR,—We are led to suppose that the Insurance Acts Committee are anxious to ascertain the views of the profession on insurance terms and conditions, and to carry out its wishes. They have, in the suggestion of Dr. Daniel in your issue of July 12th, of a postal vote, an excellent opportunity to demonstrate their sincerity.

It must be quite obvious from the letters published in the *JOURNAL* and reports from the group conferences that the proposals contained in M. 25 cause profound dissatisfaction and distrust. As Dr. Baskett says in your issue of July 19th, the Council could, if it would, make the Act voluntary in twelve months and so ensure justice and fairness to all. The profession is only waiting for a strong lead and organization, and if the Insurance Acts Committee really wish to carry out the wishes of the profession, let them ascertain them by a postal vote and then insist on them being carried out.

Many doctors cannot attend meetings, and there is not enough time to discuss a document like M. 25 in detail, but all can find time to read it and vote on it as suggested.

We should be doing a public service by holding up any extension of the Insurance Acts, for the public have not been asked if they wish more of this German delicacy, and we know what was the verdict at the by-elections when the Insurance Bill was before the country.—I am, etc.,

Monton Green, July 22nd.

ALFRED M. BILLINGS.

SHORTAGE OF DOCTORS.

SIR,—“Puzzled” will find other reasons to account for the “shortage of doctors” that, apparently, does not exist.

1. Practices of doctors who have died have been purchased by other practitioners in the same town, thereby decreasing the number of openings available for demobilized men.

2. Retired men have resumed practice and “squatted” in various places with the patriotic desire to do their bit in the great war and to aid the civil population. They still consider it necessary to continue their good work, and will doubtless eventually sell their mushroom practices to demobilized men.

3. In one town there were three practices among five men. Now there is one practice among two men, the other two practices having been absorbed therein, and this practice holds everything in the district.

It would be only fair to us, now demobilized, who have either to try to pick up the threads of a former practice or who have had to purchase a fresh practice, to make all persons under the National Insurance Act, when the new scheme comes into force, choose a doctor as they did at the beginning, and not to leave them on their present doctor's list with the opportunity of leaving him (as they can now do) at the end of each year only. In the absence of the doctor to whom an insured person would have gone, that person went to some doctor who had not joined up. As a result one man, who did not join up, has increased the number on his list to nearly 4,000. One who did join up had nearly 1,500; he now has just over 200. May I merely sign myself,

July 13th.

PUZZLED II.

SIR,—I quite agree with “Puzzled” that there is really no shortage of doctors at present. His remarks are in reference to private practice. But the same is true in regard to public appointments.

During the war some of the public authorities got one man to perform the duties in connexion with two or three appointments; the salary for such a complex job being generally better than for any single appointment. Now, with the appearance of peace, some of them are still hanging on to their multiple duties (and good salaries), with the result that a good many of us on discharge from the army find nothing to do. Again, as the result of war exigencies there is now a tendency to run medical institutions (especially sanatoriums) with a smaller medical staff. If one inquires for the reason, one gets the ready answer: “Shortage of doctors; can't get a third man.” A more likely reason is that the salary offered is so miserably small that it would not tempt a rat-catcher in his own profession.—I am, etc.,

July 16th.

DISABLED AND DISGUSTED.

THE Italian Ministry of War has recently published a book giving the laws, regulations and edicts that govern the care and treatment of those suffering from wounds or sickness acquired during the war.

The Services.

NEW NAVAL RATES OF PAY.

An Admiralty Order was issued on July 17th announcing the new rates of full, half, and retired pay for naval officers which have been approved by the Government. The new scales involve a substantial addition to the pay of all commissioned ranks in the several branches of the service.

Full Pay.

In framing the scales the main object is stated to have been to place officers of the various branches on the same plane, so far as possible, with due regard to their responsibilities and to technical and professional knowledge required for the performance of their duties. The new rates will apply also to officers of the Royal Naval Reserve and Royal Naval Volunteer Reserve. Except in the case of officers serving at the Admiralty, consolidated pay and consolidated allowances will, as a general rule, be abolished, and all officers will receive full pay and allowances applicable to their rank. The Medical Director-General's pay will be £2,500 a year. The new rates of pay are antedated to February 1st, 1919, to include the *ad interim* increase then granted for all officers in the service on May 1st, but officers of the Royal Naval Reserve and Royal Naval Volunteer Reserve dispersed, though not demobilized, before May 1st will remain on their present rates of pay. Officers promoted owing to the acceleration of promotion introduced by Section V (an extract from which appears below), or whose seniority is thereby antedated, will not receive any advantage in respect thereof as regards back pay prior to July 1st, 1919, but will be granted the increments to which their new rank and seniority may entitle them from that date. In calculating war gratuities of officers whose rate of gratuity depends upon pay, the permanent rates of pay in force before the issue of this Order will continue to be used. These officers, and those whose war gratuity is based on rank, will receive the benefit of any promotion (after June 30th and before the termination of the gratuity-bearing period) resulting from the new regulations.

Half-Pay.

For officers up to and including sub-lieutenants of all branches there will be no half-pay except for misconduct, or at an officer's own request; in such cases half pay will be half the officer's full pay on the executive officer's scale. In the case of lieutenants, lieutenant commanders, and commanders of all branches a distinction will be drawn between those awaiting employment and holding themselves at the disposal of the Admiralty, and those who are unemployed at their own request, or in consequence of misconduct. In the former case officers of all branches will receive unemployed pay as follows:

For the first six months: Full pay of rank (without allowances). For the next six months: Lieutenants, 17s. a day; lieutenant commanders, 22s. 6d. a day; commanders, 27s. 6d. a day. Thereafter: Half the full pay of their rank and seniority on the executive officers' scale.

In the latter case officers of all branches will receive half the full pay of their rank and seniority on the executive officers' scale.

Captains of any branch on first promotion, if not employed, and willing to serve, will receive six months' unemployed pay at £2 8s. a day. Other captains of all branches unemployed will receive, under six years' seniority, £1 12s. 6d. a day; over six years' seniority, £1 17s. 6d. a day.

The rate of half-pay for a rear admiral will be £2 5s. a day.

Unemployed pay will only be granted where officers unemployed in the naval service are not undertaking continuous professional work for which payment is made. Periods during which unemployed full pay or unemployed pay is received will only count as half-pay time. An officer declining an appointment will at once be placed on half-pay.

Allowances.

The Board of Admiralty have decided to get rid of as many allowances as possible where they are in the nature of pay by merging them in full pay. In the medical branch specialist allowances at the rate of half a crown a day will be given to officers specialized in professional subjects as indicated below. If a surgeon commander is appointed solely for specialist duties, he will receive pay as a surgeon commander only. These allowances will not be paid after promotion.

Anaesthetist: not exceeding six allowance

Ophthalmic not exceeding thirteen allowance

Various changes are announced in regard to other allowances not in the nature of pay, including increased rates of subsistence allowances. Allowances to medical officers whilst serving in certain hospitals and other naval establishments at home or abroad in lieu of provision for themselves and their servants, and for fuel and light, are abolished; so is the allowance to the medical officer of a school of physical training, and charge pay for surgeon commanders at hospitals.

Promotion.

Section V includes the following alterations in the rules regarding promotion of

(a) Surgeon lieutenants: a eligible for promotion after six years, instead of eight as at present, the promotion of those on the list on July 1st, 1919, being antedated as necessary.

(b) Surgeon lieutenant commanders will be eligible for promotion to surgeon commander after six years, instead of eight as at present, those on the list on July 1st, 1919, being given two years' seniority. Instructions will be issued to the fleet as regards the seniority of those surgeon lieutenant commanders now due for promotion owing to the double acceleration.

(c) Surgeon commanders on the list on July 1st, 1919, will be given two years' seniority.

Retirement.

The following alterations in the regulations for retirement in the case of medical officers are announced:

(a) **Compulsory.**—Surgeon rear admirals in future to be invariably retired at 60, the power of retention to the age of 62 in special cases being abolished. Surgeon captains to retire at 55. Surgeon commanders to retire at 50. Surgeon lieutenant commanders to retire at 45.

(b) **Optional retirement at 40** to be allowed for all ranks at Admiralty discretion.

The new ages for compulsory retirement will be worked down to in five years, beginning with January 1st, 1920.

New scales of retired pay will apply to all officers retired in future and to all retired officers who have served during the war in any service capacity, but the retired pay of any such officer will not necessarily be assessed or reassessed on the revised scale unless his conduct is considered by the Admiralty as having been satisfactory.

Miscellaneous.

Income tax on service emoluments will continue to be charged at service rates for the current financial year, but thereafter will be at the ordinary rates applicable to the rest of the community. Existing rates of children's allowances will continue until the end of 1919, after which they will be abolished. There will be certain modifications based upon the principle that officers in receipt of the new rates will, after July 1st, 1919, receive children's allowance. The full rates will apply to those of or below the rank of lieutenants, and the half rates to those of the rank of lieutenant commander; officers above that rank will be ineligible for any allowance.

Steps have been taken to increase the number of higher ranks in the engineer branch, and similar consideration will be given to the accountant and medical branches.

Rates of Full Pay.

The table of full pay for the medical branch is as follows:

Rank.	Before Feb. 1st.	Total Pay plus Bonus, Feb. 1st.	New Rate.
	£ s. d.	£ s. d.	£ s. d.
Surg.-Lieut.—On entry ...	0 14 0	0 18 6	1 4 0
After 2 years ...	0 15 0	0 19 6	—
After 3 years ...	—	—	1 9 0
After 4 years ...	0 17 0	1 1 6	—
After 6 years ...	0 18 0	1 2 6	Becomes Surg. Lieut.-Comdr.
Surg. Lieut.-Comdr.—			
On promotion ...	1 0 0	1 5 0	1 15 0
After 2 years ...	1 1 0	1 6 0	—
After 3 years ...	—	—	1 17 0
After 4 years ...	1 4 0	1 9 0	—
After 6 years ...	1 5 0	1 10 0	Becomes Surg. Cdr.
Surgeon Commander—			
On promotion ...	1 7 0	1 12 6	2 5 0
After 2 years ...	1 8 0	1 13 6	—
After 3 years ...	—	—	2 9 0
After 4 years ...	1 10 0	1 15 6	—
After 6 years ...	1 11 0	1 16 6	2 13 0
After 8 years ...	1 13 0	1 18 6	—
After 9 years ...	—	—	2 17 0
After 10 years ...	1 15 0	2 0 6	—
Surgeon Captain—			
On promotion ...	2 5 0	2 11 0	3 5 0
After 3 years ...	—	—	3 10 0
After 6 years ...	—	—	3 15 0
After 9 years ...	—	—	4 0 0
Surgeon Rear Admiral ...	£1,300 a year	£1,409 10s. a year	5 5 0

Dental Surgeons.

A branch of dental surgeons will be permanently instituted. Surgeon lieutenants (D) will rank with surgeon lieutenants, and will be eligible to promotion to lieutenant commander (D) on attaining six years' seniority. No higher rank than that of lieutenant commander will obtain in this branch. Dental surgeons will otherwise conform to the regulations applicable to officers of the medical branch. The daily pay ranges from £1 1s. 7d. on entry to £1 16s. 6d. for a surgeon lieutenant commander (D) after six years. A dental surgeon who is also qualified medically will receive pay on the medical officers' scale.

ROYAL AIR FORCE.

Pay.

REVISED uniform rates of pay, pensions, and allowances for officers of the Royal Air Force were announced on July 21st; but specialist services (such as medical and

dental) will continue to have special rates as hitherto. It is stated that medical officers will receive the same rates of pay as may be approved for the medical service of the army. The scales for pensions now announced for the flying, technical, and administrative branches do not apply to medical and dental officers of the Royal Air Force.

Temporary Commissions.

The Air Ministry announces that the Royal Air Force requires the services of a limited number of medical practitioners, including those who have already served.

All candidates must be fit for general service at home and abroad, should be under 35 years of age, and must be willing to fly if called upon to do so. Those who have served before will be commissioned in their previous substantive rank, those who have not served will be commissioned as lieutenant. The period of engagement will be for one year or until no longer required, whichever shall first happen. Pay will be at the rate of £550 a year inclusive of all allowances, except travelling allowances and expenses when travelling on duty, and rations or the allowance in lieu. Outfit and kit allowance will be issued to those who have not received them for previous service.

Applications should be addressed to the Secretary, Medical Department, Air Ministry, London, W.C.2.

HONOURS.

THE following further awards are announced in recognition of services during the war:

O.B.E.

Surgeon Commanders Robert John McKeown, R.N., and Horace Bruce Marriott, R.N., and Surgeon Lieutenant Commander Edward Aubrey Guy Wilkinson, R.N., for valuable service in H.M.S. *Emperor of India*, *Resolution*, and *Revenge* respectively, all of the First Battle Squadron.

FOREIGN DECORATIONS.

The following decorations and medals have been awarded by the Allied Powers for distinguished services rendered during the course of the recent campaign:

Conferred by the President of the French Republic.

Légion d'Honneur.—*Chevalier*: Temporary Captain (acting Major) Lionel Dudley Woods, R.A.M.C.; Temporary Captain Maurice Smith Bryce, M.C., R.A.M.C.

Croix de Guerre.—Major (temporary Colonel) Thomas Kay, D.S.O., R.A.M.C.(T.F.); Majors John Macauley Bowie, R.A.M.C.(T.F.), Burnet Elmer Kelly, C.A.M.C.; Captain (acting Lieut.-Colonel) Henry Alphonsus Harbison, M.C., R.A.M.C.; Captain (acting Major) Norman Veitch Lothian, M.C., R.A.M.C.; Captain Charles Leopold Franklin, M.C., R.A.M.C.; temporary Captains (acting Majors) Daniel Cowin, R.A.M.C., Alan Renata Green, R.A.M.C., Ernest Eugene Herga, M.C., R.A.M.C.; temporary Captains Philippe Bernard Belanger, M.C., R.A.M.C., Arthur Atkins Greenwood, R.A.M.C., Humphrey Neame, R.A.M.C.

Palme Académique.—Major (temporary Lieut.-Colonel) William Davenport C. Kelly, D.S.O., R.A.M.C.; temporary Captain (acting Major) Thomas C. Ritchie, O.B.E.; Herbert T. Retallack-Moloney, R.A.M.C.

Ordre de l'Etoile Noire.—*Officier*: Major (acting Lieut.-Colonel) Thomas Bettesworth Moriarty, D.S.O., R.A.M.C.

Conferred by the King of Hellenes.

Order of the Redeemer.—*Chevalier*: Temporary Captain James Watson, R.A.M.C.

Conferred by the President of the Portuguese Republic.

Military Order of Avis.—*Grand Officer*: Major-Generals Howard Carr, C.B., A.M.S.; and Richard Henry S. Sawyer, C.B., C.M.G., retired pay, late A.M.S. *Commander*: Colonels Herbert Eustace Cree, retired pay, late A.M.S.; John Munro Elder, C.M.G., C.A.M.C.; Edward Moresley Hassard, A.M.S.; Richard Hugh Penton, D.S.O., A.M.S.; Hugh Stanley Thurston, C.B., C.M.G., R.A.M.C.; Anthony Henry Waring, D.S.O., R.A.M.C. *Brevet-Colonel* William L'Estrange Eames, C.B., R.A.M.C. *Lieut.-Colonel* (temporary Colonel) James Hamilton Campbell, D.S.O., R.A.M.C. *Lieut.-Colonel* (acting Colonel) William Lawrence Steele, C.M.G., R.A.M.C. *Lieut.-Colonels* John Robinson Harper, R.A.M.C.(T.F.), Samuel James C. P. Perry, R.A.M.C. *Major* (temporary Lieut.-Colonel) George Nixon Biggs, R.A.M.C.(T.F.). *Major* Marmaduke Cordoux Wetherell, R.A.M.C. *Cavaleiro*: Major John Lawrence Wood, R.A.M.C. *Captain* (acting Major) Alexander Dickson Stirling, D.S.O., R.A.M.C. *Temporary Captain* Montgomery du Bois Ferguson, R.A.M.C.

WAR BONUS FOR TEMPORARY M.O.'S, INDIA.

WE are informed that in the case of temporarily commissioned officers of the British and Indian armies, Indian Medical Services, and Royal Indian Marine, the production of a certificate signed by their commanding officer at a date subsequent to February 1st, 1919, to the effect that they have been selected for retention with the armies of occupation or garrisons in India, and the Crown colonies or home army, will be sufficient evidence for payment of the war bonus. The certificate should be forwarded to the Accountant-General, India Office. The

rates are the same as those laid down in Army Order 54. It appears, therefore, that in the case of Royal Army Medical Corps officers in India Office payment a certificate is required. Officers in Mesopotamia come under Indian rates of pay.

AUXILIARY ROYAL ARMY MEDICAL CORPS FUNDS. The usual quarterly committee meeting was held on July 4th. Twelve grants were made to cases in the Benevolent Branch for Officers, amounting to £898, and two grants in the Relief Branch for the rank and file, amounting to £86.

These funds are for the relief of widows and orphans of commissioned officers and non-commissioned officers and men of the rank and file of the Royal Army Medical Corps, Special Reserve, Territorial Force, and New Armies, and also for the relief of the children of those who have been so severely damaged in the present war that they need help for the education of children. Requests for relief should be addressed to the Honorary Secretary, Sir William Hale-White, at the offices of the funds at 11, Chandos Street, Cavendish Square, W.1.

TERRITORIAL DINNER.

LIEUT.-COLONEL A. R. HENCHLEY, D.S.O., R.A.M.C.(T.F.), desires to say that the dinner of Territorial Force medical officers is intended to bring together all those officers, and is not limited to those resident in London. It will be held in London, and Colonel Henchley asks any officers resident in London willing to serve on the committee to write to him, care of Messrs. Holt and Co., 44, Charing Cross, London, W.C.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE. DIPLOMA IN PSYCHOLOGICAL MEDICINE.

The managing committee for the Cambridge diploma in psychological medicine desires to announce that it has been decided to recognize twelve months' clinical experience in a military neurological hospital as qualifying a candidate to enter for Part II of the examination for this diploma. Part I is open to all persons whose names are on the *Medical Register*.

A course in preparation for these examinations will be held at the Psychological Laboratory, Cambridge, during August next. Information may be obtained by writing to Dr. J. P. Lowson at the Psychological Laboratory, Cambridge.

UNIVERSITY OF LONDON.

A MEETING of the Senate was held on June 25th, when Sir Cooper Perry was re-elected Vice-Chancellor for 1919-20.

Dr. T. Baillie Johnston has been appointed, as from September 1st, 1919, to be the first incumbent of the University Chair of Anatomy, tenable at Guy's Hospital Medical School, and Dr. Alfred Joseph Clark to the University Chair of Pharmacology, tenable at University College, as from September 1st, 1919.

An amended syllabus in human anatomy and morphology for the B.Sc. honours degree for internal students was approved to come into force for examinations in and after 1921; copies can be obtained from the Academic Registrar.

Mr. H. J. Waring has been elected Chairman of the Committee of Medical Members of the Senate and Sir Cooper Perry has, on the nomination of the Senate, been reappointed a Governor of the Battersea Polytechnic.

The annual report of the Physiological Laboratory Committee was presented. It gave a general account of the work carried on during the year.

A course of four lectures on the electrical examination of the nervous system was delivered by Professor A. D. Waller, F.R.S., and Miss M. D. Waller, and in the department of general physical physiology Dr. Waller has continued his work on the emotive responses of the nervous system and on the influence of muscular work on the output of carbon dioxide. In the department of chemical physiology, owing to the fact that Mr. Gardner's time was largely occupied in munitions work, the investigations were curtailed, but progress has been made with various researches previously instituted. The staff of the laboratory is still below pre-war strength, and the lecture room continues to be used by the university for clerical purposes. The Laboratory Committee urges the importance of restoring it to the laboratory before the commencement of the next academic year, when the advanced lectures, which have been in abeyance, ought to be resumed.

The annual report of the Brown Animal Sanatory Institution stated that 1,125 dogs, 385 cats, and 129 horses had been brought to the institution. At the request of the Medical Research Committee and Control Board (Liquor Traffic) the acting superintendent had continued in the laboratory his investigations on factors influencing alcoholic intoxication. The work was being published as a special report of the Medical Research Committee. The superintendent and an assistant had continued his work on ultramicroscopic viruses. The appointment of Mr. F. W. Twort as superintendent of the institution had been continued for one year from June 1st, 1919.

LONDON HOSPITAL MEDICAL COLLEGE.

The following prizes and certificates were presented on July 14th to the successful students:

"Price" (£100) and Entrance Scholarships in Science (£50), Messrs. G. N. Golden, J. A. H. Andre, K. W. Todd (equal scholarships divided). Epsom Scholarship (for students of Epsom College).

Mr. G. L. Peskett. Prize in Clinical Medicine (£20), Mr. A. B. K. Watkins; Honorary Certificate, Mr. E. Sergeant. Prize in Clinical Surgery (£20), Messrs. B. L. Sergeant and A. B. K. Watkins (equal prize divided); Honorary Certificate, Mr. J. Fanning. Prize in Clinical Obstetrics and Gynaecology (£20), Mr. M. W. B. Bulman; Honorary Certificate, Mr. F. F. Langridge. "Duckworth Nelson" Prize in Practical Medicine and Surgery (£10), Mr. A. B. K. Watkins. "Lethaby" Prizes (£10, Organic Chemistry), Messrs. S. W. Eveson and G. N. Golden (equal prize divided). Prize in Anatomy and Physiology (£25), Mr. H. C. V. Joy; Honorary Certificates, Miss H. R. Ashton, Miss O. G. Potter. Prizes in Elementary Clinical Surgery (£5 each), Messrs. J. E. Zeitlin, F. H. W. Tozer, and Miss O. G. Potter; Honorary Certificates, Miss M. E. Kennedy and Mr. H. C. V. Joy. Prize in Practical Anatomy (£10), Miss H. R. Ashton; Messrs. D. Krestin, F. C. Hunt, T. C. Oliver (equal prize divided). "Anderson" Prizes in Elementary Clinical Medicine (value £3 each), Miss M. E. Kennedy, Miss D. W. Roughton, Mr. D. C. Williams; Honorary Certificates, Mrs. M. H. Burrows and Miss R. E. Pilgrim.

The "Buxton" Scholarship in Arts, the "Price" Entrance Scholarship in Anatomy and Physiology, and the "Arnold Thompson" Prize were not awarded.

Mr. Marlborough Pryor, after presenting the awards, referred to the fact that women students had been admitted on equal terms with men, and expressed his gratification at having had to present four prizes and five honorary certificates to women students. He appealed to women students to consider the claims and attractions of research, for he considered that in many ways, by their delicate sense of touch, their quick perception, and intuitive powers, they had an advantage over men. He also believed that they were more self-denying, and therefore more ready to devote themselves to such work, for which he hoped national or other funds would be available.

UNIVERSITY OF EDINBURGH.

At the University Court, on July 14th, Dr. J. C. Meakins, director of the department of experimental medicine, McGill University, Montreal, who has served in the Canadian Army Medical Corps both in this country and in France, was appointed professor of therapeutics; and Dr. Francis D. Boyd, university lecturer in clinical medicine, Moncrieff-Arnott professor of clinical medicine, in succession to Professor Russell.

The court resolved that in view of the exceptionally large number of medical students already entered, not more than 130 should be allowed to matriculate for the first time in October, 1919, with a view to study in the faculty of medicine.

Mr. William Wilson, M.A., LL.B., a distinguished graduate of the university, admitted an advocate in 1910, was appointed secretary of the university in succession to Sir Ludovic Grant (resigned).

UNIVERSITY OF GLASGOW.

The following were among the degrees conferred on July 21st:

M.D.—"Elizabeth M. Sloan (Mrs. Chessier), J. Steele.
M.B., Ch.B.—"J. G. Coltart, "J. B. Morrison, Christine C. Abernethy, Helen F. Allison (Mrs. Lindsay), Grace R. Anderson, Susan S. Bryce, Emily L. Clow, H. L. Coulthard, R. MacL. Courtney, Veronica C. J. Davies, Louise Denil, A. D. Fraser, M. F. Gibson, J. F. Hamilton, D. W. Humble, J. Kirk, D. M. Lindsay, Margaret Logan, P. Y. Lyle, Alice McElwee, Alice McClashan, Evelyn C. McD. McGregor, Annie I. O. MacLardy, Mabel M. Maclean, Agnes H. Macwhirter, R. Mair, S. H. Meiring, J. W. Morton, Louisa E. Pigeon, Helen L. Ralston, Katherine O. Robertson, Eliza D. Sandison, W. Scott, P. M. Speed, J. Stewart, Elaine B. S. Stocquart, Jean B. Thomson, Marion Thomson, A. S. van Collier, Helen B. Wilson, S. Young.

* With commendation.

QUEEN'S UNIVERSITY, BELFAST.

At the meeting of the Senate on July 16th the following appointments were made: Dr. Thomas Walmisley as professor of anatomy, in succession to Professor J. Symington, and Dr. J. W. C. Gunn as full-time lecturer in pharmacology in the vacancy created by the retirement of Sir William Whitla, M.P., and Dr. P. T. Crymble was reappointed lecturer in applied anatomy.

The following yearly appointments were also made: Mr. James A. Craig lecturer in ophthalmology and otology, Professor W. St. C. Symmers and Dr. T. Houston, joint lecturers in medical jurisprudence, Dr. John McLeish teacher in vaccination, Dr. H. W. Baitie lecturer in public health administration, Dr. John Morrow clinical lecturer in medicine, Mr. R. J. Johnstone clinical lecturer in midwifery, Mr. Andrew Fullerton, C.M.G., clinical lecturer in surgery, Mr. Haydn Mulholland clinical lecturer in ophthalmology.

The appointment of the following assistants and demonstrators in the Faculty of Medicine for the session 1919-20 was approved. *Demonstrators:* Clinical Pathology, Dr. Thomas Houston; *Materia Medica and Pharmacy*, Dr. V. G. L. Fielden. *Assistants:* Anatomy, Dr. R. J. McConnell and Dr. Amy O. McCallum; Medicine, Dr. S. I. Turkington; Midwifery, Dr. J. McLeish.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

An extraordinary comitia of the Royal College of Physicians of London was held on Thursday, July 17th, at 5 p.m., the President, Sir Norman Moore, Bt., occupying the chair.

A letter was received from the Minister of Health dated July 14th, 1919, inviting the College to place before him the names of persons who, in the opinion of the College, are specially suitable

to serve upon the Consultative Council which will advise upon "medical and allied services." A provisional list was submitted to the College and approved.

CONJOINT BOARD IN SCOTLAND.

THE following candidates having passed the Final Examination have been admitted L.R.C.P.E., L.R.C.S.E., L.R.F.P. and S.G.:

J. S. M. Connell, R. B. Forgan, Poon Lip Loh, T. L. Edwards, J. K. Steel, J. F. Kerr, S. Stein, T. R. O'Keefe, W. Gibb, D. A. Stegman, M. J. Woodberg, Jung Bahadur Singh.

Obituary.

THE death is announced of Dr. JOHN FRASER STEVEN, D.S.O., late Captain in the Royal Army Medical Corps, who had a distinguished career in the war. A pupil of Glasgow High School, he went to Glasgow University, where he graduated in Arts in 1903, and afterwards was a distinguished student in science and medicine, graduating in both faculties. Prior to the outbreak of hostilities he was in practice at 43, Lansdowne Crescent, and acted as assistant to the professor of physiology in Glasgow University. He resigned the latter position in 1915 to go on active service, and was attached to the 47th Field Ambulance, 15th Division. He was mentioned in the dispatches from Viscount French published at the beginning of 1916, and was awarded the D.S.O. for gallant conduct during one of the battles on the western front.

FLEET SURGEON JEREMIAH SUGRUE, R.N.(ret.), died in London on June 2nd, aged 62. He took the M.D. and M.Ch. of the Royal University of Ireland in 1881, after which he entered the navy, retiring as fleet surgeon on February 28th, 1900.

SURGEON COMMANDER FREDERICK FEDARB, R.N., whose death has recently been reported, was educated at Glasgow University, where he graduated M.B. and C.M. in 1887, after which he entered the navy as surgeon, attaining the rank of fleet surgeon on July 28th, 1906. He was posted to H.M.S. *Vernon*, the torpedo school ship at Portsmouth, on February 22nd last.

SURGEON LIEUTENANT COMMANDER QUINTIN HUME RICHARDSON, R.N., died on June 23rd, aged 34. He was the only son of Deputy Inspector-General Richardson, R.N.(ret.), was educated at Guy's Hospital, and took the diplomas of M.R.C.S. and L.R.C.P.Lond. in 1910. He entered the navy as surgeon soon after, and had recently been promoted to his late rank. He was posted to H.M.S. *Dragon* on August 7th, 1918.

DEPUTY SURGEON-GENERAL GEORGE WHITLA, R.A.M.C. (ret.), died at Hove, Sussex, on May 30th, aged 87. He took the diploma of L.R.C.S.I. in 1856, and entered the army as assistant surgeon on September 15th, 1857, over sixty years ago. He became surgeon on September 15th, 1869; surgeon-major on March 1st, 1873; and brigade-surgeon on October 8th, 1882, retiring with an honorary step in rank on February 1st, 1883. In the regimental days he served in the 99th Foot, now the 2nd Wiltshires, in the Royal Artillery, and in the 45th Foot, now the 1st Notts and Derby.

LIEUT.-COLONEL JAY GOULD, C.B.E., Bengal Medical Service, died at Aden of malaria on June 2nd. He was born on January 20th, 1867, and educated at University College, Liverpool, graduating M.B. and Ch.B. Victoria University in 1890. He entered the I.M.S. as surgeon-lieutenant on July 29th, 1893, and became lieutenant-colonel on July 29th, 1913. Before the war he held the post of Deputy Director-General of the I.M.S. He had seen much war service: North-West Frontier of India, Waziristan, 1894-95, medal with clasp; Chitral, 1895, relief of Chitral, medal with clasp; North-West Frontier of India, 1897-98, the Malakund, operations in Bajaur and in the Mamund country, Utman Khel, Buner, and action of the Tanga Pass, clasp; China, 1900, medal; Tibet, 1903-4, medal. He had also been on service, on various fronts, throughout the late war. He received the C.B.E. on August 25th, 1917, and was made a Knight of Grace of St. John on December 28th, 1917.

MAJOR CHARLES EDWARD BALDWIN SEAL, V.D., Indian Defence Force, Medical Branch, died at Darjiling, Bengal, on January 10th. He was educated at University College Hospital, and took the diplomas of M.R.C.S. and L.R.C.P. London in 1888. Some twenty years ago he took up practice at Darjiling, the summer capital of Bengal. He took a commission as second lieutenant in the Northern Bengal Mounted Rifles (Volunteers) on July 21st, 1899, and attained the rank of lieutenant-colonel in that corps on September 16th, 1913. When the Indian Volunteer Corps was absorbed in the Indian Defence Force, during the late war, he transferred to the medical branch of that force, with the rank of major. He had received the Volunteer Decoration.

CAPTAIN WALTER SIDNEY SHEPPARD, R.A.M.C., died after an operation at Charing Cross Hospital on June 6th, aged 48. He was educated at Cambridge, where he graduated B.A. in the Natural Science tripos in 1892, and M.B. and B.C. in 1895, and at Charing Cross Hospital, and, after acting as resident obstetric physician in that hospital, joined the Colonial Medical Service, and served in the Straits Settlements, where he rose to be senior health officer of Singapore, and a Justice of the Peace. After retirement, he took a temporary commission as lieutenant in the R.A.M.C. on December 1st, 1916, and was promoted to captain after a year's service.

CAPTAIN WILLIAM S. R. STEVEN, R.A.M.C., who died on July 1st at the Military Hospital, Devonport, was the youngest son of the late John Steven, of Bay View, Sligo, Ireland, and grandson of the late Captain Caleb Robertson, 88th (Connaught Rangers), of Abbey View, Boyle, Ireland. A student of Queen's College, Belfast, he took the degrees of M.B., B.Ch. R.U.I., in 1909. After acting as resident clinical assistant at the Townsend Street Maternity Hospital, Belfast, and as a resident surgeon and physician at the Royal Victoria Hospital, Belfast, he entered the Royal Army Medical Corps as lieutenant in January, 1911. He was appointed to the Eastern Command, and eventually proceeded to India early in 1913, being employed as malarial expert at Karachi. He was gazetted to the rank of captain in July, 1914. For the first eighteen months of the late war he acted, with great credit to himself, as radiologist to the Colaba War Hospital, Bombay; later he was employed in a similar capacity on a hospital ship plying between East Africa, Mesopotamia, and India for a period of close on two years. He was invalided from India at the beginning of the present year, and was at the time of his death from appendicitis commanding the Military Hospital, Eggbuckland, Plymouth. Captain Steven was a man of charming personality, conspicuous ability, and the possessor of many friends, by whom his loss is greatly deplored. He was unmarried. By his untimely death, at the age of 34, the Royal Army Medical Corps loses the services of one of its most promising officers.

CAPTAIN GEORGE THOMAS WHYTE, R.A.M.C., of Loughbrickland, co. Down, died recently at Castlevalle, Rushbrooke. He took the diplomas of L.R.C.S. and P.I. in 1892, the F.R.C.S.I. in 1901, and the D.P.H. in 1903. He served as a civil medical officer in the Field Force in the South African war, and also in the West African Medical Staff, in North Nigeria. He took a temporary commission as lieutenant in the R.A.M.C. on September 1st, 1914, and was promoted to captain after a year's service.

DR. ABRAHAM JACOBI, one of the leading authorities on diseases of children, died recently in New York in his 90th year. He was born at Hartum-in-Minden, Westphalia, on May 6th, 1830, and studied at Greifswald, Göttingen, and Bonn, where he took his doctor's degree in 1851. Soon after graduation his political opinions brought him into conflict with the Prussian Government, and he was thrown into prison. On his release in 1853 he shook the dust of Germany off his feet and emigrated to America. He was professor of children's diseases in the New York Medical College from 1861 to 1864, and in the University Medical College from 1865 to 1870, when he was appointed to the chair of pediatrics in the College of Physicians and Surgeons. That position he continued to hold for many years. He contributed largely to the literature of his specialty, and some of his books have become classics. So great was

his reputation that the German Government sought to recapture him, and offered him a chair in the University of Berlin, which he declined. Owing to his love of liberty his sympathies in the late war were strongly anti-Prussian, and in 1918 he accepted the honorary presidency of the Friends of American Democracy, an association of Americans, mostly of German descent, opposed to the rule of the Hohenzollern dynasty. Dr. Jacobi, who was held in the highest respect in his adopted country, was the recipient of many academic and other honours.

Medical News.

THE house and library of the Royal Society of Medicine will be closed during the whole of August for repairs and cleaning.

DR. H. R. OSWALD, coroner for the South-Eastern district of London, has been appointed by the London County Council coroner for the Western district in succession to the late Mr. C. Luxmoore Drew.

MESSRS. H. K. LEWIS AND CO. have removed their publishing, wholesale, and advertisement departments to 28, Gower Place, W.C.1., opposite their old premises; in addition to enlarging the book shop, it is intended to provide a new reading room over the present library room.

DR. G. S. STANSFIELD, on resigning the office of medical superintendent to the Birkenhead Union Infirmary, after twenty-four years' connexion with the institution, has been presented by the staff with a silver tea set as a mark of their appreciation and esteem.

MESSRS. LONGMANS, GREEN, AND CO. hope to publish Volume I of the *Official Naval History of the War*, by Sir Julian Corbett, in the autumn. It will end with the battle of the Falklands. It is hoped to complete the work in four, or possibly five, volumes.

THE eleventh congress of the Belgian Medical Federation was held at Antwerp on July 19th and 20th. The questions discussed were the relation of the medical profession to insurance societies, the dental art and general medicine, the organization of a medical co-operative purchase association, medical printing and medical co-operative societies.

SIR WILLIAM ARBUTHNOT LANE, Bt., C.B., F.R.C.S., has accepted the invitation of the committee of the French Hospital in London to act as senior surgeon. The following other appointments have been made: Physicians, Drs. J. Campbell McClure, F. G. Crookshank, Jean Brossy, Jean Braun (genito-urinary diseases); Surgeons, Mr. J. Cairns Forsyth, Mr. Robert M. Rowe; Ophthalmic Surgeon, Mr. James McHoul; Radiologist, Dr. F. Hernaman-Johnson.

A LETTER of thanks has been addressed by the Ministry of Health to Local Pensions Committees and Sub-committees for their work in connexion with the administration of the scheme of dependants' allowances, and particularly in connexion with the War Office Appeals Committee, by responding readily to requests for additional information in individual cases. The letter is signed by Sir Robert Morant, Secretary to the Ministry.

DR. T. JAYS has accepted the post of Vice-Principal of Livingstone College. In addition to helping the Principal, Dr. Wigram, he will give the lectures previously delivered by Colonel G. B. Price, M.D., C.M.G., who is taking up work under the Ministry of Pensions in connexion with the treatment of discharged soldiers suffering from tropical diseases. Before the college reopens on October 1st a course of fifteen lectures on personal care of health in the tropics will be given from September 22nd to 25th.

THE attendance at the victory meeting of the American Medical Association, recently held at Atlantic City, was the largest with the exception of two ever recorded. The number registered was 4,929. President Wilson cabled his congratulations from Paris to Surgeon-General Braisted on his election as president for 1920. At the closing meeting a resolution was adopted calling on Congress to allot at least \$300,000 for the prevention of influenza epidemics, to be used in research work by the Public Health Service.

AN exhibition of chemical products, organized by the *British and Colonial Pharmacist*, was held at the Northampton Institute, Clerkenwell, last week, concurrently with the congress of the Society of Chemical Industry. The exhibition was the twentieth of its series, which was interrupted during the war, but has now been resumed with many features of fresh interest. Nearly a hundred firms contributed. Among the surgical dressings displayed was "Sanoplast," a dressing composed of gauze, with adhesive plaster edges, which does not require the use of

bandages or pins. Many pharmaceutical products, vaccines, antiseptics, and British equivalents for synthetic preparations previously obtained from abroad, were included.

A MEETING of the court of directors of the Society for Relief of Widows and Orphans of Medical Men was held on July 2nd, Sir Alfred Pearce Gould, president, in the chair. Twelve new members were elected, the largest number at any meeting since the centenary of the society in 1888. The death of one of the annuitants of the society was announced; she came on the funds in 1890; her late husband had paid in subscriptions £38 17s., and his widow and one child had received from the society the sum of £2,900; the child is still in receipt of a grant of £50 a year. This case, which is but one of many, is a striking example of the benefits of the society, for relief is only granted to the widows and orphans of deceased members. The sum of £2,036 5s. was voted for the payment of the half-yearly grants to the widows and orphans on the society's books (fifty widows and seven orphans). In addition the sum of £285 was voted as a special Peace Gift, each widow and orphan to receive £5. The invested capital of the society now stands at £140,000; this cannot by the by-laws be decreased, and only the income derived from it is used for the payment of grants and expenses. Membership is open to any medical practitioner who at the time of his election resides within a twenty-mile radius of Charing Cross. The annual subscription varies with the age of the member at the time of his election, and starts at £2 2s.; there are special terms for life membership. Further particulars and application forms may be obtained from the secretary at the offices of the society, 11, Chandos Street, Cavendish Square, W.1.

Letters, Notes, and Answers.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

The postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Attitology Westrand, London*; telephone, 2631, Gerrard.
2. ACTING FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulatde, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

A DOCTOR in the western part of Ireland has a patient who suffers every winter from chilblains of the hands, but without itching; he desires to hear of some locality in the South of England with a climate in which he might hope to escape.

SULPHUR IN CHRONIC SEBORRHOEA OF THE SCALP.

"CALVUS" has under treatment a lady, aged 25, whose thin fine hair grows more scanty. Hair washes of many sorts have been used, and thyroid and calcium lactate internally. He inquires whether the colloidal sulphur would be useful.

. We are informed by a leading dermatologist that colloidal sulphur oil is of great use in chronic seborrhoea of the scalp. The sulphur is in a state of fine subdivision, and the application leaves no stickiness. Appropriate internal treatment is necessary in many cases, as seborrhoea is not entirely a local condition.

INCOME TAX.

II. V. B. inquires whether the assessment of professional earnings on the basis of the actual income of the year in the case of a practitioner who has served in the army in that year is compulsory or optional.

. Undoubtedly optional. The legal basis of assessment is the average of three years, and that can be set aside only on the application of the person assessed for an adjustment of the change to the basis of the actual year. Our correspondent does not say how the average was computed by him, and we assume, of course, that the point in dispute is not the accuracy of the average figure but its applicability.

FEES FOR LIFE INSURANCE EXAMINATIONS.

"EXAMINER" writes: It has been the custom for many years, I believe, for the larger life insurance offices to pay a fee of 10s. 6d. for examinations of proposals under £300, and £1 1s. for those over. The same form is used for both, and the amount of work (urine testing, etc.) is identical. Is not the time now opportune for insisting upon £1 1s. in all cases? This sum appears to me to be on the lean side for the

responsibility incurred, but 10s. 6d. for answering the same set of questions is absurd.

* The question of fees for life insurance examinations has been under consideration by the Association for some years, but so far a unanimous opinion has not been obtained. At the Representative Meeting in 1915 the Council submitted a number of recommendations fixing varying rates of payment according to the nature of the report required, but though some discussion occurred, no decision was reached. It is understood that the matter is being raised again at the Annual Representative Meeting.

MUCOUS COLITIS.

IN reply to "Perplexed," Dr. R. W. Allen (London) points out that what proves of use in one case of mucous colitis may fail in the next, and makes the following suggestions: Should his patient be anaemic or neurasthenic, the administration, subcutaneously or intramuscularly, every other day of the contents of an ampoule "cacodylo-ferriques-fraisse," obtainable from Roberts and Co. of New Bond Street, is likely to prove of material service. Small doses, three times a day, of extracts of suprarenal and posterior portion of the pituitary glands in liquid or tablet form are also to be recommended. A direct attack upon the predominant bacterial invaders of the mucous membrane of the bowels by means of a detoxicated vaccine prepared from shreds of the voided mucous membrane has in several cases of my own seemed to be of undoubted service, reducing the number of motions, amount of membrane passed, offensive character, and toxic symptoms. Finally, the application every second or third day of the powerful ultra-violet rays emitted from the naked tungsten electrodes of the wolfram arc light, the light being directed upon the lower dorsal and lumbar segments of the cord, will help to give tone to the enfeebled musculature of the bowels. The combined treatment may have to be maintained for several weeks before any marked improvement becomes manifest.

DR. PERCY NEWELL (Margate) advises a trial of ext. hyterionica liq. (P. D. and Co.). It must not be prescribed in a mixture, as it is precipitated, and adheres to the bottle. The prescription might be for 2 drachms, and the directions should be to take 10 minims in milk three times a day.

LETTERS, NOTES, ETC.

SURPLUS MEDICAL STORES.

ARRANGEMENTS have been made by the Surplus Government Property Disposal Board of the Ministry of Munitions to enable serving officers of the R.A.M.C. and those demobilized, and dental surgeons serving or demobilized, to purchase surgical and dental instruments and appliances which may be from time to time surplus to army requirements. The cost of new instruments and appliances has been fixed at 10 per cent., and that for used instruments and appliances at 33½ per cent., under the prices laid down in the priced list of medical stores, 1917. Intending purchasers when making application should clearly and accurately state their full requirements, which should be limited to articles they may need for their own personal use. Application should be made to the Officer in Charge, Base Dépôt, Medical Store, at Scouts Hall, Edge Lane, Liverpool; Central Laboratory, Bristol; Infirmary Road, Dublin; Easter Road Barracks, Edinburgh; St. Michael's Hall, Northampton; Old Brewery Barracks, High Street, Portsmouth; on Leader Bridge, York; in London, to the War Office X-Ray Laboratory, Hortensia Road, Fulham Road, S.W.10. Dental instruments and appliances and aseptic furniture are stored only at the Army Medical Store and Army Medical Reserve Store, Woolwich Common, Woolwich, S.E.18. A list of surplus surgical instruments and appliances, etc., available for disposal by sale is published in the current number of *Surplus*, the official organ of the Disposal Board (price 3d.).

PENSIONS MEDICAL BOARDS.

EMOBILIZED MEMBER (United Service Institution, S.W.) writes: As recorded in the JOURNAL of July 12th a general meeting of medical practitioners in the Cheltenham area resolved that they were willing to act on pensions boards at a rate of either (1) £1 ls. per session dealing with not more than five cases, or (2) £2 2s. per session lasting two and a half hours.

These resolutions state plainly the terms under which part-time members of pensions boards should agree to serve. The present remuneration is £1 ls. for a session of nominally two and a half hours. Often, however, boards are sitting for three hours or even longer. We are supposed thoroughly to examine eight cases in the two and a half hours, and also to fill in a number of forms. The clerical work is daily growing in volume. Much of it should be done by a clerk, and a good deal has to be written out in duplicate and sometimes in triplicate.

There is a growing exasperation among members at the amount of clerical work and also a strong feeling that too many cases are dumped on to the boards for the time allowed. Many cases, such as those of doubtful tuberculosis, require a lengthy and thorough examination, and it is fair neither to

the medical man nor the patient to rush too many cases on to the boards for examination.

We all feel that the present rate of pay is totally inadequate, and hope the British Medical Association will take the matter up without delay. Many of us are doing the work while looking for practices or taking post-graduate courses after demobilization. The present rate of pay does not enable us to meet the increased cost of living.

WAR MEDALS AND HOME SERVICE.

"A. M." writes: In several of the newspapers a doubt has been expressed as to the giving of war medals to men who have served on home service. If the War Office should decide to follow this course it will be guilty of a gross injustice to the medical profession. Hundreds of medical officers volunteered at the beginning of the war, and, much against their will, were ordered to do home service, in spite of repeated applications to be sent overseas. These men have done most strenuous work, and suffered war risks (especially on the East Coast) greater than many who went overseas. Are these men to be insulted and their work and patriotism flouted and unrecognized because (for no fault of their own) they were retained on home service? I respectfully suggest that the British Medical Association should bring this protest before the War Office and ask for immediate remedy of this injustice. Medical men have not joined up for medals only, but they certainly wish for recognition and appreciation. Many have lost their practices, and are in a very parlous state after their four or five years' service in the R.A.M.C.

YOUTH AND AGE.

DR. THOMAS FREDERICK HIGGS (Dudley) tells us that on the evening of May 11th, two days before his 84th birthday, he attended a woman at the birth of her first child. He thinks this must be a record. If the child lives as long, the two lives will have covered parts of three centuries.

TYPHUS FEVER IN SOUTH RUSSIA.

DR. ROBERT J. SIMONS (Corsham, Wilts), in a note on typhus in Russia, states that he is informed that an epidemic is raging in General Denikin's army and among the Don Cossacks, and that there is an absolute lack of medical comforts, clothing, and even important staple articles of food. Men, he continues, go to the front in rags, they come back to die, owing to the insufficiency of comforts for them. One battery armed with British guns, is, I hear, "losing four to five men a day from typhus fever." I understand that the British Red Cross Society has been applied to, but is unable to act as the Government and the Supreme Economic Council in Paris are unable to decide which should take the requisite steps to send proper medical aid. But something should be done quickly. It is horrible to read letters from people on the spot, who speak of the unequipped condition of the hospitals. "A hospital of 42 beds, for officers and men, is run by two ladies, assisted by four Bolshevik prisoners. The patients have no clothes to go out in." At Ekaterinodar "the conditions in the typhus hospital are terrible." It is heartrending to think that these conditions are becoming even worse, whilst the Government and the Supreme Economic Council in Paris are discussing points of procedure.

A PORTABLE CINEMA.

THE possibilities of the cinematograph as an aid to medical and scientific demonstrations are already well known. A portable projector apparatus is now being placed on the market by Mr. George Palmer, of 47, Gerrard Street, London, W.1. It contains all that is needed for showing a standard sized film in any room possessing an electric supply. The box, which weighs 20 lb., can be placed on a table and connected by a flexible cord with the nearest electric light bracket.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 36, 37, 40, 41, 42, 43, and 44 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 38, 39, and 40.

THE appointment of certifying factory surgeon at Soham (Cambridge) is vacant.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.

A Sketch

OF THE

GROWTH OF THE SURGERY OF THE
FRONT IN FRANCE.AN ADDRESS TO THE ABERNETHIAN SOCIETY OF
ST. BARTHOLOMEW'S HOSPITAL.

BY

SIR ANTHONY BOWLBY, K.C.B., K.C.M.G., K.C.V.O.,
LATELY CONSULTING SURGEON, BRITISH ARMIES IN FRANCE.

It is about eighteen years since I addressed the Abernethian Society after my return from the South African war, where I had been in surgical charge of the Portland Hospital. I had at that time got to know much of the work of the Army Medical Service, and subsequently, as consulting surgeon to Millbank Military Hospital and in other ways, I have kept in touch with this branch of our profession. It was probably partly in consequence of this that when the war was about a week old I was offered by Sir Arthur Sloggett the appointment of consulting surgeon in France, and my friend Sir George Makins was also selected. I have never been able to learn why the British Expeditionary Force did not require our services at once, but the fact is that it was past the middle of September before they allowed us to leave England, and it was the 23rd of that month before I sailed for Havre.

I lost no time in going to Paris, for it was there that the head quarters of the lines of communication was situated, and I was soon visiting various hospitals in or near that city. The battle of the Aisne was drawing to a close and our casualty clearing stations were engaged in field-ambulance work and in entraining wounded. During the fighting at Mons, in the retreat, and at the Marne they had not been employed, and at the Aisne also most of their kit and stores were not being utilized. We had as yet no motor ambulance cars. Many of the wounded came into Paris, but most of them were being sent to Rouen, so after a few days I went there and spent my time in the two general hospitals which were at work.

Everything I saw pointed to great difficulties in dealing with the wounded at the front, and I was deeply impressed by the condition of the patients on their arrival at the base hospitals. It seemed to me that I might be of more use further forward than at Rouen, and this feeling was very much accentuated when I learnt that the British army was leaving the Aisne and moving northwards. I therefore asked if I could not be of more service in that direction, and was much gratified to receive an order on October 12th telling me to report at general head quarters. I lost no time in obeying, and left early next morning for Abbeville. Beyond that town the roads were crowded with army transport of every kind, and I did not arrive at St. Omer until 5.30 p.m. on October 13th. It was getting dusk, but inside the town I met Major Poe, R.A.M.C., whom I had last seen at Rouen, and who had arrived in charge of our very first motor ambulance convoy. He told me that he was just off "to a place called Hazebrouck," that there had been fighting on a large front that day, and that he expected to bring in 420 wounded. Little did he or I think that this was the opening day of what would ever after be known as the "First battle of Ypres."

I had arrived in the nick of time. Early next morning I was at the office of the medical department and found that Colonel (later Major-General) Sir T. J. O'Donnell had recently been appointed to be "D.M.S., Front," and was the senior officer at General Head Quarters at that time. I soon saw him and the Adjutant-General, Lieut. General Macready, and explained that I had been sent out as consulting surgeon and that I wanted to stay at the front. It seemed to have been generally accepted that the only proper place for all consulting surgeons was the base, but as there were only two of us, and as Sir G. Makins was working hard at Boulogne, I did not have much difficulty in obtaining permission to stay and help with the 420 wounded who had arrived or were arriving at No. 1 Casualty Clearing Station in the Collège de St. Joseph. I was then supposed to have come to General Head Quarters temporarily, but, as it turned out, my stay lasted for the rest of the war.

I have only a few words more to say by way of introduction, but it is necessary to mention that I found the "D.M.S., Front" most helpful in every way and most sympathetic towards my proposals or suggestions. Later on he became the D.D.G. under Sir Arthur Sloggett, and when in 1916 he left us to take up the chief administrative appointment in India, he was replaced by Sir W. G. Macpherson. From all these officers I received every assistance and encouragement throughout the war, as I also did from their successors, Sir Charles Burchaell and Major-General J. Thomson.

I think that my work was all the easier because my previous experience in South Africa enabled me to realize from the beginning that the Army Medical Service was essentially an integral part of the whole army, and that it must be considered always as a part which was intimately related to various other parts, and could not be considered as if it were a detached unit.

Thus it was the considered policy of the army before the war that no wounded should be retained near the front longer than was absolutely necessary, and that consequently they must be evacuated to the lines of communication on the first opportunity. The army had decided to get the wounded out of its way as soon as it could, and it did not wish to have large hospitals near the front which would require the transport of food and ordnance supplies on railway lines or roads urgently needed for military stores of every description. It had further to be realized that the "military situation" always dominated everything, and that the medical officer must not expect to be always furnished with a reason for decisions opposed to his own opinions. It is necessary to keep these facts in view in order to realize that radical changes in the surgery of the front could not be made by the Army Medical Service with a stroke of the pen, and that the decision on many matters did not rest with the Director-General alone, but was a concern of the General Staff also. It is not appreciated by many, for example, that the site of a casualty clearing station and the arrangements for the transport of wounded are matters which can only be settled in conjunction with the "Q. branch" of an army, or that the alteration of the whole policy of evacuation of sick and wounded was a matter which interested the General Staff.

Now we come to the ever famous "First battle of Ypres." During this fight our army had only a comparatively small number of men in the field—namely, seven depleted infantry divisions and three cavalry divisions. I am not going to describe the battle; it would take a great deal more than the time at my disposal. It began at Hazebrouck on October 13th, and was continued by the gradual advance of our troops until in the north we passed beyond Ypres. The country was at that time very pretty, with sloping hillsides and woods, and it may be interesting to you to know that at a place called Polygon Wood a number of horses used annually to be trained for the International Horse Show at Olympia. What happened during the next few weeks was that we and the French, and north of us the French Marines at Dixmude, and north of them the Belgians, were fighting very hard to stop an overwhelming mass of Germans, with an equally overwhelming mass of artillery, who attacked on the whole front from Bethune to the sea. The casualties that we suffered were in no way represented by the number of the wounded. In those days it happened over and over again that whole companies were practically annihilated. They stood their ground, they returned the fire of the enemy, they fought until they died, and that is why there were comparatively few wounded in proportion to the dead. But before they laid down their lives they killed by accurate and rapid rifle fire a sufficient number of Germans to ultimately stop the onset.

We had at first six clearing stations at work. One was in Ypres, but it was shelled out the first week and had to be taken to Hazebrouck, which was twenty miles back, where there was already another. At St. Omer, about thirty miles back, there was a casualty clearing station used as a sort of base hospital. One casualty clearing station was at Poperinghe, which is behind Ypres; one was at Bailleul; one was at Bethune. The last three were our only casualty clearing station units close to the battle, and the one in Bethune was shelled out before the end of November.

Now just let us look at the situation for a moment, and think of what the casualty clearing stations could do for the 13,000 men who were wounded in this fight. Each casualty clearing station consisted of a staff of only six medical officers, a commanding officer, and a quartermaster, and each had altogether eighty orderlies. They were equipped, on plans made during peace, merely with the intention that they should act as places through which the wounded could be passed from the field ambulances into a train, and they were never intended to do operative surgery. They had no beds, and only 200 stretchers; they had hardly any instruments; they had each one operating table; they had no sterilizing apparatus and very few towels; there were no gloves; there were no gowns. So when I arrived at the front on October 13th I realized that the more numerous field ambulances must do most of the emergency operations, and that anything on a large scale in the way of front line surgery was impossible for the moment. But it was very evident that as soon as the opportunity came there was much which might be done.

Officially, the first battle of Ypres lasted until November 17th, but it went on for a little longer than that. Early in November it was suggested that some beds might be got for the worst cases in the casualty clearing stations, and we got twenty beds to start with. That was a beginning, but when we got the beds we said, "It is no good having beds for sick patients unless you have nursing sisters!" The latter were not supposed to go to the casualty clearing stations, but when we got the beds we asked for them, and said, "Until you have sisters you will not get a sufficiently high ideal of work." We wanted to do things as well as they did them at any great civil hospital; so we got twenty beds to begin with, and we got five nurses to each casualty clearing station. That was towards the end of the battle, and at Christmas I came back for a few days to London, partly for leave, but I also came back with authority to obtain considerably more equipment for the casualty clearing stations.

So ended 1914, but, although the obvious changes in front line surgery were but small, the all-important principle had been conceded—namely, that the casualty clearing stations no longer existed merely for the purpose of evacuation, but were allowed to treat, operate upon, and retain wounded men. A small beginning, it is true, but one that contained great possibilities for the future.

1915.

I returned to France early in January, and from that time onwards we began to do regular operating work in casualty clearing stations and to train surgical staffs. At this stage we had to come to some definite decision as to the lines on which we were going to work. Were we going to ask that a large number of experienced operating surgeons should be sent out from England to take front line work at the casualty clearing stations, or were we not? I knew that there were many operating surgeons in England who were doing very hard work, and I knew that some of them who could do first-rate work at home were not young enough to stand the racket of casualty clearing station work night and day. And if we did get them out to France others would have to be found to take on their work, so my impression was that we ought to train our own staffs at the front. But I pointed out that it was no good training the staffs unless it was arranged that they should, as far as possible, not be changed. There is a tendency in all armies to move people about, and you might go to a unit one day and find So-and-so there; go the next, and find somebody else in his place. Well, from that time onwards we started training some men and casting out others whom we did not find good enough, until we had a satisfactory, capable, energetic lot of young surgeons, and I can never sufficiently express my admiration for the way in which the clearing station work was done by them.

The next event was that on March 10th there came the crowds of wounded from the battle of Neuve Chapelle. Up to this time the British army had expected daily to move forwards; the idea always was that we were going to advance, and the consequence was that because of this idea the supply of additional equipment to casualty clearing stations was postponed. The main object of the army was, of course, to beat the Germans, and everything was subservient to that, for the wounded man necessarily

takes a secondary place in war. Supplies of munitions and food for the fighting men—that is the first consideration. I did not grumble, but I only tell you the fact that, as far as front line surgery was concerned, we were necessarily handicapped by the idea that we were going to advance. The next thing that handicapped me personally was that the General Staff had not yet learnt how far it could trust us civilians or our proposals to do operations at the front. When events were leading towards the Neuve Chapelle fight I knew beforehand that there was going to be a battle, but I was not told anything officially until the battle had actually begun. The fact was that in March, 1915, we had not yet got to the stage when those in authority turned to us and said to the consulting surgeons: "There is going to be a fight; it is going to take place on such a day and in such a place. Make the necessary surgical arrangements, and be ready for the treatment of so many wounded." That all came a little later, when the Directors of Medical Services of armies worked with the active co-operation of their respective consultants. So "Neuve Chapelle" arrived, and with it 12,000 wounded, for whom there were very few casualty clearing stations. It was impossible, of course, for the latter to deal thoroughly with the majority of the wounded; nor were they intended to do so, for at that time the policy of the British army was still the same as that of all the other armies when the war began—that is, "We will not in battle deal with wounded men at the front; operating work has got to be done at the base." And it must be recognized that evacuation to the base was very good and rapid in this battle.

On April 22nd the "Second battle of Ypres" began with the German "gas offensive." On May 9th our attack on Festubert began, and those fights overlapped. There were over 60,000 wounded in April and May. During that time we had ten casualty clearing stations at work; and I felt myself that the strain on them was greater than it had been even in the first battle of Ypres, while the surgeons at the base were no more than sufficient in numbers for their own work. So we went on during the spring and summer of 1915, training staffs to do the surgical work, putting the casualty clearing stations into huts or tents instead of in houses, increasing accommodation for operations, adding to the equipment, and as a result accomplishing all that was surgically necessary during times of comparative calm, but always overwhelmed when there was a great battle.

And then, after a short rest, came the next battle—"Loos," on September 25th—an attack by the First Army. Before that time my friend Colonel (now Sir) Cuthbert Wallace had come out, and he took one section of the front, which was in the area of the First Army, while I carried on in the Ypres section, in the Second Army. Just before the battle of Loos an "advanced operating centre," as it was called, was created near Bethune. It deserves to be mentioned, because this was the first time an advanced operating centre was pitched in front of existing casualty clearing stations for a battle. Unfortunately, it was swamped by the number of cases brought in, and the few casualty clearing stations could not do more work for the wounded than had been accomplished by the casualty clearing stations in previous battles.

During the year 1915 we had had altogether nearly 200,000 wounded, and of these about 50,000 were wounded at Loos and 60,000 were wounded in April and May at Ypres and Festubert.

After the battle of Loos Colonel Wallace and I felt that the time was ripe for a more definite recognition of the value of the front line surgery, and we therefore asked for an increase of the surgeons in the casualty clearing stations, and especially for reinforcements before heavy fighting began. We pointed out that the casualty clearing stations were now able to do very valuable work at the front so long as they were not overwhelmed, and our proposals were very cordially received by the Director-General.

So the year 1915 closed. It had been a time of disappointment for the army, because all our expectations of a general advance had come to naught, and now a period of trench warfare had become established. But as far as surgery was concerned the change was advantageous, for we had been enabled to further increase the equipment of the casualty clearing stations since Neuve Chapelle and to make them into real front line hospitals. The combatants

themselves looked to us for help, and no one actually at the battle front questioned any longer the policy of providing the wounded with prompt surgical treatment. The casualty clearing stations had indeed already won the confidence of the army, and now they were bound to progress yet further.

1916.

The year 1916 opened very quietly. A Third Army had been formed in the Albert region, with Colonel Alexis Thomson as its consulting surgeon, and a Fourth Army was in process of creation. It was this increase of the army that brought about in April my appointment as "Advising consulting surgeon" at General Headquarters, and I was given a sort of roving commission along the whole front, with the duty of advising in all surgical matters. I had already the rank of surgeon-general, and this was of very great assistance in my new post.

Preparations were beginning for our attack in the Somme region, and I accordingly spent a good deal of time in the area occupied by the Fourth Army, on whose front the fight was to take place. Here I enjoyed the fullest opportunity of hearing from the D.M.S., Surgeon-General O'Keeffe, the arrangements which were being made for the casualty clearing station work, and I now had also the advantage of discussing the surgical proposals at first hand.

The chief difficulty was that the railway communications were as yet quite insufficient for all the requirements of the army, and, as supplies and munitions had first claim, it was difficult to get sanction for as many casualty clearing stations as seemed to be necessary. But we were going into a very big fight and the wounded were certain to be very numerous, so the Director-General ultimately arranged for the provision of fourteen casualty clearing stations to hold not less than 1,000 men each (some of them could take nearly 2,000), and, in addition, we provided near Albert a very good advanced operating centre for abdominal cases, with about forty beds.

Further, and most important of all, we were able to increase all the surgical staffs before the battle began, and were also allowed to bring to our help the surgical specialists from other casualty clearing stations further north, arrangements which greatly assisted the work of Colonels T. Sinclair and Maynard Smith, who were associated with me as consultants for the Fourth and Fifth Armies, for it should be mentioned that soon after the fight began our Fifth Army came into being. During this battle I took up my own residence at a casualty clearing station near Albert, and took charge of certain areas as a consulting surgeon.

It was well we had made large provision in the casualty clearing stations, for on the first day there were 22,500 wounded, the next day there were 16,000; the next day there were 9,000. After that matters eased, yet the total number of casualties during the battle was over 300,000. It was fortunate also that during this fight we had in each casualty clearing station fourteen medical officers instead of six, and fifteen nurses instead of five, and as the result of the increased staffs, and in spite of the pressure of battle, I had the satisfaction of reporting to the Director-General that we had done 30,000 essential operations under anaesthetics at the front during a period of three and a half months. That brings us to the end of 1916, a year in which front line surgery made a very great advance and established itself on a sound footing.

1917.

Now we come to 1917. Great encouragement was given to us by the Director-General to increase the staffs of casualty clearing stations materially, but, in consequence of the German army retiring over a large portion of the front, arrangements had to be made in addition for an advanced operating centre behind Arras. The scene of battle had now shifted northwards to the areas of the Third and First Armies, whose consultants were Colonels H. M. W. Gray and Cuthbert Wallace, and whose Directors of Medical Services were Surgeon-Generals Murray Irwin and W. Pike (the latter was shortly succeeded by Sir H. Thompson). The surgery had already become everywhere very much more efficient than it had ever been before, and "resuscitation wards" and arrangements for warming badly shocked men were to be found in every

casualty clearing station. The Thomas splint, which formed such an important feature in our work, was now being universally used by the casualty clearing stations and field ambulances of every army, and it had even gone as far forward as the regimental aid posts in some areas. The best methods of applying it had been thoroughly taught during the winter by all the consulting surgeons, and its use and the use of other new first-aid splints had been demonstrated in every field ambulance as well as in the casualty clearing stations on the whole front. This personal education very soon proved of the greatest value.

The battle at Vimy and Arras, which began on April 9th, was fought by our First and Third Armies, and many new casualty clearing stations were provided before it began. It had to be unduly prolonged in order to help the French, who had got into great difficulties on the Aisne, and our prolonged attacking under very unfavourable conditions gave rise to many more casualties than would have occurred if we had only required to do as much as we ourselves wished. But the surgeons of the casualty clearing stations were reinforced by "surgical teams" from other units, comprising a surgeon, a sister, and an anaesthetist, and good work was done everywhere.

Then came the "Messines" fight, on June 7th, further north still, and when I returned to the Second Army I was glad to find that Colonel Gordon Watson was the consulting surgeon, and we arranged, under Major-General Porter, the D.M.S., for the treatment of the wounded. Well, that was a most completely successful fight. The arrangements of the D.M.S. for bringing the wounded into the corps dressing stations and the casualty clearing stations worked most smoothly, and 18,000 men were treated very thoroughly in three days. Most of the casualty clearing stations held as many as 1,000 patients, and had fifteen nursing sisters. In no previous fight had the wounded done so well.

Arrangements had then to be made with the Directors of Medical Services of the Second and Fifth Armies (Surgeon-Generals Porter and Skinner) for the "Third battle of Ypres"—the "Passchendaele fight"—which began on July 31st, and we were very fortunate in being able to provide for yet larger reinforcements of surgeons than formerly. There had recently arrived a number of American surgeons, and some of them were amongst the very best surgeons in the whole of America. They were not yet required for their own army, and by getting them and a number of our own colonial surgeons—Australians, Canadians, New Zealanders, and South Africans—we created enlarged and most efficient staffs for the casualty clearing stations, so that each of these had at least twenty-four medical officers, and we were also enabled to double the operating equipment. Each casualty clearing station kept eight operating tables at work, and no fewer than 60,000 wounded were treated under anaesthetics during the fight. That was the best thing that we had yet done, because, as the total wounded in the three and a half months amounted to 196,000, those 60,000 represented about 30 per cent. of the whole of the wounded who passed through the casualty clearing stations. It should also be noted that it was during this fight that blood transfusion was first employed on a large scale. Almost the whole of the necessary operations were done at the front on this occasion, and the result was that never before had the wounded in the general hospitals at the base done so well.

Before this battle had well finished another attack of ours blazed up at Cambrai on November 20th. The Germans replied by an attack on November 30th, and our casualty clearing stations, although they were very near the line of fire at one time, managed to hold on to their sites, and practically all the wounded were adequately treated.

The year 1917 came to an end soon after this battle, and the Army Medical Service could look back on its front line work with a good deal of satisfaction. The wounded had reached a total of nearly 500,000 in the year, but, in spite of such great numbers, a far larger proportion of them than in any previous year had been thoroughly treated at the front. The equipment of the casualty clearing stations had become very complete, methods of treating patients suffering from shock or loss of blood had been systematized, and the arrangements for re-introducing hard-worked units had been fully tried and not found wanting.

1918.

We entered next upon what proved to be the last year of the war—1918. It began very peaceably; there was nothing doing. I wandered over the front to see that all was in readiness, and found but few wounded anywhere, although we all knew that this was really the calm before the storm. There was subsequently a lot of talk about our being surprised by the German attack, but there was not a word of truth in this statement, for commanders of all casualty clearing stations in the Fifth Army had been warned by the D.M.S.—Surgeon-General Skinner—that the attack was impending, and later we got definite information that it would take place on March 21st.

On the morning of that day I started early, and from twenty-five miles away I could hear the roar of battle. I went down to the head quarters of the Fifth Army, and even after eleven o'clock there was so dense a mist on the hills that one could not see 100 yards. It was in that mist that at dawn the Germans had managed to push their way between our outposts where our line was very thin, for the Fifth Army covered about forty miles of line with only fourteen divisions. I got down to head quarters of the D.M.S. at Nesle, and afterwards went on further forward with the consulting surgeon, Colonel Maynard Smith, to a place called Ham. There I found the most advanced of our casualty clearing stations working splendidly, but there had been a fire in the medical stores in the village, and the railway line between this casualty clearing station and the next one at Cugny was broken by shell fire. We heard, however, that the patients had been got away to Compiègne, so I went on to a group of casualty clearing stations further north. Here also everyone was working hard, for they were close to the main road leading from St. Quentin, and great numbers of wounded were arriving. On this day, and early on the next, practically all the wounded were satisfactorily treated in the casualty clearing stations. Afterwards there were many who could not be brought in because, for one reason, the roads got so blocked with traffic, retiring guns, and innumerable lorries, that the ambulance cars which took patients to the casualty clearing stations from the field ambulances could not always get back to the field ambulances to pick up the next load. The result was that a certain number of wounded were necessarily left behind, although not before many of them had been carefully dressed and splinted by the field ambulance staffs. Some units lost their all, but others saved a great deal of their kit and equipment. Every casualty clearing station of the Third and Fifth Armies had to retire, but many of them were reconstituted in the neighbourhood of Doullens and Amiens, and within a day or two were again at work. The Third Canadian Stationary Hospital at Doullens was also reinforced by additional surgeons and acted as an enlarged casualty clearing station; it did excellent work for many weeks until it was destroyed by a fire started by a hostile bomb.

The Germans claimed 93,000 unwounded prisoners, but the actual number was, I believe, about 46,000 wounded and unwounded put together, and not a single patient once in a casualty clearing station was captured. Wonderful stories went round the base, and even to England, as to the number of people who had been captured, and one rumour said, "the whole of No. 00 Casualty Clearing Station has been captured with all the staff and the nurses," etc. It was all invention, yet, considering what had happened, it was surprising that there were not more reports of disasters. But then there was a complete absence of anything like a panic. In only one instance were a few patients left behind, and then they were left in charge of a medical officer and some orderlies. It was the right thing to do at the time, for the capture of the whole staff would not have helped matters. But even in that case some cars and lorries were sent back and everyone was evacuated before the Germans arrived.

Meantime, the train service to the base had been first-rate, and the general hospitals received the wounded with little delay. Fortunately, we had anticipated that the base hospitals would be heavily worked, and more operating theatres and more surgeons were waiting in readiness before the call for action came. The Directors of Medical Services and the consulting surgeons of the Third and Fifth Armies, Colonels Gray and Maynard Smith, had had a very anxious time, but the worst of the pressure was all over within a week, for by March 28th

the retreat had stopped and the German attack had already failed.

The real cause of the failure was the complete defeat of the German assault on the Arras sector on March 28th. After having rushed the south of our line they made a very determined effort to get through further north, at the junction of the First and Third Armies, but there was no mist as there was on March 21st, and our artillerymen were able to get on to their troops where they were massing behind the line, and machine gunners and rifles fired into them as they came nearer. We heard afterwards, what we did not know at the time, that after the attack had failed with tremendous losses Ludendorff abandoned the main offensive, and you will remember that the further German advance towards Amiens never came off.

Fighting continued, however, in April and May in the northern part of the line which we called the "Kimmel area," and also on the Armentières-Bethune front in the Lys valley; but, although some of the casualty clearing stations had to retire, the front line surgery continued without much interruption in all three armies, and, while the people in England were still full of anxiety, we in France were confident that before the summer was out our turn to advance would come.

You will remember that on May 27th the Germans attacked the French on the Aisne. We also had some divisions down there, divisions which were not up to strength and which suffered very severely, although they held on, and by holding on they helped to prevent Rheims from being taken. But the French were defeated and were driven back beyond the Aisne, and in consequence one of our casualty clearing stations in this region was captured; as the staff remained to take charge of the wounded they were captured also.

We now come to July, the month in which the tide of battle began to turn, although the full flood did not run till August. On July 4th—Independence Day—the Americans came into the battle line for the first time at Villers Bretonneux. They had been ordered by their own people to be under our command for the attack, and then at the last moment for some reason the order for them to join in the attack was countermanded. This caused great disappointment, and one section of the Americans behaved as Nelson did when he put his blind eye to the telescope, and "did not hear the counter-orders." The attack was very successful; there were not many wounded, and all were easily dealt with by our surgeons.

On July 15th came the last attack of the Germans. They crossed the Marne, but were violently counter-attacked by French, British, and Americans on July 18th, and at that time and subsequently some of our casualty clearing stations had very heavy work near the Marne, and were so overfilled with wounded that many of the latter had to be passed on to American and French units for treatment.

It was early in August that I became aware of movements of large numbers of cavalry and guns, all very mysteriously done at night, and I realized that there was something big on foot. But it was only twenty-four hours before it actually took place that I and Colonel Gask, the consulting surgeon of the Fourth Army, were told officially that there was to be a big attack by us in the area of the Fourth Army on August 8th.

The warning was short, but the casualty clearing stations were ready in every way and ample reinforcements of surgical teams arrived in plenty of time, so that when the battle did begin, on the morning of August 8th, we were quite prepared for it, with plenty of casualty clearing stations and plenty of surgeons.

The attack of August 8th was a complete surprise, as you may remember. It was a surprise to you over here; it was a surprise even to some of the troops who took part in it, and it was a very great surprise to the Germans. That day marked the beginning of our own great offensive, the opening of the greatest battle that has ever been fought, and the beginning of a British advance which ran the Germans to a standstill, and which practically never stopped until the enemy were completely defeated and the Armistice was signed.

During the earlier part of the battle the fighting was mostly in the south, but after a short time it spread over the whole line. There was a brief interval after the end

of August, and then late in September we got back once more to the old position of the Hindenburg Line. When we got as far as that inquiries were set on foot to ascertain whether our troops were overtired, now that they had fought continuously for six weeks, but all the information pointed to the fact they were still full of go and keen to attack, so Sir Douglas Haig decided to press home the advance and to attack at all points.

The consequence was that on September 27th, 28th, and 29th our great assault took place on the Hindenburg Line, and in the north the Belgians joined in with the Second Army. On September 27th and 28th the Second, Third, and First Armies attacked, and finally, on the 29th, the Fourth Army. The result was a universal advance, heavy losses, but a complete destruction of the German morale, for now that they were driven back from what they had believed to be an impregnable position the fighting spirit was knocked out of them, although the First, Third, and Fourth Armies had some strenuous opposition in very difficult country early in October.

I need hardly remind you that these advances of ours always meant a constant moving and re-pitching of our casualty clearing stations, which had now to leave their huts, and some of their equipment behind them, and do their work in tents. But before each fresh advance there was generally a little breathing time, and, as everything was planned and thought out beforehand by the various Directors of Medical Services and their consulting surgeons, the casualty clearing stations were generally all well placed and well equipped before the fighting of the next stage began. What we did need very badly was more transport, and there can be no doubt that if front line surgery is to be maintained as it should be in an advance then the casualty clearing stations of the future must have far more transport allotted to them than they have had hitherto. We had great difficulties for want of it. During the earlier part of our advance the stress of the work fell successively on the Fourth, Third, and First Armies, and then on the Second Army. The Fifth Army had not been in the line since the great German attack, and was only just being reinstated when our own attack opened on August 8th. It came into action in September.

As far as the surgery was concerned, there was increasing difficulty in supplying sufficient staffs as more and more of the whole army became engaged, but almost everywhere the high standard which had been reached was maintained in spite of the difficulties.

A greater trouble was that the casualty clearing stations had often to send some patients to the base before operation or else to evacuate others sooner than was surgically advisable because of the constantly recurring calls to pack up and move on with the victorious troops. It was a penalty of success, and this evacuation to the base was really urgently necessary because the devastated country and the destroyed railways quite prevented the moving forward of the general hospitals.

The "Great War" was now drawing to a close, but it was destined not to end until we had crowned our success by an advance in the old "Ypres salient," and here on October 14th the Second Army fought for the last time over the old battlefield. The D.M.S., Major-General Guise Moores, pushed up our clearing stations in preparation for this fight, now not only as far as they had been before the previous March retreat, but this time as far as Ypres itself, and we established a group of three at Brielen, just outside Ypres.

I told you that I originally arrived at the Ypres front on October 13th, 1914, and here we were back again on October 14th, 1918, after an interval of just four years. I had heard the first shells come into Ypres, and that day I heard the last. It was interesting to realize that, whereas in 1914 there was no attempt to perform surgical operations at the front on a large scale, in 1918 no less than 40 per cent. of the whole of the patients who were brought to the Brielen casualty clearing stations of the Second Army were anaesthetized and passed through the operating theatres during heavy fighting.

Extraordinary changes had taken place in the treatment of wounded men between the "First battle of Ypres" in 1914 and the "Last battle of Ypres" in 1918.

You will remember that when Napoleon returned from Elba there was the campaign called "The Hundred Days." The great battle that the British army began on August 8th and finished on November 11th, and which

resulted in the defeat of the Germans and the ending of the war in 1918, instead of continuing through the winter, lasted just about the same time. It will very likely be known in future as "The Hundred Days Battle of the Great War."

During this period we had more than 300,000 wounded to deal with, but the accumulated experience of many battles and the systematized methods developed by constant practice enabled the work to be done with comparatively little difficulty. It is, of course, true that at times the casualty clearing stations were overworked and that the quality of the surgery suffered. This must always occur in great battles because of events beyond the control of the medical service. Yet, even when this is admitted, it may still be claimed that the British surgery of the front showed a continuous improvement in each successive year of the Great War.

ON ABDOMINO-THORACIC WOUNDS OF WARFARE.

BY

MAJOR GORDON TAYLOR, O.B.E., R.A.M.C.,

SENIOR ASSISTANT SURGEON TO THE MIDDLESEX HOSPITAL;
HUNTERIAN PROFESSOR OF SURGERY, ROYAL COLLEGE
OF SURGEONS OF ENGLAND, ETC.

THE first abdomino-thoracic gunshot wound which I ever saw and the first operation for this injury which I witnessed was in 1910 or 1911 in the Middlesex Hospital; an urgent thoraco-laparotomy was performed by my colleague and chief, Sir John Bland-Sutton, and a successful result was obtained in his skilful hands. The case was that of a footman of seventeen years, who shot himself in the chest with a revolver, "because the girl he loved did not requite his love." The wound of entry was in the fifth left intercostal space, half an inch below the left nipple; the patient's condition was desperate and the thorax was hastily opened by a vertical incision dividing the lower costal cartilages, and the abdomen was subsequently opened in the left linea semilunaris by a prolongation downwards of the thoracic incision. The missile was found to have traversed the lung, diaphragm, stomach, and spleen, and it was removed from beneath the skin in the left lumbar region. The pleura was swabbed dry of blood, and many ounces of blood were sponged from the coelom. Wounds of the anterior and of the posterior wall of the stomach were sutured, and the spleen, which was bleeding freely, was removed. The chest and abdomen were closed and the diaphragm sutured. An intravenous saline was given during the operation and the patient rallied thereafter. An empyema, due to infection with a coliform organism, retarded his recovery, but the patient ultimately got well. The sequel is interesting, for "the girl, finding the youth so ready to sacrifice himself for unrequited love, softened her heart; the pair are contented with each other now, although the accident went near to swelling the list of love stories with tragic endings."

This incision of Sir John Bland-Sutton for dealing with an abdomino-thoracic wound is, then, the prototype of the thoraco-laparotomy reintroduced by Pierre Duval in 1917—some six years later.

The subject of abdomino-thoracic wounds was discussed by Sir Anthony Bowlby, Jules Voncken, and Pierre Duval at the third Allied Surgical Congress for the study of war wounds held at Val-de-Grâce in November, 1917. Sir Anthony Bowlby's contribution to the discussion has been incorporated in the *Manual of Injuries and Diseases of War*, which was issued by the War Office in 1918. It would be idle to reiterate the information and opinions expressed therein; they are familiar to all the surgeons who have worked in the forward area. It is worthy of note that this class of wound constitutes about 9 per cent. of the thoracic wounds admitted into a casualty clearing station, and, according to Sir Cutbert Wallace, about 12 per cent. of the abdominal cases. Jules Voncken's estimate of their frequency is, however, somewhat higher.

Some of the earlier papers specially point out the severity of this type of lesion. Walters, Rollinson, Jordan and Banks,² writing on February 10th, 1917, note especially the high mortality. Only 18.5 per cent. of such patients in their series of cases recovered, and they state that in those who survived only solid viscera were injured.

Major A. L. Lockwood, D.S.O., and his co-workers at No. 36 Casualty Clearing Station,⁵ as a result of their experiences in the Somme offensive of 1916, took a more hopeful view, and in March, 1917, pointed out that wounds of the diaphragm are by no means necessarily fatal, nor even to be greatly feared, if particular attention be given to repairing the diaphragm at the earliest possible moment. Lockwood's attention was especially focussed on this muscle, and the improved results in this class of case in his hands were undoubtedly due to the suture of this muscular barrier between chest and belly. The dogmatic statement, however, that death certainly ensues if something be not done to repair the diaphragm in every case of injury to that muscle, is open to question. On more than one occasion, especially on the right side, the diaphragm has been deliberately left unsutured, and a favourable issue has ensued. Increasing attention to the thoracic aspect of the abdomino-thoracic wound has led to still greater improvement in the results.

It must be remembered that it was not until the later part of 1916 that the general principles underlying the treatment of gunshot wounds in general were applied to injuries of the thorax. It is now generally accepted that the sooner a wound is rid of the agents carrying infection—for example, foreign bodies and clothing—and the sooner the media suitable for the growth of organisms are removed—for example, blood clot and devitalized and damaged tissue—the better is the prognosis. In no class of case was this axiom so neglected as in the case of gunshot wounds of the chest. Although Sir Henry Gray and Captain J. E. H. Roberts⁴ operated upon a chest case in Rouen early in 1916, and Major Jack Anderson, D.S.O., operated upon several chests in the early summer of 1916, yet it is to Pierre Duval, of the French army, and to Colonel Gask, C.M.G., D.S.O., that the credit is due of evolving a technique in dealing with wounds of the thorax.

During 1917 the attention of surgeons was increasingly directed upon thoracic surgery, and papers were published in the autumn of 1917 and early winter of 1917-18 by Gask and Wilkinson,⁶ Jack Anderson,⁶ Roberts and Craig,⁷ and Lockwood and Nixon,⁸ which embodied the experience derived from casualty clearing station work during the year.

Statistics all go to show that the *immediate* prognosis of an abdomino-thoracic wound is in many cases largely determined by the nature of the *abdominal injury*. Those that are accompanied by a wound of a hollow viscus are very fatal. Thus Sir Cuthbert Wallace found that only 7 out of 28 such cases were evacuated to the base—that is, the mortality amounted to 75 per cent. Gask and Wilkinson⁶ saved only 3 out of 13 cases with hollow viscus injury, and another series showed only 1 recovery in 5. Lockwood,⁸ however, managed to save 8 out of 20, and I have records of 11 recoveries of my own out of 22 cases, a recovery rate of 50 per cent. Nevertheless, when a comparison is instituted with cases associated with solid visceral injury, the mortality is relatively high.

My own personal series of 75 abdomino-thoracic cases submitted to operation, or at least transfused with blood with a view to operation, represents practically every abdomino-thoracic case admitted to my casualty clearing station from the end of the Cambrai "show" in 1917 till August, 1918. It also includes several cases operated upon in the beginning of the autumn advance of 1918. The recovery rate, therefore, is not merely the recovery rate of cases submitted to operation, but is really the recovery rate of those cases admitted to hospital in which it was considered that operation was urgently needed if life was to be saved. The cases complicated by hollow visceral injury gave a recovery rate of 50 per cent. Those complicated by wounds of a solid viscus showed a recovery rate of 70 per cent. The total recovery rate in my series is 64 per cent. In 22 of these cases transfusion was considered necessary and performed, and 11 of these recovered. Nine of the 22 transfusions were hollow viscus injuries, and 5 lived.

An analysis of the 27 cases that ended fatally shows that 2 died before any operation could be performed, 13 in less than twelve hours, and one in eighteen hours, presumably from the abdominal injury. The remaining 11 all died of some form of chest complication—massive collapse, pneumonia, thoracic sepsis; one died of a subphrenic abscess.

The remarkable statistics of Saint and Jack Anderson are worthy of notice (*vide infra*). Saint's recovery rate in

22 cases is over 80 per cent.; in only two cases, however, of this series was there injury of any hollow viscus, but some of the cases which recovered were complicated by very severe wounds of other parts. Major Jack Anderson, D.S.O., has a remarkable recovery rate of 79.2. Forty-two out of 53 of his cases were evacuated to the base. In his series also the relative number of cases complicated by injury to the hollow viscera was small. None the less, both series of statistics constitute a triumph of surgery.

I have been able to collect 207 cases of abdomino-thoracic injury operated upon during the year 1918 either by myself or by some of my colleagues in the Fourth Army, who have courteously sent me their notes. As is shown in the accompanying table, 138 made a good recovery; the percentage of recoveries amounts to 66.6. When compared with Sir Anthony Bowlby's figures given at the Surgical Congress at Val-de-Grâce in November, 1917, these statistics show a remarkable improvement. Sir Anthony published notes of 151 cases, with 74 recoveries—recovery rate 49 per cent. Sir Cuthbert Wallace, in his *War Surgery of the Abdomen*, published in the summer of 1918, gives 70 cases, with 31 recoveries—percentage recovery 44.3.

Some Abdomino-Thoracic Injuries Operated on in the Fourth Army during 1918.

Surgeon.	Cases.	Recoveries.	Percentage of Recoveries.
Saint	22	18	81.8
Jack Anderson	53	42	79.2
Hancock	12	8	66.6
Gordon Taylor	75	48	64.0
Stanley	24	14	58.3
Walker	21	8	38.1
Total	207	138	66.6
Sir Anthony Bowlby, November, 1917	151	74	49.0
Sir Cuthbert Wallace, 1918 ...	70	31	44.3

Perhaps some allowance may be made for a surgeon's vanity over not only his own but also his colleagues' successful cases, and licence may be granted me to quote several cases of severe abdomino-thoracic injury saved by surgery; the desperate nature of this type of wound may not be fully realized by those who are not personally acquainted with the work in the casualty clearing zone.

Major Lockwood, D.S.O., of No. 36 Casualty Clearing Station, records the following case:

CASE I.

Gunner C., aged 31; penetrating chest wound; haemothorax; laceration of diaphragm, liver, and right kidney, with hernia of colon.

On arrival at the casualty clearing station on September 27th, 1917, he was moribund. Active resuscitation; heated bed, sleep (omnipon), intravenous sodium bicarbonate 2 per cent. 20 oz. Rallied very slowly. Blood transfusion 600 c.cm. with Kimpton-Browne tube.

Operation six hours after admission; prepared and taken to theatre directly after blood transfusion, condition being much improved. Pulse rate 130 to 140; blood pressure 85; respirations rapid. Large entrance wound admitted three fingers (not a sucking wound) just to the right of body of third-lumbar vertebra. Dirty jagged exit wound admitting three fingers over the costal cartilage of the ninth right rib in the anterior axillary line. Hernia of colon through exit wound, gangrenous patch size of one franc piece with half-inch laceration. Anaesthesia, paravertebral and local. Incision from side of third lumbar vertebra to cartilage of ninth rib. Excision *en masse* of entry and exit wounds with deep muscles of back. Gangrenous patch in the bowel excised, and closed with linen thread. Colon replaced in peritoneum. Chest entirely full of clotted blood. A widely open laceration of diaphragm five inches long and a quarter to half an inch from its parietal attachment. Lung almost completely collapsed. Pleura cleansed. Diaphragm sutured with catgut. Laceration of outer and lower border of liver admitting three fingers, but liver not bleeding. Peritoneum swabbed dry and closed. Right kidney split across beyond repair. Nephrectomy. Operation entirely carried out under paravertebral and local anaesthesia; no gas and oxygen used. Recovery uneventful; evacuation November 20th, 1917.

Major Charles, O.B.E., of No. 30 Casualty Clearing Station and of Ipswich, has sent me notes of another case.

CASE II.

Lieut.-Colonel P. of the Third Canadian Division, was admitted under his care for a shell wound of the left arm, and an abdomino-thoracic wound of the left side. The missile had entered over the eighth rib in the left nipple line. The patient was collapsed and pulseless on admission, and exhibited signs of severe internal haemorrhage. Resuscitation for two hours; abdomen explored by transdiaphragmatic route. Resection of 6 inches of rib; haemothorax evacuated; omentum found protruding through diaphragm. Spleen hopelessly shattered; splenectomy; wound of stomach sutured; diaphragm sutured, and thorax closed. Pulse at end of operation 150. Transfusion of blood 2 pints. Twelve hours later the pulse was 100 and of good volume. The officer made thereafter an uneventful recovery, and was discharged fit for duty three months later.

Major Saint's case of an abdomino-thoracic wound with penetration of chest, diaphragm, and liver, and wounds of the duodenum and colon by a large piece of shell, is well worthy of mention, particularly when we reflect upon the high mortality associated with wounds of the first portion of the small bowel.

It would be possible to multiply almost indefinitely the records of desperate abdomino-thoracic cases which have survived by reason of surgery; such cases have, I suppose, been sent down by the surgeons of almost every casualty clearing station on the British front. Some cases of my own have been a source of satisfaction to me.

CASE III.

Pte. S. M., of the A.I.F., was hit about midnight near a ration dump by a large piece of air bomb. He was admitted into the casualty clearing station some hours later in a moribund condition. Active resuscitation was started, but his state remained desperate, and twelve hours later he was taken to the operating theatre in a pulseless condition. Blood transfusion 800 c.cm.; wound of entry in lower part of left chest widely excised, and haemothorax evacuated; several feet of small intestine in pleural cavity, spleen almost completely divided into four pieces; splenectomy; wound of diaphragm enlarged, edges excised; small intestine returned into coelom; diaphragm sutured, chest closed. The patient developed pneumonia in the lower lobe of the right lung, but made a good recovery and returned to Australia.

CASE IV.

Sapper McG. was admitted into a casualty clearing station in a pulseless and apparently moribund condition one evening in July, 1918. So desperate was his condition that the reception room officer informed me that he thought he would be dead before I could reach the hospital from the officers' mess. Active resuscitation was, however, practised, and he was taken to the theatre three-quarters of an hour later; he was found to have an enormous tangential wound of the lower portion of the right chest. Four ribs were badly "stove in," an enormous rent in his liver was bleeding, and there was a hernia of the hepatic flexure of the colon and of the right kidney. Blood transfusion 800 c.cm. Damaged ribs resected; damaged portion of liver excised; kidney and colon washed and replaced; the diaphragm, which had been detached by the missile, was resutured to the upper edge of the opening in the pleura. The following day the left arm was amputated for a severe gunshot wound of the forearm with extensive damage to muscle and gas gangrene, which by this time had established itself. The patient, notwithstanding the severity of the injury, made a good recovery.

CASE V.

Sgt. G., of the A.I.F., was admitted to a casualty clearing station in the middle of July for a severe abdomino-thoracic wound of the left side. The diaphragm had been detached from its costal attachments for about five inches. The lower ribs were badly "stove in"; the left kidney was split irreparably, and covered with dirt and filth. The splenic flexure of the colon was shattered and gangrenous and was resected, an end-to-end junction was performed; the right kidney was hopelessly damaged and impregnated with dirt, and was removed. The diaphragm was reattached to the upper margin of the wound in the pleural cavity, and the abdominal cavity properly resutured and closed by a plastic operation.

The patient was brought to the operating theatre in a pulseless condition in spite of resuscitatory measures which had been practised for six hours since his arrival in the hospital. Blood transfusion was commenced at the same time that the operation started. For four days subsequent to his operation the patient did well; then an anaerobe infection of his chest declared itself. Thoracotomy was performed through a fresh incision, some clot evacuated, and the pleura washed with flavine and closed. In spite of blood transfusion and frequent aspiration the infection gained ground, and cultures of the fluid from the pleura showed the presence of almost every anaerobe prone to attack wounds of the chest. He died on the eighth day after the operation.

These examples are typical of the severe abdomino-thoracic case; the improved figures, then, are not due to the fact that the type of case that has come under the care of the surgeon has been less severe. The cases quoted above show that the benefits of surgery were

extended by the casualty clearing station officers to even the most desperately wounded.

I am convinced that the *immediate mortality* of the most desperate cases has been reduced by blood transfusion, by nerve-blocking, and probably also by the more extensive employment of gas and oxygen. None the less, it is only fair to add that one has seen many desperate cases recover where chloroform and oxygen have been used.

The *late mortality* of the abdomino-thoracic wound has most certainly been reduced by the improved technique of thoracic surgery.

Two cases of a special interest have reached casualty clearing stations as the result of accidents to kite balloons on the British front.

CASE VI.

Two Hun aeroplanes came out from behind a cloud and "strafed" a kite balloon near Sorel. One plane selected as the object of its attack the balloon itself, the other made for the observing officers as they descended to the ground in parachutes. One escaped completely, the other sustained a severe abdomino-thoracic wound of the right side, involving chest, diaphragm, and liver. He made a good recovery.

CASE VII.

Sgt. S., of the Kite Balloon Section, was observing at about 2,000 feet. He was shot by a Hun airman through the right chest and abdomen. He came down in a parachute, and at the operation one-third of the right lobe of the liver was found to be completely detached and lying free in the abdomen. The liver and diaphragm was sutured; shock was very severe. The wound broke down badly on the tenth day; the intestines were in the bed, but were replaced; the wound was resutured, and the patient made a good recovery. I am indebted to Major Jack Anderson, D.S.O., for the notes of this case.

The following case is of interest:

CASE VIII.—*Abdomino-thoracic Injury Produced by a Bayonet.*

Lieut. B. was out on night patrol, and was bayoneted through the right hypochondrium. At operation the liver, diaphragm, and pleura were found to be penetrated. An empyema complicated his convalescence, but he was ultimately discharged fit.

CASE IX.—*A Case for Diagnosis.*

A soldier was standing by his horse in the transport lines near Templeux-Guerard and was suddenly seized with pain in the right side of the abdomen. He was admitted to the main dressing station and sent down by an able officer of a resuscitation team attached to a corps main dressing station as a case of "appendicitis." He was admitted to a casualty clearing station, where, after careful examination, several competent surgeons diagnosed a "perforated duodenal ulcer." To exclude the possibility of any thoracic disease with referred abdominal pain, a physician was invited to examine the chest. Apart from the fact that the breathing was weaker over the right lower lobe, no abnormal physical signs were observed.

The abdomen was opened. A few drachms of blood were found in the right kidney pouch; the duodenum was examined and a perforation was found in the first part. The diagnosis seemed only too truly confirmed. The opening was sutured and the abdomen closed. For some eighteen hours the patient did well, but suddenly failed and died.

I had the opportunity of being present at the autopsy. The sutured perforation was in good repair, but there was more blood in the peritoneal cavity than at the first operation. The duodenal suture was undone and a finger introduced into the lumen of the bowel, passed through another opening posteriorly, and impinged against a machine-gun bullet embedded in the head of the pancreas! Investigation of the source of the bleeding in the coelom revealed the fact that there was a through-and-through wound of the liver. Very careful search of the surface of the body disclosed a minute wound of entry in the supraspinous region of the right scapula. Although the bullet had passed downwards through the lung and diaphragm, only about a couple of ounces of blood were present in the right chest cavity; the diaphragmatic opening was minute.

It is interesting to add that this patient, on admission to the casualty clearing station, when describing the onset of his pain, made the remark that "it felt exactly as if he had been shot." The missile apparently came from an enemy aeroplane; it was an armour-piercing bullet. He was indeed a "battle casualty"!

Traumatic Diaphragmatic Hernia.

Out of 22 personal cases of abdomino-thoracic wounds of the left side, associated with injury of a hollow viscus, there was a hernia of the stomach in 4. In one case small bowel, and in one the colon, was herniated into the pleura, and in nearly every case there was a hernial protrusion of omentum. Increasing experience of hernia in left-sided abdomino-thoracic wounds made me the more inclined to approach the diaphragm from the thoracic side, even when the injury was due to a bullet.

CASE X.—Traumatic Diaphragmatic Hernia of the Diaphragm, Fatal Seven Months after the Wound.

Captain C. P. Symonds⁹ has reported in detail the case of a private, aged 29, who was admitted to the Connaught Hospital, Aldershot, at the end of August, 1916, for severe abdominal pain. He was wounded in the preceding February when fighting against the Senussi.

Six weeks after the original wound he had his first attack of pain, which was, however, very slight. The attacks of pain became more frequent and more severe, but the attack which brought him for relief to the Connaught Hospital was the most severe that he had till then experienced. On radiography, after a bismuth meal, the bismuth was seen to extend in the stomach right up to the second left rib in front, and above it could be seen the dense compressed lung. He was therefore transferred as an urgent surgical case to the Cambridge Hospital, Aldershot, to be under surgical care. Here, however, his condition rapidly improved; the pain disappeared, and in a few days he was able to take food without discomfort. He came under my observation and that of my colleague, Major James Taylor, and considerable doubt was expressed as to the validity of the diagnosis. The x-ray experts at the Cambridge and at the Connaught were not in agreement in their findings nor in the interpretation thereof. The man seemed very well, and surgery did not appear to be urgently called for.

In the beginning of October the patient had another severe attack of pain, and in my absence an operation was performed by Major James Taylor. A hole in the diaphragm was found, but the man's condition was desperate, and he died of shock.

At the autopsy a large circular opening, admitting a medium-sized hand, with quite smooth and rounded edges, was found near the centre of the left dome of the diaphragm. In the thorax were the stomach, great omentum, transverse colon, upper half of small gut, the last kinked in several places, distended, and of a deep plum colour. The stomach reached as high as the second left rib and was partly adherent to the chest wall.

The expanded copper casing of a rifle bullet was discovered in one edge of the diaphragmatic wound, but no trace of the leaden core was found. Presumably the latter had been removed in the earlier operation performed in Africa.

It is remarkable that, considering the number of abdomino-thoracic wounds which must have been unoperated on in the early part of the war, so few cases of diaphragmatic hernia have been recorded. Perhaps Lockwood's contention that very few of these cases survive is true. D'Oily Grange¹⁰ has, however, recorded a case of diaphragmatic hernia which followed a bullet wound of the left chest. It was successfully operated on in Newcastle by the abdominal route.

P. Lecène¹¹ has recorded two cases of traumatic diaphragmatic hernia of the stomach which became strangled, and in one case underwent torsion as well. These cases were operated upon from the abdomen; in one the cartilago-osseous thoracic outlet was temporarily detached; in the other the eighth costal cartilage had been removed at a previous operation, and ready access was thereby afforded to the region of the hernia. I have knowledge of two more cases of diaphragmatic hernia, each consequent upon a bullet wound, which became strangled. One was successfully operated upon; the other proved fatal.

Experience has persuaded me that the thoracic route is the right method of approach for dealing with a diaphragmatic hernia. The Germans have painted too gloomy a picture of the dangers of an artificial pneumothorax, and have made too much of their negative-pressure chambers and positive-pressure anaesthetic arrangements.

In the treatment of abdomino-thoracic injuries, just as in that of wounds of most regions of the body, the successive years of the war have witnessed a steady progress; more and more abundant have become the triumphs that surgery has won. I am proud of the privilege I enjoyed of working for nearly two years in the casualty clearing zone, where these triumphs have been gained, and I am especially grateful to Major-General Sir Anthony Bowlby, K.C.B., through whose kindly offices I was enabled to share the labours of those who gladly and cheerfully toiled at "the back of the front."

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- ⁹ Symonds, *Journal of the R.A.M.C.*, 1917.
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THE Belgian Surgical Society will celebrate the twenty-fifth anniversary of its foundation in September next at Brussels.

ACUTE DIVERTICULITIS OF THE TRANSVERSE COLON: RESECTION OF BOWEL: RECOVERY.

By H. F. VELLACOTT, F.R.C.S.,
PLYMOUTH.

Mrs. W., aged 36, was admitted to the Royal Albert Hospital, Plymouth, on December 28th, 1918.

History.

She had been subject to attacks of pain in the upper abdomen for about eighteen months. This pain was severe at times, but had no relation to food though she had to be careful what she ate. On the day of admission she had "had indigestion all day," which developed into acute pain quite suddenly about 5 p.m. Dr. Pullen, of Stoke, was called at 10 p.m., and immediately sent her to hospital where I saw her at 11 p.m.

Vomiting and the signs of acute appendicitis were all present with the exception that the maximum tenderness and rigidity were situated to the right of and close to the umbilicus. This was noted, but I made the diagnosis of appendicitis without hesitation.

The general condition was excellent, the pulse being 84 and the temperature 99.8° F.

Operation.

A right rectus incision was made. There was considerable excess of free fluid present in the abdomen with a faint smell of *B. coli*. The appendix was easily found, and seen to have been the seat of former disease, but was obviously not the cause of the present attack. It was rapidly removed. By introducing the finger I could now feel a mass higher up in the abdomen, and therefore enlarged the incision. Adherent to the transverse colon lying in relation to the second part of the duodenum was a small amount of "lymph" and a mass the size of a large walnut was felt in its upper and posterior wall. The omentum was wrapped round this. From the mass a thick band passed up in the transverse mesocolon towards the central group of lymph glands. This band and the mass in the bowel were so hard that I diagnosed malignant disease with perforation, and decided to resect. About six inches of the gut were accordingly resected, and an end-to-end union made. Great care was necessary in the resection, as the thickening in the mesentery involved the superior mesenteric vessels. The resected segment of gut was slit down and held out for my examination, and the true diagnosis became apparent. No other diverticula were seen on the exposed part of the bowel. It was noted that the gall bladder lay immediately above the area of resection, but was not involved in adhesions. Gall stones were felt, but it was not the time to remove them, so I closed the abdomen except for a rubber drainage tube.

The progress of the patient was uninterrupted, and I last saw her on June 12th, when she looked very well. She suffers from indigestion, which suggests that an operation may soon be necessary for removal of gall stones.

Description of Specimen.

On examining the part removed I could find no trace of malignant disease in the lumen of the gut, but on the upper posterior wall was a small opening, an eighth of an inch wide, leading to a cavity in the hard mass. This cavity was a little more than a quarter of an inch in diameter, and was neatly filled by a concretion which could be seen from the lumen of the gut. A perforation had taken place from the diverticulum forwards into the general peritoneal cavity in front of the transverse mesocolon. Microscopical sections showed no trace of malignancy. The concretion was composed of inspissated faeces.

The case is of interest as occurring in the transverse colon and at the early age of 36. Apparently it is not the first time that the inflamed and cicatricial mass has been mistaken for a growth in these cases. For the original diagnosis of appendicitis I make no apology.

THE INGUINAL ROUTE FOR RADICAL CURE OF OBTURATOR HERNIA.

BY

TEMP. MAJOR E. T. C. MILLIGAN, R.A.M.C.

ATTENTION has recently again been focussed on the inguinal approach in the operation for radical cure of femoral hernia. Above many other advantages, it ensures the obliteration of the sac. The suitability of the same approach for the radical cure of obturator hernia is worthy of note. The class of case to which it might be applied is represented by a patient who came under my observation recently.

He complained of dull pain over the inner portion of Scarpa's triangle in the right thigh, with indefinite tenderness over the inner and upper portion of the pectineus muscle; the symptoms,

he said, were aggravated many times during the day and once or twice at night while asleep, by any sudden turning of the leg outwards. His troubles were annoying rather than disabling.

He had been examined with great thoroughness and treated at several hospitals in an endeavour to diagnose his condition, which was suspected to be obturator hernia, but clinical methods had failed to bring about an accurate diagnosis, and his symptoms were unrelieved.

I decided that the obturator foramen should be explored, and adopted the following method of approach as causing the least disturbance to tissues and structures.

An oblique incision was made parallel to and just above the inner end of Poupart's ligament, exposing the external abdominal ring and the attachment of the external oblique aponeurosis to Poupart's ligament. The aponeurosis was incised in the line of the skin incision and the upper part retracted. The spermatic cord was also drawn upwards out of the way and the external iliac vein and the femoral ring defined. With deep retractors the peritoneum was pushed upwards from the pubic bone, when, about one inch behind the femoral ring, could be seen and felt the obturator foramen, through which the obturator nerve disappeared into the thigh after running along the wall of the true pelvis in a conspicuous manner.

The sac of the hernia was drawn from the foramen without difficulty and its obliteration was assured by this approach.

The above method is eminently suited for this class of case, but would not be recommended for strangulated obturator hernia, because it could not be diagnosed clinically with certainty as the origin of the mischief. Such an abdominal catastrophe would call for laparotomy in order to elucidate and treat the cause.

PERFORATED DUODENAL ULCER IN A MAN OF 83: OPERATION: RECOVERY.

BY

HERBERT H. BROWN, M.D., F.R.C.S.,

SURGEON TO THE EAST SUFFOLK HOSPITAL.

In each of the two successful cases of operation for perforated gastric ulcer recorded by Captain E. Huntley, R.A.M.C., in the JOURNAL of July 12th, the operation was performed within a few hours of the perforation, and he emphasizes the importance of operation at the earliest possible moment.

The following case was remarkable from the fact that the perforation occurred when the patient was more than 80 years of age, and I attribute the successful result mainly to the fact that I was able to see him soon after the occurrence, and operate within a few hours.

He was a fairly healthy old man and active for his years. On June 30th he was suddenly seized with very severe pain in the upper part of the abdomen, and vomited almost immediately, bringing up nearly two pints of fluid material. When I saw him, about 6 p.m., he was suffering great pain; the abdomen was very rigid but not much distended, and the liver dullness had not disappeared. I gave morphine gr. $\frac{1}{2}$ and arranged for his transfer to a nursing home.

On opening the abdomen at 9 p.m. only a few bubbles of gas escaped; there was a moderate amount of greenish fluid in the upper part of the abdomen, but no peritonitis. There was no fluid in the pouch of Douglas. A perforation was immediately evident on the anterior surface of the duodenum close to the pylorus. The edges were indurated, and apparently the ulcer was of some duration. It was closed with two layers of sutures, and posterior gastro-jejunostomy performed. A pint of food was introduced into the jejunum before the first row of sutures was completed. A drainage tube was left in the wound, extending to the site of the ulcer, but no other drainage seemed necessary. The tube was removed after forty-eight hours, and the patient made an uninterrupted recovery. I started feeding him with peptonized milk within twenty-four hours of the operation.

Captain Huntley mentions that in neither of his cases was irrigation of the abdomen performed, and expresses the opinion that in early cases irrigation may possibly do more harm than good. I would go much further than this. I believe that in no case, early or late, should the abdomen be irrigated, and that this applies to all forms of septic peritonitis.

In the early days of operation for perforations irrigation was the rule, but since it has become the general custom to mop out the superfluous fluid, drain the pouch of Douglas, and sit the patient up in the Fowler position, the prognosis has become far more favourable. This has been attributed to the shock, so called, of flushing the abdomen, to the diffusion of the septic material, etc.; but flushing the abdomen does not in itself cause any perceptible shock.

In cases of ruptured pregnant tubes the abdomen, which is full of blood, may be flushed out with large quantities of normal saline solution with only beneficial results.

I think the explanation is simple. With the onset of peritonitis an inflammatory reaction in the serous membrane is set up, the vessels are engorged, serum is poured out in quantities into the peritoneal cavity highly charged with leucocytes, which attack the deleterious organisms, and the result of the combat is the lymph and purulent fluid which are so evident. The osmotic current is from the circulation to the peritoneal cavity, and only to a moderate extent are toxins absorbed back into the circulation. But when we replace this fluid with normal saline we leave in the abdomen a large quantity of fluid highly charged with toxins which it has dissolved, and this fluid is rapidly absorbed into the circulation, carrying the toxins with it.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ENLARGEMENT OF ADRENAL IN STARVATION.

WHILE working as a prisoner of war behind the German lines in a prisoners' hospital laager it fell to my lot to carry out several autopsies on British and allied soldiers who died in the laager. Many batches of prisoners arrived from neighbouring working parties, where they had been systematically underfed, and had been worked until they were physically prostrated. From each batch some members died a very short time after admission. I was greatly impressed, in carrying out autopsies on these emaciated cases, by the size of the adrenal glands. In a series of eight cases of death from underfeeding the adrenals were definitely enlarged, almost to half as large again as normal, and the enlargement seemed, from naked-eye appearance, to be mostly in the cortex. Unfortunately there were no facilities for microscopy.

It would appear that the adrenals had hypertrophied to counteract the low blood pressure produced through insufficient nourishment. Perhaps this observation may lead others who have occasion to examine *post mortem* cases of extreme emaciation to pay special attention to the adrenal glands.

CHARLES H. C. BYRNE,

Queen Alexandra Military Hospital,
Millbank, London, S.W.1.

Captain R.A.M.C.

IODINE IN VARICELLA.

ONE of the worst effects of chicken-pox is the scarring, particularly on the face. These scars are invariably caused by the pocks becoming secondarily infected; irritation is set up, and the patient cannot refrain from scratching, with the result that a permanent scar is formed, and the course of the disease greatly prolonged.

For some time past I have made it a rule to treat all these cases with iodine. From the first I give instructions that every vesicle shall be painted twice, or at least once, a day with tincture of iodine, applied with a small camel-hair brush. The result fully justifies the slight trouble involved, for not only is secondary infection prevented, but (perhaps in consequence) the itching, which in some cases is so intolerable, is almost entirely prevented; the pocks heal more quickly; the duration of the disease, and so the infectious period, is materially shortened; and scarring is entirely absent if the treatment is conscientiously carried out.

I always advise that not more skin than possible be painted, only the vesicles themselves; I have not seen irritation set up even in cases with a large number of pocks.

Cherem, Surrey.

CHARLES CORBEN, M.D., F.R.C.S.E.

COLLOSOL MANGANESE IN ANAEMIA.

For the last two years I have been using injections of colloidal manganese (1.0 c.cm.) in cases of anaemia in which the patient had a definite intolerance of iron. The results have been exceedingly good and the improvement in the women's general health marked. In several of the cases I commenced the manganese treatment for the relief of boils from which the patient suffered, and found that as

the boils or pustular eruptions disappeared the anaemia rapidly improved. I have tried it also in other cases in which a great tendency to constipation contraindicated the use of iron, and in these instances the results were equally good.

London, W.

E. B. TURNER, F.R.C.S.

RUPTURE OF OVARIAN CYST DURING PREGNANCY: OVARIOTOMY: PREGNANCY NOT INTERFERED WITH.

On March 3rd, 1919, I was called to see, in consultation with Dr. McArthur, of Gardenstown, Mrs. T., aged 39, an 8 para.

She had had amenorrhoea for eight months and considered herself pregnant, but during the whole of the pregnancy she had been much bigger than in her previous pregnancies. About eight weeks before I saw her she had been seized with acute pain in the right side, after which the abdomen had rapidly become more distended. It was now so distended that she could not walk about and had been lying in bed for over a week.

Examination of the abdomen revealed free fluid, but nothing more could be made out. The heart seemed to be quite normal and she was passing a normal quantity of urine which was free from albumin.

I decided to tap the abdomen to relieve the extreme distension, and withdrew 16 gallons of fluid which had all the appearances of ovarian cyst fluid. The uterus could now be felt lying well to the left side of the abdomen and apparently about the size of an eight months' pregnancy. Occupying the whole of the right half of the abdomen was a cystic swelling which could not be displaced.

A week later she was removed to hospital, and I operated on her on March 13th through a right pararectal incision. The tumour was a large multilocular cyst of the left ovary, the pedicle being twisted and lying compressed between the uterus and the promontory of the sacrum; a rent was discovered in its outer wall where it had evidently ruptured. The cyst and contents remaining after removal weighed 17 lb.

The patient made an absolutely uneventful recovery, in spite of the fact that the news of her husband's death had to be broken to her on the sixth day. On April 18th she was delivered naturally of a full-time living child after a short labour of three or four hours. The child weighed 7½ lb.

I have reported this because of the following features: (1) The rapid growth of the cyst during pregnancy; the abdomen had not been noticeably big prior to this pregnancy. (2) The spontaneous rupture, which is comparatively rare; McKerron found it to occur in only 2.3 per cent. of the cases which he collected. (3) The enormous size of the cyst and the huge quantity of free fluid in the abdomen. (4) The very satisfactory result, inasmuch as the pregnancy was unaffected by (a) the torsion and compression of the pedicle, (b) the rupture of the cyst, and (c) the operation.

Banff.

W. MANSON FERGUSON.

PEDICULI OF THE EYELASHES.

The following note may be of some interest to students of parasitic skin diseases.

L. N. T., aged 2 years, was brought to my consulting room with a maternal statement that insects were crawling on her eyelashes. On careful examination with a lens I could see on the upper eyelashes of the left eye a number of "nits" and three or four pediculi in active movement. With some difficulty I removed a couple of small parasites which under the microscope proved to be a male and female specimen of *Pediculus capitis*. The hair was quite free from infection, and all knowledge of disease there was denied, but I strongly suspected that there had been a "spring cleaning," and that one or two ova had fallen on to the lashes, become adherent, and provided the colony I discovered.

A weak nysol solution and ung. hyd. ammon. dil. soon destroyed both parasites and ova.

Hove.

A. A. HILL, M.D.

LIQUID PARAFFIN FOR DISINFECTING NEEDLES AND SYRINGES.

Liquid paraffin (B.P.), which boils at 360°C., is very convenient for disinfecting needles and syringes used for

exploring purposes, for withdrawing blood, and for giving intramuscular injections, etc.

A simple method is to heat the upper part of a test tube three-quarters full of liquid paraffin until currents appear (indicating a temperature of about 150°C.) or rather longer, draw the heated fluid at once into the syringe until it comes into contact with the whole of its interior, and then eject it.

The advantages are the rapidity and simplicity with which complete sterilization can be effected at the bedside and the absence of deleterious effect on the needle, which, if always disinfected and cleaned in this way, never rusts, but remains patent and useful as long as it can be kept sufficiently sharp. The method is particularly useful for needles and syringes for giving intramuscular injections of mercurial cream.

Caution is needed in heating the paraffin, or it may spurt; but this is easily avoided if care be taken to move the test tube up and down in the flame whilst heating. An experience of this means of disinfection extending over six years has convinced me of its utility.

Bath.

RUPERT WATERHOUSE, M.D., M.R.C.P.

Reports of Societies.

THE OXFORD OPHTHALMOLOGICAL CONGRESS.

THE annual meeting of the Oxford Ophthalmological Congress was held on July 10th and 11th. Members were lodged in Keble College; the scientific proceedings took place in the Department of Human Anatomy of the University (kindly lent for the purpose by Professor Arthur Thomson), where technical and commercial museums were also arranged. The programme opened on July 10th with an address of welcome by the Master, Mr. SYDNEY STEPHENSON. Major WALTER H. KIEP, R.A.M.C., read a paper on the ocular complications of dysentery, and Major EDGAR H. SMITH, R.A.M.C., a paper on quinine amaurosis, which were both well discussed by the members present. Dr. WILLIAM McLEAN of New York described his further experimental studies in intraocular pressure and tonometry, and exhibited his latest model tonometer. A discussion on preventive ophthalmology was introduced by Colonel J. HERBERT PARSONS, C.B.E., consulting ophthalmic surgeon to the forces. Colonel Parsons pointed out that the scope of his subject dealt with the prevention of damage (a) to the individual and (b) to others: (a) included many subjects, such as prevention of damage to the eyes from accidents, defective illumination, deleterious rays and organisms, and the prevention of damage to health from headache, accident, fatigue, etc.; (b) included regulations for the prevention of the transference of contagious disease and rules for navy, army, air force, mercantile marine, railways, motor industry, cinemas, and so forth. The problems of preventive ophthalmology constituted a question of collective action, and were of particular value at the moment, when projects of reconstruction were to the fore. In connexion with the prevention of accidents to the eyes in factories, there was urgent need of a scale of awards for compensation founded upon scientific principles. The formulation of regulations for the public services demanded (1) a widening of the basis of education of ophthalmologists, (2) co-operation between ophthalmologists and other experts, and (3) improvement in the methods of examination of candidates and the selection of examiners. A good discussion followed the address, after which the Doyné Memorial Medal was presented to Colonel Parsons by the Deputy Master, Mr. Philip H. Adams. In the afternoon members and their friends were entertained to tea in the gardens of Trinity College by Mr. D. N. Nagel, M.A., and Miss Nagel. In the evening, after the annual dinner of the Congress in the hall of Keble College, when some seventy members and visitors were present, the annual general meeting of the Congress was held. It was determined, on the motion of Mr. J. B. STORY, to make representations to the General Medical Council in support of those recently preferred to that body by the Council of British Ophthalmologists concerning the instruction and examination of medical students

in eye work. Readers of the BRITISH MEDICAL JOURNAL are aware that the recommendations in question have been rejected by the General Medical Council.

On July 11th the proceedings began with a paper by Dr. S. LEWIS ZIEGLER, of Philadelphia, on the problem of the artificial pupil: knife-needle *versus* scissors. Dr. P. BAILLART, of Paris, followed with a communication dealing with his dynamometer for determining the blood pressure in the branches of the central retinal artery. Mr. A. F. MACCALLAN, O.B.E. (Cairo), read a paper on the seasonal variations of acute conjunctivitis in Egypt. Colonel A. H. TUBBY, C.B., C.M.G., entered a suggestive plea for investigation as to any possible connexion between skeletal asymmetry, on the one hand, and defects of the eye, on the other. A pathetic feature followed when a discussion upon employment for the blind was introduced by three blind speakers—namely, Mrs. ADOLPHUS DUNCOMBE, Captain PERSON WEBBER, and Captain TOWSE, V.C. The subject was discussed most sympathetically by the meeting, and it is hoped that some useful action will be undertaken by the Congress in connexion therewith. In the afternoon the Ashurst War Hospital at Littlemore, near Oxford, was thrown open to members by Lieut.-Colonel T. S. Good, R.A.M.C.

The technical museum contained interesting exhibits by Dr. Thomson Henderson, Dr. Harvey Goldsmith, Dr. S. E. Whitnall, Dr. Harrison Butler, Dr. E. H. Edwards Stack, and others.

A pleasant feature of the Congress was the presence of representatives from Canada, Australia, Egypt, the United States, France, and Norway.

Reviews.

WAR NEUROSES.

SIR FREDERICK MOTT's book, *War Neuroses and Shell Shock*,¹ is to a great extent an embodiment of the course of instruction given at the Maudsley Hospital to successive groups of officers sent by the medical service of the U.S. Army. There is a striking contrast between the readiness with which the U.S.A. authorities appreciated and took advantage of the admirable opportunities for instruction provided by this hospital and the lack of any adequate attempt at systematic instruction in our own service. Throughout this book the author is at great pains to insist on the bodily changes that underlie the so-called functional disorders. He recognizes that in such disorders we can always trace a disturbance of the mechanism of emotion: that is, a physiological disturbance. One result of the war was the study of neurological medicine by practitioners who were slow to recognize the fundamental importance of the study of nervous physiology.

The attractiveness of the school that deals exclusively with psychical manifestations and ignores the physical changes that underlie neuropathic disorders may to a great extent be accounted for by the perfectly legitimate repulsion that exists at the present day toward the crude materialism or its thinly disguised presentation in the form of the scientific agnosticism of the last century. This is, however, bad psychology and bad metaphysics. The study of mental disorder is really that of the disorders of conduct and of the mechanism by which conduct is expressed. It is open to us to have any metaphysical theory of mind that may please us. It would not, indeed, be difficult to show that the system of psycho-analysis implies, above all else, a mechanical conception of mind, but as physicians it is with the physiological mechanism of conduct that we are concerned. It is unfortunately true that at present only the grossest disturbances of the emotive mechanism can be detected.

Sir Frederick Mott lays stress upon the analogy between the nervous symptoms accompanying such obvious disorders of the endocrine glands as exophthalmic goitre and those occurring in the functional neuroses. He gives an account of the work of Crile and Cannon as to the part adrenalin may play in emotive discharges. It is to be regretted that he did not also include his own observations on the morbid

anatomy of the sexual glands in dementia praecox, an omission which we hope may shortly be repaired.

After all is said, however, the paucity of our knowledge allows as yet only the enumeration of a very few objective signs of the underlying bodily disturbance. The measurements showing qualitative and quantitative differences from the normal in the psycho-galvanic response, undertaken in the author's laboratory, may be the first stage in the elaboration of physiological methods for recording the bodily changes accompanying functional nervous disorders. That a bodily emotional state may precede and determine the nature of a psychosis would be a platitude hardly worth stating were it not so constantly forgotten by the newer school of psycho-therapy. And yet most of us are only too familiar with the man who searches for some domestic misdemeanour on which to pour the swelling tide of irritation arising from an ill-conditioned stomach. Meredith has recorded for all time the change to a more rosy view induced in a justly incensed solicitor by the afterglow of a glass of old port.

As Matthew Arnold once said, the man who cannot understand the fifth proposition always has a taste for the infinite, and equally a doctor who is doubtful of the meaning of the plantar response is very often attracted by psychotherapy. To all such this book should prove a healthy tonic.

Most neurologists will share Sir James Purves Stewart's regret that the silly term shell shock was ever introduced. This book was written to help medical officers engaged in army and pensions work, and since shell shock bulks so largely as an official diagnosis, it would have been difficult to adopt a more scientific nomenclature without greatly impairing the utility of the book. The author has done the best he can by differentiating between commotional and emotional shock, but he is clearly not contented with the terminology. One result of the use of the term shell shock has been to create difficulty when we come to discuss it in relation to the condition known as surgical shock. It is by no means clear that the condition of commotional shock due to exposure to the effects of high explosives without gross injury bears any relation to that following extensive surgical or accidental injury. We infer that Sir Frederick Mott would much prefer to use the term concussion for the former condition; and though he discusses at some length the various theories of shock, he clearly finds little evidence in his own researches of lesions other than those referable to physical disturbance of the central nervous system, and the principal subject for discussion resolves itself into one concerning the mechanism by which such a disturbance is effected. The section on the pathological anatomy of concussion is well illustrated, and the evidence pointing to the occurrence of carbon monoxide poisoning in some cases is of great interest, though in the absence of a blood examination it cannot be conclusive.

Very important are the deductions from an inquiry into the previous history of cases of war neurosis. The author concludes that the majority of patients studied were soldiers who had a neuropathic or psychopathic taint. In 74 per cent. a family history of neurotic or psychotic stigmata was obtained, whilst a previous neuropathic constitution was present in 72 per cent. These figures may well alarm the most hardened optimist of the Pensions Ministry. Through the war the country has become responsible for the future of many thousands of constitutionally neuropathic men. Many will no doubt be restored to a precarious level of social utility, but many will continue as long as they live to be, with occasional remissions and relapses, a charge on the neurological hospitals of the State.

It is of some topical interest to note that the author found that 60 per cent. of the cases of war neurosis were total abstainers, which was a percentage double that of the cases admitted to a general hospital suffering from wounds or diseases other than nervous functional conditions. He appears to hold the view that fear of the consequences of taking alcohol is in itself an indication of a nervous diathesis, and that this, rather than the absence of the beneficial results of the rum ration, may to some extent account for the high percentage of neuropathic abstainers. Apart from this, however, the author has found the majority of officers strongly convinced of the value of the rum ration, and this opinion will be endorsed by most medical men who have seen the war from the

¹ *War Neuroses and Shell Shock*. By Sir Frederick W. Mott, M.D., LL.D., F.R.S., F.R.C.P. With Preface by the Right Hon. Christopher Addison, M.P. London: H. Frowde, and Hodder and Stoughton. 1919. (Demy 8vo, pp. xx + 348; illustrated. 16s. net.)

front line and not from the comparative comfort of the base and clearing hospitals.

The author deals fully with functional contracture, but is unable to put forward any evidence in favour of Babinski's theory of reflex contracture, a theory which, despite the great authority of its propounder, finds now very few advocates.

The subject of psycho-analysis is treated very fairly. It is recognized that the method may furnish valuable indications of the genesis of various obsessions, whilst war experience has amply refuted the sexual theories of Freud.

Treatment is discussed with the sanity and balance that we expect from Sir Frederick Mott. He has a very poor opinion of hypnotism as a curative agent. Like all experienced neurologists, he is well aware that rapid removal of symptoms in cases of hysteria can be effected by practically any method of common-sense suggestion. The much-advertised ten minutes cures have always been commonplaces of neurological hospitals, and indeed have often been effectively rivalled by quacks on the music-hall stage. We hope that the sane utterances of the author on this subject may be brought home to the ardent young psychologists and physicians who have of late made British medicine slightly ridiculous by their insistence on miraculous cures, both in the medical and the lay press. It is easy, of course, to understand how dramatic such cases may appear to those whose neurological experience dates with the war, and it is to be hoped that self-restraint will come with increasing knowledge. Sir Frederick Mott is very emphatic on the necessity for the establishment of an atmosphere of cure, and nothing, he finds, excites faith so much as seeing the benefit of treatment. The methods of re-education advocated are all simple, but he is no believer in leaving their application to the masseuse—a practice which, more than anything else, has been responsible for lack of success in treatment.

An excellent preface written by Dr. Addison augurs well for the future of neurology under the Ministry of Health. Attempts to exploit the new ministry will no doubt be made by numberless cranks, medical and lay, in favour of schemes of psychotherapy based on unscientific psychology and a more or less complete ignorance of the physiology of the nervous system; and it is some comfort to reflect that so long as such sane and scholarly work as this of Sir Frederick Mott's is recognized by those in power there will be little likelihood of their succeeding.

BRITISH HEALTH RESORTS.

TEMPORARY residence in the occupied territories in the Rhineland has served to prove to many of our military and civilian workers that in some respects they have a good deal to learn from their late enemies, but the thoroughness of the organization of foreign health resorts has always been appreciated by English visitors, whether in search of health or amusement.

The prolonged closure of all the German and Austrian "cure-places" has reacted upon the various health resorts of the British Isles, and hence the appearance of a new edition of Dr. NEVILLE WOOD's book² on the subject should be welcome, as supplying an account of all the changes, additions, and improvements that the last few years have brought about.

Much has been done, both from the scientific and the practical standpoints, to bring British hydrotherapy into the prominence that it deserves, but it is still very far from the goal of universal recognition. Medical hydrology and climatology require constant and careful study by skilled observers working together, and this can only be done in properly equipped institutions, which must, at the same time, be rendered attractive to patients. This latter consideration has never been neglected by the managers of the spas of Central Europe, but only in a few of our own are sufficient pains taken to render treatment agreeable and at the same time effective.

Dr. Wood's book supplies a great deal of useful information as to ways and means, and is well illustrated by photographs showing the general features of most of the places mentioned, with detailed views of some of them. It would be rendered still more useful as a work of reference if

supplied with a more comprehensive index and classification of diseases, with cross references.

Considerations of space have, no doubt, led to the compression of details with regard to many of the less popular places, but it is obvious that very many coastal and inland resorts are deserving of far more recognition than they have yet received. There is abundant scope for scientific study and for commercial development, in order that these properties may be fully investigated and adequately utilized. Dr. Wood's book points the way to such recognition, and it is to be hoped that future editions may be able to record the results of vastly increased effort.

DISEASES OF THE SKIN.

As Dr. SEQUEIRA's *Diseases of the Skin*,³ first published in 1911, has already reached a third edition, it is clear that he appeals successfully to a large number of readers. For a textbook on a special subject this comparatively rapid series of editions is no mean achievement, and it is indeed not too much to say that his book is a standard work in British dermatology. Compared with many of the Continental treatises it is relatively small, but this feature in no way detracts from its excellence; the reader will find in it a clear exposition of the more commonly seen skin complaints, besides many references to and short accounts of the rarer affections. Illustrations are of peculiar importance in a book of this nature, and they have been generously supplied in this volume. Whether representation of skin disease by means of colour photography, although at the moment fashionable, is always an unqualified success, may be a matter of opinion, but even here no ground for serious criticism exists.

In the text ample notice has been taken of recent contributions to dermatology. Good accounts are given of the skin affections of soldiers, such as trench feet and eruptions due to high explosives. As would be expected from Dr. Sequeira, the section on tuberculosis of the skin is especially full, and contains a mass of important and useful information.

At the present moment dermatology has assumed a position of special importance because of its close relation to syphilis. As a large increase in the incidence of this disorder is expected from the modifications of social conditions during the war, the views set forth should be critically examined. Most authorities will agree with the author that in the treatment of syphilis it is essential to combine mercury with the form of arsenical medication selected. The course recommended by Dr. Sequeira consists of four injections of arsenobillon, kharsivan, or galy, followed by eight injections of mercury. Treatment is then suspended for a period of two months, when a "Wassermann" test is made; subsequent action depends on the result. Further, it is stated that every case should be under observation for at least two years, and that during this period occasional courses of mercury should be given, even if the "Wassermann" reaction be negative. This is sound advice, and will be endorsed by every worker with experience in venereal diseases. It would possibly have been a better guide had Dr. Sequeira given a more particular account of the form these subsequent mercurial courses should take, but perhaps he deems it wisest to leave these details to the worker, contenting himself with an expression of the principle to be followed.

The book is completed by several useful appendices, in which the various forms of treatment employed in dermatology are arranged under general headings. Here will be found much useful knowledge in a readily accessible form. The book repeats the attractive features of the previous editions, besides containing much additional information.

NOTES ON BOOKS.

DR. GABRIEL BIDOU has written a small book on instrumental orthopaedics,⁴ in which he advocates certain principles which he appears to consider new, in the treatment of paraplegia especially. These are the active control of the thigh and leg by means of shoulder move-

² *Diseases of the Skin*. By James H. Sequeira, M.D. Lond., F.R.C.P. Lond., F.R.C.S. Eng. Third edition. London: J. and A. Churchill. 1919. (Med. 8vo, pp. xiv + 644; 257 figs., 52 coloured plates, 36s. net.)

⁴ *De l'Orthopédie instrumentale*. By Docteur Gabriel Bidou. Paris: Published by the Author, the Orphan Apprentice School. 1919. (Cr. 8vo, pp. 132; 20 figures.)

³ *Health Resorts of the British Islands*. Edited by Neville Wood, M.D. Second edition. London: University of London Press, Ltd. 1919. (Demy 8vo, pp. xvi + 253; illustrated. 6s. net.)

ments, the use of elastic springs in a special manner, and the multiplication of range of movement by the use of leverage and of pulleys. Of these, the first has been used for years in artificial legs, chiefly in America. Dr. Bidon employs celluloid in place of leather. His methods are well illustrated by numerous plates.

Professor ALLEN's large textbook of *Local and Regional Anaesthesia*⁵ gives a full account of the theory and practice of this important subject, and has in addition chapters on spinal, epidural, and other special varieties of local anaesthesia. The book, which has reached a second edition, is copiously illustrated, and is full of minute and practical directions as to the best methods of obtaining local anaesthesia in the various parts of the body. We recommend the work to the attention of all anaesthetists.

We have received from Professor J. B. MORELLI, of Montevideo, a large work, running to 1250 pages, on *Artificial Pneumothorax*⁶ and other methods of surgical intervention in pulmonary tuberculosis. Written in Spanish, these two volumes contain a great deal of information gathered from the extensive literature on the subject, most of it published in the last twelve or fifteen years, together with the author's comments and a full account of his own endeavours in this direction. Everything of importance connected with the surgical treatment of pulmonary tuberculosis seems to have been brought together in this lengthy compilation, which is well illustrated and reads like the composition of a fluent pen. Many references to the literature are given, and a number of illustrative skiagrams have been included at the end of the book.

The fifth edition of Colonel BLACKHAM's concise and well written *Primer of Tropical Hygiene*⁷ should be in the hands of all intelligent residents in tropical countries. It is full of practical directions, and may be strongly recommended.

The fourth edition of the treatise on *Practical Butter-making*,⁸ by WALKER-TISDALE and ROBINSON, is a short and well illustrated account of a subject that has become one of surpassing interest in these margarine-ridden days, particularly to dwellers in towns where butter-making almost appears to rank among the arts lost during the war. In the hope of increasing the production of this indispensable article of diet we recommend the book to all readers, but especially to those who dwell in rural places.

HOPE MALLESON, in the short biography she has called *A Woman Doctor*,⁹ gives a striking account of the life of Mary Murdoch of Hull. Dr. Murdoch was one of those charming personalities framed in a small and delicate body, but endowed with a large heart and a great capacity for work of a high standard, together with the power to attract others to help her in the various public activities in which she took a part. Dr. Murdoch was an excellent surgeon and physician, greatly beloved by the people of Hull, by whom she was affectionately known as "Our Lady Murdoch." Dr. Murdoch's early death came as a great blow, not only to her colleagues and personal friends, but to a very large circle of patients, rich and poor. The biography is well worth reading, if only to learn how much can be done and done well by an earnest lover of her fellow creatures.

⁵ *Local and Regional Anaesthesia*. By Carroll W. Allen, M.D., Assistant Professor of Clinical Surgery at the Tulane University of Louisiana, New Orleans, etc. Second edition, reset. Philadelphia and London: W. B. Saunders Co. 1918. (Roy. 8vo, pp. 574; 260 figures, 28s. net.)

⁶ *Pneumothorax Artificial y Otras Intervenciones en la Tuberculosis Pulmonar*. Estudio Critico y Clinico. By Dr. Juan B. Morelli, Professor de Clinica Terapeutica de la Facultad de Medicina. Vols. I and II. Montevideo: Imprenta Nacional. 1918 and 1919. (Roy. 8vo, vol. I, pp. 664; vol. II, pp. 665-1246; 61 figures; 8 plates.)

⁷ *A Primer of Tropical Hygiene*. By Colonel R. J. Blackham, O.M.G., C.I.E., D.S.O., M.R.C.P.E., D.P.H.Lond., A.M.S. Fifth edition, revised and enlarged. Bombay: G. Claridge and Co. 1918. (34 by 43; pp. 154. 1 rupee.)

⁸ *Practical Butter-making: A Treatise for Butter-makers and Students*. By C. W. Walker-Tisdale, F.C.S., and Theodore R. Robinson, F.S.I. Fourth edition. London: Headley Brothers, Ltd. 1919. (Cr. 8vo, pp. 143; 32 figures. 5s. 6d. net.)

⁹ *A Woman Doctor: Mary Murdoch of Hull*. By Hope Malleison, B.A. London: Sidgwick and Jackson, Ltd. 1919. (Cr. 8vo, pp. xiii + 231; 4 portrait illustrations. 7s. 6d. net.)

THE Paris Students' Association and its sports section ("Paris Universit  Club") are taking the initiative in providing a park for games of all kinds. The committee includes the President of the French Republic, the Prime Minister, the Minister of Public Instruction, the deans of all the faculties, and a large number of prominent personalities.

MEDICAL AND SURGICAL APPLIANCES.

A Pneumatic Injector for Local Anaesthesia.

MR. E. G. SLESINGER, M.B., F.R.C.S.Eng., sends the following account of an apparatus designed to overcome some of the difficulties and objections to the usual syringe method of injecting local anaesthetics, particularly in the case of extensive operations or when local anaesthesia is desired as an adjunct to gas and oxygen in abdominal work:

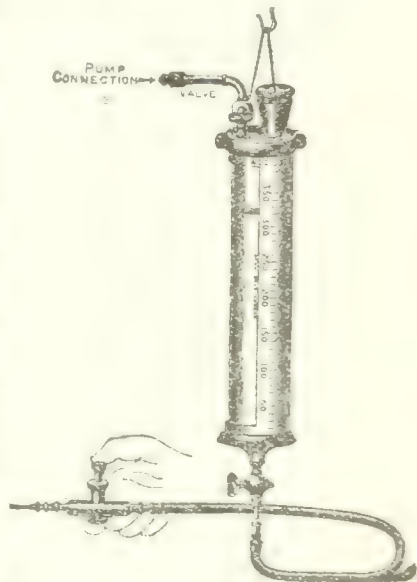
It consists essentially of a container composed of a glass cylinder in a metal frame with a graduated scale. This frame has a top and a bottom cap, each of which screws into position, and, being lined with a pad of composition material, forms with the glass cylinder an airtight chamber. In the top cap of the container are, first, a tube fitted with a tap, in the end of which is an ordinary Dunlop bicycle valve, and secondly, a funnel opening with a screw plug for filling. The bottom cap has an exit tube with a tap. From the exit tube, by means of a connexion with a bayonet catch, runs a flexible metal tube to the other end of which the injection valve is attached by another bayonet catch. The injection valve is so constructed that when at rest no fluid can flow through it, but on light pressure on the button with which it is provided a free flow is established. To the distal end of the injection valve any desired type of needle can be fixed by a bayonet catch connexion. The whole apparatus can be readily boiled before use.

When using the apparatus the fluid for injection is poured in through the filling funnel and the plug screwed home. Approximately about 100 c.cm. or more, as shown on the scale on the frame, should be left for compression. An ordinary bicycle pump is now screwed on to the valve in the top cap, the tap at its base is opened, and the apparatus is pumped up until further pumping is impossible. The tap on the valve is then closed, the pump is removed, and the apparatus is ready for use. The tap in the bottom cap is opened and a needle attached. When the needle is inserted into the tissues and the button on the injection valve lightly pressed, fluid will flow in under sufficient pressure to produce even pressure skin anaesthesia if desired. The apparatus has been made for me by Messrs. Down Bros., St. Thomas's Street.

The advantages which it is claimed this apparatus affords over the usual syringe method are: (1) It saves a great deal of time; (2) when once prepared it will serve for several cases; (3) it obviates the tremor of the operator's hand which results from the pressure used in syringe injections; (4) it permits more accurate control of the injection; (5) it enables the amount of local anaesthetic used to be seen at a glance; (6) unlike the syringe, it does not break or get out of order easily. A further use for this apparatus is in giving a large number of of serum injections rapidly—for example, antitetanus injections—where flaming the needle between cases is all that is needed. The rubber on the bicycle valve should be inspected from time to time and replaced when necessary, and a little vaseline occasionally put into the injection valve from below.

The Congress of Uruguay has voted \$4,000 for the enforcement of the recently enacted law providing for the compulsory testing of all milch cows with tuberculin.

Two bursaries subscribed for by the colleagues and pupils of Senator Camillo Golgi have been founded in the University of Pavia on the occasion of his retirement under the age rule. They are to be awarded by preference to the sons of doctors fallen in the war. The freedom of the city of Pavia was at the same time conferred on the distinguished pathologist, and the municipality presented him with a gold medal and an artistically designed album containing the signatures of a large number of citizens.



GAS WARFARE.

THE HARRISON MEMORIAL LECTURE.

THE first Harrison Memorial Lecture was delivered before the British Pharmaceutical Conference on July 22nd by Mr. Francis H. Carr, who gave a sketch of Lieut.-Colonel E. F. Harrison's early life, a time of hardship and austerity out of which he won his way to independence solely by his own exertions. It was not by chance that Harrison undertook to do for this JOURNAL the work which resulted in the two trenchant volumes *Secret Remedies* and *More Secret Remedies*, published by the British Medical Association. Even as a youth he had a great dislike of untruthful advertisements, and as he grew older found an intense interest in unmasking fraudulent advertised remedies which in his opinion dishonoured the profession of pharmacy. Mr. Carr truly said that in Harrison there was a remarkable combination of extraordinary celerity in uptake, untiring assiduity in work, accuracy of observation, transparent honesty, and ability to give quick and sound judgement in every emergency. Added to this there was what must have struck every one associated with him—a certain humility and willingness to give his time to a small task with the same whole-hearted devotion as to the biggest. When the war began Harrison was 45 years of age, and had worked himself to a shadow, but he determined to enter the army, which he did by enlisting as a private in the Sportsmen's Battalion in May, 1915. It was, we think, not the sinking of the *Lusitania*, as Mr. Carr suggests, but the first German gas attack, that impelled Harrison to enlist, with the hope that somehow his chemical knowledge and skill could be used; as Mr. Carr said, it reflects great credit on those responsible that he was soon picked out for work he proved himself so extraordinarily competent to discharge. Of what Harrison accomplished in the protection of the allied troops and the discomfiture of the enemy Mr. Carr gave a fuller account than we think has hitherto been made public. He said:

In the course of the struggle gas warfare underwent immense change. Beginning with the use of relatively simple bodies, in the choice of which obviously only a small amount of chemical intelligence had been brought to bear, it ended with the use of complex organic substances, the result of intensive study and research which had proceeded in every allied country from the time that a definite decision was made seriously to adopt them; and when we consider the progress made in this short space of time, we cannot but conclude that if warfare is to continue among civilized nations, there lies in this field a capacity of destruction compared to which the use of explosives is likely to become insignificant. Commencing on April 22nd, 1915, with the use of chlorine in clouds of gas emitted from cylinders, by the autumn of the same year a large variety of obnoxious gases was being used with greater or less effect. Gases employed in warfare may be divided into those actually lethal in their effects and those employed chiefly to clear the enemy from a position, or to inflict such temporary damage as will put the individual out of action for a period. To this second class belong the lachrymators, which make the eyes and nose run; the sternutators, which cause sneezing, coughing, and vomiting; and the vesicants, that blister the skin and produce lesions which—especially in the case of mustard gas—take a very long time to heal.

Among the lethal gases employed were chlorine, hydrocyanic acid, cyanogen bromide, phosgene, ethyl dichlorarsine, and other arsines. Among the irritants were benzyl and xylol bromides, bromacetone, bromethyl methyl ketone, chlorpiorin, ethyl iodacetate, dichloroethyl ether, dibromomethyl ether, arsenic trichloride, diphenyl chlorarsine, phenyl carbonylamine chloride, and the famous *BS* dichloroethyl sulphide, known as "mustard gas," but not to be confused with "mustard oil," to which it has no relation. Little or nothing was known at the outset of the chemical and physical properties of most of these substances; it will therefore be realized that in order to establish an effective defence against such a wide variety of compounds, it was necessary to submit them to the most searching examination, both chemical and physical, and by pharmacological methods to gain an insight into their lethal, lachrymatory, or sternutatory properties. Means had to be devised for identifying the gases, detecting their effects, and so forth. Thus was opened an unlimited field of research to which chemists or physiologists had previously directed little attention.

It was with sickened feelings of revolt against such debasement of science that British investigators first

undertook this work, and many loyal English men of science hesitated to do so. Nevertheless, when the imperative need was clearly recognized, the task was undertaken with a thoroughness characteristic of British scientific effort. It is a great triumph for such efforts that through them the British gas defence excelled that of all other belligerents, and was ultimately adopted by most of the Allies. By a mistake in organization the offensive and defensive gas warfare sections were at first independent of each other; but the knowledge required overlapped at many points, and after a while the gap was bridged by the development of liaison, and, finally, the Anti-gas Department became a section of the Chemical Warfare Department, with Harrison at its head; points of contact were also established between the Anti-gas Department and the Royal Society's committee which dealt with physiological problems arising out of the war. All the anti-gas appliances designed in England were submitted to our forces in France before manufacture was undertaken, and Harrison himself made frequent visits to the other side in this connexion. Liaison was developed not only with the British Expeditionary Forces in the various theatres of war, but also with other allied armies, to which Harrison's department rendered extremely valuable services at most critical junctures. To the American army in particular great help was given by putting at their disposal the whole of our information, and the services of some of our best officers.

The problem of devising suitable protection was in the beginning relatively simple, for sodium hyposulphite and an alkali readily absorbed the offensive agents then employed, but the tremendous possibilities of gas warfare and the uncertainty as to what form it might assume were already keenly realized. Disaster threatened if no effective counter measures were devised to prevent a repetition of the shock produced by the first onslaught. As was suspected, fresh gases were soon employed, introducing a number of variable and uncertain factors. At first attacks were confined to gas emitted from cylinders in the form of a cloud which ran like a fluid over the ground and poured into the trenches at comparatively attenuated concentrations, but with the adoption of other methods of projecting the gases, much higher concentrations had later to be dealt with. In addition to the use of gases, atomized liquids and solids, spread by means of detonators from bombs, shells, and other projectiles, came into vogue. Indeed, the greater number of so-called "poison gases" are liquids at the ordinary temperature and pressure. There were later fine sprays consisting of suspended particles. These constituted quite a separate problem and one of the most difficult, for such spray or mist can only be removed by filtration through a fine medium, which, as will be readily understood, implies a resistance to breathing. A respirator had to be devised which could be used under conditions of severe physical exertion; eyes, as well as throat and lungs, had to be protected; all shapes and sizes of heads had to be fitted, and the equipment had to be able to endure the rough usage entailed in warfare in trenches deep in mud and water. Besides the protection of men, there were horses, mules, dogs, and pigeons for consideration.

Prior to the introduction of the box respirator various types of masks were evolved which gave satisfactory protection against the gas attacks of the time. Sodium thio-sulphate, sodium phenate, hexamine, and an alkali were the principal absorbents employed. A helmet, with goggles inset, rapidly replaced earlier models, and Mr. E. W. Lucas, C.B.E., the well known pharmacist, rendered valuable service in producing at lightning speed large numbers of these helmets. Harrison's outstanding services commenced during the autumn of 1915, when, in conjunction with Captain (then Lieutenant) Sadd and other workers, he applied himself to the development of a form of respirator which would give very many hours of protection in such concentrations of gas as were then being encountered. The earliest appliances of this character, since known as the large box respirator, were manufactured at Christmas of that year. This was the first serviceable British respirator which contained as the protecting medium chemical granules and animal charcoal in a metal box. It had a rubber tube connected to a snout with a mouthpiece and nose-clip, the snout being worn over the mouth and nose. It was fitted with inspiratory and expiratory valves, and the snout was made of many layers of cheese cloth impregnated with zinc hexamine solution. Rubber sponge goggles were added for the protection of the eyes. The production of this apparatus in the early months of gas warfare, when the principles of respirator construction were almost unknown, coupled with the fact that it gave very efficient all round protection, make it one of Harrison's greatest achievements. The next form of protective apparatus which was

worked out in the Anti-gas Department was the small box respirator—a replica of the large one with certain improvements. It was composed of some thirty-five component parts, requiring for their assembly a multitude of operations and for their production an immense number of different trades; and when one considers the absolute necessity of a high uniform standard of perfection for the finished respirator—for even a pin-hole leak might mean the death of the wearer—it is seen what a gigantic task the organization of production became. Colonel Harrison was greatly helped by Sir Howard Spicer and many others, and by the introduction of a system of supervising by military inspection officers in each factory, and with technical assistance of the most expert kind, he was able to secure from the moment of its first issue the very high standard of perfection which won for the box respirator that faith and reliance on the part of our armies which is a true measure of its wonderful success.

It is difficult to realize the large amount of work involved. There was the cutting out and sewing of the mask, the making of the eye-pieces and nose-clip, the doping of the mask, the making of the tins, of valves, and the flexible rubber tubes, known as "Gorman" tubes, the expanded metal divisions, filter pads, and so on. Under the general direction of Colonel Horrocks, during less than a year from the autumn of 1915, the box respirator had been conceived, designed, submitted to field tests, accepted, and its manufacture established on the very large scale of an output of some 20,000 to 30,000 a day. Harrison may be said to have been the leading spirit of the small box respirator rather than its inventor; an opportunity which gave him the scope he needed was presented, and he made the fullest use of it. His success lay not merely in his personal achievement, but in inspiring and co-ordinating the powerful efforts of many others with his own. The work had grown immensely when Colonel Starling, who had been for a large part of the time in charge of this department, left it, and Harrison succeeded him. In the period which followed the chemical, physical, and mechanical tests which each box respirator had to meet were elaborated and improved. Every part was tested and inspected for weaknesses and leaks. Means were devised for proving their effectiveness in meeting every one of the gases employed by the enemy. The output was brought up finally to a daily supply of 50,000 respirators, and in all some twenty millions were supplied.

A great feature of the respirator was the large capacity of the box containing the absorbents which could be varied at will. Assisted by the Intelligence Services and by a large scientific staff carrying out chemical, physical, and physiological research, Harrison and his colleagues were able so to modify the contents of this box that the complete success at first attained was continued until the end of the war. Indeed, after the first few months of gas warfare the enemy never used a gas against which our troops were not amply protected. Among the absorbents employed the principal was a chemical granule composed of an alkaline mixture consisting of lime, caustic soda, and permanganate, which had been invented and worked out by Bertram Lambert at Oxford. Harrison with great enthusiasm worked on this conception and produced a convenient formula for such a mixture. It was necessary that the granule should be porous, yet quite free from dust, and free also from any tendency to disintegrate into dust when submitted to vibration. Harrison produced such a granule in the laboratory, and the formula was transmitted to Messrs. Boots at Nottingham, who, in co-operation with Harrison, modified it to make it suitable for large scale manufacture. Great difficulties had to be overcome owing to the exothermic nature of the reaction and to the instability of permanganate under the conditions involved.

Another important constituent of the respirator was charcoal. Animal charcoal was at first employed, but later wood charcoal, prepared under certain special conditions, was found to be more suitable. The method of manufacture of a hard and efficient wood charcoal worked out in the Anti-gas Department, was installed on a large scale, and at the time of maximum output involved the charring of 300 tons of wood per week. The canister, when complete, had the following contents, arranged in the order given:

- A wire gauze dome,
- A thin layer of cotton-wool over the gauze,
- A layer of mixed granules with charcoal,
- A layer of cotton-wool,
- An expanded metal diaphragm,
- A second layer of granules and charcoal,
- A layer of cellulose wadding,
- A second expanded metal diaphragm,
- A third layer of mixed granules and charcoal,

- A piece of towelling to prevent dust entering the breathing tube,
- A piece of expanded metal, and
- Two springs to hold all the contents in place.

In addition to meticulous scrutiny of the several parts before they were assembled as a complete apparatus, the respirators were continually being tested, both in the laboratory and on men, to determine their resistance against gases, vapours, and smokes. Those who have been spared all the risks and horrors of war will not wish me to omit reference to the intrepidity with which, in the ordinary routine of testing the apparatus, men have daily entered chambers containing high concentrations of lethal substances—such, for instance, as phosgene—and remained there for a great length of time until the respirator had begun to fail. An idea of the improvements effected may be gained from these tests; they were first carried out in concentrations of 1 in 10,000; this proportion was raised in 1916 to 1 in 1,000, and in 1917 to 1 in 100. When this last stage was reached, a change of method grew imperative, as the concentrated gas proved very irritating to the skin, and the clothing of the wearers became rotten. The arrangement then adopted was to place the respirator in the gas chamber, passing the breathing tube through the wall of an ante-chamber in which the subject sat. But, in addition to these trials, standard laboratory tests were established which in many ways were to be preferred, because they eliminated certain variable factors, such as the irritability of the respiratory tract and the rate and depth of breathing of the individual. For this purpose, and for use during gas attacks, simple tests for identifying the gases were devised after much research, and the results obtained have been of great service, especially in the laboratories, for it was only by the discovery of such simple means of detecting the presence of traces of gases, and of roughly estimating their concentration, that the standard laboratory tests referred to were rendered possible. As an example, a test paper was devised for detecting phosgene and chlorine at dilutions of one in a million. This paper is rendered sensitive by a mixed solution of *p*. dimethylamino benzaldehyde and diphenylamine. In summarizing Harrison's achievements we have especially to acknowledge the co-ordination of pure scientific work, technical effort, and manufacture, and withal his wonderful personal influence in gaining from every section of the various workers concerned, and notably from each individual of his staff, the highest possible standard of emotional effort. This is the essential quality of a great organizer; Harrison possessed it in a remarkable degree. In him it was combined with a rare and conspicuous courage—a combination which truly made him a great soldier. In 1917 he was promoted to lieutenant-colonel and awarded a C.M.G. At the end of this year the department concerned with offensive gas warfare was linked with the Anti-gas Department. Harrison's organizing powers were given an even wider scope, for the offensive had grown to immense proportions, and he was made deputy controller. His services in this critical period were of immense value; he became the acknowledged leader of chemical warfare, and finally was made its director. Shortly before his death he learned the news that he was to be promoted to the rank of brigadier-general, and also that he had been awarded the French Légion d'Honneur. For a chemist who had joined in the ranks thus to climb to one of the highest positions in the army was a truly remarkable achievement.

THE TEACHING OF MEDICAL HISTORY.

ENGLAND is almost the only country where there is no adequate provision for the teaching of medical history. In France, the United States, Switzerland, Norway, Holland, and Canada, chairs of this subject have long been in existence; in Germany and Austria not only are there several professorships of medical history but, in Leipzig as in Vienna, there are fully equipped institutes for its more detailed study. Great activity in the same direction has been exhibited in Denmark, Portugal, Belgium, and especially in Italy. In this country the subject has been ignored by all our universities except Edinburgh, where a part time lectureship has been established.

Yet the advantages to be derived from an acquaintance with the history of medicine are many, while the burden which it places on the curriculum is *nil*. Dogmatism, the current foible of the working scientist, finds in history its best antidote. Formlessness and diffuseness, the literary dangers which threaten to crush progress by making

scientific literature unreadable, and therefore inaccessible—these find their natural remedy in the study of the great models of the past. If we reflect that William Harvey compressed the greatest of all medical works into fifty-two pages, and that William Gilbert needed hardly more space to detail twenty years' magnetical experiments, while to-day the International catalogue of the mere titles of scientific papers fills seventeen annual volumes, the urgent need of better literary form may be realized.

The thought of our age is separated from that of the time that went before us by the fertilizing doctrine of evolution. It is a presentation of truth which has done as much to stimulate the studies of the historian as it has to guide the researches of the biologist. Living things, as Theophrastus tells us, must be studied not only and not so much for what they are as for what they are becoming, and to understand what they are and what they are becoming we must know what they have been. The whole of evolutionary teaching may be summed up in the phrase that organic products are the outcome of their history, and can only be understood when their history is known. Yet is there anything more truly organic than ideas? Can any doctrine be comprehended in its entirety until we know how it came to be what it is? Still less can any great system, such as that of modern medicine, be understood without reference to its past. The history of medicine, like other evolutionary studies, gives an interest to present phenomena that can be obtained through no other channel. It brings into practice and into research the only effective counter to the cynicism of the middle years when the eagerness of youth is passed and the mellowness of age is not yet upon us. It forms a real foundation of that happiness in his work and pride in his profession that is the chief guarantee of the doctor's efficiency.

There are those who think that medical history is best left in the hands of amateurs and to the spare time of men who have the leisure and literary gifts for its pursuit. This view is partly true, though it also contains a fallacy. No one interested in the history of medicine would or could wish the solace of study removed from those who love it, for whom it is a real *re-creation*. But only those who have spent years in historical research—and there is no form of research that makes greater claims on time and energy—only those can realize the amount of fruitless labour and the endless disappointments that await the unequipped labourer. To make the efforts of the casual historical worker effective and fruitful it is before all things necessary for him to have experienced guidance. Historical research, like every other form of research, has its own technique, and a technique very laborious in the acquisition. Even properly to find one's way about a great library needs months of experience. But for a localized and limited field of investigation an efficient guide may help the worker to acquire his technique with comparative ease and rapidity, while without such aid he may wander long and then abandon his task in despair or produce immature and imperfect results.

For a generalized interest in history and effective work along historical lines the first need is the establishment of two or three chairs to be held by men who would devote their lives to the task of setting forth the history of medicine as a continuous whole. Such duties might well be combined with the task of delivering short courses of historical lectures in the various medical schools. There is no reason why one such lecturer should not be shared by a number of schools and his course, instead of further overburdening the curriculum, would do something to lighten it by giving it meaning and connecting its various parts.

The second thing needed for the adequate study of medical history is the establishment, preferably in London, of a special institute. It need only consist of a couple of rooms near one of the great libraries, in which would be collected all the reference books most important for medical historians. These works number some seven thousand, and only when they are placed together is it possible for the student to realize the scope and method of his subject. The collection in one place of all these books would save an immense amount of the researcher's time and would help him to place his work in proper relation with that of others. The institute should be in no sense a museum or collection of old books, but a place where all the necessary aids to research are brought together.

To such an institute the researcher might bring his manuscripts, his transcripts, or his discoveries on the one hand, or his inquiries, his needs, or his difficulties on the other, and be met by an expert able to help him.

Those who are best acquainted with the work done in other countries for the history of medicine will have no doubts that the introduction into this country of a systematic treatment of the subject will do much to raise the educational standing and with it the self-respect, happiness, and efficiency of the medical profession as a whole.

CHARLES SINGER, M.A., M.D.Oxon.,
F.R.C.P.Lond., F.S.A.,
Tutor of Exeter College, Oxford.

PORTRAIT OF SIR CLIFFORD ALLBUTT.

We publish below a further list of the names of subscribers to the Fund for presenting Sir Clifford Allbutt with his portrait. It will be seen that some subscriptions have recently been received from India and America. As it is intended shortly to close the Fund, the Treasurer requests all those who wish to take part in the presentation, but who have not yet notified their intention, to send their subscriptions without delay. The amount is limited to one guinea. Cheques and postal orders should be made payable to the "Sir Clifford Allbutt Presentation Fund," crossed London County, Westminster, and Parr's Bank, and addressed to the Treasurer of the British Medical Association, 429, Strand, London, W.C.2.

After the portrait in oils has been painted it is intended to commission a mezzotint engraving from it which subscribers to the Fund will be able to purchase for their own collections.

Dr. Arthur C. Alport (Johannesburg)
Dr. W. Armistead (Cambridge)
Dr. Elizabeth Bell (Belfast)
Lieut.-Gen. Sir C. H. Burtchaell, K.C.B., A.M.S. (India)
Dr. F. G. Chandler (London)
Dr. James Craig (Congleton)
Surgeon Lieut.-Colonel Decimus Curme (Bournemouth)
Dr. F. Deighton (Cambridge)
Dr. G. A. Ferraby (Nottingham)
Captain W. F. T. Hamilton, O.B.E., M.C., R.A.M.C.
Dr. F. A. Hepworth (St. Albans)
Dr. C. Courtenay Lord (London)
Mr. J. Y. W. MacAlister (London)
Dr. J. C. McVail (Edinburgh)
Colonel A. Martin-Leake, V.C., F.R.C.S. (Calcutta)
Dr. A. P. Moore-Anderson (London)
Dr. W. D. Newcomb (Cambridge)
Sir R. Douglas Powell, Bt., K.C.V.O. (London)
Dr. David Reisman (Philadelphia)
Dr. Robert Sevestre (Leicester)
Sir St. Clair Thomson (London)
Captain E. B. Vernay, R.A.M.C.
Dr. H. Wales (Gargrave, Leeds)

ROYAL MEDICAL BENEVOLENT FUND.

At the meeting of the Committee held on July 8th twenty cases were considered and £200 voted to fifteen of the applicants. The following is a summary of some of the cases relieved:

Widow, aged 52, of L.S.A.Lond. who died in 1914. Receives £2 10s. per week from the sale of the practice, and £2 from children. Has five children, only the two eldest working, the third at home, and the two youngest at school. Requires help owing to the increased cost of living. Relieved four times, £35. Voted £10.

Widow, aged 39, of M.D.Durh. who died in 1917. Was left totally unprovided for with seven children, now aged 17 to 3 years. Only the eldest is working, and she helps all she can. Applicant receives £150 from dividends and about £52 by letting rooms. Brother-in-law pays rent, and relations help a little with education. Relieved twice, £30. Voted £12.

Daughters, aged 43 and 47, of M.R.C.S.Eng. who died in 1892. They live on the West Coast and take in paying guests, and during the last twelve months have made £70. Rent and rates, £79. They find it necessary to apply for help owing to the very short season in 1918 and the increased cost of living. Relieved six times, £60. Voted £10.

Widow, aged 53, of L.R.C.P. and S.Edin. who died in 1893. Applicant suffers from ill health, and is unable to work. Has two sons who are both in the navy, and help whenever possible. Pays £6 a year rent. Relieved sixteen times, £161. Voted £18 in two instalments.

Subscriptions may be sent to the Acting Honorary Treasurer, Dr. Samuel West, at 11, Chandos Street, Cavendish Square, London, W.1.

British Medical Journal.

SATURDAY, AUGUST 2ND, 1919.

THE PANEL CONFERENCE AND THE REPRESENTATIVE MEETING.

FROM the report published in the SUPPLEMENT of July 26th of the Conference of Local Medical and Panel Committees and the report of the Annual Representative Meeting in the present issue it will be seen that the Conference occupied itself mainly, though by no means exclusively, with the present insurance medical service as discussed in the report of the Insurance Acts Committee, known as document M. 25, while the Representative Body, in dealing with the subject of a public medical service, largely confined itself to the extensions of the present service for the insured which may occur when the Ministry of Health is in a position to make a thorough revision of the service. Thus, though some overlapping was unavoidable, the Representative Meeting was supplementary and in no sense rival to the Conference, and where the two bodies went over the same ground there was practical agreement in their decisions. The astounding apathy of many members of the profession towards the whole subject was conspicuously absent at both meetings, and there was abundant evidence that the report of the Insurance Acts Committee had been carefully studied by the Representatives. In a few points, put forward more or less tentatively by the Committee, certain modifications were made by the Conference, but in spite of some general expressions of dissatisfaction with this document, founded on an idea that the Committee had allowed itself to be dictated to by the Commissioners, the Conference passed a practical vote of confidence in the Committee by authorizing it to negotiate definitely with the Government for the new terms and conditions of service for 1920 on the lines of M. 25 and the two interim reports as amended, subject to full consideration of suggestions from Panel Committees and to the resolutions of the Conference.

It is to be noted that in the Representative Meeting and in the Conference, as well as throughout the profession, there has been disclosed an almost unanimous discontent with the present insurance medical service as it affects both panel practitioners and insured persons. The broad lines of the service perforce remain as the Insurance Acts have fixed them, but the innumerable irritating details that have been superimposed by regulations are seen to have distorted what might conceivably have been a sound medical service into a service which, to the better class of practitioners, has become hatefully irritating, and in the hands of less conscientious practitioners is as slipshod as can possibly be imagined. The Insurance Acts Committee has set itself to find a remedy for this, and it starts with the definite declaration, in which it is supported by both the Representative Body and the Conference, that the remedy will not be found, as some have suggested, in a whole-time general practitioner State service. The discontent with one aspect of the present service was forcibly brought out at the Representative Meeting in the debate on paragraph 106 of M. 25. The meeting strongly supported the Council and the Committee in declaring that insurance doctors are crippled in their

work by the limitations of the present service and in urging the necessity for the inclusion in the insurance service of provision for (a) consultant or specialist non-residential services, (b) laboratories, and (c) a nursing service. To this was added a resolution that arrangements should be made for auxiliary hospitals in which general practitioners could treat their own patients; but an amendment opposing any extension of medical benefit except consultant's advice for the present insured, was lost. A recommendation was also carried without dissent to the effect that general practitioner attendance and treatment is the only foundation on which any systematic provision of other kinds of treatment can properly be based, and that, speaking generally, such additional services should be available only on the recommendation of a general practitioner.

Another important recommendation of the Council was adopted by the Representative Body to the effect that the provision of advice and treatment now made, or about to be made, at maternity and infant welfare centres, at school clinics, at venereal disease clinics, and at tuberculosis dispensaries, should at once be brought into proper relation with the domiciliary attendance of general practitioners. Resolutions were also carried for the establishment at once of clinical and pathological laboratories for the whole population, the clinical medical staffs to be appointed on a part-time basis and remunerated on a time basis, or on a "payment per attendance" basis, a medical committee playing an important part in their selection. It was further resolved that general practitioners, having special qualifications, should be eligible in the same way as consultants or specialists, and that all general practitioners should be given opportunities for taking suitable part in the work of the clinics. The Representative Meeting, however, recognized that some time might elapse before these services could be organized, and therefore postponed the question whether such services should be regarded as an essential part of the service from early in 1920.

As to the provision of residential institutions or the extension of the service to dependants of the insured or to other classes of the community, it was resolved that no steps should be taken without further conferences nor without reference to the Divisions of the Association, and if necessary a special meeting of the Representative Body. To this was added a further resolution to the effect that no State medical general practitioner service should be provided for any persons whose total income exceeds £250 a year and who would not already have been provided for under the Insurance Acts.

The remaining sections of the annual report of Council bearing upon the Ministry of Health having been approved, the Representative Body discussed the employment of consultants, and motions were carried to the effect that when patient and doctor desired a second opinion this should be obtainable without reference to the referee, who should only be brought in when the patient wished a second opinion which the doctor thought unnecessary; and that, in submitting a patient for a second opinion, the doctor should furnish a statement of the case as is done in private practice. The meeting recorded the opinion that excessive demands for expert services should be investigated by a medical committee chosen by the profession and not by a lay or mixed committee. It was further decided to object to the payment of the fees of consultants or specialists out of money allocated to the payment of capitation fees to practitioners. The remainder of the supplementary report of the Council was then approved; it dealt with the

constitution of the medical consultative council under the Health Ministry and also the continuance in office of the Ministry of Health Committee of the Association. This completed the first day's work of the Representative Meeting so far as the Ministry of Health is concerned.

We propose in our next issue to take up some of the other questions discussed in the document M. 25 which relate rather more specifically to national insurance and were considered in greater detail by the Conference. It may be said here that in debating in such detail the many matters referred to in M. 25 relating to the insurance medical service, there was evidently in the minds of both the Insurance Acts Committee and the Conference an underlying assumption that the present panel system will be continued, for a considerable time at any rate, in its main outlines. As the Ministry of Health Act is held to go no further than the central co-ordination of the various Government departments dealing with health matters, which is sure to be a long business, no fundamental revision of the present insurance medical service seems to be possible without legislation, and this may be delayed for some time owing to the pressure of other parliamentary business.

R.A.M.C. CONTRACTS.

MR. GLADSTONE once perplexed his supporters and amused his opponents by asserting that the country was not at war, but in a condition of belligerency. The phrase was unhappy, as many of the utterances of that distinguished Parliamentarian were, but the distinction he had in mind is very real, and has its application at the present time. There may be fighting between two nations, though there has been no formal declaration of war, and the fighting may be stopped before declaration of war becomes necessary. For instance, who will say what is the true position of the British forces in Russia, and, still more, what are the relations of the Government of India with the ruler of Afghanistan? There is fighting, and apparently a good deal of it, on the frontier, though both the Ameer and the Viceroy profess pacific intentions. Again, who can answer the question whether the European war is over? Peace has been concluded with Germany, but not yet with Austria and Bulgaria. Many Acts passed by Parliament during the years of war contained provisions which were to come to an end at the termination of the war, and the same is true of many contracts. An Act of Parliament which was passed last November "to make provision for determining the date of the termination of the war" authorized His Majesty in Council to declare what date should be treated as the date of the termination of the war. An Order in Council will presently fix the date. The original intention seems to have been that it should be August 4th, but the Order has not yet been issued.

Among the contracts which will be affected by the date declared in the Order in Council will be the contracts of medical officers for temporary service in the army. After the virtual abolition of the yearly contract in 1917 the period of the standard contract was "until the termination of the present emergency or until my services are no longer required, whichever shall first happen." Every contract in the form quoted above will lapse on the date of the official termination of the war. This is true in theory, but in practice it is subject to some serious exception. Officers and other ranks of all arms and branches of the service, though eligible for demobilization, are

being temporarily retained in India under War Cabinet authority, in order to tide over the present emergency in that country. Probably the same is true of North Russia. Orders have been issued that all who have been so retained in India shall be given onward passage to the United Kingdom at the earliest possible opportunity, and immediately the situation in India permits of their release. Their return home, therefore, is contingent. In the first place the Government of India is apparently the authority to determine whether the situation in that country permits their release, and in the second place their return must depend upon there being accommodation for them on homeward bound ships. For the last six months or more there has been an outcry in India because of the delay officers and civil servants due for leave find in getting away from that country, owing to shortage of shipping. This has not yet been relieved. But the real grievance will be if men under such a contract as has been quoted should be retained after the appointed date.

There was some hope that Mr. Churchill on Tuesday might throw a little light on the general situation, which would apply equally to Russia and India. He did not come up to expectations; he said, what we have all heard often before, that demobilization had been delayed by the prolongation of the negotiations before a final settlement with Germany was reached, and also by difficulties in India and in Egypt. He stated, what was also well known—that demobilization had now proceeded until more than three million officers and men had reached their homes. It was, he added, now going on at the rate of five thousand or six thousand a day, and he expressed the hope that it would be accelerated during the next months. Voluntary recruiting, he said, was going on at the rate of four or five thousand men a week, and the volunteer regular army now amounted to 225,000 men; in addition 25,000 men in the Armies of Occupation had volunteered to stay on. He added that, unless some unexpected evil turn of events occurred, conscription, which was dwindling every day as discharges took place, would pass from the statute book at the expiration of the present Military Service Act.

Voluntary recruiting for the medical service of the army, however, is not proceeding satisfactorily. The recent offer of consolidated pay of £550 a year has not secured many candidates for temporary commissions in the R.A.M.C. There may be differences of opinion as to the reason, for the terms were such as it might be thought would prove attractive to young men, especially those newly qualified who have not undertaken responsibilities at home. No doubt the increased cost of living and the consequent increase in civil wages and salaries has an effect, but we suspect that distrust of the War Office is at least as influential. The offer has not been well received by officers now serving or recently demobilized, and no doubt their opinion must greatly influence young men who have not yet served. The war bonus which officers of all branches of the service have been receiving since February will come to an end at the date officially declared as the end of the war, but it is natural that medical officers should compare the pay they are now receiving with the consolidated pay of £550 a year and be dissatisfied when they find there will be a reduction. But in addition there is the uncertainty introduced into the new contract by the provision that the period of service shall continue until the expiration of twelve calendar months or until the officer's services are no longer required, whichever shall first happen. This, as some of our

correspondents have said, is a one-sided contract, inasmuch as the War Office would be able to dispense with the officer's services in a few months, whereas the officer would be bound for a year. The whole trend of Mr. Churchill's apology was to encourage the belief that the strength of the army would be very rapidly reduced, and this must increase the hesitation with which the contract is regarded. Medical officers are disposed to think that if they are to be demobilized to civil work within a very short time they may as well take the plunge at once.

We are not prepared to say that if the terms of the contract were modified, so that the rights of the individual officer under it were the same as those of the War Office—namely, that an officer would have the right to stay on for a year if he chose or leave earlier after reasonable notice—voluntary recruiting would be improved, but there can be no doubt that such a modification of the contract would be equitable. Meanwhile, the need of the army for medical officers is great if medical officers who have served long are to be demobilized, as they have the right to ask. Mr. Churchill spoke of an army of something under a quarter of a million, but as a matter of fact the military forces now on foot must number at least a million, and there is a call upon the medical profession to provide the proper number of medical officers. Its members will, no doubt, be willing to respond to the call if the War Office will show itself willing to treat them justly and considerately. We invite Mr. Churchill to give attention to the problem, for we are bound to say that the present difficulty is largely due to his own action early this year, when suddenly, without consultation with the medical profession, he scrapped the scheme for demobilization carefully worked out beforehand by the Central Medical War Committee in consultation with the Ministry of National Service. The scheme, had it been loyally carried out, would have avoided many of the difficulties now pressing upon the War Office and have prevented some of the profound distrust and dissatisfaction at present felt.

A LESSON OF THE WAR.

THE address given by Sir Anthony Bowlby to the Abernethian Society of St. Bartholomew's Hospital, published this week, will revive many memories, and will be of interest alike to those who had to stay at home and those who served with him abroad. His general review of the growth of the surgery of the forward areas of the British army in France is a valuable contribution to the history of medicine. It contains information, especially about the number of casualties from the various battles, which will be new even to those who served in France; for the medical officer with a field ambulance, a casualty clearing station, or at the base, was never able to obtain any wide view of the actual results of these actions and the call they made on the resources of the Army Medical Service. The story begins just before the first battle of Ypres, when there were six casualty clearing stations and the wounded numbered 13,000. The casualty clearing station at the beginning of the battle was, as had been arranged, no more than its name implied—a unit to serve for evacuation, which practically meant that it took care of men while they were waiting to be put on the ambulance train which would take them to the base for any operation that might be necessary. Sir Anthony Bowlby came home early in December, 1914, and brought with him an article on the work of the clearing hospitals during the previous six weeks, which was published in the *JOURNAL* of December 19th. He therein said that a clearing hospital was essentially a mobile unit, and must be able to move with the

army at the shortest notice. Consequently it was not equipped like a general hospital, for it had no tents, no huts, stretchers instead of beds, and no such luxuries as x-ray and pathological outfits. The lecture we publish to-day is largely the story of how this conception of a clearing hospital was replaced by the casualty clearing station, as it was known later, indeed, after no long time, for by the end of 1914 the medical authorities in France were convinced that the units must no longer exist merely for the purpose of evacuation, but should be allowed to treat, operate upon, and retain a wounded man. How well this duty was discharged Sir Anthony Bowlby relates in chronological order. The numbers of wounded increased from the 13,000 at the first battle of Ypres and the 12,000 at Neuve Chapelle to 60,000 at the second battle of Ypres, to 300,000 at the Somme, to 500,000 in 1917, and to 300,000 during the hundred days in which the war was brought to a successful end. The casualty clearing stations became hospitals, with a staff of skilled surgeons trained on the spot, with anaesthetists, pathologists, and a staff of nursing sisters, so that a man was as well off in one of them as he could be in the best appointed hospital in peace. After this organization had been brought to perfection it was possible, at the third battle of Ypres (the Passchendaele fighting) to treat under anaesthetics at the casualty clearing stations 60,000 out of a total of 136,000 casualties, or about 30 per cent. of those who passed through. This was brought about partly by the system of borrowing surgical teams, consisting of a surgeon, an anaesthetist, a nurse, and a highly trained orderly. In 1918 the defects of a system which had grown up and was thoroughly well adapted to stationary warfare, were disclosed. When the Germans pushed through in March, 1918, some casualty clearing stations, with all their elaborate equipment of huts, electric plant, x-ray rooms, had to be abandoned to the enemy, although no patient in any one of them became a prisoner. Thereafter when the Germans were so completely defeated in the Arras section at the end of March the conditions began to change, and when the great allied attack, begun on August 8th, was successful, and it became necessary to move casualty clearing stations forward rapidly, transport difficulties became serious. Sir Anthony Bowlby expresses the opinion that if front-line surgery is to be maintained at the right standard during an advance casualty clearing stations must have more transport. The difficulties created by the want of it were evident to everybody in France in August and September of last year; in certain places the casualty clearing stations were held up twenty and thirty kilometres behind the line, sometimes even more. It is true that to move some of them, with all their impedimenta, at that time, would have meant the use of thirty or forty lorries for several days. It would be unreasonable to ask for transport on this scale as a permanent part of their equipment, but for an emergency it is not absolutely necessary to move forward the whole of a casualty clearing station; a section would be enough to establish an advanced operating centre; the equipment for this could, we believe, be taken forward in four lorries, and the possession of this number would at all times greatly facilitate the work of the unit. This aspect of the matter will, we hope, receive full consideration when the lessons of the war are under review by the Army Medical Department, the War Office, and Parliament. It would mean a certain amount of expenditure, but the money would be well spent.

SITES, LAY-OUTS, AND PLANS.

THE Housing Department of the Ministry of Health has started a journal—*Housing*. It consists of sixteen pages, costs threepence, and is to appear once a fortnight. This first number has a send-off from Dr. Addison, in which he invites the country to celebrate the termination of a desolating war by a united and determined

effort to sweep away the evil slums and wretched cottages which disfigure our towns and countryside, and to replace them by healthy and pleasant houses. Schemes for the erection and completion of new houses have, he says, come in in good numbers, but a considerable proportion of local authorities are still behindhand even in this respect; and he goes on to express the hope that those local authorities which have not yet submitted schemes will act on their own initiative before the compulsory clauses of the new Act become operative. *Housing*, he says, is not to compete with existing periodicals, and there will be no departure from the policy of giving the press all information, but the new venture is intended to serve as a regular means of direct communication between the department, local authorities, and the Ministry's staff up and down the country. The general make-up of the new periodical very much resembles that of most technical journals. There are reports of meetings, dates of conferences, reviews of books and periodicals, lists of applications received from local authorities as to sites, lay-outs, and house plans, and lists of proposals approved and tenders submitted. Three pages of designs, showing elevation and plan, for blocks of four cottages, are given; they are based on drawings in the Manual, and present a general similarity, but certain differences are shown; thus, on the ground floor in two of the sets a living room and scullery are provided, but in the third a parlour also. The houses in each set are not all of exactly the same size; in some one bedroom is larger, and instead of the bathroom being on the ground floor it is on the first. Perhaps the most interesting part of the periodical is a page dealing with points arising in the Ministry's correspondence. Thus, with regard to baths, it is said that where in rural districts there is no proper water supply the provision of baths should not be insisted upon, though space ought to be left for a bath should it become possible to add it. In the houses shown in the plans there are three bedrooms, but seaside towns, where the working classes practically all take in visitors, it is proposed to make four bedrooms as the maximum, but in special circumstances to agree to a higher proportion of houses with four bedrooms than would otherwise be regarded as proper. Eight houses to the acre is to be regarded as the maximum, not the minimum. "There is no harm in approving fewer than eight houses per acre where this seems desirable and the land is reasonably cheap." It is added that the giving of more land to a house will often enable a higher rent to be obtained, and all through the utterances of the Ministry there is this idea of asking a higher rent where there is better accommodation, either inside or out. It would not be true to say that the elevations of the three sets of cottages illustrated are anything but commonplace, but there is some relief in noting that the Ministry, owing to the scarcity of slates and tiles, is willing to encourage thatch in rural areas; owing to the risk of fire it should not be used in districts urban in character. It is very difficult to prevent pigsties in a village becoming a nuisance, and it is a little surprising to be told that where it is the custom to provide them there will be no objection to charging the cost of properly constructed and suitably located pigsties to the housing scheme, and letting such cost rank for financial assistance and a higher rent. The last ministerial point is a little amusing; apparently some local authority having difficulty about water, asked leave to employ a water diviner; the Ministry, however, lays it down that local authorities should obtain proper advice if they have difficulties, and should not be encouraged to employ water diviners. This first number of *Housing* has a supplement giving the general lay-out of the Swanpool Garden Suburb, near Lincoln, and photographs of some of the houses in course of erection. The pool is made a feature of the lay-out, and has a tennis court, bowling green, pavilion, and recreation ground, on its banks. The

schools are on the edge of the recreation ground, and the technical institute looks over the tennis court and bowling green.

WESTERN MEDICINE IN CHINA.

The annual account of the Peking Union Medical College contains a full account, with plans and illustrations, of the institution, which is to be fully equipped with laboratories for pathology, bacteriology, pharmacology, and physiological chemistry, and with lecture and demonstration rooms. These are lodged in separate buildings. The other buildings include a hospital with medical, surgical, and out-patient departments, and a nurses' training school, administrative offices and residences for the staff. While the buildings embody all the features of a modern medical school and hospital, the external forms have been planned in harmony with the best tradition of Chinese architecture. The college, it is hoped, will be opened to students next year. The work of the China Medical Board of the Rockefeller Foundation is set forth in the Third Annual Report, January 1st to December 31st, 1917. In addition to an account of the progress made in the creation of the proposed medical centre in Peking, particulars are given of the Shanghai Medical School which is intended to be a second medical centre in China. The Canton Hospital in connexion with the Canton Medical Missionary Society and the Canton Medical Missionary Union was established in 1835. A fair proportion of the medical staff are Chinese, and there is a training school for native nurses. The annual report for 1918 states that the two chief factors which are sapping the vitality of China are the high infant mortality and tuberculosis. The directors propose in the coming year, while plans are maturing for a thoroughly equipped modern hospital, to take steps towards combating these evils. Arrangements are being made for public lectures on hygiene, and efforts will be made to secure the foundation of the first tuberculosis hospital and sanatorium for the Chinese in China. The disturbed condition of the country brought a large number of wounded soldiers to the hospital. The number of operations performed was 2,514. A laboratory examination is made in the case of every patient admitted; the number of such examinations was 4,659. In the medical wards 1,198 cases were treated, showing a considerable increase as compared with 1918. Bubonic plague and cholera are conspicuous by their absence in the records. No case of genuine cerebro-spinal meningitis was admitted; nor is any authenticated case known to have occurred among the Chinese, although the disease was very prevalent in Hong Kong during the spring and summer.

HEALTH CONSULTATIVE COUNCILS.

The arrangements for the appointment of consultative councils in accordance with the provisions of the Act establishing the Ministry of Health are proceeding. Nominations for the Local Health Administration Council have been invited from the Association of Municipal Corporations, the County Councils Association, the Urban District Councils Association, the Rural District Councils Association, the Association of Poor Law Guardians, the London County Council, and the National Association of Insurance Committees. The suggestions invited from a large number of medical bodies of the names of medical practitioners to serve on the Medical Consultative Council have been made; they were referred to the special medical selection committee, which has sent in a short list of names chosen from the large number submitted by the various bodies.

PLAGUE IN ENGLISH PORTS.

The Ministry of Health announces that a master stevedore and bargeman in Liverpool, who was removed to the isolation hospital on July 11th and died on July 19th, was suffering from plague. Bacteriological confirmation of

the diagnosis was only obtained on July 26th. A mouse found dead has been proved by bacteriological examination to have suffered from plague, but dead rats, also found in the man's office and the adjacent premises, were not, on examination, ascertained to have had plague. The Ministry also announces that two officers from ss. *Framlington Court*, which arrived at Avonmouth from Montreal on July 22nd, were removed to the isolation hospital suffering from plague. The vessel reached Montreal from Alexandria, and called at Sydney, Nova Scotia, on her voyage to Avonmouth. She has been detained by the Bristol Port Sanitary Authority, and all precautions have been taken. The circumstances are being investigated by one of the medical officers of the Ministry.

GRANTS FOR MEDICAL EDUCATION.

We learn that certain London medical schools, which have prepared schemes for the reconstruction of their clinical teaching, have been officially informed that they can count upon financial assistance from the State based upon the approved expenditure incurred in carrying out those schemes. We believe that the offer has been made to four schools, and that it is of the nature of a contingent grant in proportion to the amount provided by the school itself.

In the advertising columns of the JOURNAL this week will be found advertisements for the posts of Deputy Medical Secretary to the British Medical Association, at a salary of £800 rising to £1,000, and of Scottish Medical Secretary of the British Medical Association, at a salary of £800.

Medical Notes in Parliament.

R.A.M.C. Officers in India.

MR. CAPE asked whether Royal Army medical officers in India who contracted to serve for the duration of the war were being detained whilst other medical officers who signed only yearly contracts were being demobilized first. Mr. Churchill: Yes, sir; officers serving under a yearly contract have been sent home from India as there is no authority to retain them beyond the period of their contract. Mr. Cape further asked whether regular Royal Army Medical Corps officers were being retained at home stations whilst doctors who took temporary commissions were being detained in India and elsewhere at great personal and financial sacrifice. Mr. Churchill replied that every regular medical officer of the Royal Army Medical Corps who could possibly be spared had been placed under orders for India, so as to release temporary commissioned officers who were serving there.

Artificial Limbs for Officers.—Sir J. Worthington Evans announced on July 24th, in reply to Major Cohen, that the cost of repairs and renewals of artificial limbs and other appliances would in future for officers, as for men, be borne by the State. The decision made some time ago as to artificial limbs had already been notified, but it was now extended to artificial appliances other than limbs. The serving officer must bear the cost of renewals and repairs until retired, but on his retirement the Pensions Department would undertake such expenses when necessary from fair wear and tear.

Medical Benefit for Service Men under State Insurance.—Mr. Newbould asked the Minister of Health, on July 28th, the number of invalided seamen, marines, and soldiers under the National Insurance Acts in England, Scotland, and Wales respectively. Dr. Addison replied that in September, 1917, special arrangements were made as to the provision of medical benefit for men invalided from war services; the approximate number of men admitted to this benefit under these arrangements was 318,000, being 270,000 in England, 28,000 in Scotland, and 20,000 in Wales. But there was an additional number of such men who, having commenced to be eligible for medical benefit before September, 1917, were not included in those figures. The number of these was not known as they were merged in the civil population.

Dental Treatment.—Mr. Sugden asked the Minister of Health, on July 28th, what steps he was taking to prevent dental caries in children under school attendance age, children in attendance at school, and adults respectively, and in view of the prevalence of dental caries, as revealed by recent examinations in adult

males, whether he would issue instructions to local authorities to institute inquiries and forward recommendations thereon for its elimination. Dr. Addison replied that adequate provision of dental treatment for the whole population could only properly be introduced as an integral part of that complete scheme of national health services which would be amongst the earliest matters to be considered by the Ministry, with the advice of the consultative councils. A prime necessity, however, must be certain improvements in the existing arrangements for dentistry, suggested in the report of the departmental committee, which would require legislation in certain respects. In the meantime the provision of dental treatment for mothers and children was being developed by several local authorities under the regulations of the Ministry of Health and by help of its grants; in several school clinics by aid of the Board of Education; and in some areas in connexion with national insurance. The importance of the matter was emphasized in all suitable communications from the Ministry to local bodies.

Vaccination Regulations for the Navy.—Dr. Macnamara, in reply to Mr. J. Davison on July 28th, said he had no information as to a particular instance of alleged grievance cited by the hon. member, but the circumstances accorded with the regulations of the Admiralty, that persons serving in the navy who declined revaccination were not to land in ports where there was danger of contracting small-pox. The confinement to ships in such cases was not a punishment, but a necessary precaution to protect those who declined revaccination and their shipmates.

Indian Army Officers' Sick Leave.—Mr. Montagu, in answer to Colonel Yate on July 25rd, said that all Indian army officers on sick leave in Great Britain during the war had been admitted to the same medical treatment in hospitals or by private practitioners as British service officers. Through the generous aid of the London Tropical School of Medicine it had also been possible to arrange to send civil and military officers suffering from tropical diseases to the school hospital at Albert Docks for diagnosis and preliminary treatment. He hoped it might be possible to continue this arrangement. It secured the officer the best advice on his case and as to his treatment. The hospital charges in those cases were borne by the revenues of India.

The Physical Condition of Army Recruits.—Major Farquharson asked the Pensions Minister, on July 28th, whether it was the case that all the scientific data and documents collected by the Ministry of National Service in regard to the physical condition of recruits for His Majesty's army had now passed into the possession and custody of his department, and if so, would he forthwith transfer those documents to the Ministry of Health? Sir James Craig (Parliamentary Secretary to the Ministry of Pensions) said that the whole of the medical and statistical staff of the Ministry of National Service were transferred to the Ministry of Pensions on April 1st last. Part of that staff had for some time been engaged in the work of collating and analysing the scientific data and documents as to the physical condition of recruits for the army (as suggested by Major Farquharson), and it was considered advisable that they should bring the work with them and complete it. The Minister of Health had throughout approved of this course of action. It was hoped that the results of the work would be published in the autumn. In the meantime any information was at the service of the Ministry of Health.

Trade Marks Bill.—Sir Auckland Geddes, on July 28th, moved the second reading of the Trade Marks Bill, which he described as a modest yet important measure. It would establish a Part B in the Register of Trade Marks, and for this part registration for certain kinds of marks would be easier than for Part A. There was considerable abuse at present in the employment of trade marks, and the second part of the bill was designed to remedy this. There was, for example, the case of drugs. A very good example of the abuse was the use of the word "aspirin." It was to deal with difficulties arising from the use of names which were absolutely blocking names upon other manufactures of the same chemical substance that the bill was introduced. The bill was read a second time, and the Solicitor-General said that the various considerations could be cleared up in Committee.

Institutional Treatment for Soldiers in Ireland.—In reply to Lieut.-Colonel W. Guinness, Sir James Craig said that there were two institutions in Ireland available for discharged neurotic soldiers. There was no epileptic colony in Ireland with which arrangements could be made for the reception of discharged men, and it was therefore necessary to bring the few cases to England. Men were placed in asylums only if they were certified under the lunacy laws, and he was now arranging that men so certified should be treated as service patients. Special arrangements would be made with the medical officers.

Sickness Rates in Organized Industries.—Mr. J. Davison asked whether the Minister of Health could submit statistics for the United Kingdom showing separately the sickness rates obtainable in the great organic industries, such as agriculture, chemical trades (including gas workers), mining, metal trades, textile trades, and miscellaneous trades, for the years 1913-1918. Major Astor replied that statistics did not exist at present in this country as to the sickness rates in the several organized industries. In so far as information on sickness rates existed, as, for instance, in the records of friendly societies and of approved societies under national insurance, it did not afford any guidance as to the rates prevailing in the several industries, because those bodies were not organized according to occupation.

Scotland.

APPOINTMENTS TO THE NEW CHAIRS AT GLASGOW.

THE three new chairs in the University of Glasgow, endowed with a sum of £20,000 each by Mr. William and Mr. Frederick Gardiner, shipowners of Glasgow, were filled at a meeting of the University Court on July 23rd. Dr. E. P. Cathcart, professor of physiology in the University of London at the London Hospital Medical College, was appointed Gardiner professor of physiology. Professor Cathcart graduated M.B., Ch.B. in the University of Glasgow in 1900, took the M.D. in 1904, and the D.Sc. two years later. After taking his first degree he was research scholar at the Lister Institute and afterwards bacteriologist to it, until in 1905 he was appointed Grieve lecturer in chemical physiology in the University of Glasgow. In 1915 he was appointed to the London Hospital Medical School. Professor Cathcart has given particular attention to nutrition, and especially protein metabolism. Dr. C. H. Browning, director of the Bland-Sutton Institute of Pathology at the Middlesex Hospital, and professor of bacteriology in the University of London, who was appointed to the Gardiner chair of bacteriology, is also a graduate of Glasgow, taking the M.B. in 1903 and the M.D. in 1907, in which year he became assistant to Professor Muir in the pathological department of the university; in the following year he became lecturer on bacteriology. In 1911, when the laboratory of clinical pathology was opened at the Western Infirmary, he was appointed director and lecturer on clinical pathology in the university. In 1914 he became director of the newly established Bland-Sutton Institute. Professor Browning's researches have been concerned chiefly with immunity, but during the war he devoted attention to the production of antiseptics, and introduced acriflavine. Dr. Thomas Stewart Patterson, Waltonian lecturer and lecturer in organic chemistry in the University of Glasgow, was appointed to the chair of organic chemistry; he also is a graduate (D.Sc.) of the University of Glasgow, and spent three years in the laboratory of the late Professor Victor Meyer in Heidelberg. At the same court appointments were made to two new chairs in modern languages—Mr. Charles A. Martin, a graduate of the universities of Paris and Lyons, hitherto lecturer on French language and literature in the University, to the Marshall chair of modern languages (French, etc.), and Mr. Herbert Smith, a graduate of St. Andrews, to the William Jacks chair of modern languages (German, etc.).

GRADUATE MEDICAL TEACHING IN GLASGOW.

In March, 1914, at the request of the medical faculty of the University, a conference was held of the medical teaching staffs of the university and other medical schools and of the general and special hospitals of Glasgow to consider the establishment of an organized scheme for graduate classes in medicine. An executive committee was formed, and it had been intended to start such a course early in 1915, but the outbreak of war rendered postponement necessary. Another conference was held in February, 1919, between the medical faculty of the University and the general committee for post-graduate medical teaching, and it was agreed to institute an emergency course during May and June, especially for the benefit of medical men who have served in the military forces. The course was well attended by officers and ex-officers of the army and navy, as well as by medical men from America, India, the West Indies, South Africa, and China. Another course on the same lines will begin early in September. It will be essentially a practitioner's course, and will include classes in medicine, surgery, obstetrics, and various special subjects. A clinical and practical course in tuberculosis has been arranged at the Consumptive Sanatorium, Bridge of Weir, and at the Tuberculosis Dispensary in Glasgow. The opportunities in gynaecology and obstetrics will be exceptionally good, and there will be evening demonstrations in diseases of the throat, nose, and ear. The fee for the whole course is 5 guineas, but one class only may be taken on payment of a fee of 2 guineas. Full particulars can be obtained from Dr. A. M. Kennedy, Pathological Institute, Royal Infirmary, Glasgow.

THE MEDICAL PROFESSION IN THE WAR.

The Royal Faculty of Physicians and Surgeons of Glasgow has addressed a memorial to the King on the conclusion of the war, congratulating him on the lustre which the victorious peace has added to his reign. The memorial recalls that the Faculty was incorporated by the King's ancestor, King James VI of Scotland, in 1599. It expresses deep gratitude for the sympathy, encouragement, and support afforded by the King to his people, both by precept and example, throughout the arduous struggle which preceded the glorious victory finally attained. The Faculty recognized with pride the decisive part which the King's forces at sea, on land, and in the air, and in all quarters of the world, had played in achieving victory and attaining peace, and recalled with much satisfaction that the Royal Army Medical Corps, in which numbers of the Fellows and Licentiates, and Diplomates of the Royal Faculty had served, had sustained an honourable and vital part in the terrible struggle of the past years. The Faculty, in common with the medical profession, besides contributing so large a proportion of its membership to actual war service, had, by the most strenuous efforts, despite its greatly depleted numbers, maintained the necessary medical services at home with an efficiency which formed an important factor in the successful prosecution of the war.

Ireland.

DUBLIN HONORARY DEGREES.

At the recent graduation ceremony at Trinity College a number of honorary degrees were conferred by the University of Dublin. The candidates were introduced in Latin speeches by Major Tate, F.T.C.D., Public Orator. The honorary degree of LL.D. was conferred on Field-Marshal Viscount French, "Prorex Hiberniae"; on Field-Marshal Sir Henry H. Wilson, G.C.B., Chief of the Imperial General Staff; and on Brigadier-General R. C. Jellicoe, D.S.O. The honorary degree of M.D. was next conferred upon five medical graduates of the university in recognition of their work during the war in the Army Medical Service. They were, in alphabetical order, Major-General J. J. Gerrard, C.B., at one time D.M.S. Fifth Army in France; Major-General Sir James Murray Irwin, K.C.M.G., for long D.M.S. Third Army; Major-General J. J. Russell, C.B., who, after service at Rouen, was appointed D.D.M.S. Ireland; Major-General W. T. Swan, C.B., in presenting whom the Public Orator made reference to the operations in Palestine; and Major-General Sir Harry N. Thompson, K.C.M.G., formerly D.M.S. of the First Army, and now of the Army of the Rhine.

CLOSING OF DUBLIN HOSPITALS.

The position with regard to the three Dublin Hospitals—the Richmond, Hardwicke, and Whitworth Hospitals—due to the Government's refusal to increase the subsidy to these institutions, has reached a crisis. The entire Whitworth Hospital, consisting of eight wards, has been closed, and it is possible that the Richmond also may be closed on Monday. The various traders who have been supplying provisions to these institutions since last February, and who have not received any payment on account since then, have notified the secretary, through their solicitors, that they will cease to do so. One trader, who supplies beef, butter, and other commodities, stated that his account was over £2,000, and that there seemed little prospect of payment. The extern departments of all the hospitals have been closed for some weeks. During last week only medical and surgical cases calling for treatment of short duration were received, and of other patients only those for whom payment would be made by the various Government ministries and local authorities were admitted. So far the fever hospital, which is the only institution of its kind on the north side of the city, is being kept open. A large number of nurses who were in course of training had to be sent home and servants and porters dismissed. The present condition of the hospital, owing to a dearth of patients, makes it impossible for students to receive the clinical instruction necessary in preparation for their examinations.

The Lord Mayor is in communication with the Chief Secretary with a view to his receiving a deputation on the matter during the coming week, when it is hoped something may be done to relieve the present state of the institutions, the closing of which must involve much hardship upon the poor in the north side of the city.

The statement which appeared recently in a morning paper setting out the overdraft on the hospitals' account at £6,500 was referred to by the Secretary as misleading, since it did not include the large amount of debts accumulated since February. Further, it was pointed out that the hospitals had no invested funds or capital which could be realized, and were consequently solely dependent on the Government grant. During the war a very large number of wounded soldiers was treated in these institutions.

GYNÆCOLOGICAL APPOINTMENT IN BELFAST.

Mr. C. G. Lowry, M.D., F.R.C.S.I., Belfast, has been appointed assistant gynæcologist to the Royal Victoria Hospital, Belfast, in succession to Mr. R. J. Johnstone, M.D., F.R.C.S.Eng., who was recently appointed to the post of gynæcologist vacated by Sir John Byers. Mr. Lowry has had a brilliant career. After holding junior posts as resident surgeon and physician in the Royal Victoria Hospital and Maternity Hospital and demonstrator of anatomy in the university, he was elected gynæcological surgeon to the Templemore Avenue Hospital, and was appointed assistant to the professor of midwifery and gynæcology in the university, the former of which he still holds.

England and Wales.

LONDON WATER.

In his thirteenth annual report Sir Alexander Houston, Director of Water Examination, Metropolitan Water Board, states that during the year ended March 31st, 1919, difficulties were caused by the floods which occurred in rapid succession and the cold weather through which, owing to burst pipes, the consumption was greatly increased, with consequent increased rates of filtration leading to deterioration of the supply. At the Lee Bridge works, where the filter beds were temporarily inundated with flood water, the percentage of samples containing typical *B. coli* in 100 c.cm. (or less), 10 c.cm. (or less), 1 c.cm. (or less), and 0.1 c.cm. (or less), was 92.8, 53.5, 21.4, and 7.1 respectively. Taking the whole period of the war, the average quality of London water was wonderfully well maintained, but in the year under review the New River, East London (Lee), and Chelsea bacteriological results were the worst recorded. The floods were responsible in the two former, and as regards Chelsea, Sir A. Houston says the works were asked to do too much in relation to the filtration area. During the year 20,841 million gallons were chlorinated during 286 days (West Middlesex supply), and 261 days (rest of Staines supply), out of a total of 365 days. The intermissions were caused by floods, when the water was too turbid for filtration and stored water had to be used instead. The proportions were 74.3 per cent. raw water and 25.7 per cent. stored water during the year. The net saving by chlorination was approximately £10,503. The dose on the average was 1 in 2.25 million = (0.44 in 1 million), in terms of available chlorine. With bleaching powder (chloride of lime) of 33 per cent. strength this equalled 13.33 lb. per million gallons. The bacteriological results are better in winter (21.1 per cent.) than in summer (34.6 per cent.). Chlorination on the average succeeded considerably better than storage; it is practically three times superior during the winter months, when both the river water and the stored water gave the least satisfactory results. Despite the magnitude of the treatment (70 to 80 million gallons treated daily) no complaints have been received as regards taste since it was first started in June, 1916. In unfavourable years, when the unsatisfactory bacteriological results might continue for several weeks, chlorination could hardly be achieved without giving a taste to the water, and intermittent treatment would probably be necessary. Experience had shown that about April or May the results of the filtra-

tion of raw Thames water were not satisfactory owing, not to floods, but to a seasonal development of diatoms, the effects apparently of bright sunshine and increased temperature. At this period of the year fermentative changes seem to occur in the bed of the river leading to masses of suspended matter, buoyed up perhaps with bubbles of gas, rising up and rendering the water turbid. The accompanying diatoms give the material a viscid character, which tended to clog the filters. After May or June excellent filtration results might be expected until the late autumn or winter floods, when the river water filtered badly. At the date of writing last year's report it looked as if the problem of the prevention of choking of the filter beds with algal and other growths had been solved. Towards the end of April, however, the reservoir water and the upper layers of the sand filters gradually acquired a greenish tinge. The laboratory filtration figures remained good, and eventually it was found that the trouble was caused by a minute growth (*Raphidium*) which passed through the meshes of the laboratory linen filter despite the fact that the linen was in four layers.

RESIDENTIAL TREATMENT OF TUBERCULOSIS IN LONDON.

At the meeting of the London County Council on July 29th the Public Health Committee reported that a basis of agreement had been reached with the Insurance Committee with regard to the provision of residential treatment for insured persons suffering from tuberculosis. The Council already provides a certain number of beds in sanatoriums and hospitals; it is now to provide a much larger number, to which the Insurance Committee will have the right of nomination. The number available for insured persons who are recommended by the Insurance Committee for residential treatment is to be at least 100 more than the funds of the Insurance Committee might, according to the estimate of the Minister of Health, be expected to provide. The medical adviser of the Insurance Committee is to be a part-time officer in the tuberculosis division of the public health department of the Council, and the Council is to appoint a tuberculosis officer to act as medical adviser to the Insurance Committee with regard to residential treatment. The Council and the Insurance Committee are each to appoint three representatives to confer on any general question of administration, and disputes are to be referred to the Ministry of Health. A supplementary agreement has also been entered into whereby the Council becomes responsible for the provision of residential treatment for discharged soldiers and sailors. The cost of this is to be borne centrally by insurance and Exchequer funds. On April 1st, 564 men of this category were receiving such treatment. At present the Council funds 200 beds for cases of tuberculosis among adults, and these agreements will place upon it the responsibility of finding at least 860 additional beds. The general effect is to make the Council the central administrative body for dealing with residential arrangements for all tuberculous persons requiring such treatment through local authorities in London.

CENTRAL MIDWIVES BOARD.

A special meeting of the Central Midwives Board for England and Wales was held on July 24th, Sir Francis Champneys, Bt., in the chair. The Board dealt with three final and three interim reports, and five fresh cases. Four women were struck off the roll. Most of the charges were in respect of general breaches of the rules. Immediately after the Penal Board the ordinary monthly meeting was held. Before the business was proceeded with Mr. G. W. Duncan, the secretary, who is retiring in September, was handed a gift from the present and some of the past members of the Board. The chairman expressed the great regret of all the members at parting with Mr. Duncan, and spoke in high terms of appreciation of his services. Miss Paget added a few words, laying stress on the fact of how good a friend Mr. Duncan had always been to the midwives. Subject to the approval of the Ministry of Health, Mr. Herbert George Westley, M.A. Cantab., was appointed secretary of the Board as from September 6th next at a salary of £600 per annum, with annual increments of £20 up to £800 per annum, the salary being deemed to include any war bonus awarded up to that date.

PUBLICITY ARRANGEMENTS IN COMBATING VENEREAL DISEASES.

The London County Council, at its meeting on July 29th, voted £1,407 (75 per cent. of which is returnable by means of the Government grant under the Public Health Regulations) towards the publicity arrangements of the National Council for Combating Venereal Diseases. The results of disseminating information through the press have been such, in the Public Health Committee's opinion, as to justify a continuance of the arrangement.

Correspondence.

A POST-GRADUATE SCHOOL IN LONDON.

SIR,—I earnestly hope that these saddest of all words, "too late," are not to be recorded of our much-discussed efforts for making London a great post-graduate centre, but unless those who have been at work upon the scheme vote "urgency" upon it, and get something done *and done at once*, there is grave reason to believe that it is already too late. I refer, of course to the *permanent* post-graduate scheme which has been under discussion at many meetings for, I think, two years; and beyond printed programmes and schemes we are no further forward than we were two years ago when the project was first mooted. Now we hear from America that the profession there, probably inspired by what has been done here since last Christmas by the Fellowship of Medicine, has determined that New York shall be the great medical centre of the world, and with the usual American boldness has taken steps to raise a fund of ten millions sterling for the purpose. In view of the magnificent generosity and patriotism of American millionaires—and especially when they see a chance to go one better than obsolete Europe—personally I have little doubt that, vast as the sum is, it will be raised; but even a much smaller sum will probably do all that is necessary until the American post graduate scheme is self-supporting.—I am, etc.,

July 26th.

OBSERVER.

THE TERRITORIAL FORCE MEDICAL SERVICE.

SIR,—The communications under the above heading published in your issues of May 3rd and July 19th cover a good deal of ground and may best, I think, be discussed under two headings—namely, questions which arise from difficulties inherent in a territorial system, and, secondly, matters of detail which are, as it were, accidental and capable of being dealt with and solved by internal administrative action by the administrative medical officers.

With the latter of these a great part of both communications is concerned, and I will deal with it first, prefacing my remarks by the statement that in pre-war days it was by no means essential that a medical officer should train with the unit to which he was gazetted; where and on what lines he trained in any year was a matter between him and his A.D.M.S., the latter taking care, of course, to ensure that before an officer gazetted to a field ambulance or a battalion went for annual training in, say, a military hospital, he should be reasonably proficient in his field ambulance or regimental duties.

Moreover, if a medical officer was able to give the time to it and had the inclination he could attend a training in June with one formation, and a second in August with another and quite different formation, and would be assisted to this by his A.D.M.S. This was actually done on occasion by friends of my own.

The outstanding feature of the Territorial Force was that all ranks had their training in units organized for war, the officers as regimental M.O.'s and officers of field ambulances, clearing hospitals and general hospitals, and the other ranks similarly, according to their appropriate duties, and the Regular R.A.M.C. officers of experience with whom I have discussed the matter, without any hesitation ascribed the great success of Territorial field ambulances in the field to the fact that their training throughout had been on war lines, and expressed regret that this had not been the case of the Regulars: the war formations of R.A.M.C. having no existence in the Regular service in peace time.

Many of the clearing hospitals (T.F.) were, I think, not formed until the Territorial Force was embodied; they existed on paper only, with a skeleton crew as it were, and had no previous training or even substantial existence. That being so, it is not surprising that in the early stages some of them were not a success, more particularly as they were speedily changed out of all recognition from very mobile units with equipment for 200 on stretchers to the elaborate, slightly mobile, hospitals accommodating 600 to 1,000 patients that the casualty clearing stations became.

The case of the Territorial regimental medical officer is a little difficult. He had important duties—frequently unappreciated by the combatant officers, who generally held that a man who could not shoot and had not sufficient brains to keep his equipment clean was specially fitted to be a stretcher-bearer and render first aid to his injured comrade—in connexion with his battalion during winter training and very light duties in the summer training in camp, which left him ample time in which he might attach himself to, say, a field ambulance which might be training near by, and acquire some knowledge of field ambulance duties if he so desired. For training other than in camp, arrangements should have been, and generally were, made by A.D.S.M.S. for instruction of all officers through the medium of the adjutants of the schools of instruction established in the divisional areas.

Questions falling into my first group—that is, arising by reason of the Territorial Force conception itself—are very much more difficult to answer, as to do so involves the attempt to reconcile and combine incompatibles.

In its very essence the Territorial Force was strictly territorial, and derived its strength from the strong local patriotism of its members, who joined the local unit to which they were most inclined, and in connexion with which they developed a considerable *esprit de corps*; it would have been, I am sure, a disappointment to them, and felt as a grievance, if the annual training in camp had been carried out otherwise than with the units with which they had been associated in the preceding eleven months. Any departure from that system of training would, I feel sure, jeopardize the whole existence of the Territorial Force as we understand it.

Secondly, the Territorial Force was a purely voluntary association, and departures on the lines suggested by "Territorial Force" for training purposes, however desirable in themselves, presuppose that the Higher Command will have in peace time in the future the same absolute power of disposal of officers and other ranks that it has had during the recent mobilized service.

Thirdly, a "general list" for promotion, etc., presupposes perfect fluidity of the personnel composing it, to which in peace time, under a voluntary and territorial system, it is, and will be, impossible to attain.

Fourthly, the training of other ranks is fully as important as the training of the officers, and, *mutatis mutandis*, the above remarks apply equally to them.

Now I confess I see no way out of the impasse on the lines suggested by "Territorial Force." My own idea would be to retain substantially the old Territorial Force organization of local units and training, and supplement this by having large scale manoeuvres, lasting, say, a month, in a suitable part of Great Britain each year, to which all formations taking part would proceed on a war footing, and in which training would be carried out as nearly as possible under active service conditions; attendance at the manoeuvres training for the whole period to be compulsory for that year on all members of the formations concerned. If four divisions, with the appropriate Corps or Army troop formations, took part in such manoeuvres each year, it would be possible for every Territorial to get a month's real service training about once in four years.

The difficulties in the way are, of course, great, not least being the heavy expense, but the knowledge gained would be of real value, and the fact that such manoeuvres had to be carried out would be a powerful stimulus to the routine unit-training during other years.

If such a training be not possible—and I can hardly believe it would be—the only alternative, it seems to me, is the establishment of permanent R.A.M.C. schools of instruction (on the lines of the R.A.M.C. training camp at Eastbourne in 1915 and elsewhere later) in various parts, to which officers should have access at all times, and through

which should pass also as many as possible of the other ranks. This might be efficient, but would not be popular, and the Territorial Force depends for its existence on its popularity.

I have purposely said and will say nothing on the subject of pay further than to point out that in comparing Territorial Force pay with that of temporary officers the allowances in the former case should be added, and to express my conviction that as the service to the State is equal in all arms, the pay of all arms should be the same in the corresponding ranks, and that such pay should be consolidated, and all the frills and intricacies of the Royal Warrant, allowance regulations, etc., abolished entirely.

I may, perhaps, be allowed to say, in concluding, that I served as a regimental M.O. in the Volunteers and the earliest days of the Territorial Force, and later in field ambulances, one of which I commanded on active service for over two and a half years, and for the last months of the war commanded a Territorial casualty clearing station, so that my experience has been as varied probably as that of any Territorial medical officer, which must be my justification for stating my views as above on the points raised.—I am, etc.,

Stafford, July 25th.

A. E. HODDER.

REFORM OF PUBLIC HEALTH ADMINISTRATION.

SIR,—As one who has for many years taken great interest in public health, and acted both as a member and also as an official of public bodies, may I congratulate "M.O.H." on his excellent letter with regard to reform of public health administration which appeared in your issue of July 19th, p. 91.

He thoroughly grasps the position of affairs, and it is obvious that the only way in which the new Ministry of Health can, as he says, be effective in local administration, in order that henceforth the numerous laws and regulations shall not only come into existence, but shall everywhere be put into effective operation, is by making the medical officer of health a State official, centrally appointed and controlled. Those of us who are holding the position of medical officer of health, one which is as a rule underpaid, with responsibilities increasing every day, were, I am sure, all disappointed that no such proposal was adopted when the Act for setting up the Ministry of Health was passed; for it is clear to all that unless the medical officer of health is an official of the Ministry, and not of the local council, things will be no better in the future than they have been in the past under the régime of the Local Government Board.

Then, again, there is another most important point, namely, what attitude is the new Ministry of Health going to take up in dealing with local councils? Is it going to continue the policy of the Local Government Board and simply advise, suggest, and recommend, knowing in nine cases out of ten its advice will be ignored?

As an instance of the opinion held by local bodies I may mention that the clerk to a rural district council said to me the other day (and, as is well known, the rural district councils are the greatest offenders in neglecting to carry out the Public Health Acts): "The Local Government Board would never enforce anything which was contrary to the wishes of the local authority."

In the county in which I live there is a splendid opportunity for the Ministry of Health to divide up a large district, so that it can be conveniently administered as "M.O.H." suggests; it remains to be seen whether the new Ministry will take active steps in the matter or simply advise, suggest, and recommend.—I am, etc.,

July 20th.

ANOTHER M.O.H.

SIR,—I should like to endorse all that "M.O.H." says in your issue of July 19th, p. 91. Now that we are at the beginning of reconstruction I know that several of us working in urban districts are destined to offend certain members of our councils at no distant date by our action with regard to insanitary property. It is quite probable that the Ministry of Health will give security of tenure to all whole-time medical officers of health in the immediate future; but this measure will not remove our difficulties, inasmuch as offence given to some members of a council is calculated to keep a man at his commencing salary of £500 a year for a very long time.

The Home Office were evidently in earnest with regard

to the efficient administration of the Factory Acts, and entrusted the work to their own inspectors rather than to local councils, with the result that the demands of a factory inspector are immediately complied with, and that official has nothing to fear from local influence. In the public health service things are quite different, inasmuch as men are found on almost all councils who have contrived to get there to safeguard their own private interests, the interests of commercial undertakings with which they are connected, and to see that as little as possible is spent on public health "fads."

If the Public Health Acts are to be efficiently administered, medical officers of health must be as independent of local reactionaries as factory inspectors. I have never heard of any reason as to why they should not.

With regard to what "M.O.H." says about our ill-defined duties, I should like to add that, however well-defined our duties may become, this will not prevent councils adding to them duties which should be done by a general medical practitioner, and the man who refuses to take up these new duties will find it to his disadvantage when he asks for an increase of salary. I think that a medical officer of health should confine himself to preventive work, and that vaccination should be included among his duties, but that all treatment should be given to clinical men, and should include school clinics and infectious diseases hospitals.—I am, etc.,

July 21st.

S.M.O.

ENUCLEATION OF TONSILS WITHOUT AN ANAESTHETIC.

SIR,—I have read with much interest the correspondence on sudden death under an anaesthetic. The conflict of opinion as to the relative advantages of different anaesthetics and the methods of their administration leaves the matter still open. I desire to advocate operative interference without any anaesthetic, which I believe in the great majority of cases is unnecessary, and adds uncalculated danger both at the time of the operation and subsequently—the latter from possible bronchial and pulmonary irritation, where children shortly after the operation are sent home whatever the time of the year or whatever the weather; this is necessary in school and out-patient clinics. There is also in children the possibility of delayed chloroform poisoning in cases of acidosis. During the last twenty years I have operated upon 16,000 cases, during the first period with and for the last ten years without, an anaesthetic. I am aware that objections have been raised from the humane point of view, but it is by those who have not had much experience of it in the hands of an expert.

This is neither the place nor time for any description of the method, which I hope to give fully in a subsequent communication, but I may now say that 90 per cent. of all classes of cases combined can be enucleated as well without as with an anaesthetic. After the age of about 15 one can, after injection of a weak solution of cocaine and adrenalin chloride into the peritonsillar tissues, enucleate the great majority of tonsils by dissection, by the guillotine, or by a combination of the two. A small number almost completely fixed in their beds by frequent attacks of peritonsillitis and a few very nervous individuals may require, in addition to this local anaesthesia, a general anaesthetic, but such cases are not frequent.

This morning I enucleated the tonsils of a youth of 18, who desired to join the navy. After an injection into the peritonsillar tissues of $\frac{1}{4}$ grain cocaine, 12 minims of adrenalin chloride (P., D. and Co.), and 1 drachm of hot sterilized water, I gave it three minutes to act, during which I enucleated the tonsils and removed the adenoids of two children without an anaesthetic. I mention this to point out the ease and rapidity of the methods of both local anaesthesia and of no anaesthetic at all.

I frequently have three or four cases in succession where the children scarcely make a murmur. Of course when the child comes into the theatre crying it will continue to do so; but, generally speaking, I do not think there is any more pain than in the extraction of a tooth, and frequently not so much. There is not half the loss of blood, bleeding generally stopping in a few minutes, and the patient is generally ready to go home in half an hour.

More than two hundred medical men have had experience with me of this method and have expressed their agreement with it. If it had been universally followed the

fifty-six deaths recorded in the *Proceedings* of the Royal Society of Medicine would not have occurred. When the anaesthetic is given by a skilled anaesthetist and the operator is an expert the question is a little altered, but in hospital practice, where one is dependent upon continually changing house-surgeons, anaesthesia becomes very dangerous, whichever anaesthetic is used.—I am, etc.,

Birmingham, July 15th. FREDK. SYDENHAM.

SUDDEN DEATH UNDER AN ANAESTHETIC.

SIR,—I have followed the correspondence on this subject closely and with great interest. Dr. Levy's letter in the issue of July 26th again brings to the front what would appear to be the most important point under discussion—namely, the danger of light chloroform anaesthesia. He emphasizes this condition as being the predisposing cause of death under chloroform, the exciting causes requisite to produce cardiac stoppage being of various character. Dr. Levy confesses that his conclusions regarding safe administration are not derived from clinical experience. My clinical experience makes it very difficult for me to accept Dr. Levy's theory, and a second and recent perusal of his paper of May 1st, 1914, *Proceedings* of Royal Society of Medicine, does not help me in this respect.

Granted that chloroform is a protoplasmic poison and that chloroform anaesthesia is a toxæmia, it would indeed be strange if the organism were to suffer less from a large percentage of toxin in the blood than from a small percentage. I was unaware, moreover, that full anaesthesia prevents traumatic stimuli from reaching the nerve centres and reflexly setting up ventricular fibrillation. I understand that Crile and others use the anoci-association method of operating because general anaesthetics are of no use whatever in blocking traumatic stimuli. Crile further maintains that "deep general anaesthesia, especially with chloroform, renders an animal subject to early collapse, and decidedly less capable of enduring a protracted experiment." I confess to finding these latter teachings much more in accordance with clinical experience.

Do I really belong to "the old school" in believing that the important factor in death under chloroform is the high percentage of chloroform in the blood stream? I feel sure that experience has taught many modern anaesthetists to believe this. Cannot the large majority of fatal cases be explained by the inhalation by the patient of a strong chloroform vapour followed by spasmodic or other mechanical obstruction to the respiration, and the incarceration of this strong vapour in the pulmonary alveoli until the blood absorbs it to a toxic degree? It would at least appear to explain the accidents seen in connexion with the crying child, the spasmodic irregular breathing of the stage of excitement, the long-drawn inspiration and closure of the glottis when the anal sphincter is stretched, the reapplication of the mask laden with a strong vapour when the patient is "coming out," and the mechanical obstructions to breathing sometimes permitted with dental and tonsil cases.

An analysis of cases of deaths under chloroform gives us little help as regards this problem, for, according to the theory I support, it matters not at all whether a drachm or an ounce of chloroform had been used when death took place, strength of vapour inhaled being the all-important factor. A drachm of chloroform would be ample to produce sufficient concentration to cause death.

I consider chloroform a most valuable anaesthetic, and far superior to any other agent in certain conditions; but its toxicity is liable to produce spasm, and its low volatility and consequent slow elimination make it a dangerous drug even in the hands of the most experienced if used for full induction in all cases. Very many patients can be safely anaesthetized with chloroform alone, but the administrator should never proceed to induce anaesthesia with this agent unless he is prepared to change to ether or ethyl chloride, or both, should indications for this change arise.

Anaesthetists, I am sure, will not agree with Dr. Levy that they do not teach, and that textbooks do not teach, the value of a uniform anaesthesia and the dangers of an intermittent administration. I should like, too, to believe that I have their approval when I teach that once the patient is under, he should be kept as lightly under as is

consistent with the nature of the operation and the needs of the surgeon.—I am, etc.,

Dundee, July 28th.

ARTHUR MILLS.

SIR,—The majority of those who have discussed the above subject in your columns are of one mind regarding the dangers of chloroform and the relative advantages of open ether. But it is surprising to find that no one has mentioned ethyl chloride anaesthesia, save as a means of shortening the induction stage. One had imagined that ethyl chloride was widely employed as an anaesthetic for the tonsil-adenoid operation. It is safe and short, yet also sufficient.

It would appear, however, from the views expressed, that the dissection method, requiring a relatively long anaesthesia, has been adopted as a matter of routine, even in children, by several of your correspondents. Now guillotine enucleation, as devised by Whillis, will entirely remove any tonsil, if the patient is a child, and gives good results in many adult cases. "Dissection" need be chosen only for the adult whose tonsil capsules have become bound down by adhesions, as after repeated attacks of quinsy.

If, therefore, the guillotine method will suffice for the average case, why this vogue for routine dissection with its attendant anaesthetic troubles?—I am, etc.,

Edinburgh, July 26th.

DOUGLAS GUTHRIE.

SIR,—Allow me to thank your many correspondents for their instructive comments on my report under the above heading. Their opinions differ in some respects, but on the whole it seems that to my questions ("Is there special danger in the operation of tonsil enucleation by dissection?" and "Is the light chloroform anaesthesia given by Junker and tube when the mouth is wide open a source of peril?") the answers are in the affirmative; and the general conclusion is that ether is the safest anaesthetic for this operation.

In his first letter Dr. Levy writes: "There is nothing unusual in the conditions attending the death." Considering that this is my first fatality in thirty years' constant administration of anaesthetics, I am surely entitled to the opinion that the conditions were distinctly unusual. He goes on to speak of my administration having been "intermitted." There is nothing in my report to justify such a statement; there was no intermission, and the administration was quite continuous, the change from a mask to a Junker tube and back again being done in a second or two. That the chloroform dose was "insufficient" is probably true, and I laid stress upon the fact that anaesthesia *must* be light when the vapour pumped through the tube is greatly diluted by air admitted freely through an open mouth and uncovered nose. It is a common experience in throat and nose work to find a temporary return from the Junker to the mask necessary in order to provide a sufficiently deep anaesthesia.—I am, etc.,

Eastbourne, July 21st.

H. S. GABBETT.

HOSPITALS FOR TUBERCULOSIS.

SIR,—I should like to make a few comments on the lecture by Dr. Batty Shaw in the *BRITISH MEDICAL JOURNAL* for July 26th.

1. So far as my experience goes, very few early cases have up to the present been treated in sanatoriums, and I am inclined to think that, were a careful history of all cases in sanatoriums taken with a view to discovering how long before admission they had been suffering from symptoms of activity, it would be found that most were far from early, but that in those which were early the result of treatment had been excellent.

2. With regard to early infection in childhood, I would observe this may be of two kinds: (a) By food, in which event it will be by the bovine bacillus, and this may produce some protection in later life against the human bacillus, though of course if sufficiently large in amount it may under favourable circumstances produce any of the various kinds of surgical tuberculosis; (b) by way of the respiratory tract, which, if the dose be large, may have most serious consequences; this is due to infection, and is extremely likely to happen in the neighbourhood of a not careful open case of pulmonary tuberculosis.

3. I should regard the chronic case mentioned on p. 99 with a family half of whom had tuberculosis as an obvious case of home infection, and I should object to the inference that this man had necessarily a weak resistance; for it is a little difficult to believe that a man who was still alive after suffering for years from what had obviously become an extensive amount of disease was lacking in resisting power. He was, of course, very resistant, but had lacked the good fortune to have been treated in the early stages.

4. It is important to remember (a) that the ordinary person can deal with a small amount of infection, but that the dose of bacilli received at any one time is of great importance, and a large dose may break down the strongest resistance, and (b) no doubt the order in which infectious doses are received will have a bearing on the type of case resulting: if a small dose be received first, then a larger dose received later may not have such serious effects.

5. We must not forget that many cases are infected more than once.

6. With reasonable precautions a sensible person, even with open tuberculosis, can avoid infecting others, but it is surely better to treat patients before they have become infectious, and not to watch them without treating them until too late because afraid to make a diagnosis.—I am, etc.,

New Cumnock, July 27th.

EDWARD E. PREST.

INFECTIVE CATARRHS—SO-CALLED "COLDS."

SIR,—We are glad to find that our original letter on this subject (in your issue of June 14th) has called forth an interesting correspondence. Apparently nearly all who have written to you (as well as others who have written to us privately) quite endorse our main contention that the terms "a cold" or "a chill" as commonly applied to infective catarrhs are unfortunate, misleading, and actually mischievous, being based on an erroneous etiological conception. As Professor Leonard Hill rightly says: "The medical profession by the use of the word 'chill' keeps up a false etiology in the public mind, while the correct and rapid diagnosis and treatment of infective disease is hampered by the belief of the profession in chill as a chief cause of illness." His witty suggestion that "a fug" would be a better term than "a chill" would, if acted upon, go a long way towards bringing home to the public the true predisposing causes of these common but serious affections.

In reply to our critic Dr. J. E. Blomfield, we would say that whilst there are, no doubt, insuperable difficulties in the way of enforcing compulsory isolation for infective catarrhs, owing to their widespread occurrence and many gradations, this does not alter the fact that they are highly infectious and often very dangerous; or that it is thoughtless and selfish in a high degree for any one who realizes this needlessly to expose himself whilst suffering in an acute stage.

It may be that the universal practice of inoculation with a suitable vaccine, say once or twice a year, will prove to be the best and most hopeful method of combating infective catarrhs; but in the meantime we would again urge that exposure to infection in hot, stuffy rooms, rather than exposure to cold on leaving such rooms, is generally the true explanation of "catching a cold"; that catarrhs abound in winter because ventilation is then less; and that pure cold air is a protection against them rather than a danger.

Dr. Blomfield fails to convince us that, in the kind of cases mentioned, there is either any definite fall of temperature or any check to elimination; and surely it is not necessary to call in the factor of cold to account for a "flare" in any chronic septic condition. The symptom-complex noted in his last paragraph is, we think, fairly correctly described by Professor Hill's term "glut of the bowels."

The traditional view, which Dr. Blomfield apparently still clings to, is no doubt firmly established and will take a long time to dislodge; but it is not necessary, in order to maintain our thesis, to contend that climatic conditions, sudden changes of temperature, or "draughts" have no influence on these affections. The remarkable immunity, however, enjoyed by patients in sanatoriums (especially if isolated from the outside world) and by arctic explorers, etc., also the well known fact that one may contract an

acute infective catarrh at midsummer, surely indicate that it is not cold in the ordinary sense but infection which is the determining factor.—We are, etc.,

N. I. SPRIGGS.

C. KILLICK MILLARD.

Leicester, July 26th.

HYPERPYREXIAL HEATSTROKE.

SIR,—I may say that I was admitted with this illness in Mesopotamia (temperature 105°) in August last, and the first symptom I felt of the illness was the constant desire to micturate, and passing of urine, a pint at least at a time; the specific gravity, I learnt in hospital, was only 1001 to 1005. There was absolute suppression of sweating for four days, but no headache and no previous illness. A blood test was negative. I do not see why these symptoms should be caused by sandfly fever alone, as my illness occurred on the ship *Syria*, going to Basrah for the first time from England, and there was no sign of malaria. I attribute my illness to the excessive moist heat alone, which I believe upset the automatic arrangement of my heat centre.

The treatment adopted was ice-water baths and about 60 grains of aspirin a day. Epistaxis was severe every night for four days during sleep, and now I feel no ill effects and have had no other illness since.—I am, etc.,

Sounthorpe, July 22nd.

T. R. COULDREY, Capt. R.A.M.C.

SIR,—I am interested to read Captain Sinderson's theory, but would ask him how he can explain the following facts on the lines of his theory:

In the summer of 1917 I was M.O. to a regiment camped on the Tigris, about sixty miles above Baghdad. There were numerous cases of hyperpyrexial heatstroke, chiefly amongst the men whose duty it was to water the animals at midday. At the same time parties from the regiment had to spend about two nights a week out of camp preparing a front line. The invariable sequence was an outbreak of sandfly fever amongst the men so employed, whereas we in the camp were singularly free from this. When these lines were occupied later in the year a large number of cases of sandfly fever resulted, and these in no way resembled the hyperpyrexial heatstroke.

Whilst agreeing that hyperpyrexial heatstroke is due to a toxin, I do not think that the toxin of the sandfly is the specific one.—I am, etc.,

W. YEOMAN,

Late Captain R.A.M.C.(S.R.).

London, W., July 22nd.

DENTAL CONDITIONS IN PREGNANCY.

SIR,—In the interesting article by Dr. Ballantyne, in the *JOURNAL* of July 26th, reference was made to the prejudice against dental treatment during pregnancy.

I entirely agree with Dr. Ballantyne that extractions and fillings during pregnancy are not dangerous. In support of this I should like to mention that two years ago Dr. Robertson, Medical Officer of Health for Birmingham, established a weekly dental clinic in conjunction with the ante-natal clinics. Since then some hundreds of expectant and potential mothers attending my clinics have been treated for extractions, fillings, and dentures, and although the treatment in many cases has been undertaken as late as the seventh month, in no case has there been the slightest untoward result. On the contrary, marked improvement in the general health has frequently been noticed.—I am, etc.,

Edgbaston, Birmingham, July 28th.

ROSE L. MOLLOY.

SIR,—Dr. J. W. Ballantyne's contribution on the dental condition of expectant mothers in an ante-natal clinic is of great interest. Dr. Ballantyne, in view of his observations which disclosed that 98 per cent. of the women had defective teeth, rightly appeals for measures to be taken to save the teeth of the potential mother by all the means of preventive dentistry.

In this connexion I venture to suggest that the diet of the expectant mother should not be overlooked. Experimental evidence is gradually accumulating which shows that diets deficient in some of the food accessory factors, or "vitamines" as they are sometimes called, have a very

marked influence on the dentition. Mrs. E. Mellanby has drawn attention to the pronounced changes which the teeth of rachitic puppies display, a condition which, according to Dr. E. Mellanby's researches, would seem to be due to the deficiency in the diet of the fat soluble A accessory factor or a factor closely associated with it (*Lancet*, December 7th, 1918). Major F. M. Wells and I have shown that the pulp in the teeth of guinea-pigs subsisting on a scorbutic diet undergoes a very definite deterioration. Such condition of the teeth has also been observed by us in scorbutic monkeys (*Proc. Roy. Soc.*, B, vol. 90, p. 505).

Dr. Ballantyne, as well as other clinicians, has been impressed by the bad condition of the teeth of pregnant women. The latest researches impel one to consider the hypothesis that defective diet may be the cause of it. By defective diet I understand either one which is quantitatively inadequate or a diet which, although satisfactory in its calorific value, is deficient in some vital principles, such as the accessory factors. It is quite conceivable that a pregnant woman existing on a diet containing just sufficient accessory factors for her own metabolic requirements may incur a deficiency by giving some of it up to the developing embryo. Our experiments with guinea-pigs have shown that an antiscorbutic deficiency which hardly manifested itself by the ordinary macroscopic lesions nevertheless produced definite changes in the structure of the teeth.—I am, etc.,

London, S.W., July 29th.

S. S. ZILVA.

EFFICIENT TREATMENT OF THE CHRONIC RUNNING EAR.

SIR,—Captain Wilson's memorandum on the treatment of running ears (May 24th, p. 642) is, I consider, of the greatest importance, as it brings into prominence some points most difficult to impress on the medical profession and the public.

1. The seriousness of the condition. As a rule, running ears, provided they are not so offensive as to attract attention, are lightly regarded, with in many cases ultimately most serious results, requiring urgent operative treatment.

2. The absolute necessity of skilled supervision and treatment of these cases. This point is most difficult to get the public to realize. Those who can efficiently cleanse their ears at home are few and far between (I refer to the hospital class of patient), and this entails daily attendance at a hospital, and in some cases in-patient treatment when the discharge is profuse, until the condition has sufficiently improved. I do not altogether agree with Captain Wilson's principle of swabbing instead of syringing. Personally, I prefer the combination, or I may say rather the alternation of the two. But syringing to be effective must be skilfully and carefully done.

3. As a result of (2) a very large out-patient attendance at the ear department of a general or special hospital is entailed—a point which hospital committees, and also, I must say, some members of the medical profession, do not as a rule realize.

I agree with Captain Wilson that constant supervision and treatment, if persisted in, give excellent results as regards cure of the trouble; but I consider, from a very large experience, that one will always find a certain percentage of cases in which the otorrhoea will continue and will remain foul, and the patient's health be obviously affected by septic absorption, as shown in general malaise and anaemia; in these cases—and I do not include those with recurring granulomata, headache, obvious cholesteatomata, etc., which every one will agree are in a more serious category—nothing but operative measures will avail to remedy the condition.—I am, etc.,

Southsea, July 22nd.

C. A. SCOTT RIDOUT.

ALCOHOL AND VENEREAL DISEASE.

SIR,—Colonel J. G. Adami's article (*BRITISH MEDICAL JOURNAL*, January 25th, 1919, p. 98) on the prevention of venereal disease, which he heads "The policy of the ostrich," is most cogent, and one of the finest examples I know of the practice of taking the mote out of somebody else's eye without casting the beam out of your own. Colonel Adami recommends all sorts of valuable schemes for preventing venereal disease without condescending on

the great problem. What chiefly makes young men in the army consort with these ladies who give it them? a question to which the broad answer is—drink. If you cut off drink you destroy prostitution as a business proposition. Regulation will diminish venereal disease, particularly the worst sort, and is useful; so is prophylaxis; but they attack this public health problem too late. One-third of total admissions to sick list in the army in 1906 were venereal, one-third of the total days' sickness in the navy that year were venereal. The usual experience from year to year was that one-third of the illness of the navy was due to venereal disease, and I have never found any fleet surgeon to dissent from the view, which experience forced upon me, that two-thirds at least of the venereal cases occurring in the service were contracted when the patient was under the influence of drink.

Alcohol damages first the most highly developed cells in the brain, and diminishes at once self-consciousness and self-control. Hence the greater pull which flaunting prostitution makes on men who have "the drink taken." No endeavour to limit venereal disease without dealing with the drink question can be thorough. As well might one attempt to extinguish a fire due to an escape of gas, and fed thereby, without cutting off the gas. Such would truly be "the policy of the ostrich." A United States medical officer told me that in his town in Tennessee where they had, before prohibition, a "red light" district with a thousand women living in it, since prohibition these ladies had all left the town. Little has been said lately about this relation of drink and venereal disease, but it is to be remembered to his lasting honour that Dr. Grenfell of Labrador wrote a short note to *The Times* in 1917 drawing attention to the importance of prohibition in the prevention of venereal disease.

Drink they have themselves taken helps to make women prostitutes, drink men have taken is the chief adjuvant of prostitutes. It is hard to get this argument stated in the press of this country, which seems to me to be very tender with the arguments against drink. Women are unconsciously more friendly to men who have taken a little drink and have so become more susceptible, more forward. But, wine is a mocker, and often cheats women of the prize, marriage, for which they are angling. It makes the men less persevering, and often ultimately unmarriageable.

There are other things worse than prostitution; those also are fed by drink. All of us who regularly read *The Times* must remember the astonishment with which we first there read the word syphilis. That marked a brave attempt to wake up England in regard to this danger. It is still necessary to wake England up thoroughly. There are enormous difficulties in the way, silent, unconfessed, but with enormous inertia resisting movement. So true is it that where your treasure is there will your heart be also.

I am sorry that, as I am at present abroad, I send this note so late.—I am, etc.,

W. E. HOME, M.D., B.Sc., D.P.H., M.R.C.P.E.,

Marseilles, June 30th.

Fleet Surgeon R.N.(ret.).

THE FUTURE OF THE MEDICAL PROFESSION.

SIR,—There is no longer a question of whether there shall be state medical service—there is already a state medical service. The question now is how far state control of medical practice shall extend. I make a few tentative suggestions.

I would propose that state medical service should be divided into three classes: (1) Consulting and specialist; (2) whole time; (3) part time.

1. Consulting service to be obtained by request of a general practitioner, or of a patient with his sanction.

2. Whole-time panel practice, list to be limited to 2,000 at 10s. capitation, midwifery cases to be taken, and some extra fees to be arranged.

3. Part-time panel practice, limited to 1,000. Midwifery engagements to be optional.

Poor Law district work should be transferred to panel surgeons. Poor Law hospitals should be brought up to date as regards staff and equipment.

This scheme is only a skeleton. It might serve for the nucleus of a medical service which would be elastic and efficient. Of course many details would require thinking out, such as, for instance, pathological and research laboratories, the relation to voluntary hospitals, the arrangements for tuberculosis and venereal diseases, etc.,

but the main principles are simple. Either the future of medical practice must be moulded by intelligent prevision, or it will shape itself on chaotic lines by a process of evolution. We need a statesman who will consider the needs of the people, and also will listen to the voice of the profession as a whole, who will act as our pioneer in still unexplored regions of preventive and clinical medicine.—I am, etc.,

Loughborough, June 29th.

J. B. PIKE.

THE NEW R.A.M.C. CONTRACT.

SIR,—I notice in the recent number of your JOURNAL an article intimating that the response of medical men to the War Office appeal for doctors has not been satisfactory.

May I point out that perhaps the authorities have no idea how bitter is the feeling, among Territorial and Special Reserve medical officers, at the difference in treatment recently meted out to them as compared with the temporary R.A.M.C.? Letters have appeared, representations made, but all to no purpose.

If the War Office were to supplement gratuities of all Territorial and S.R. medical officers (and so compensate them for the monetary loss they have suffered by being a Territorial or S.R. instead of a temporary R.A.M.C. officer)—making their gratuities up to a total of, say, £500 for four years' embodied service such as a naval medical officer gets after the same period, or at the same rate as a regular R.A.M.C. gets after eight years' service, it would, I feel sure, help to mitigate some of the sore feeling that is so prevalent at present, and might encourage re-enlistment. I notice you call attention to the disadvantage under which junior officers of the Territorial and Special Reserve R.A.M.C. have served in the war. Why, then, if such disadvantage is recognized is it not made good to them, especially if the Government needs their further help?—I am, etc.,

July 28th. CAPTAIN R.A.M.C.T., LATE SURGEON R.N.

EDINBURGH UNIVERSITY ROLL OF HONOUR AND WAR RECORD.

SIR,—It is proposed to publish a roll of honour and war record of the University of Edinburgh, and a letter asking for information as to war service, promotions, honours, etc., with dates, is being sent to all graduates and to the relatives of the fallen whose addresses are known. The number of medical graduates who have given their lives is very considerable, and it has been found very difficult to obtain the addresses of their relatives. It would be a great favour if this communication could be inserted in your widely circulated journal, so that those interested may become aware of the forthcoming publication, and may communicate particulars to the undersigned—

JOHN E. MACKENZIE, Major,

University of Edinburgh,
July 15th.

Editor.

REPRINTS.

SIR,—I should like to make a suggestion to those of your readers who order reprints of their papers, which would, if adopted, be a great boon to libraries, and at the same time would have very distinct advantages for the authors. Let the author, as early in his career as possible, decide on a convenient size (usually a demy octavo), and when ordering reprints ask the printer, without altering the set of the type, to make his reprints on paper of that size. If the formes are not altered the extra cost will be trifling, and those who receive his reprints from time to time will be able to bind them up into convenient volumes. I frequently receive batches of reprints varying in size from duodecimo to imperial octavo, and it is difficult to classify these varying sizes as one would like, and utterly impossible to make a decent binding of them.—I am, etc.,

J. Y. W. MACALISTER.

The Royal Society of Medicine,
1, Wimpole Street, London, W.1, July 7th.

ACCORDING to *Italia Sanitaria* of Rome the number of officers of the Italian medical services who perished in the war up to January 20th, 1919, was 376. Of these 347 belonged to the army, 10 to the navy, 42 to the Red Cross, 2 to the Order of Malta, 3 to the mercantile marine, and 2 to the colonial service. In addition to these, 216 medical students lost their lives.

Universities and Colleges.

UNIVERSITY OF OXFORD.

DIPLOMA IN OPHTHALMOLOGY.

THE following have satisfied the examiners: H. W. Archer-Hall, E. M. Eaton, V. O'Hea-Cussen, W. H. Kiep, W. C. Souter.

UNIVERSITY OF CAMBRIDGE.

AT a congregation held on July 24th the following medical degrees were conferred:

M.B., B.Ch.—E. N. Showell-Rogers, H. L. Cronk.
B.Ch.—F. N. Y. Dyer.

UNIVERSITY OF LONDON.

AT a meeting of the Senate held on July 24th the title of Emeritus Professor of Anatomy was conferred upon Professor Sir G. D. Thane, LL.D., F.R.C.S.

The following candidates have been approved at the examinations indicated:

M.D.—Branch I. Medicine: F. C. H. Bennett, Dora C. Colebrook, C. Cooke, Annie M. Forster, G. E. Genge-Andrews, Mary E. Harding, J. S. H. Lewis, H. A. Moody, J. A. Ryle (University medal).
Branch II. Pathology: G. S. Wilson.
Branch III. Mental Diseases: M. Culpin, C. W. Forsyth, T. Q. Graves.
Branch IV. Midwifery and Diseases of Women: J. A. Forriera, J. J. Jhirad, M. H. Oldershaw, V. J. E. C. del S. Perez y Marzan, C. G. Richardson.
M.S.—Branch I. Surgery: W. B. Gabriel, L. G. Phillips.
* Qualified for University medal.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.

The following have been appointed demonstrators in the subjects indicated:—Practical Surgery: W. Girling Ball, F.R.C.S., and J. E. H. Roberts, M.B., B.S., F.R.C.S. Operative Surgery: Sir C. Gordon Watson, F.R.C.S. Midwifery: M. Donaldson, M.B., B.Ch., F.R.C.S. Biology: W. A. Cunningham, M.A., Ph.D. Chemistry: J. H. Johnston, M.Sc., F.I.C. Anatomy: J. L. Shellshear, M.B., Ch.M. (senior demonstrator); R. A. Ramsay, M.Ch., F.R.C.S., H. E. Griffiths, M.B., F.R.C.S.; J. B. Hume, M.R.C.S. Physiology: J. Trevan, M.B., B.Sc., M.R.C.P. (senior demonstrator); N. B. Dreyer, B.A., and R. Hilton, B.A. Pathology: R. G. Canti, M.B., B.Ch.; T. Jockes, M.B., and E. G. D. Murray, M.A.

T. H. G. Shore, M.D., M.R.C.P., has been elected curator of the museum.

UNIVERSITY OF DUBLIN.

THE following degrees were conferred on July 4th:

M.D.—J. V. Cope, G. P. Efford (*in absentia*), Evelyn Fisher, E. O. Marks, F. J. Smith, A. G. Varian, Hilda M. Varian, A. H. Watson.
M.B., B.Ch., B.A.O.—A. R. Aldin, C. G. Ambrose, F. J. G. Battersby, C. D. Brink, J. C. J. Callanan, P. Casey, J. H. Coolican, F. J. Dymoke, G. FitzM. Keatinge, A. G. D. Magee, L. J. Nugent, J. S. Quin, C. J. Quinlan, Gertrude Rice, Mary C. Sheppard, A. H. Thompson, H. B. van der Merwe, V. G. Walker, T. J. R. Warren.

UNIVERSITY OF SHEFFIELD.

THE following candidates have been approved at the examination indicated:

FINAL M.B., CH.B.—W. Collins, R. E. Ford, R. H. Groves, Dorothy E. Mathews, R. E. Pleasance, F. Roper, L. Samuels, F. L. Smith, Alice White.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary Council was held on July 24th, when Sir George Makins, G.C.M.G., President, was in the chair.

H.R.H. The Prince of Wales.—The President reported that the Prince of Wales had consented to become an Honorary Fellow of the College; he was therefore elected. The President stated that His Royal Highness hoped on his return from Canada towards the end of the year to attend at the College to receive the diploma.

His Royal Highness the Duke of Connaught, Colonel-in-Chief of the Royal Army Medical Corps, had also consented to become an Honorary Fellow, and was duly elected.

Diploma of Membership.—Diplomas were granted to seventy-eight candidates found qualified at the recent examinations.

LONDON SCHOOL OF TROPICAL MEDICINE.

THE following candidates have been approved at the examination held at the termination of the sixtieth session:

*W. H. W. Cheyne (Duncan and Lalaca medals), J. I. Connor, G. S. Glass, E. D. Fitzgerald (Smith Settlements Medical Service), Surgeon Lieutenant Commander T. O. Patterson, R.N., Captain W. C. Spackman, I.M.S., P. A. Dalal, A. C. Price, Captain H. N. Stafford, R.A.M.C., J. T. Smith, Miss Y. H. Honsboo, Miss S. A. Finch, Miss A. Bransen, B. B. Watch, H. O. Gilmore, S. Peckett, J. W. Scharif, J. E. Tibbles, Miss B. Warren, B. Mountain, B. B. Jareja, O. Farrell, A. R. Neckles, J. A. Lilley.

* With distinction.

Obituary.

W. H. PEILE, M.D., D.P.H.

MANY old students of University College Hospital will bear with regret the news of the death of William Hall Peile, son of the late Sir James Peile of the India Office, which took place at Sidmouth on July 14th. Having spent some years at Cambridge and taken his Arts degree there, he joined the hospital at a rather later age than the majority of students. He was most thorough and careful in his work, and after obtaining the diplomas of M.R.C.S. and L.R.C.P. in 1897 he held the resident posts of house-physician, house-surgeon, and senior obstetric assistant. He later took the degree of M.D. at Dublin University and the D.P.H. of the English Royal Colleges.

Never of robust constitution, his health prevented him from gaining the position in the profession to which his ability entitled him, and he was induced to spend several years cruising in various parts of the world. Finally he married and settled at Sidmouth, where as medical officer of health he devoted himself to improving the sanitation of this lovely little seaside resort. Some workmen's dwellings erected by the local council on his advice remain as evidence of his work. Peile's health, unfortunately, broke down, and he was obliged a few years ago to relinquish this post. He contributed some interesting articles to the medical journals. Those who had the privilege of knowing him have lost a staunch friend and one whom they will always remember as a true type of a cultured English gentleman.

CAPTAIN CLEMENT PERRONET SELLS, M.C., R.A.M.C.(T.F.), died at the Royal Air Force Hospital, Swanage, on July 4th, aged 29. He was the son of the late Vincent Perronet Sells, of Highfield, Oxford, and was educated at Oxford and at Middlesex Hospital, taking the diplomas of M.R.C.S. and L.R.C.P. Lond. in 1916. He joined the R.A.M.C.(T.F.) on August 23rd, 1916, was attached to the R.A.F. from April 1st, 1918, and received the Military Cross on June 3rd, 1918.

DR. THOMAS ADDIS EMMET of New York, who died on March 1st, was born on May 29th, 1828, in Charlottesville, Virginia. He was the son of John Patten Emmet, professor of chemistry and materia medica in the University of Virginia. He graduated at the Jefferson Medical College, Philadelphia, in 1850, and after many years' service as assistant became surgeon-in-chief to the Women's Hospital in 1861, an appointment which he held till 1872. He was the author of *The Principles and Practice of Gynaecology*, which went through several editions. Dr. Emmet was a great collector of American prints and autographs and extra-illustrated books. One of his collections was sold for £30,000, another for £14,400. He left a fortune amounting to £200,000.

PROFESSOR HERMANN OPPENHEIM, the well known neurologist, who died recently at Berlin, was born in that city in 1858. He studied medicine at Goettingen, Bonn, and Berlin, where he came under the influence of Westphal. He became assistant in the neurological clinic of the Charité in 1883; in 1886 he qualified as *privat-docent*, and in 1893 became professor. He published papers on traumatic neuroses, syphilitic diseases of the central nervous system, tumours of the brain, encephalitis, and cerebral abscess in the *Charité Annalen*, *Virchow's Archiv*, and the *Zeitschrift für Nervenheilkunde*. He was also the author of a textbook on nervous diseases published in 1894, well known in its time; a second edition appeared in 1898.

MAGNUS GUSTAF RETZIUS, the famous Swedish anatomist, died at Stockholm on July 21st, aged 77. He was the son of another distinguished anatomist, Anders Retzius, and was born at Stockholm in 1842. After studying at Upsala and Stockholm he graduated at Lund in 1871. In 1877 he was appointed extraordinary professor of histology in the Carolina Institute of Stockholm, becoming ordinary professor in 1889. He resigned in 1900, and devoted the rest of his life to research. In the pursuit of knowledge he travelled widely in Europe and America, and by his work in anatomy and anthropology won many distinctions,

including the Monthyon prize of the Institute of France. He published his results in monographs on the organ of hearing in bony fishes (1872); the anatomy of the nervous system and the connective tissue (in collaboration with Axel Key (1875-1876); on Finnish skulls (1898); the organ of hearing in vertebrates (1881-1884); on the macroscopic anatomy of the human brain (1896); on old Swedish skulls (1899), and kindred subjects. The last of a series of handsome and beautifully illustrated folios appeared in 1914. Retzius was a Fellow of the Royal Societies of London and Edinburgh, the American Philosophical Society, the Académie des Sciences of Paris, and many other learned bodies.

The Services.

MENTIONED IN DISPATCHES.

IN a special Supplement to the *London Gazette*, issued on July 28th, General Sir C. C. Munro, Commander-in-Chief, India, relates particulars of the part played by India in the various operations in the recent war. The list of those mentioned for particular services, appearing as an appendix to the dispatch, include six members of the A.M.S. and R.A.M.C., four officers of the I.M.S., and two Indian medical practitioners.

Major-General P. Hehir, C.B., C.M.G., I.M.S., was reported as wounded in the casualty list published on July 8th, presumably on the Indian frontier. This is the first instance throughout the war of a medical officer of this rank being wounded.

Lieutenant Hari Das, I.M.S. (temp.), attached 19th Gurkhas, is reported as wounded, in the casualty list of July 26th.

Medical News.

AN organization of medical practitioners has been formed in New York to start a movement to raise £10,000,000 for the purpose of making New York the medical centre of the world.

DR. HENRY STRONG, J.P., of Worthing, some time of Croydon, left £47,750. He directed that his property should be divided into twenty parts, six of which are to be given to Epsom College, two to the Croydon General Hospital, and the remainder, subject to a few personal legacies, to various charitable institutions.

THE Summer School of Civics and Eugenics at Cambridge will be opened by Viscount Haldane on Saturday evening, August 2nd. The address of the Secretary of the School is, University Arts School, Bene't Street, Cambridge.

LAST week Major-General Sir Robert Jones, C.B., entertained a large party of friends to dinner at the Savoy Hotel, London, to meet King Manuel. The occasion was the approaching cessation, owing to the declaration of peace, of King Manuel's active share in the work of the military orthopaedic department. Various speakers—Sir Robert Jones, Sir Arthur Stanley, Lieut.-General Goodwin, Sir Harold Stiles, Lord Knutsford, and Sir Robert Hudson, chairman of the Joint Finance Committee of the British Red Cross Society and the Order of St. John—bore testimony to the value of the work done by King Manuel in influencing public opinion, by acting as liaison officer between the orthopaedic department and the Joint War Committee, and by his own personal labours at the Shepherd's Bush Military Orthopaedic Hospital. In replying, King Manuel spoke in the warmest terms of Sir Robert Jones and thanked all those with whom he had been associated in work for the disabled man during the last four years.

FLEET SURGEON ALFRED T. CORRIE, R.N., has been elected a governor of St. Bartholomew's Hospital, London.

AT the matriculation examination of the University of London in June, 226 candidates passed in the first division and 1,188 in the second division.

THE KING, on the occasion of his visit to the Guildhall on July 29th, knighted Dr. W. R. Smith, one of the Sheriffs of London.

THE Wellcome Historical Medical Museum will be closed for cleaning and redecoration from August 9th until the end of September.

THE King of Italy has appointed Dr. A. F. Cameron to be a Chevalier of the Order of the Crown of Italy in recognition of valuable services rendered during the war.

THE special course of instruction in the surgical dyspepsias will be repeated at the London Hospital Medical College by Mr. A. J. Walton, assistant surgeon to the hospital. The lectures, to which members of the profession will be admitted on presentation of their cards, will be given on Mondays and Fridays at 4.30 p.m., commencing on August 1st.

BEFORE his death on the field of honour, M. Albert Gauthier-Villars had decided to publish an annual calendar of the scientific world. It was intended to replace the German *Minerva*, and the title was to have been *Universitatum et eminentium scholarum index generalis*. The work is to appear under the direction of Professor R. de Montessus de XX Ballore of Paris.

THE annual report of the Imperial Cancer Research Fund shows that the work of the laboratory during the past year has been a continuation of the programme laid down at the beginning of the war. Sustained effort on a subject divorced from the immediate national interest became increasingly difficult as the war approached its culmination, the main efforts of the staff being concentrated on war problems. But there is a promise of a return to the special work of the laboratory during the coming year. Dr. Bullock has returned from the army, and Dr. H. A. Drew has become a regular member of the staff. A report on the special war work is being prepared by the director, Dr. J. A. Murray, and will shortly be issued. The treasurer, Sir Watson Cheyne, observes that as the scientific staff is now nearly at full strength, and it is confidently expected that researches will be energetically resumed, it is necessary that the fund should be generously supported by the public. Owing to the heavy death rate from malignant disease it must surely, he says, be to the interest of the community that the fund should not be starved.

ON the invitation of the Rumanian Government a mission consisting of representatives of all the faculties of the French Universities and of the Collège de France went recently to Bukarest. The object is to reorganize teaching in accordance with French methods. The president of the mission is M. Lucien Poincaré, vice-rector of the University of Paris, and among the members is Dr. Balthazard, professor of forensic medicine in the faculty. A medical society on the model of the Société médicale des hôpitaux de Paris has recently been founded at Bukarest. Its proceedings will be published in French. Professor Nanu-Muscel, the first president, in his opening address paid a warm tribute to the work done for Rumania by French doctors.

Letters, Notes, and Answers.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

The postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology*, Westrand, London; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate*, Westrand, London; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra*, Westrand, London; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

INCOME TAX.

"TAXIBUS" inquires as to the legitimacy of deducting the cost of an additional motor car for income tax purposes.

*. The deduction is not permissible unless the old car is scrapped or sold, because the purchase of a second car is an outlay of further capital on the practice. If our correspondent's intention is to retain the old car for a limited period only, we suggest that when that car is sold the one now purchased might be regarded as having been a replacement of the old car, and a deduction claimed for income tax purposes in the year of sale. The practice, which appears to be growing, of retaining an old car for emergency purposes when a new car is purchased, gives additional weight to the hardship imposed on members of the medical profession by their legal inability to claim the anticipatory allowance for wear and tear that is accorded to business men and manufacturers, and it is hoped that this very legitimate grievance will not survive the forthcoming reorganization of the income tax.

LETTERS, NOTES, ETC.

MEDICAL ASPECTS OF PROHIBITION.

DR. H. N. ROBSON (Bournemouth) writes: Many doctors now realize that hereditary disease can cause instability of mind that leads to peculiar or extreme views and actions. May not this be the probable origin of some of the rabid socialists, conscientious objectors, drug-takers, and prohibitionists who seem mentally incapable of keeping in the middle of the road? The Anglo-Saxon races for years put down all laws for the prevention of venereal diseases and now produce most of the prohibitionists; is this cause followed by effect? Perhaps doctors in asylums and alienists might favour your readers with some observations on the subject which would be interesting to sociologists.

WAR MEDALS AND HOME SERVICE.

"1914 CROCK" writes: I should like to dot the i's and cross the t's of "A.M.'s" letter on medals, which applies to all branches of the service. The most iniquitous thing is that the conscript, who was hauled into the service shortly before the armistice, and who spent only one day before the armistice at some cushy overseas base, where even the air-Hun troubled not, is to be given the Service Medal, but no ribbon is to be worn by the men who volunteered for general service in 1914, and who, having broken down on the East Coast through air-raids, tip-and-run bombardments, bad billets, etc., were afterwards relegated to Home Service for the duration. Apart from sentiment, this treatment is likely to affect recruiting for the new Territorial Force, as, judging from remarks heard on all sides, most people will "wait to be fetched" next time.

PENSIONS MEDICAL BOARDS.

"P." writes: The interesting article in the JOURNAL of July 12th raises many points in connexion with the medical department of the Pensions Ministry. Attention might have been drawn to other matters. In the first place, too much stress cannot be laid on the necessity for decentralization wherever it is at all possible.

One of the most essential things is for each area or regional officer to have an advisory board consisting of the leading consulting medical men practising in those parts; they should meet at frequent and regular intervals, and the selection of medical officers should be entirely in their hands; this would mean that only the most suitable and best experienced men would sit on the boards, and this would give confidence to the general public as well as do justice to the pensioners up for examination. Further, in every large city there should be boards of appeal, consisting of consultants only, who would deal with cases sent to them by the ordinary boards for an opinion or in case of appeal by the individual or perhaps higher authority.

Then, again, the question of granting a gratuity should be made use of in settlement of all claims where the applicant is willing to accept this method.

As to the selection of medical officers for the boards, it is stated that only medical men are to be accepted for Ireland, Scotland, or Wales, who are of those nationalities; if that be so, the same rule should apply to England, and preference be given to Englishmen.

In the case of establishment of hospitals under the Pensions Ministry, there are many hospitals now being closed by the army authorities which might well be taken over as going concerns.

MEDICAL FEES.

"MOUNTAINEER" writes: Dr. Geoffrey Price is perfectly right, and the British Medical Association should take a definite lead in this matter. Even with 50 per cent. increase of fees we shall not be so well off as we were before the war, as our salaries of chauffeur, dispenser, servants, drug bill, petrol, to say nothing of income tax, have so largely increased. Another matter is that for panel work "mileage" should be modified to meet the nature of the district. Personally I live in a very hilly country, and would rather motor four miles on a dirt road than one here.

APPLIED PHYSIOLOGY.

DR. JOHN HADDON (Hawick) writes: The abstract of Professor Starling's lectures on the feeding of nations (given in the BRITISH MEDICAL JOURNAL of June 21st) may be taken as giving the most up-to-date views. He said that, "although man's first care had always been to provide his daily bread, the science of 'dietetics' was of comparatively recent origin." It may seem presumptuous on my part to venture to criticize Professor Starling's views as to food, but no man in the profession can have had more personal experience as to the physiological action of different foods than I, and I feel sure that we can have no science of dietetics until we know the physiological action, as well as the chemical constitution, of the common articles of diet. Calories are supposed to depend on the chemical constitution of a dietary, but they give no clue to the physiological action of any food. When we have a true science of dietetics we will be able to prescribe a diet as easily as we can now prescribe drugs, and with more beneficial and lasting results. Hippocrates said the aim of the physician should be to find out a diet suitable to the sick, but it seems to me to be the duty of the state to find out a diet that will prevent disease, which it ought now to be able to do, seeing we have got a Ministry of Health. Professor Starling

evidently thinks that fat is absolutely necessary in a dietary that will preserve health and vigour; nevertheless, he admits that when our population was uncommoded by a temporary shortage in fats during the early part of 1918 no ill effects were noticeable in health or efficiency. Such a fact might suggest that fat may not be necessary. I have lived for years without any fat in my dietary and never was more fit, so that it is quite a mistake to suppose fat is a necessary ingredient; but when I was a great invalid—a victim of influenza—I discovered, when dieted at a hydropathic, that it was animal food that was making me ill. That was in 1896, and I have been a vegetarian since then. Now, however, at 73 years of age, I am going to try to be a fruitarian, for I believe that man is a frugivorous animal, as our comparative anatomists have all along taught.

A PEACE MEMORIAL.

TEMPORARY SURGEON LIEUTENANT R. T. BAILEY, M.B., R.N., writes to suggest that the permanent memorial proposed to be established to perpetuate the memory of peace should take the form of the erection of a large, well appointed, and finely designed hospital for children on a suitable site in the neighbourhood of London; it should be large enough to enable all classes of children to receive treatment. Such a hospital, combining the functions of an actual children's hospital for acute as well as chronic cases, and suitable also as a convalescent centre, would be a great boon. He urges that apart from the sentiment of the nation in having a beautiful living memorial of its triumph in contrast to statuary or even a cathedral, such an institution would be a monument of national economy. It would be a fitting living memorial of sacrifice in the past, and be a symbol of resurrection for the people of the land.

DURATION OF GESTATION.

DR. P. H. WALKER (Mganduli, Tembuland) writes: The memorandum under this heading in the JOURNAL of March 22nd invites criticism. As regards the preliminary postulates, it is common for the mother of a young child to become pregnant without any sign of menstruation, and I have known of one woman who never menstruated though she had children. In all such cases there must have been periodic shedding of the uterine mucosa. Hence it follows that the haemorrhage, when not accentuated by disorder of bowels, liver, or heart, is only the measure of the amount of superfluous blood, and of the amount of engorgement of the uterus in excess of what is absolutely necessary. The fact that menstruation may happen in the first two months of pregnancy shows that there can be a partial shedding of the mucosa, and indeed must be, in cases of superfetation; but that is in accordance with the new teaching that the decidua is embryonic.

Conception only occurs during the rut of animals, and it could occur during menstruation but for Jewish law and our sense of cleanliness. Conception—that is, the suction of the semen into the Fallopian tubes—in normal circumstances happens just before or soon after menstruation, while the centre in the spinal cord is keyed up to the proper pitch. Pregnancy implies co-operation. Months of cohabitation may pass without its happening. The sexual nervous apparatus is a delicate machine, and dread of the result may inhibit the maximum reflex and prevent impregnation as effectively as any contraceptive. That is one reason why extensive and independent migration of the spermatozoa seems so improbable. But desire in woman is not only periodic but cumulative, and after months of repression a time is apt to come when Nature asserts herself regardless of consequences.

The cessation of pain in ovarian dysmenorrhoea on the appearance of the discharge implies the coincident rupture of the Graafian follicle and relief of the ovarian tension. Lawson Tait's idea seems incredible, that ova drop out of the ovaries at any odd time independent of the periodic turgescence. When a woman once only in an otherwise normal existence has membranous dysmenorrhoea, and the amount of discharge is just as usual, it seems good enough evidence that the uterus discards a similar amount of epithelium at other times, but in particles instead of in mass. The menstrual phenomena are not vestigial, and one cannot suppose them purposeless. If the periodic turgescence is not to burst the follicle, to erect the imbricated end of the tube, and to prepare the soil for the implantation of the fertilized ovum, what is the use of it all?

How long the mucosa continues fit for the attachment of the ovum is uncertain—probably two weeks at most. At least, it must be unfit for some time towards the end of the interperiod, as otherwise there would be no need for renewal; and during an ordinary period of three to seven days the ovum is still in the tube. Prolonged haemorrhage implies a morbid condition incompatible with pregnancy. Now, if ordinarily the tubal ovia take ten days to sweep out the ovum into the uterus, with a pre-menstrual conception implantation might take place by the eleventh day, irrespective of the length of the period. In a post-menstrual case it might be a good bit later. The date of implantation would be most useful for calculation if it could be ascertained—just as we count from the day of setting eggs under a hen and not from when they were laid. But it should be remembered that if in human incubation a fortnight is about the limit of unforeseen error, in the case of the hen there may be forty-

eight hours between the first and last chicken hatched out, which would be equivalent to twenty-six days in the human scale. It seems probable, however, that the length of gestation is governed by the rate of growth and the other factors rather than the date of implantation. At the same time, if a pre-menstrual conception causes fertilization almost directly on extrusion of the ovum and six to nine days elapse when it is post-menstrual, the interval is long enough to permit some amount of molecular change in the unfertilized ovum, and that, I believe, determines the sex. After about thirty years' observation I am still convinced that post-menstrual conception always results in a female.

ENDEMIC GOITRE AND POLLUTED WATER.

CAPTAIN OLIVER LATHAM, A.A.M.C., A.I.F. (Pathologist, No. 1 A.G.H., Sutton Veny), writes: On revisiting some tenant farmer friends of thirty years' standing in the Dublin Mountains, I was much interested to find among the eighteen children of three cousins who married three sisters of a family—all neighbours—four marked cases of presumably endemic goitre. The drinking water is obtained from surface wells, which in summer become deeply contaminated with cow dung, geese droppings, etc. The farm women have often admitted that they did not care to drink the water in a drought. Having read a little of McCarrison's work, I am interested to know whether any endemic centre in Great Britain has been made the subject of an inquiry on the lines of his teaching, and if so whether I could get in touch with the investigators. I could only suggest boiling all drinking water or drinking rain-water collected from the roof.

CONSTIPATION AND POSTURE.

DR. A. HUMPHREY DAVY (Bournemouth) writes: The textbooks on the treatment of constipation do not lay sufficient stress on the anatomy of the large bowel. We know that in the erect position peristalsis in the ascending colon has to contend with gravity. When lying on the right side peristalsis in the transverse colon is also opposed by gravity. How are these difficulties best obviated? On going to bed patients should always lie on the right side. By doing so peristalsis is not opposed by gravity, and the contents can move along from the caecum to the hepatic flexure. During the night or early morning people often awake; the patient should then turn over on the left side, when gravity will help (and not hinder) peristalsis in the transverse colon to move the contents to the splenic end. On rising in the morning gravity will help peristalsis to send the contents down the descending colon to the sigmoid flexure and thence to the rectum. To relieve cardiac work people are often advised to lie down on the right side on going to bed. The importance of doing so is equally indicated for the working of the large bowel.

THE UNION OF RED CROSS SOCIETIES.

PROFESSOR GIOVANNI D'AJUTOLO of Bologna has published a pamphlet (Bologna: Tipografia di Paolo Neri, MCMXIX) in which he claims to have been the first to propose the formation of a central committee which should co-ordinate the work of Red Cross societies throughout the world. The idea was suggested to him by the terrible earthquake in Calabria and Sicily, which caused loss of life and widespread suffering that might have, to a large extent, been prevented by a properly organized system of assistance. His views were set forth in a number of articles published in various Italian journals, the first of which appeared at the beginning of 1909. They are reprinted with full references in the pamphlet. From a summary of the details of his scheme published in the *Gazzettino* of Milan, May 31st, 1909, it seems to us that Dr. D'AJUTOLO is justified in his claim to have anticipated Mr. Henry Davison's conception of a union of Red Cross societies.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 34, 38, 39, 40, 41, and 42 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 35, 36, and 37.

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Observations

ON

THE BACTERIOLOGY OF CHRONIC NASAL CATARRH AND ITS TREATMENT BY AUTOGENOUS VACCINES.

BY

LEONARD MACKEY, M.D., M.R.C.P.,

PHYSICIAN TO OUT PATIENTS, QUEEN'S HOSPITAL, BIRMINGHAM.

The cases on which this paper is based were of patients suffering from (1) recurrent acute nasal catarrh, (2) chronic nasal catarrh, or (3) chronic post-nasal catarrh.

They do not include (a) simple brief nasal catarrhs, (b) epidemic nasal catarrhs, influenzal or otherwise, or (c) nasal infections associated with polypi, diseases of antrum or sinuses, atrophic rhinitis, or any discoverable surgical lesion, with the exception of some cases of adenoids which will be referred to later.

All the cases were sent to me with a view to vaccine treatment, and the bacteriological examinations were made for that purpose.

On the records kept during the past seven years this paper is based. Nearly every case was examined by a throat surgeon, whose opinion enabled me to exclude local lesions and abnormalities.

Method of Making Cultures.

Having ascertained that the patient has not recently used any antiseptic nasal douche, I gently pass a nasal swab along the floor of the nasal passage till it reaches the back of the nasopharynx, move it about a little, and then withdraw it in such a way that it rubs against the turbinate bone. Having swabbed the other side in the same way, I immediately inoculate two plates of blood agar and place them in the incubator.

A nasal swab is made like a throat swab, but is much smaller and on much finer wire so that it follows any twisting of the nasal passages without hurting the patient.

At first I used a nasal speculum when taking the swabs, but now I only use it when the nostrils are very hairy or sore. A post-nasal swab passed through the mouth and behind the soft palate has proved of no use to me.

It is of the utmost importance that the cultures should be put on and incubated as soon as the swab has been taken, and if this is impossible the swabs should be kept warm (for example, in the waistcoat breast pocket) till they can be taken to a laboratory. A delay of a few hours may spoil the cultures. It is impossible to place any reliance on a nasal swab sent through the post, for two of the most important germs found in nasal catarrhs—namely, *Pneumococcus* and *B. influenzae*—die quickly if the swab gets cold, while germs of minor importance, such as *Staphylococci* and diphtheroid bacilli, actually multiply in the mucus on the swab and become more abundant as time elapses between the taking of the swab and the making of the cultures. So that in a case where the immediate cultures showed, say—

Pneumococcus ... 1,00 colonies
Staphylococcus ... 8 colonies

a similar swab sent through the post and cultured the next morning will grow—

Staphylococcus ... 1,000 colonies
Pneumococcus ... nil

This result is utterly fallacious, and if followed by an autogenous *Staphylococcal* vaccine could only bring it into disrepute. If anyone doubt the truth of this apparent paradox, he need but try the experiment a few times to convince himself of its accuracy.

The Bacteriology of Healthy Nasal Passages.

It is essential to know something of the bacteriology of normal nasal passages if we wish to interpret accurately our findings in catarrh.

The nose is not, like the mouth and throat, a breeding place for all sorts of germs. Compared with the pharynx the healthy nasopharynx is wonderfully sterile—at least, that part of it which can be reached by a nasal swab.

Cultures, made in the way described above, have been made by me repeatedly from healthy persons, and they bear little or no resemblance to cultures made from patients with nasal catarrhs.

In catarrh almost invariably a profuse growth is obtained of the causative germ, which is usually *Pneumococcus*, *B. influenzae*, *Micrococcus catarrhalis*, Friedländer's bacillus (*B. mucosus capsulatus*), or a special type of streptococcus.

In health, cultures are sometimes quite sterile, but more often show a few odd colonies of *Staphylococcus albus* and diphtheroid bacilli. Sometimes in healthy persons one gets a profuse growth of these two germs, and for that reason should be very chary of accepting them as causal in cases of catarrh.

Diphtheroids, under the names *B. septus* and *B. coryzae segmentosus*, have been described as causes of catarrh, and even as causes of epidemics. I do not deny that they can become pathogenic, but the more I see of them the less is the importance I attach to them, and for some years I have refused to make vaccines from them alone.

Staphylococcus aureus sometimes appears in cultures from a healthy nose, but more frequently when there are pimples or sores in the passages. It is seldom the sole cause of an ordinary nasal catarrh, and, when associated with a purulent discharge, points rather to definite disease of the antrum or sinuses.

I believe—and I think every one must believe—that healthy persons can carry catarrhal germs in their nasal passages without suffering from catarrh, but I am sure it is a mistake to think that such examples are common, and I have never obtained good cultures of the pneumococcus and influenza bacillus from healthy nasal passages.

On the other hand, it is quite common to find a person with post-nasal catarrh who is unconscious of the fact, though greenish mucus can be seen trickling down from his nasopharynx.

The practical point is that such bacteria as may be present in healthy nasal passages should not deceive the investigator in nasal catarrh except in rare instances, provided always that he makes his cultures from fresh swabs.

The following is a short table of the germs found in 558 cases of chronic nasal catarrh during the past seven years. It shows that seven or eight different germs are capable of causing chronic catarrh, and that the pneumococcus is easily first and the influenza bacillus second.

Table showing Micro-organisms found in 558 Cases of Chronic Nasal Catarrh (only good growths on blood-agar are tabulated).

(October, 1912, to July, 1919.)

	Occurred in	Pure cultures in
<i>Pneumococcus</i> ...	191 cases	103 cases
<i>B. influenzae</i> ...	142 ..	48 ..
<i>M. catarrhalis</i> ...	119 ..	49 ..
<i>Staphylococcus aureus</i> ...	104 ..	56 ..
<i>Streptococcus</i> (not <i>S. mucosus</i>) ...	52 ..	18 ..
Diphtheroid bacillus (<i>B. septus</i> and <i>B. coryzae segmentosus</i>)	46 ..	10 ..
<i>Streptococcus mucosus</i> ...	41 ..	22 ..
Friedländer's bacillus (<i>B. mucosus capsulatus</i>)	41 ..	14 ..
<i>Staphylococcus albus</i> ...	40 ..	26 ..
<i>M. tetragenus</i> ...	3 ..	5 ..
<i>B. proteus</i> ...	4 ..	0 ..

351 cases showed pure cultures.

207 cases showed mixed cultures.

The above figures need little comment, but I must again remind the reader that the list does not include (1) cases of a single attack of "cold in the head" or (2) epidemics of nasal catarrh. Obviously figures based on an epidemic in a school or town would be most misleading if applied to common colds in general.

It is also possible that the simple acute nasal catarrh, which clears up rapidly and does not recur, may be due to a germ which occupies a low place on my list. In other words, my figures may show that pneumococcal and influenzal colds are not really the commonest, but only the most difficult to get rid of. More research is needed to clear up these points.

My cases may be divided clinically into three main groups, and in each group the pneumococcus and influenza bacillus predominate over all other germs.

1. Cases of Frequently Recurring Acute Attacks of Nasal Catarrh, leaving the Patient apparently free from Catarrh between the Attacks.

These persons are usually carriers. The acute attack gives them a few weeks' protection and respite, after which they develop a fresh attack, the onset of which is often

determined by a chill, a change of weather, a long railway journey, or a visit to a stuffy and crowded entertainment.

If tested in the interval between the attacks they will be found infected. In children such a condition is usually due to adenoids, and clears up after their removal.

2. Cases of Chronic Nasal or Post-nasal Catarrh in which the Patient's Chief Complaint is the Discharge itself.

The catarrh either necessitates the frequent use of a handkerchief or worries the patient by the constant discharge at the back of the nose. Sometimes such persons get acute attacks also.

In such patients evidence is frequently discovered of ill health, such as lack of energy, indigestion and lack of appetite, shortness of breath on exertion, and hearts which are easily strained by exercise, but the chief trouble, from the patient's point of view, is the incessant nasal discharge. In children such cases are usually due to adenoids, and the removal of the adenoids cures the child.

3. Cases in which there is Post-nasal Catarrh, but the Patient is not aware of its Existence, and complains only of its Consequences.

Such consequences are :

(a) Chronic or recurrent bronchitis, sometimes associated with asthma.

(b) General ill health and incapacity for ordinary work.

(c) Chronic gastric catarrh and disorders of digestion, due presumably to the swallowing of pus and germs.

(d) Signs of heart strain, presumably from toxic action on the myocardium.

(e) Neurasthenia.

(f) In rare cases pleurisy, pains in joints, muscles and fascia.

(g) Otherwise-unexplained spells of mild pyrexia.

(h) Such infections may act as a contributory cause in more serious diseases of doubtful origin, such as nephritis and arthritis.

(i) In children sharp attacks of pyrexia with enlargement of the cervical glands may be the only symptom of chronic post-nasal infection, and earache and otitis media may arise from the same cause. In children such infections are usually associated with adenoids, and the germs disappear after the adenoids have been removed.

(j) Two adults and three children were sent to me because they had had several attacks of lobar pneumonia within a few years; all showed a pure culture of pneumococcus from nasal swabs.

Now I do not wish the reader to run away with the idea that I believe neurasthenia and gastritis is often due to nasal infections, but I do believe that chronic nasal infections are capable of causing those and many other diseases, and that a routine investigation of the nasal passages would be worth making in many instances of chronic and inexplicable disorder. But I do wish to assert most emphatically that chronic and recurrent bronchitis is frequently due to post-nasal catarrh, and that the causal and dominant germs in the sputum can usually be obtained in pure culture from a nasal swab. Any bacteriologist who has worked with sputa and who knows how difficult it may be to grow the germ that he can see in the sputum, will appreciate the importance of knowing where he can find profuse and frequently pure cultures.

In some cases of asthma, especially when associated with bronchitis, the nasal passages contain the causal germs, usually *Micrococcus catarrhalis* and *Pneumococcus*, but in the great majority of cases of true asthma the nasal passages show no infection.

Once more I lay stress on the point that obstinate nasal infections in young children depend upon adenoids, and that such adenoids do not necessarily cause nasal obstruction.

I maintain that the person who carries pneumococci or influenza bacilli in his nasal cavities is not really healthy though under ordinary circumstances he may appear so. He is capable of infecting others. In times of stress and unusual effort, and on exposure to "fogs" and chills his infection finds him out. I suspect that such carriers are to be found among the men who developed heart strain under military service, among the business men who become neurasthenic from worry and overwork, and among the women who cannot stand up against the strain of domestic worry.

The man who gets lumbago after gardening, stiffness after tennis, sciatica after sitting on the grass, neuritis from starting his car, and a cold in the head after a long

dusty ride is not necessarily "gouty"; he may be simply infected. The pains and disorders which accompany all acute infections show what germs and their toxins can do, and in a mild degree chronic infections produce similar symptoms.

Nasal infections are commoner than pyorrhoea and much more important. I am sure that they are a cause of pneumonia and bronchitis, and lead to pulmonary complications after anaesthetics. Otitis media and its complications begin as infections of the nasopharynx. That chronic post-nasal infection may prepare the way for tuberculous infection cannot be doubted.

Whoever discovers a simple and effective method of sterilizing the nasal passages will deserve the thanks of mankind.

Vaccine Treatment.

I can only hope that what I am about to write will be believed, but, after what has been said and written on vaccine treatment in the last ten years, I can forgive anyone who reads such accounts with the utmost scepticism.

In the past seven years I have treated over 500 cases of chronic catarrh with autogenous vaccines. The patients were not soldiers, nor victims of the influenza epidemic; they were persons suffering from chronic nasal catarrh who were sent to me by their doctors because ordinary measures had failed to cure them.

Before they were sent to me they had tried the usual remedies, nasal douches, nebulizers, antiseptic applications, and so on; they had sometimes benefited by a stay at the seaside, but "caught a fresh cold" on the return journey; naturally, most of them had consulted a throat surgeon, and, indeed, many were sent to me by the throat surgeon with the statement that nothing abnormal could be seen beyond catarrh of the nasal passages. It is to be understood that I am not making any comment on the value of ordinary methods of treatment; I am simply pointing out that these patients had failed to respond to them.

In the case of children vaccines were seldom used, for I soon learnt that chronic catarrh in children is due to adenoids, and can be cured by the surgeon. Why is it so commonly believed that a child who breathes comfortably through its nose cannot have adenoids?

The vaccines were made from the germ or germs which I believed to be responsible, and always from the primary cultures when these were pure. Mixed vaccines were made when two or more catarrhal germs grew profusely on the plates, or when, as sometimes happened, a different infection was found in the two nasal passages.

The vaccine most frequently used was pneumococcus, either pure or combined with some other germ, and the next on the list was Pfeiffer's influenza bacillus (I have not observed any difference since the epidemic); and then *Micrococcus catarrhalis*, *Staphylococcus aureus*, *Streptococcus mucosus*, *B. mucosus capsulatus* (Friedländer's), and, last of all, *B. septus* and *B. coryzae segmentosus*. The vaccines were made in such strengths that 20 minims represented the maximum dose, and I began with 4 or 5 minims and gradually increased, giving twelve doses at intervals of a week. The maximum dose of pneumococcus and streptococcus used was always 150 million for an adult, and of the other germs 300 or 400 million.

The vaccines were administered by the patient's own doctor, and, as a rule, he or the patient reported the result. I have not heard of any difficulties or unpleasant reactions in the course of the treatment.

The results are good; they have been better in the last three years than they were in the first three, simply because I am better able to judge what germs to use in the case of mixed cultures, and because in doubtful cases I insist on repeating the test before I prepare the vaccine. In some instances the vaccine has failed completely, but such cases are fortunately rare.

The fairest summing up I can give—naturally, I have not been able to trace every case—is as follows:

In many cases the patient is pleased and grateful and believes himself cured, there is no sign of catarrh, but the same germ is still in his nose, and after two or three years the catarrh will reappear.

In half the cases the catarrh is cured and the nasal passages are normally sterile.

In about a third of the cases the catarrh persists in a modified degree.

Considering the type of case tackled, the results amply justify the treatment, but fortunately there is something more to be said. In the case of a patient with secondary disorders the results of the treatment are still better, for whether the catarrh is cured or only reduced, the general health is improved and the patient gains weight and strength. He ceases to fear chills and "fugs," is in better spirits, and loses the dread (so common in catarrhal subjects) of tuberculosis.

Preparation of Autogenous Vaccines.

I have no experience of stock vaccines, but to those who are interested in autogenous vaccines I should like to say that they will not find nasal catarrh easy at first, but that success will follow if they bear in mind the importance of:

1. A suitable form of nasal swab.
2. The use of good media.
3. The making of cultures immediately the swab is taken.
4. The dominating part played by the pneumococcus.
5. The part played by Pfeiffer's bacillus of influenza.
6. Treatment over a considerable period, however rapidly the patient may appear to be cured.

Some day we may know why nasal catarrh, so slight and transient an ailment with most of us, proves so obstinate and intractable in some; meanwhile nothing but good can come from further investigation and discussion.

The recent correspondence in this JOURNAL on infective catarrhs encouraged me to publish these data from my own practice.

THE TREATMENT OF CHRONIC URETHRITIS:

WITH A DESCRIPTION OF A NEW INSTRUMENT
FOR CAUTERIZING THE LACUNAE.

BY

W. WYNDHAM POWELL, F.R.C.S.,

LATE SURGEON TO THE WESTERN GENERAL DISPENSARY, LONDON.

IN the treatment of chronic urethritis, whether due to the gonococcus or some other microbe, local instrumental methods are more than ever in use, and for the present, at any rate, it is clearly recognized that medicines, injections, vaccines, etc., play only a subsidiary part, and are by themselves, in the majority of cases, of no value whatever unless accompanied by instrumental interference.

It will, I think, be agreed that of all instrumental proceedings dilatation, whether by means of sounds or the four-bladed dilator, is the most valuable, but is far too often neglected. If young surgeons would only thoroughly learn the possibilities connected with dilatation of the urethra under all conditions and stages of disease, it would be infinitely more profitable than experimenting with such doubtful proceedings as electrolysis, hot sounds, suction, etc. I have repeatedly seen cases in which the urethra, already narrowed to half its size by recent infiltration, had been subjected to electrolysis for the cure of a discharge without benefit, and not infrequently with positive harm, when a few simple dilatations would have effected a cure.

The treatment of gleet by means of bougies is very old. Benjamin Bell in 1785 was perfectly cognizant of the good effect of dilating the urethra in cases of gleet, and says "that the largest bougie that the urethra will take should be passed for its cure."¹

In my opinion every case of gonorrhoea—certainly every prolonged attack—should be subjected to a dilatation on recovery. The young practitioner will be surprised to find how frequently contractions will be present without signs or symptoms. He should not take too literally the patient's statement that the stream of urine is perfect. He may be an optimist or merely unobservant. Only a few days ago I performed urethroscopy on a man who complained of a slight urethritis of a week's duration. It was his first attack so he repeatedly assured me. Imagine my surprise on finding an advanced stricture in the bulbous urethra. On being pressed he confessed to a similar slight attack eighteen months before which was not worth bothering about or mentioning. His present non-gonococcal discharge was probably a relapse, after alcohol, of his previous urethritis.

Almost all inflammatory processes of the urethral mucous membrane throw out cellular deposit, of which part, should absorption be at all delayed, becomes

converted into young fibrous tissue. If the irritation be prolonged, sufficient material will be deposited to cause considerable narrowing of the urethra, which may or may not progress to form real stricture, and eventually interfere with the urinary stream. The mucous membrane may heal without instrumental assistance in any of these stages and the discharge cease.

J. D. First gonorrhoea ten months ago, cured in four months. Never had an instrument passed. Wishes to marry, and comes to make sure that he is well. No symptoms, no discharge, no threads. Says the stream is as good as ever. Urethroscopy: Strictures from one to three inches; admits No. 15 F. only. Could dilate only up to 17 F. at first sitting, which means a condition of dense induration. I have partially softened this with the electrolytic sound connected with the positive pole of the battery, after the method of Luy's, using 10 milliamperes for ten minutes. The silver-plated sound which fits the urethra fairly firmly may be kept on the move or the current reversed for a few moments before withdrawal. This is the only condition in which general electrolysis of the urethra appears to be of any use.

Occasionally cases of persistent discharge are met with where no infiltration material has been thrown out, and these are among the worst cases one has to deal with. Fortunately they are not common.

E. T. Married recently. Gonorrhoea five years ago; many relapses. Says he has not been reinfected since. Discharge and heavy flakes crowded with gonococci. His wife also has a discharge containing the gonococcus. Urethroscopy: Mucous membrane very flabby, like perished rubber. Four-bladed dilator up to 80. No resistance. Vaccines may be tried. Lost sight of him.

On the other hand, extensive deposits may take place early during an attack, certainly at the end of one month, the result of bacterial activity, often reinforced by the chemical irritation of concentrated injections or strong irrigations.

M. T. First gonorrhoea two months ago. Mild attack with very little discharge. Had solution of argyrol sealed in the urethra for three hours on twelve different occasions; does not know the strength. Gonococci now abundant. Urethroscopy: Pronounced infiltration one to three inches; admits 21 F. with pressure and followed by slight bleeding. After a week 23 F. passed easily without pressure and with no bleeding, showing rapid absorption.

These deposits in themselves are of a beneficent nature, and represent the local effort to combat the disease. They are therefore the surgeon's friend if he recognizes the condition before much organization has taken place. Anyone who has carried out a dilatation or two under such circumstances will remember the astonishing rapidity with which the discharge disappeared. In this connexion it should be mentioned that recent deposits may become absorbed to a considerable extent without the assistance of an instrument if the irritation be removed.

G. B. Gonorrhoea ten months ago. Discharge ceased after two months. Two relapses since. Has used pretty regularly an injection of argyrol 5 per cent., holding it in for ten minutes, three times a day. Urethroscopy: Patchy infiltration stained black by the silver extending from 1 to 4 in.; admits a No. 24 F. cannula only. No dilatation done. To discontinue the injection, and to come for treatment in a week. His military duties prevented him from coming for eight months, when the canal was found to be wide and pale, and with only a trace of sclerosis. He had had no treatment. A 27 F. sound was passed easily, and a few days later a four-bladed dilator up to 68. Recovery was complete.

The commonest region to be affected with infiltration is what may be called the glandular and lacunar area, extending from the lacuna magna at three-quarters of an inch from the meatus for about three and a half inches. It affects in the first place the roof chiefly, but eventually extends around the canal. It is somewhat superficial at first, and if left untreated may heal, leaving behind slight general sclerosis or isolated strictures of large calibre. On the other hand, the infiltration may spread more deeply and the contracting process progress so as to interfere eventually with the urinary stream. It must be borne in mind, however, in connexion with the frequency of infiltration in this region that strong injections which cause, or assist in causing, these deposits are often used indifferently or are intentionally injected so as to reach only 3 or 4 in. of the urethra.

Much less frequently met with is an infiltration of the region of the bulb where severe stricture is commonest. This seems paradoxical, but the explanation is that an infiltration in this situation is of more serious import than elsewhere, owing to the laxity of the mucous membrane

and the quantity of cavernous or spongy tissue surrounding it, which favours extensive deposits of fibrous tissue and rapid contraction. The hypothesis that this region is more prone to inflammation and stricture than elsewhere owing to its dependent position favouring the collection of pus is not borne out by fact, as, urethroscopically, no more secretion is found there than elsewhere. As in the part anterior to it, infiltration of the bulbous urethra begins in the roof, and can be seen as fine white transverse bands on strong air distension. These can be distinguished from the muscular fibres found in this situation by the sharpness and whiteness of their free edges, and sometimes by their asymmetry. When they involve the floor of the urethra they are easily detected, as this part is otherwise smooth and free from ridges. Although the muscular fibres, both smooth and striped, which encroach on the bulb, chiefly on the roof, as an extension of the non-striped sphincter and compressor urethrae, have to be strongly expanded with air before the farthest stricture bands can be seen, I have never seen stricture definitely in the membranous urethra. Stricture has been described, however, in this situation but only as an extension backwards of a bulb stricture, and Bazy and Decloux describe and illustrate with four or five beautiful illustrations the normal and strictured membranous urethra in such a case.²

Infiltration of the prostatic urethra may lead to a certain amount of sclerosis, accompanied by an irregular thickening of the *veru montanum*, but it does not usually lead to the formation of a stricture, although a few isolated cases have been recorded. This immunity is due to the scantiness of the submucous cellular and cavernous tissue and the firm support provided by the dense fibro-muscular tissue of the prostate. It is significant that the urethra only becomes liable to stricture after it has entered the corpus cavernosum urethrae (*corpus spongiosum*) at the bulbo-membranous junction, and the rapidity and especially the degree of the narrowing, appears to depend on the quantity of cavernous tissue in its vicinity, which diminishes from behind forwards. On the other hand, the incidence of infiltration runs *pari passu* with the richness in gland elements and decreases from before backwards. The fossa navicularis, which has a smooth mucous membrane covered with pavement epithelium and sparsely supplied with glandular elements, is only occasionally affected with gonorrhoeal stricture.

When to Dilate.

No doubt considerable experience is necessary to decide at what period in the course of an attack it is safe or desirable to begin dilatations. If begun too soon the reaction which follows may develop into a veritable relapse, and this may spread, with its attendant possibilities, to the hitherto healthy posterior urethra. On the other hand, if unduly delayed, or if deferred until the gonococcus disappears, as is advised by some writers on this subject, the inflammatory deposits will be given time to organize into fibrous tissue and the most favourable opportunity for bringing about their absorption allowed to pass, to say nothing of the fact that these deposits shut in and shelter the microbes in the pockets and recesses of the mucous membrane—a most important factor in the prolongation of the disease.

Urethroscopy.

After a month the question of an anterior urethroscopic examination arises. Florid cases must be excluded from this category and their examination deferred. In mild first attacks urethroscopy may be undertaken after one month or sooner, especially if the patients have undergone irrigation treatment and a condition of tolerance attained, or, in other words, the chronic stage anticipated. Second and especially subsequent infections can often be examined after a couple of weeks, the discharge rapidly subsiding after a few good irrigations with a 1 in 5,000 solution of potassium permanganate. Examination with the air-inflation urethroscope is much less irritating than an exploration by means of a *bougie à boule*. If a smallish tube be used, no part of the urethra need be touched except the immediate neighbourhood of the meatus. As a rule—but there are many exceptions—when the posterior urethra is sufficiently affected to dull the urine, anterior urethroscopy, like other instrumentation, must be deferred, although it should be borne in mind that this condition is sometimes kept up by a stricture, due to a previous attack,

which may require dilatation before the urine has cleared or will clear up. The posterior urethra does not lend itself well to air distension, but may be examined by means of a six-inch straight or elbowed tube without air inflation. A better method is by means of a water circulation urethroscope, such as Wossidlo's or Geiringer's. Fortunately a urethroscopic examination of this part of the canal is only rarely necessary, and, as a rule, should not be undertaken until at least nine or twelve months have elapsed, and then only after a course of instrumentation by sounds.

Method of Using a Dilator.

When using a straight dilator one of the blades should be applied to the centre of the roof of the urethra to bring pressure to bear on the important area of the lacunae. The dilator is then closed and rotated just a little so as to bring the blades to a fresh section of the mucous membrane and dilate as before. This is to be repeated once or twice, rotating the instrument each time and taking only three or four minutes over the whole proceeding. The blades of a dilator should be as broad as possible. A good one is made in all nickel by Gentile of Paris. The operator should be familiar with the strength necessary to use under all circumstances, from the gentlest pressure in cases of early soft infiltration to the firm pressure necessary in advanced organization of the deposits.

Dilatation is carried out by means of sounds, so long as the meatus will accept them; afterwards, if it is necessary to go higher, the four-bladed dilator must be used. Straight six-inch sounds and straight dilators are used for the penile urethra and curved ones for the bulbous part. To decide whether a curved instrument should be used or not—and they are not so simple to use as the straight—aero-urethroscopy is invaluable. The bulbous part being a wide and dilatable section of the canal any narrowing is easily detected, except in the immediate neighbourhood of the bulbo-membranous junction, where muscular fibres close the canal and baffle the diagnosis. For each time a curved dilator is required a straight one will be used perhaps fifty times. Air or water pressure does not affect the deposits; they only strain the unaffected parts.

Dilatation is carried out about every ten days in early cases of infiltration and every five days in advanced cases. There are, however, many exceptions to this rule. The effect of dilatation being physiological, time must be allowed for absorption of the deposits to take place. If dilatation be repeated too soon in a case of soft infiltration it will be found that the reactive congestion prevents so large a size being soon repeated without bleeding or excessive reaction. The good effect will continue for at least two or three weeks, and the amount of absorption that will follow one dilatation in suitable cases is astonishing. In follicular cases, where the disease is somewhat strictly confined to the follicles, care must be taken not to overstretch the urethra, or injury to the healthy fibrous, elastic and muscular elements of the mucous membrane will result, and a condition of flabbiness or paralysis set up, there being no general infiltration to resist the pressure.

Every instrumentation should be preceded by irrigation of the urethra with a solution of mercury oxycyanide 1 in 5,000, and followed by one of potassium permanganate of the same strength, or of silver nitrate 1 in 8,000. If these details are carried out effectively, a plain dilator is quite as good as an irrigating one. There is no particular degree to which a dilatation should be carried at each sitting. Every case is a law unto itself. The resistance is the guide. In a recent case where resistance is slight the dilator should be withdrawn once or twice and the urethra stripped, when a trace of blood will give warning that enough for the time has been done. The discharge may disappear long before all the deposit has been absorbed. Dilatations should, however, be continued and the urethra restored to, as near as possible, its original size.

The dilator is not often required for the prostatic urethra, large sounds being preferable and usually sufficient, if the meatus is large enough to take them. Silver nitrate irrigations are especially suitable for the posterior urethra in chronic cases, and may be used also either after an instrument or after a prostatic massage, in strengths varying from 1 in 10,000 to 1 in 5,000. In inveterate cases painting the prostatic urethra with a 1 in 8

solution of silver nitrate through a urethroscope tube is an eminently satisfactory proceeding. Instillation of a solution of silver nitrate is a disappointing form of treatment, except perhaps in chronic inflammation of the vesical trigone, and should be given up in favour of the sound and irrigator.

Instrumentation should be temporarily suspended if gonorrhoeal rheumatism supervene. This applies to the anterior as well as to the posterior urethra. Vesical irrigation after a strong anterior dilatation must be made at a low pressure, not more than 4 ft., or haemorrhage may follow. The usual height of the reservoir is 5 ft. to 6 ft. above the urethra for an anterior and 4 ft. or 5 ft. for a vesical irrigation.

To facilitate the entry of fluid into the bladder if deep breathing and relaxation fail, the patient should endeavour to empty his urethra of the last few drops of urine. This brings the ejaculator urinae into action and the fluid in the anterior urethra will be pumped into the bladder, this being the path of least resistance. The same result may be obtained by the patient endeavouring to close the anus tightly a few times.

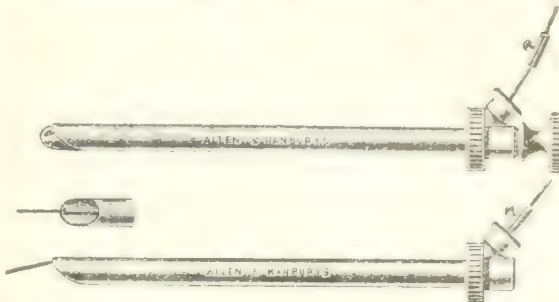
Personally I always use a little cocaine to facilitate the entry of fluid into the posterior urethra and bladder, and also for instrumentation. Five or ten drops of a 1 per cent. solution injected into the urethra with an eye dropper and massaged backwards into the posterior urethra is suitable for all purposes. The solution is made up with a 1 in 2,000 solution of mercury oxycyanide, which sterilizes it.

Cauterization of the Lacunae.

The point to which I wish particularly to draw the attention of genito-urinary surgeons is that in a certain number of cases dilatation fails to bring about recovery and the discharge continues, and the question then arises, What more can be done to effect a cure? On performing urethroscopy (and I may say in passing that my pattern aëro-urethroscope with magnifying telescope is the best for the purpose), one, two, or a series of small swellings may be seen along the roof of the urethra (occasionally one may be found situated on the side wall or floor), each with a small, swollen, often crateriform orifice pointing towards the meatus; they may or may not contain pus. These are the inflamed and suppurating lacunae of Morgagni, which may keep up a discharge long after the other parts of the urethra have recovered. Other sources of pus in the anterior urethra are minute abscesses connected with the submucous glands of Littre, which burst and continue to leak through a small sinus on to the surface of the mucous membrane or into a lacuna. The more superficially placed glands and the follicles, which are superficial immature glands of Littre, usually empty their inflammatory contents through their natural outlet.

It is obvious that if dilatations and irrigations fail to clear out these foci—and this often happens—something more has to be done to expedite recovery. In the BRITISH MEDICAL JOURNAL of September 26th, 1908, I described a new method of cauterizing these pockets in the air-distended urethra, which was a great advance on former methods, and this proceeding has been largely adopted by genito-urinary surgeons in this country. The destructive agent used being either silver nitrate or electrolysis. There is not much to choose between these two agents—the latter is the more precise and cleanly, while the former is the more readily available. As in ninety-nine cases out of a hundred nothing more is required than a caustic-covered probe-point for the destruction of these foci, it occurred to me that if a simpler method than the interposition of a collapsible mount, as in my operating urethroscope, could be devised, the treatment would be simplified and brought within the range of a much larger number of surgeons. With this end in view I have had made for me by Messrs. Down Brothers an ordinary four-inch urethral cannula with a small tube running along its inner wall. This inner tube, which is about a millimeter and a half in diameter, tracing it outwards, leaves the cannula obliquely near the flange, and terminates externally right away from the line of vision. A small screw cap fixing a rubber disc, through which the probe passes prevents the escape of air. This arrangement is superior to all devices which entail the passage of the probe through the window of the urethroscope. The distal end of the small tube terminates just within the end of the cannula, and is slightly elevated

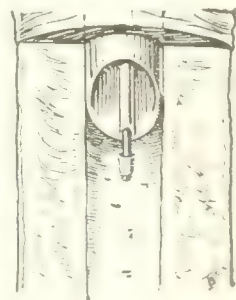
to direct the probe a little towards the centre of the urethra. Should the end of the probe when projected not be well seen when looking down the cannula, it may be slightly bent to bring it clearly into view. (See illustration.)



An essential point in its practical use is that the cannula being *in situ* in the urethra, and the probe projected beyond it for three-quarters of an inch or so, the latter need not be touched again, but the probings done by grasping the urethroscope firmly and manipulating the cannula and probe together in the urethra. This leaves the left hand free to steady and make traction on the penis. The expert will often treat the lacunae before commencing dilatations.

Directions for Use.—After boiling the cannula remove the probe and thoroughly dry both. Replace the probe and project it beyond the end of the cannula for an inch. Heat the point in a spirit flame and melt on to the terminal quarter of an inch a minute film of silver nitrate and withdraw the probe into its sheath. This, besides protecting the caustic, ensures a thin film only being used. The oiled cannula is next introduced into the urethra to its full extent, keeping the side containing the probe in contact with the lacuna, the obturator is removed, and the excess of lubricant mopped out with stylet and cotton.

The urethroscope is securely fixed into the cannula and air admitted under direct control of the eye. The probe is then projected into the middle of the inflated urethra for three-quarters of an inch or as much as may be necessary, and, as the cannula is being slowly withdrawn and the lacunae brought into view, it can be introduced into them while tilting the distal end of the cannula a little towards the affected wall. This proceeding may be compared with that of slipping the hand into the inside breast pocket of the coat, to which a normal lacuna in an inflated urethra may be compared in miniature. All the affected lacunae may be treated at one sitting, but the quantity of silver nitrate will be found sufficient only for three or four without renewal. A lacuna has a depth of only one-sixth to one-fourth of an inch (four to six millimetres), and is comparatively wide, so that the probe should be moved from side to side.



Subsequent treatment consists in the use of a mild anti-septic injection, such as zinc permanganate (one-eighth grain to an ounce of water), by means of a hand syringe, or, better still, a daily irrigation with a solution of potassium permanganate 1 in 5,000. The patient should be warned of some increase in discharge for a day or two, and that possibly it may be blood-stained. After a week or so dilatations are resumed. If a urethroscopic examination be undertaken at the end of a fortnight the cauterized lacunae may be found distended with the air used for inflating the urethra. This phenomenon occurs frequently also in lacunae that have recovered from prolonged inflammation without having been subjected to cauterization, and is due to the cicatrization and contraction of their free edge, which then acts like the taut string of a bow. This appearance occurs normally in a well-developed lacuna magna, so that its interior can be viewed under aëro-urethroscopy.

This altered condition of the lacunae is one of the reasons why the urethra that has taken a long time to recover, or has been subjected to many attacks, recovers

from a new infection with such remarkable rapidity after a few irrigations with potassium permanganate, the solution freely entering the lacunae and flushing them out.

It is advisable to stock at least a couple of these tubes, and a 22 F. and a 26 F. are useful sizes, but any size can be obtained. Other uses may be made of these tubes: for instance, the small inner tube may be made longer than the cannula to form a syringe, or a capillary syringe may be passed instead of the probe. A silk covered wire is used for electrolysis. On one occasion I used it as an écraseur by passing a fine steel wire doubled from the

distal end, thus forming a loop. The base of a wart which has been shaved off with the thinned end of a cannula, or a warty area, can also be cauterized in the distended urethra.

I have used this method of treating the lacunae constantly for five or six years and can thoroughly recommend it as a practical, efficient, and expeditious substitute for the probe and collapsible mount.

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OBSERVATIONS ON THE ILEO-CAECAL VALVE IN MAN.

By A. RENDLE SHORT, M.D., B.S., B.Sc., F.R.C.S.,

HONORARY ASSISTANT SURGEON, BRISTOL ROYAL INFIRMARY;
LECTURER ON PHYSIOLOGY, UNIVERSITY OF BRISTOL.

A patient has recently come under my care in whom the ileo-caecal valve was visible on the surface. Exceptional opportunity was therefore afforded for observations on its behaviour.

The patient, a well nourished, intelligent man, aged 39, suffered from dysentery in Salonica in December, 1916. In September, 1917, caecostomy was performed at another hospital on account of chronic dysentery. The whole of the caecum prolapsed through the wound and turned inside out, and this condition has remained ever since. The large intestine has been irrigated regularly, and there is little or no discharge from it now. An operation to remedy the condition is contemplated shortly, probably



FIG. 1.—The ileo-caecal sphincter at rest.

excision of the caecum and ascending colon with the termination of the ileum, and end-to-end anastomosis of the ileum and transverse colon.

PRESENT CONDITION.

A mass of prolapsed bowel, about the size of a large orange, is seen over the right iliac fossa. It is covered with mucous membrane, which is the mucosa of the caecum turned inside out. At the upper end the orifice leading to the ascending colon can be found beneath a fold. There is no thickening or inflammation or ulceration. The thin wall of the caecum is spread out over coils of ileum, which are not themselves visible, but through the covering of caecum it can be seen that these coils of ileum are in incessant peristalsis; fasting or feeding they are never still.

THE ILEO-CAECAL VALVE.

In the centre of the protuberant mass the ileo-caecal valve is plainly visible all the time. In the somewhat similar case described by A. H. Rutherford¹ the valve could only be seen by drawing aside a fold of mucosa. Through the orifice all the motions pass and are collected in a receptacle. Nothing passes on into the ascending colon.

It is clear at a glance that the ileo-caecal valve should rather be regarded as a sphincter than a valve. It is oval in shape. There is a well marked ring of muscle surrounding it, slightly raised above the surface. Three or four puckers are visible radiating from the slit-like orifice. When the sphincter is contracted it is about three-quarters of an inch long. No folds of ileal mucosa are then visible. It grips the inserted finger.

When the patient is lying quiet in bed the sphincter remains closed, and nothing comes through for hours at a time. Occasionally there may be a little passed, but I have not seen it myself. When the patient is up and about there is rather more activity.

The effectual factor in bringing about activity is the taking of food by mouth. This never fails. Fluids or solids have the same effect, but especially a proper meal of solids. I have timed the reflex on various occasions. It may take place in one and a half minutes, or may be delayed for four minutes.

When activity commences the sphincter relaxes, the orifice lies patent, and may measure $1\frac{1}{2}$ in. across. Folds of ileal mucosa are exposed to view. Having relaxed, it does not contract again until activity ceases, in this respect differing from the pylorus.

First there comes through a spit or two of gas and bubbles, then follows a gush of liquid orange or brown-coloured faecal matter. This continues to come through in

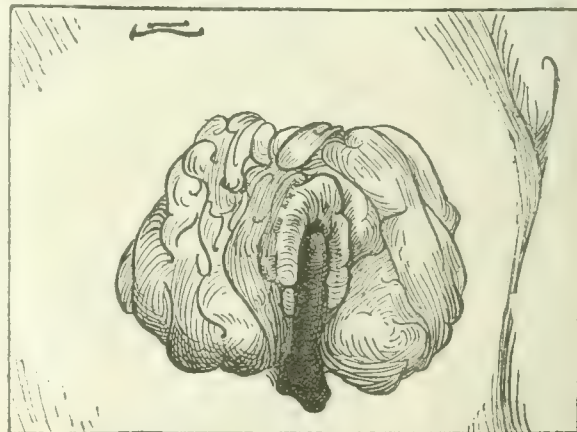


FIG. 2.—The ileo-caecal sphincter relaxed after taking food.

gushes of about $\frac{1}{2}$ oz. at a time at intervals of half a minute, more or less. This goes on whilst food is being taken, and for a variable time, usually about an hour afterwards, unless the food consisted only of a biscuit or glass of milk, in which case the orifice ceases to discharge after twenty minutes or so. Articles of undigested food, such as currants, take about six hours coming through from mouth to ileo-caecal valve.

SPECIAL OBSERVATIONS.

Secretion of Succus Entericus.—On one occasion, just after taking food, the first gush to come through was not faecal, but consisted of a drachm or two of clear watery fluid. It seemed as if the swallowing of food had provoked a reflex secretion of succus entericus, and that on this particular occasion there happened to be no faecal matter in the terminal inches of the ileum, so that the succus entericus came through in a pure state. In ordinary it would be mixed with faeces.

Acid and Alkali Reflexes.—It is well known that the pylorus is controlled by the acidity or alkalinity of the contents of the duodenum. I applied acid solutions, and on another occasion alkaline solutions, to the caecal mucosa near the orifice, both when it was active and when it was quiescent. Neither acid nor alkali had any obvious effect in hindering or stimulating the activity of the ileo-caecal sphincter. This point, as far as I know, has not been investigated before, but the result is not surprising. The conditions of activity of the pylorus and the ileo-caecal sphincter are quite different.

Bismuth Skiagraphy.—Not much information could be obtained by this means. The stomach was viewed with the fluorescent screen, and behaved normally. After four hours a small trace of the bismuth meal remained in the stomach, but most of it was in the pelvic coils of the ileum. On one occasion an attempt was made to determine whether irritation of the caecal wall had any reflex effect in delaying the emptying of the stomach. A clip was applied to the caecal mucosa near the valve, and left on; at the same time a bismuth meal was given. It was found impossible to keep the clip applied; the peristaltic movements of the ileum underneath repeatedly threw it off. The stomach emptied in the normal time.

Influence of Local Stimulation on the Activity of the Ileo-caecal Sphincter.—It was not possible by stimulation of the mucous membrane of the caecum to start efflux. On the other hand, I repeatedly found that pinching up a fold of caecum near the orifice, when it was in full activity after a meal, delayed the outflow and made the jets less frequent, though it did not check them altogether. This is of considerable importance, as bearing on the question whether chronic inflammation in the ileo-caecal region, as for instance chronic appendicitis, can delay the passage of bowel contents through the sphincter.

Influence of Enemata.—In Rutherford's case, enemata given per rectum stirred up more activity in the ileum than in the colon. In the present observation, enemata and colon wash-outs did not provoke activity of the ileum or discharge of ileal contents.

Plugging the Orifice.—In Rutherford's case inserting a finger into the sphincter caused pain and spasm. My patient, on the other hand, wore a plug in the hole for some time before he came to me, without inconvenience. It was used, so he said, to control the efflux, but needless to say, it failed to do so.

REFERENCE.

¹ A. H. Rutherford, *The Ileo-caecal Valve*, 1914.

RENAL EFFICIENCY TESTS IN NEPHRITIS AND THE REACTION OF THE URINE.*

BY

J. B. LEATHES, M.B., F.R.S.,

PROFESSOR OF PHYSIOLOGY, UNIVERSITY OF SHEFFIELD.

The functions of the kidney include three that are equally important—the excretion of the nitrogenous end-products of metabolism, the regulation of the osmotic tension of the blood by the removal of a fluid of higher or lower tension as the case may be, and lastly, the regulation of the reaction of the blood. The efficiency of the kidney in nephritis in regard to the first two of these functions has been studied by many; in regard to the last, only, so far as I know, by Henderson and Palmer. They collected the daily urine of large numbers of nephritic subjects, and found that it tended to be more acid than that of other subjects.

I started some years ago in Toronto the investigation of the nephritic kidney in the performance of this function, but the work was interrupted before much more had been done than to employ for taking the reaction a double titration method, using methyl orange and phenolphthalein. In a solution of sodium phosphate, if all the phosphate is acid phosphate, methyl orange turns pink; if any of it is dibasic this indicator is yellow; when it is all dibasic, and not before, phenolphthalein turns pink. In a solution of mixed phosphates, therefore, by titrating on the one hand with methyl orange and N/10 acid the amount of the dibasic phosphate present is determined, and on the other with phenolphthalein and N/10 soda, the amount of acid phosphate present is determined, and the ratio of the amounts used in the two titrations gives the ratio in which the two phosphates are present. This ratio varies with the reaction, and the reaction of the phosphate mixture may be given as so much per cent. acid or so much per cent. alkali, according to the results of the titration. The reaction of the urine practically always lies between these two points, the

turning points of methyl orange and phenolphthalein respectively. And since the principal constituents of the urine that determine its reaction are the phosphates, the reaction of the urine may be expressed in the same way as that of a pure phosphate solution, in acidity or alkalinity per cent.

In 1916 an exceptional opportunity for prosecuting inquiry into this subject occurred when the nephritis cases of the 3rd Northern General Hospital were collected together in a branch hospital and entrusted to me. The method of testing the condition of the kidney, which I used during two and a half years at this hospital, was what is well known as a water test. The patients, kept in bed, received at 8 a.m. 500 c.cm. of water to drink, but had no food or drink otherwise from supper the night before till noon. Urine was collected, measured in six fractions, from 11 to 7 and then at 8, 9, 10, 11 a.m. and 12 noon; in each the reaction was determined by the method described. It soon became apparent, from the study of perfectly normal subjects under the same conditions, that a large number of the cases still undergoing treatment for nephritis reacted to this test exactly as the normal organism, while others did not. The normal subject produces during the night a urine that is acid, as does also the nephritic subject, but in the morning the reaction in the normal subject swings strongly over to the alkaline side. This more alkaline reaction persists generally to the last specimen collected.

In nephritic patients often the acid reaction persists throughout the test. Normally, of course, too, the urine, scanty during the night, becomes very abundant after drinking water. It is well known that in nephritis diuresis often cannot be produced by drinking water. When there is no diuresis there is frequently not any change in the reaction either, and cases of this kind occurring early in the series studied, suggested naturally that the change in reaction constant in the normal subject undergoing the water test was merely that which, as was shown by Rüdel in 1892, accompanies any diuresis. But tests done on the normal subject and similar in all respects except that the amount of water taken was reduced to 250 or to 100 c.cm. and that consequently the diuresis was proportionately reduced, showed that nevertheless the change in reaction persisted in the same degree as when diuresis was well marked; results are given in Table I that were obtained in this way.

TABLE I.—Normal Subjects.

(Three tests done on the same normal subject.)

	Diuresis, c.cm. per hr.		Alkalinity per cent.	
	Before.	Maximum After.	At Night.	Maximum (at 10 or 11 a.m.).
I. 500 c.cm.	40	285	25	91
II. 250 c.cm.	27	116	23	85
III. 100 c.cm.	37	88	20	89

Precisely similar results were obtained from three tests done on another normal subject, the conditions observed being in all respects the same as in the water tests done on nephritic patients, except as to the amount of water taken in the experiments numbered II and III in Table I.

With more experience of the reaction to the test in nephritic patients it soon became apparent that in them, too, the phenomena occurred separately and were independent of one another. For, in the first place, the matutinal alkaline tide was undiminished in many cases in which the drinking of 500 c.cm. of water produced little or no diuresis, and, secondly, a considerable number of cases were observed in which the diuretic response was normal or but little impaired, while the alkaline tide was missed altogether.

The study of nephritic patients in this way, therefore, brought to light three abnormal types of response—one in which there was little or no diuresis but a normal alkaline tide (Groups III and IV, Table II), one in which there was a diuretic reaction but no alkaline tide (Group V in Table II), and a third in which neither the one nor the other of these phenomena was present in a normal degree (Group VI in Table II).

* Communicated to the Association of Physicians at the annual meeting, July 11th, 1919.

TABLE II.—*Nephritic Subjects.*

Mean figures for response to 500 c.cm. water in nephritis:

Groups I and II practically normal.

Groups III and IV showing tendency of diuresis to be weakened, but normal alkaline tide.

Group V showing fair diuresis but little alkaline tide.

Group VI showing little diuresis and little alkaline tide.

	No. of Cases or Tests from which Mean Figures are Calculated.	Diuresis, c.cm. per hour.		Alkalinity per cent.	
		Before.	Maximum After.	At Night.	Maximum (at 10 or 11 a.m.).
I. Normal.	49	55	336	27	84
II. Normal.	65	55	256	26	73
III. Weak.	51	61	182	23	74
IV. Weaker.	16	56	96	30	74
V.	56	63	221	22	42
VI.	53	75	115	22	36

Of these abnormalities in the water test of cases of nephritis, the failure of the diuretic response has long been known and discussed; the absence of the alkaline tide is new. In order to understand its significance, the significance of the matutinal alkaline tide in the normal subject must be defined. It is a striking phenomenon which can be observed also under the ordinary conditions of life when the subject is up and takes the usual meals. It is, indeed, then sometimes even enhanced by the diuretic action of the drugs, tea, and coffee, but sometimes partially obscured by other complicating activities, the intercurrent influence of which is eliminated under the standard conditions of the water test. And incidentally, it should be observed, the traditional ascription of the alkaline tide to the secretion of hydro chloric acid in the stomach appears to be erroneous. An intense alkaline tide is normal in the morning when no food is taken; alkaline tides after other meals than the first in the day are certainly not the rule, and in the experience of the writer do not occur. It is not even *a priori* probable that they should, since the passage of acid from the stomach is the signal for the secretion of alkaline digestive juices into the small intestine, and for absorption into the blood from the intestine to begin.*

The morning alkaline tide suggests correlated variations in the activity of the other function concerned, in addition to that of the kidney, with the regulation of the reaction of the blood—namely, respiration. That respiratory activity can affect the reaction of the urine in a very marked degree is shown by experiments in which the subject voluntarily increased the depth of his breathing for an hour or even half an hour at times when the reaction of the urine is otherwise certainly acid—for instance, in the late afternoon, or still more in the middle of the night. This experiment has been done many times in the afternoon on different subjects. The following figures are typical of the result obtained:

TABLE III.—*Effects of Forced Breathing.*
(J. B. C., July 7th, 1919.)

Time.	C.cm. per hour.	Alkalinity per cent.	Remarks.
1 to 2.45 p.m. ...	81	28	—
to 4.10 " ...	56	36	Voluntary hyperpnoea from 4.30 to 4.50
to 4.55 " ...	123	91	—
to 5.35 " ...	54	82	—
to 6.22 " ...	32	44	—

At night the tendency to apnoea that the hyperpnoea induces does not make it easier to lie awake and carry on

* I was reminded by Dr. Foulton that Hasselbalch (*Biochem. Zeltsch.*, 46, p. 416, 1912) found the urine to become less acid after meals; but his results were more exactly these: "After each meal the urine was, without exception, more acid than before, but showed the lowest acidity about three hours later." This applies to breakfast at 8.30 and lunch at noon; the urine after the evening meal was not examined. No attention was paid to the volume of the urine, and no data are given as to the amount of fluid taken or the hours at which it was taken, so that it is impossible to say whether the tendency for the urine to become more alkaline between 2 p.m. and 3.30 p.m. was or was not accompanied by diuresis. I do not think his figures give support to the traditional alkaline tide ascribed to gastric secretion.

deep breathing; but in all experiments in which this difficulty certainly was overcome results such as that which follows were obtained.

TABLE IV.—*Effects of Forced Breathing.*
(J. B. L., March 17th, 1919.)

Time.	C.cm. per hour.	Alkalinity per cent.	Remarks.
11.10 p.m. to 2.10 a.m.	92	31	Sleeping in bed.
to 3.10 " ..	100	71	Hyperpnoea in bed for one hour.
to 4.50 " ..	59	61	Sleeping.
to 6.5 " ..	59	51	Sleeping.
to 7.40 " ..	49	46	Sleeping.
to 8.50 " ..	58	53	Up; 400 c.cm. tea at 7.45.

In some experiments not yet concluded the amount of carbonic acid washed out of the system by the voluntary hyperpnoea has been measured. In that from which the following figures were obtained the attempt was made to keep the depth of hyperpnoea uniform throughout a period of twenty-five minutes and the air expired in each fifth minute was collected, and it appeared that 27.4 litres of air containing 1.8 per cent. of CO₂ had been expired per minute.

TABLE V.—*Effects of Forced Breathing.*
(W. R. C., June 13th, 1919.)

Time.	C.cm. per hour.	Alkalinity per cent.	Remarks.
3.50 to 5.10 p.m. ...	92	36	—
to 5.35 " ...	50	41	—
to 6.30 " ...	67	93	Hyperpnoea from 5.50 to 6.15.
to 7.20 " ...	26	39	—

It is easy, therefore, to show that the reaction of the urine can be made alkaline by increased respiratory activity. But in order to show that the morning alkaline tide is accounted for by depression of the respiratory centre during sleep and increased activity on waking, it is necessary to determine the percentage of CO₂ in the alveolar air immediately on waking and some time later. For this purpose the apparatus for collecting alveolar air was fixed up overnight (close to the subject's bed), so that within two or three seconds of waking a sample could be obtained. The following results have been so far obtained:

TABLE VI.—*CO₂ in Alveolar Air.*

Date.	Subject.	Time.	CO ₂ per cent. of Alveolar Air.	Remarks.
1919.				
June 27...	W. R. C.	3.55 a.m.	7.40	In bed immediately on waking.
		7.10	6.63	After rising.
July 5 ...	J. B. L.	1.45 a.m.	6.13	In bed immediately on waking.
		7.30	5.38	After rising.
July 7 ...	J. B. L.	6.40 a.m.	6.13	In bed immediately on waking.
		6.49	5.74	After rising.
		8.30	5.46	After rising.
July 8 ...	S. L.	7.15 p.m.	6.46	—
		2.45 a.m.	6.76	Immediately on waking
		8.0 a.m.	5.07	Up, and 1½ hours after waking.
July 9 ...	S. L.	4.20 a.m.	6.50	Immediately on waking
		7.40 a.m.	5.52	Up; 1 hr. after waking.
		8.15 a.m.	5.07	—

The figures given are corrected for aqueous vapour except in the experiment of June 27th, done by Dr. Campbell; with that exception the analyses were done by Dr. F. A. Duffield.

On every occasion in this short series of experiments the results indicate a higher percentage of CO₂ in the lungs during sleep, and therefore give support to the hypothesis that the morning alkaline tide is related to variation in the activity of the respiratory centre—the experiments are being continued.

Whether or no this proves to be the true explanation, the interpretation of the failure of the kidney in certain stages and cases of nephritis to show any morning alkaline tide still requires investigation; this is being prosecuted. But in the cases available for the work of which this is a preliminary report it is not a failure of the kidney in its power to turn out acid that is indicated; the abnormality is that the kidney gives an acid urine in conditions in which a normal kidney gives an alkaline urine. The question arises, therefore, whether this abnormality may not be an expression of an effect of the disease of the kidney on the function of some other organ. The gradual return to the normal type of response shown in tests done on the same patient at intervals of two or three weeks during recovery is striking, and in a fuller account of the work to appear later will be illustrated by protocols.

NOTES ON THE INFLUENZA EPIDEMIC IN THE EGYPTIAN EXPEDITIONARY FORCE.

BY

J. D. BENJAFIELD, M.D., B.S.LOND., M.R.C.S.,
L.R.C.P.LOND.;

LATE TEMP. CAPTAIN R.A.M.C.; LATE O.C. 37 MOBILE BACTERIO-
LOGICAL LABORATORY (WELLCOME PRESENTATION
LABORATORY.)

Epidemiology.

THE epidemic in this force commenced in May, 1918, but the maximum incidence was not reached till September and October. The cases during the earlier period of the epidemic were on the whole mild in type and of short duration, only a very small proportion being complicated by bronchopneumonia.

In patients already debilitated by malignant tertian malaria influenza proved much more serious, many developed bronchopneumonia, and considerably over 50 per cent. of such cases ended fatally.

The epidemic continued throughout November, December, 1918, January and February, 1919, but the number of cases showed a marked decrease during the last two months. In the latter part of the epidemic few of the cases were complicated by malaria, and one had a better opportunity of studying the disease in otherwise healthy individuals. The type of the disease also changed somewhat towards the end of December, and showed on the whole a tendency to become less virulent; this feature has been maintained up to the present time.

As regards the incubation period, but little evidence is available, for the sources of infection were so general that it was rarely possible to determine the original focus in any given case. There are many features with regard to the infectivity of this epidemic which call for comment; for, while in the early influenzal stage the disease seems to be markedly infectious, yet directly bronchopneumonia supervenes its infectivity appears to be much diminished or lost altogether. This point is supported by the fact that hardly any of the sisters, medical officers, or orderlies in close contact with bronchopneumonic cases have contracted the disease.

Clinical Types.

The cases can be divided into three more or less well defined groups:

1. Catarrhal type.
2. Bronchopneumonic type.
3. Toxaemic type.

A large proportion give a history of a severe cold preceding the acute febrile period by a few days. Otherwise the onset of the disease proper is sudden, being marked notably by fever, headache, pains in the back and limbs, and lassitude. The more severe attacks were often ushered in by vomiting. The headache is generally frontal, and associated with pain in the eyes. I shall now describe the types of cases more in detail.

TYPE I: Catarrhal.—The febrile period usually extended from five to seven days, the maximum temperature being reached on the second day. It rarely exceeded 103° F., though in a few cases temperatures of 104° F. and over were met with. The temperature usually fell by lysis, though in a few cases, more especially in those treated with vaccine, the fall was more rapid. The pulse rate was increased, but rarely exceeded 116

to 120, whilst the respiration rate showed but little change. Tracheitis and pharyngitis were common, and associated with these was a dry and troublesome cough, with little or no secretion. No gastro-intestinal symptoms were present, except those usually associated with febrile disturbance—that is, furred tongue, loss of appetite, and constipation. After the subsidence of the fever the patients rapidly regained their normal strength, and post-influenzal debility was not a marked feature.

TYPE II: Bronchopneumonic.—During the early stages of the disease there was no means of distinguishing between Types I and II, except on the whole the onset in the latter type was liable to be more severe and the fever during the initial stages to be at a higher level. Usually it was not till the third or fourth day of the disease that one could classify any given case, when the temperature, instead of falling, would remain at the same or at a higher level, and the patient would be much more distressed. At the same time the pulse and respiration rates would show a greater deviation from the normal. Pain in the chest was a prominent feature, though physical signs at this stage would be absent, and they rarely appeared before the fourth or fifth day of the disease. The earliest signs usually detected were some fine sticky crepitations heard at the end of inspiration over one or both bases. A peculiar characteristic of these crepitations was that often they could only be heard once or twice during a single examination and would then disappear altogether. Once physical signs had appeared they became rapidly intensified with obvious crepitations, râles, and accentuation of vocal resonance. As compared with the slight physical signs during life, the striking feature *post mortem* was the wide extent of the pulmonary lesions. The sputum was at first very scanty, glutinous, and streaked with blood. "Rusty sputum" was rare. In the later stages, especially in those recovering, the sputum became abundant and purulent. After the development of bronchopneumonia the course varied, all grades of severity being met with. On the whole the course of cases with a severe onset, associated with vomiting, and those with high fever during the initial stages, was more severe and the prognosis correspondingly graver. There was a marked tendency for the bronchopneumonic process to spread throughout the lung, and perhaps affect the opposite side in similar fashion, so that during the course of the disease practically the whole lung tissue would become involved in the morbid process. Fortunately, in cases of this type, the portion of the lung first affected would rapidly resolve and be functional when other portions were being attacked. Many cases of this type recovered. Pleurisy occurred in a fair proportion of cases, but usually after the temperature had begun to subside. Its intervention did not appear to render the outlook more grave. Cases were seen in which during the early stages tracheitis was absent, but who, at a later date, developed bronchopneumonia, so that tracheitis does not appear to be an essential forerunner of the bronchopneumonic type.

TYPE III: Toxaemic.—This type is characterized by acute and severe onset, nearly always accompanied by vomiting, high fever, rapid pulse and respiration. The patient is flushed and anxious-looking, and obviously acutely ill from the commencement. The duration of this type is from two to five days, and they die usually exhibiting more a clinical picture of acute toxæmia than that of bronchopneumonia. In one case death supervened eight hours after the onset. During the later stages the flushing is replaced by a peculiar lilac coloured cyanosis affecting the face and neck, but most marked over the lips and ears. This feature is frequently seen in severe cases of the second type, and once it has set in the prognosis is practically hopeless. Death usually supervenes within forty-eight hours. Apart from a general erythema and herpes, no rashes have been seen. Cerebral symptoms have not been commonly met with, and consciousness is retained almost to the end. Substus tendinum, with twitching movements of the hands and arms, have frequently been observed. Delirium was common during the earlier phases of the epidemic, but practically disappeared towards the end. It will be seen that the line of demarcation between the first and second types is by no means well defined.

I have detailed the clinical features of this epidemic in order to establish its identity with that encountered elsewhere as forming part of the pandemic, for when we come to study the bacteriology several points are found at marked variance with those of other observers.

Bacteriology and Vaccine Treatment.

Owing to the prevalence of other diseases requiring laboratory assistance for their diagnosis, but little bacteriological work could be done on influenza during the early phases of the epidemic, and consequently one could not concentrate on it until it had assumed a much more serious aspect. The primary work consisted solely of the examination of sputa from all types of the disease, and the preparation of autogenous vaccines for some few of the serious cases which showed a tendency to become chronic. During the course of these examinations it was observed that a Gram-positive strepto-diplococcus was almost constantly present—thus out of 300 sputa examined it was present in 95 per cent., and very commonly it was the predominant organism, so much so that cultures on suitable media would yield an almost pure growth.

From *post-mortem* specimens of lung this organism was again found in large numbers, sometimes alone and sometimes associated with a pneumococcus. The strepto-diplococcus was also found in the liver, spleen, heart's blood and kidney *post mortem*, and in the aspirated pleural effusions during life. It was also found in a subcutaneous abscess occurring in the course of the disease, in two cases, unassociated with any other organism. One fatal case,* which occurred recently, was complicated by surgical emphysema, and the strepto-diplococcus was obtained in pure culture immediately after death from the subcutaneous tissues affected.

Morphologically this strepto-diplococcus is identical with one found commonly in the nasopharynx of normal individuals, or in those with some mild catarrhal condition of the mucous membrane. Later, blood cultures were carried out in forty cases at all stages of the disease. In three the strepto-diplococcus was isolated, whilst in one other a diptheroid organism was obtained. The last case was moribund when cultured, and the infection with the diptheroid may be regarded as a terminal one. As regards the former, two of these cases were of the acute toxic type, and the blood culture was performed on the second day of the disease; one of these died forty-eight hours and the other seventy-two hours later. The third* case from whose blood the strepto-diplococcus was isolated belonged to the second type, and eventually made a good recovery.

From these facts it was obvious that, whether one regards this strepto-diplococcus as the primary cause of the disease or not, it was certainly responsible for a very large proportion of the fatalities. For this reason, together with the very encouraging results achieved in the more chronic cases by the autogenous vaccine treatment—a vaccine composed of morphologically identical organisms—I ventured to suggest that a polyvalent stock vaccine should be given, tentatively at any rate, to a larger series of cases.

The first batch of stock vaccine used was prepared from strains isolated from sputa and lungs at autopsy; to this was added a third of pneumococcal emulsion also derived from lungs. Towards the end of October, 1918, vaccine treatment was commenced, and the preliminary results obtained in the early series of 20 cases was most encouraging. There were two deaths, one of which was complicated by acute bacillary dysentery, whilst the other was found *post mortem* to have suffered from miliary tuberculosis. Tabulated in this manner they gave the following results:

Number of cases	...	...	...	...	20
Deaths	...	...	...	...	2
Recoveries	...	...	...	...	18
Mortality	...	...	...	...	10 %

Cases treated on symptomatic lines during the same period at the same hospital gave the following results:

Number of cases	...	...	...	...	43
Deaths	...	...	...	...	15
Recoveries	...	...	...	...	28
Mortality	...	...	...	...	35 %

Whilst fully acknowledging that statistics derived from such a comparatively limited series are liable to be misleading, it is necessary for me to emphasize that this line of treatment was carried out on Indian soldiers without any selection being made. It was made a routine that every third case diagnosed in the pneumonia ward and belonging to my second type received vaccine treatment.

Before commencing treatment smears of the sputum were examined to determine the presence of the strepto-diplococcus. The scheme of dosage employed in these early cases was as follows:

Initial dose	...	...	...	5,000,000
Interval 48 hours.	...	...	...	
Second dose	...	...	...	10,000,000
Interval 48 hours.	...	...	...	
Third dose	...	...	...	15,000,000
Interval 72 hours.	...	...	...	
Fourth dose	...	...	...	20,000,000

This scheme had to be modified occasionally. No marked reactions or untoward symptoms manifested themselves as a result, but on the contrary the patient usually improved clinically shortly after the commencement of treatment. I wish especially to call attention to the definite drop in temperature which took place after each

injection. These results appeared to me to justify a much wider application of the vaccine treatment, and it was therefore provided to the casualty clearing stations and stationary hospitals in the district in which I was working.

Although for obvious reasons it has been impossible to keep accurate statistics throughout the epidemic, nevertheless all the medical officers who have been employing the vaccine have reported favourably upon it. Within the last two months the scheme of dosage has been modified, the initial one being increased to 10,000,000 cocci, to be followed after an interval of forty-eight hours by 20,000,000. Further increases are of 10,000,000 per dose. Provided that no untoward symptoms are observed, the intervals as described in the first scheme should be observed.

Much larger doses have been given without any untoward results. One medical officer reported that he had administered 50,000,000 to an apparently moribund Egyptian patient, who ultimately recovered. Other cases seemed to indicate that still better results might be obtained with a higher dosage. It has only been in a minority of cases that the vaccine does not appear to influence the course of the disease; but it is without value in the acute toxic forms.

In order to obtain the best results vaccine treatment must be instituted as early as possible, and I have strongly advocated its use in the early catarrhal stage. That this view has some justification is shown by the fact that a much smaller proportion of cases thus treated proceed to the bronchopneumonic stage.

The physical signs of pulmonary complication do not usually appear till the fourth or fifth day of the disease, so that vaccine treatment should not be delayed till these signs appear; the essential point, to my mind, is to immunize the patient against the strepto-diplococcus before actual consolidation has taken place, for when audible signs are present it indicates that considerable pathological changes are already present in the lung, and it may be too late to produce an effective immunity. Severe cases and those tending to become chronic should be treated with an autogenous vaccine, the stock vaccine being reserved for primary usage, pending the preparation of an autogenous one.

It is advisable to examine Gram-stained films for the strepto-diplococcus in all cases where vaccine treatment is contemplated and sputum is available, for in a small minority it plays little or no part in the pathological process.

Morphology and Cultural Characteristics of the Strepto-diplococcus.

Sputa examined from early cases of the disease show large numbers of Gram-positive, non-capsulated diplococci, arranged in chains of varying length, composed of four to twenty or even more cocci. In fresh specimens and young cultures the organism is uniformly Gram-fast, but in older sputa and cultures, as well as smears obtained from the tissues, the diplococci are liable to lose their staining properties. In addition to Gram, it stains well by all simple stains. The size of the organism and the length of the chain it forms vary somewhat in culture on different media, but this strepto-diplococcal arrangement is a constant feature. Involution forms are common, especially on solid media.

The organism is easily isolated from sputa by plating on plasma-glucose-agar, and it is possible to obtain an almost pure primary plate from fresh sputa in early cases. The colonies are small, grey, translucent, circular in outline, and rather flat-topped. It grows poorly on ordinary media, but freely on those containing glucose, with plasma or serum. Unless subcultured every twenty-four hours it rapidly dies out, and even then it is most difficult to keep it alive for more than six or seven days at a time, for each subsequent subculture gives a less vigorous growth. The best medium for this purpose is apparently 1 per cent. glucose-serum broth.

The reaction of twenty strains corresponding morphologically to this description has been tested against the following sugars and alcohols; in the main the reactions are constant, though differences in the degree of acidity are sometimes marked.

Glucose	...	...	...	Acid	Dulcette	...	...	...	Acid
Lactose	...	...	...	0	Mannite	...	...	...	0
Maltose	...	...	...	0	Milk	...	...	...	Acid and clot
Saccharose	...	...	...	Acid					

On the whole strains isolated from blood and pleural effusions produce more strongly marked reactions than those isolated from sputa. Thus little or no clot production in milk was observed in strains isolated from sputum, though this was a marked feature in strains isolated from other fluids. All strains were markedly haemolytic.

The strepto-diplococcus proved to be non-pathogenic to all the available laboratory animals, guinea-pigs, rats, and rabbits.

* Both these cases were investigated by my colleague, Captain J. Anderson, R.A.M.C. The latter was treated with intravenous injections of eusol.

One of the most notable bacteriological differences between the epidemic occurring in Egypt and Palestine and in Europe has been the almost complete absence of bacilli corresponding to the Pfeiffer type. During examination of film preparations of sputa at all stages of the disease, Gram-negative micro-bacilli of Pfeiffer type were only observed in twelve cases, and in three cases only has anything corresponding to the *Bacillus influenzae* been isolated in culture, although media recommended by observers in England as specially suitable for the isolation of this micro-organism, including that of Matthews,² and the "K"³ medium quoted by Fildes, Baker, and Thompson, have been repeatedly used. I find also on inquiry that these results as regards the almost complete absence of *B. influenzae* correspond with those of other laboratory workers in the district.

Many post-mortem examinations have been made, but as results coincide with those detailed by other observers, they have been omitted from this article. In this connexion I would like to thank Major P. H. Bahr, D.S.O., R.A.M.C., for his assistance and many valuable suggestions.

CONCLUSIONS.

1. There is no valid reason for assuming that the primary cause of influenza in Egypt and Palestine differs from that of the recent pandemic.

2. There is no justification for regarding *Bacillus influenzae* (Pfeiffer) as the primary cause.

3. From the work of various investigators, it is more reasonable to regard both the influenza bacillus and the strepto-diplococcus as secondary invaders, the former being the predominant organism in Europe, the latter in Egypt and Palestine.

4. In this case it is more than possible that the primary etiological agent is ultramicroscopic and is a filtrable virus, which renders the individuals infected hypersensitive to organisms which formerly only possessed a low degree of pathogenicity.

It is hoped that the favourable results achieved by the vaccine treatment will dissipate—in part, at any rate—the diffidence felt by many medical men to the employment of vaccine in acute pulmonary cases and will stimulate further investigations on this branch of therapeutic bacteriology. Work is now being conducted with a view to producing an antiserum in horses to this strepto-diplococcus.

REFERENCES.

- ¹ Abrahams, Hallowes, and French: *Lancet*, January 4th, 1919.
² Matthews: *Ibid.*, July 27th, 1918. ³ Fildes, Baker, and Thompson: *Ibid.*, November 23rd, 1918. See also W. F. T. Haultain, *BRITISH MEDICAL JOURNAL*, April 26th, 1919, p. 517.

AN ADDRESS ON GOITRE.*

BY

H. J. BOYD, L.R.C.P., L.R.C.S.,

CHAIRMAN OF THE BELFAST DIVISION OF THE BRITISH MEDICAL ASSOCIATION.

It is a very difficult thing for a man in an ordinary country practice to write a paper that would interest any number of the medical profession. He is in a totally different position from the surgeon, the consulting physician, or the bacteriologist. If he meets with a very interesting case—occasionally he does—he rarely if ever has anyone to consult, nor can he compare notes with any other practitioner.

A disease the frequency of which has been puzzling me for some time in a portion of my neighbourhood is goitre, and I thought an account of a few facts I have noted might not be inopportune on this occasion. I do not claim to have discovered anything new either in cause or treatment, but I think there are some differences between the symptoms in the majority of the cases I have met with and what I have seen described in books, notably in the time of onset and the proportion of males and females affected.

In July, 1918, there was a garden party at Hillsborough for the purpose of raising funds for a neighbouring church, and a number of young women from a district, to which I shall refer later, were present. In the evening I happened to have a good view of them as I occupied a seat on a

platform facing the audience. In the front row there were twenty-two young women, and out of these I counted sixteen with enlarged necks. I drew the attention of three persons who were sitting beside me to what I had observed, and asked them to tell me how many they thought were affected. They all arrived at about the same number.

I do not, however, wish it to be believed that anything like 70 per cent. of the young women are affected, but on this particular occasion they happened to be congregated.

Twenty or twenty-five years ago goitre was almost unknown in this district, but at the present time I know of and have seen between sixty and seventy cases. It is quite possible there may be a few more, as I am rarely consulted about it unless there arises some difficulty in breathing or swallowing. All the cases, with one exception, are of the female sex, and in over one half the right side of the gland is larger than the left. In no case have I seen the left larger, whilst, in the only male case that I know, the left is the side most affected. Why the left side should be larger in the male and the right in the female is an interesting problem; it seems to indicate that sex plays an important part in the susceptibility of different lobes of the thyroid to disease.

The gland in most cases begins to enlarge when the girls are about thirteen or fourteen. Now Dr. McCarrison in his book says that school children are more susceptible than adults when they are subjected to goitrogenous influences, and that the most susceptible age is 9 in the case of boys, and 10 in the case of girls, and that up to the age of puberty both sexes are affected equally. I do not know of a single child attending school showing any symptoms of the disease. I have spoken to several national school teachers on the subject, and in no case have they noticed a swelling or prominence in the necks of any of the scholars. The majority of children leave these schools when they are about thirteen or fourteen years of age.

Dr. McCarrison also says that in the localities where goitre is not supposed to be endemic the thyroid enlarges during pregnancy in nearly half the cases. I know of two cases that developed in the past year during pregnancy. The enlargement was first noticed by the patients about the fifth or sixth month. In one of these cases the enlargement was much the same when I saw it last, about four or five months after the child was born. In the other it had decreased; she has a sister with a fairly large goitre of sixteen years' standing, and their mother informs me that she herself had one which disappeared about twenty-two years ago, shortly after her last baby was born.

I see from several books I have consulted that defective or improper food, insanitary dwellings, bacterial and other toxins, infectious diseases, constipation and intestinal stasis, fright, mental worry, consanguinity, and heredity, are all given as exciting causes.

The majority of these causes are out of the question in this locality. There is not much wrong with the food; the people are as well fed—better, I believe—than ever they were. The dwellings are far more sanitary than they were thirty years ago—the old mud walls, thatched roofs, earthen floors, and small windows that did not open, are things of the past; and the filthy cesspools and stagnant water holes have almost disappeared. There had been no serious epidemics before the late outbreaks of influenza. Intestinal toxæmia is, I suppose, much as ever it was, while constipation is not a common condition in girls of 13 or 14.

The water supply in the labourers' cottages built by the rural council is different. Before these cottages were built shallow wells, from which the water could be lifted with a can, supplied the drinking water. Now a deeper well, with a pump, is the rule, and it is quite possible that the water now used is not the water originally supplied, but comes from some distant and polluted source. We have a few cases in the village of Hillsborough where the water supply is almost the same as it was forty years ago. The majority of the people are supplied from pumps. I have had the water from these analysed at various times, and several of the samples were certified to be contaminated with sewage.

The district in which the disease is most prevalent, and where the girls I saw in Hillsborough came from, lies along the banks of the Lagan Navigation Canal and the river Lagan. It is low lying, from 110 to 150 feet above sea level, and is bounded on the north and south by fairly

* Delivered at the annual meeting of the Belfast Division, June, 1919.

high hills; the northern, in County Antrim, are composed, according to the geological survey map, of basalt, chalk or limestone, with flint and red marl. On the southern side the hills are upper silurian with an outcrop of rhyolite and patches of thick and thin greenish grit, with beds and layers of grey slate and also yellow and brown sandstone. The valley itself lies over new red sandstone, with a few thin bands of white earthy magnesian limestone. Thus we have limestone on the one side, and underneath it magnesian limestone, which is repeatedly associated with goitre.

Bircher considers that the extinct flora and fauna of limestone rocks provide the organic constituents which help to produce goitre. Dr. McCarrison's explanation is that "these rocks are amongst the most porous, and most freely cultivated and inhabited, and that their porosity favours the excitants of the disease to unprotected water supplies. Water derived from such rocks may contain an excess supply of lime, the ingestion of which may throw an additional burden on the function of the thyroid. The presence in the soil of decaying animal and vegetable matter may convert any soil into a suitable habitat for the contagium vivum of the disease."

It is a common idea in my neighbourhood, especially amongst the elder women, that the wearing of light blouses by the young girls and the exposing of their necks in all weathers are the principal causes. There is a possibility that an alternating increased and decreased blood supply might be caused by running in and out of doors in cold weather.

There are three cottages in this district, built several years ago by the district council. They are good cottages, kept clean, and are apparently sanitary. They were built on new ground where there was no probability of any contamination from sewage. The gardens, however, are close to the house, and as these are manured there is a possibility of some deleterious matter coming from them. The well, on the other hand, is fairly deep, and I am informed the spring comes from below. These cottages are supplied by one pump. In two of them eight cases of goitre developed. The original occupiers of the other cottage have left. They were, however, oldish people beyond the susceptible age, so I did not take the trouble of looking them up. The present occupiers are a man and his wife with a young family. So far none are showing any symptoms.

I got the district council to have the water from this well analysed, stating that I suspected it of producing goitre. The report I got from the analyst was: "It is a satisfactory water, quite safe for domestic use; and, although I would classify it as a hard water, I could not say it would be the possible cause of goitre."

I afterwards gave Mr. Kirk, who noticed the goitre in one of these houses, a sample from the same pump. He very kindly got it examined by Professor Symmers, who declared it to be full of micro organisms very similar to those McCarrison describes in his book. The material excavated from this well was principally sand of a greyish-yellow colour, and the water at times had so much suspended matter that it had a slight tinge of that colour.

This well has not been used for four or five months. The occupants carry from another well a few hundred yards distant, and boil all the water used, and at present in every individual case the size of the neck has greatly diminished.

There were two deaths in the past year amongst goitrous patients. One died from tuberculosis, and I noticed that, although before death this young woman had gone to a mere skeleton, there was no diminution in the size of the goitre. It became more prominent, though I do not think there was much increase in size; it was more noticeable owing to the wasting of the other parts. She had diarrhoea for a long time, continuous sweating, and constant thirst, and, in consequence, drank large quantities of water, which, if it produced the disease, probably kept it up to its original size.

The other death occurred in an exophthalmic case, which seemed an ordinary case for years; but within nine months of her death the protrusion of the eyeballs and the palpitation of the heart first became noticeable. The pulsations were visible over the whole chest, and could easily be seen when covered with the bedclothes. I have seen the bed shake and could hear the sounds of the heart at a distance of nine or ten feet from the patient. Her

mother informed me that frequently at night when all was still she could hear it distinctly in the next room. At present two of her sisters, one 16 and the other 14, have ordinary goitres. In the case of the elder it is fairly prominent.

I know of five mothers suffering from goitre who have grown-up families, and in every case some of the daughters are affected. This at first sight looks as if inheritance played an important part in the disease, but it is quite possible that the source from which both mother and daughters got the disease was the same. Again, it is also possible that the mother herself may be the carrier and may contaminate the food or drink in some unknown manner. I know of one case in which a woman from Cookstown settled in my neighbourhood. She had a large goitre when she came. Since then her daughter has developed one. The original cause could not be guilty in this instance.

When two or three girls are affected in one house I have noticed that the one who drinks most water has generally the largest goitre, from which it might be concluded that water is the important factor, and that the growth is in proportion to the material supplied. On the other hand, some are showing the enlarged gland who declare they never taste water unless in the form of tea, coffee, or cocoa, in all of which beverages the water has been boiled. If the statement of these girls can be relied on—and why should it not?—it would seem that there must be some other vehicle than water which conveys the infection, or, if it is only from water, that the micro-organism causing the disease must be capable of surviving a few minutes' boiling. If not, the old theory of mineral constituents held in solution or suspension naturally occurs to the mind.

I have kept an eye on the domestic animals of the neighbourhood—horses, cattle, dogs, and cats—but so far I have never seen the slightest trace of goitre in any of them.

About three weeks ago I was attending in her confinement a woman who suffers from goitre. Immediately labour began she had great difficulty in breathing which she compared to a cord constricting her neck. This was so severe that at times I was greatly alarmed, and she herself was so much frightened that she never noticed her pains. After the baby was born the breathing improved, and the next morning all difficulty had passed away.

Treatment, as a rule, is not very satisfactory. It is generally tedious. The patient gets tired or careless or gives up hope. Young women object to painting their necks with iodine or blistering with red iodide of mercury. They may take iodine or potassium iodide internally for a time, but will not persist long enough for the drugs to produce much effect. Thymol I have tried frequently, but have never seen any results from it. Thyroid extract I have certainly found of value, and I frequently combine it with the iodides. I notice that when once the gland begins to decrease in size the diminution generally goes on even after the treatment is stopped.

The cases, if they come early, are, I believe, quite amenable to treatment; at least I have found it so in several cases. Whether the decrease is due to the medicine, the boiling of the water, or getting it from another well I cannot say—possibly a little of all combined.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ACRIFLAVINE IN TREATMENT OF GONORRHOEA.

DR. WATSON, in a memorandum in your issue of June 28th, offers a few suggestions as to the best method of diagnosing anterior gonorrhoeal urethritis and states that a considerable percentage of error must occur, the disease having spread to the posterior urethra. In my experience the number of days since the appearance of the discharge cannot be relied upon in the differential diagnosis, as in some cases the posterior urethra is infected at a very early date; in a few cases which have received little treatment it escapes. Frequency of micturition may not be present even when the posterior urethra is affected, and when present may be due to other causes. The two urine glass test is open to fallacies. It is better in cases of doubt to

wash out the anterior urethra with cold sterile water until it returns free from all discharge or threads. The urine then is passed in three lots, the first giving the contents of the posterior urethra, and the second an index as to the condition of the urine in the bladder.

The prostate is then gently massaged and the third urine examined; this is an old method, and if carried out carefully, the exact extent of the disease can be arrived at.

I agree with the suggestion of using urethral vesical lavage in all cases in clinics, but when the disease is limited to the anterior urethra and individual attention can be given to the case, I limit irrigation to the anterior urethra.

If in addition to the local treatment large quantities of alkalis are taken internally and the patient advised to rest, at least 50 per cent. will escape posterior infection. I have found that if the treatment is used twice a day the results are as good as when more frequently applied, and the patient is more inclined to continue the treatment.

In many cases of gonorrhoea treated with the old remedies the gonococci disappear before the end of three weeks. In the cases recorded by me to which Dr. Watson refers posterior urethritis was ruled out by the method recorded above and a cystic gland by urethroscopic examination. I am now using acriflavine in the strength of 1 in 1,000 with a 2 per cent. alkali, and the results appear to be favourable, the purulent discharge and cocci disappearing in 50 per cent. of the cases within the first fourteen days.

London, W.

J. ARMSTRONG.

Reviews.

ARMY MEDICAL ADMINISTRATION.

DURING the course of the war a great deal of criticism, constructive and destructive, was directed towards the administrative methods of the Army Medical Service, and our own columns have frequently contained notes and articles pointing out the defects as well as the successes of that service. In his most recent book, *A Vision of the Possible*,¹ Sir JAMES BARRETT, who has been a prolific writer on war topics in the last two years, sets out the conclusions he has reached, after three years' service in Egypt, as to the methods employed, and where, in his opinion, they need revision. A visionary is popularly supposed to be highly unpractical and to lose sight of detail owing to his largeness of view, but the author shows that he has a keen eye for detail. He takes pains to make it clear that no criticism of individuals is intended, for individually the medical officer, no less than the combatant, played his part to the maximum of his personal effort, and helped the nation to weather a storm which threatened disaster.

It must not, in any criticism of its methods, be forgotten that the Army Medical Service, like other military branches, had to expand at an unprecedented rate to an unforeseen extent. This made it necessary to obtain the help of men (of whom the author is careful to say he was one) with no previous knowledge of army administration. Much time and energy had consequently to be devoted to the education of the incoming man. As was inevitable, some of the criticisms heard were levelled at methods which seemed obsolete to civilians who were unaware of the underlying causes from which such methods sprang. An order often appears absurd to those to whom the reason for the order is not revealed, and if his suggestions are to be useful the critic must know something of the history of the Army Medical Service, as well as of the constitution and administration of modern armies.

Sir James Barrett in his preface expresses the opinion that the conditions under which a R.A.M.C. officer works might, owing to the unlimited scope and the freedom from financial worry, be ideal, and that constructive criticism should aim at contributing to the attainment of this end. In the first section he narrates his personal experiences as consulting oculist and aurist in Egypt. The forces there, as elsewhere, contained hundreds, if not

thousands, of men who were rushed into the army suffering from minor ailments of the nose and ear. Conditions of service aggravated these complaints, and often without aggravation afforded a pretext for going sick. An analysis of 1,474 cases shows that in a very considerable proportion the condition must have been of long standing. The problem of the soldier with "running ear" is difficult. The patient is a nuisance to his comrades and a constant perplexity to the regimental medical officer, who finds it almost impossible to give an accurate prognosis. Such cases form an appreciable part of the floating hospital population which travels constantly up and down the lines of sick evacuation, being temporarily improved and returned to duty, only to go sick again on slight pretext. Careful weeding by an expert is necessary, and grading of men for the varied types of duty; for this specialists must be appointed at the beginning of a war, so that man-power may be conserved and in a national emergency every man may "pull his weight" according to his physical ability. As organization developed in Egypt such a classification became standardized; further, much useful treatment was carried out in the forward area and only serious cases were sent to the base. An interesting circular memorandum as to the methods of treatment to be adopted in dealing with chronic otitis is reproduced in the book; the author is enthusiastic about its results, which led in many cases to long-standing disease being overcome and to the retention of men with the troops in the line. The problem of deafness was similarly attacked, and with like happy results. Impaired hearing is not difficult to simulate; when genuine it is a bar to front line work, where sentry duty demands acuity of hearing. Here again an experienced medical officer is needed to classify the cases.

On these examples of what was accomplished Sir James Barrett founds an argument for the early appointment of specialists in other branches—for example, for cardiac conditions, venereal diseases, etc. He claims that the work of the heart specialists resulted in the practical elimination of D.A.H. as a disability, largely because the issues were clearly explained to medical officers, whose enthusiastic co-operation was thus aroused. This is an important statement, with very wide bearings. In dealing with men of intelligence, such as medical officers, the rationale of the procedure must be explained if the best results are to be attained. A curt order, to the underlying reason for which the recipient has no clue, does not promote intelligent co-operation. Where a certain course is ordered in dealing with special diseases, explanatory memoranda, which need not be lengthy, are of the greatest value in securing that the instruction shall be carried out in the spirit as well as the letter.

In Section II a voluminous account is given of the work and procedure of medical boards. Probably no institution has come in for more criticism throughout the war. To board a man efficiently is no easy task; it requires an understanding of the psychology of the case as well as a mere estimate of physical efficiency. What will effectually bar one man from "carrying on" will be made light of by another; therefore the man's willingness has to be estimated as well as his condition. The members of a medical board need to be trained in the work, and should also be able to refer for an opinion to those who have special knowledge of certain disabilities, particularly those of the heart, the nervous system, and the special senses. To employ on boards, as has happened in the past, men who have been found unsuitable for hospital work is to court trouble. In the war areas the boards were faced with an additional difficulty in that the medical history sheet, which in peace is kept up for each man, was abolished, and no record of the man's medical history was available, beyond a few entries in his pay book as to antityphoid inoculation and a possible refraction test. To multiply these entries was impracticable owing to the labour of copying each time a new book was issued, and to apply to the D.A.G. Casualties involved a long delay. It is interesting to note that in Egypt the practice of entering the classification of a man's grade into his pay book was adopted, with the result that much time was saved. In the early stages standards of efficiency were not definite and had to be evolved or altered. This evolution as it occurred in Egypt—and experiences in other theatres of war were similar—is outlined by the author, who acted as president of the Standing Medical Boards; the complete memorandum of instructions for boarding,

¹ *A Vision of the Possible: What the R.A.M.C. might Become*. By Sir James W. Barrett, K.B.E., C.M.G. London: H. K. Lewis and Co. (Pp. 179. 9s.)

which was issued to every medical officer, is reproduced in the book, and should be found of great value for future guidance. The scope of the boards steadily widened, and ultimately included classification, invaliding, pensions, commissions, repatriation, and special inquiries. So valuable was their work that at the end of 1917 the D.M.S., it is stated, estimated that directly or indirectly a division had been added to the force in the E.E.F. as a result. One concrete example of classification is telling. "Base details" in Cairo and Alexandria were in 1917 very enthusiastic about football. All players were therefore reclassified, and as a result a substantial number were returned as fit for front line duty. This was a gain not only in men, but in moral, for it undoubtedly had a good effect on the men in the fighting zone who naturally "groused" at fit men being retained on "cushy" jobs at the base. In six months of 1917 nearly 9,000 men were boarded in Egypt, and the results are set out in tabular form; numerous other statistical tables are included. These are well worthy of study by military medical administrators.

The chapter on standards of vision is of interest. The pre-war standard was early discovered to be too exacting, and was revised by the War Office; in Egypt, later on, it was made even lower, so that $\frac{5}{6}$ in the right eye, with or without glasses, provided the man was not blind in the left eye, was regarded as sufficient for front line duty. Trachoma was a problem of little magnitude, but "experiences in Egypt have shown that with an Anglo-Saxon population the risk of spread is negligible." This statement should be of interest to our immigration authorities.

Before quitting this subject it should be noted that it is important that boards responsible in England for classifying drafts should have practical and personal knowledge of conditions overseas; the same standards of physical efficiency should be applied throughout.

An important subject is raised in the discussion on the relation of the Red Cross to the R.A.M.C. Whether the great voluntary organization should in war be merged in the Army Medical Service, as is the case in Japan and largely in America, or whether it should be maintained separately, is a matter for careful discussion. Sir James Barrett appears to favour the former course, and in this he will have many supporters who have served overseas. It is doubtful whether it is wise to have hospitals maintained by voluntary effort working alongside those under complete army control; many would agree that the purpose of the Red Cross is solely to supplement existing army resources and not to maintain kindred establishments.

On the subject of consultants the author covers much of the ground traversed in these columns recently, and arrives at substantially the same conclusions. On one point his brother consultants will hardly agree with him and that is, his order of precedence. He places the consulting dentist at the head, the oculist and aurist next, the surgeon and physician coming last in the hierarchy.

The summary is interesting reading and sets out plainly what many must have felt. In the first place, an officer must not become the slave of the administrative shibboleths, and regulations are not to be regarded as sacrosanct and incapable of modification. Secondly, promotion must not be confined solely to the channel of administrative capacity, but must be equally possible through clinical merit and through knowledge of preventive medicine. Thirdly, the extension of civilian advisory boards to each command is advocated. On the vexed question of whether the medical service should be removed from the control of the "A" or Adjutant-General's branch, the author has weakened from his previous firm advocacy of this change, his reason being that few medical men have sufficient breadth of view. On this point we differ from him and maintain that freedom from "A" control would materially have helped the service in the recent war. The education of civilian medical officers in army routine, the importance of preventive medicine, and the necessity for clinical medicine and medical administration working hand in hand, are dealt with. Finally, the author asks for a Royal Commission to inquire into the workings of the service and submits a series of questions for its consideration, suggesting the widening of the scope of the R.A.M.C. and further use of its magnificent matériel in peace as well as (pace the League of Nations) in war.

As a stimulant to thought the book should be read by all interested in military medical administration, and who of us does not now think that he knows a vast amount on this subject?

ORTHOPAEDIC SURGERY.

DR. ROYAL WHITMAN'S *Treatise on Orthopaedic Surgery*² is one of the standard textbooks on the subject and the sixth edition will be generally welcome. In the preface it is stated that the aim of the author is to emphasize the purposes of orthopaedic surgery, which are to prevent or correct deformity and to preserve or to restore function. The most notable change in the present edition will be found in the final chapter, which treats of military orthopaedics and the early development of practical reconstruction. In the chapter on diseases of the nervous system Dr. Whitman gives some interesting data concerning the great epidemic of anterior poliomyelitis in New York City and State in 1916. In this, as in previous epidemics, the mortality was higher than it had been among sporadic cases. For instance, in the five years 1905-09 the mortality among 7,103 cases in New York City was only 7.4 per cent. In the 1916 epidemic the mortality among 8,991 cases was 27.2 per cent. The suggestion is that an epidemic is associated with, if not caused by, increased virulence of the poison. The age incidence was much the same as that of previous records.

To a great extent the United States military authorities followed British practice in forming an orthopaedic department of military surgery, but under that department was included upbuilding as well as repair, for "under the system of universal conscription a large proportion of those who would formerly have been rejected are retained, with the expectation that they may be brought into condition by training in the camps." But besides those who might be brought up to the normal standard, recruits were accepted for special and limited military service who suffered from quite severe deformities, such as lateral deviation of the spine of less than 3 in. from the mid-line. About 80 per cent. of the cases of weak or strained back and weak or flat foot were cured by the treatment in the camps, and were finally accepted as fit for full duty. The courses of treatment were strenuous and life in the camp was made less pleasant than in an ordinary camp, so that there was no inducement to prolong recovery.

Dr. Whitman emphasizes the differences between the pathological flat-foot and the normally flat or low-arched foot; a man with the latter condition may be quite fit for all military duties and need no treatment.

The treatment of gunshot fractures and of pseudarthrosis and the preparation of amputation stumps receive due attention, and Vanghetti's methods are described. In this connexion it would seem from most recent developments that the tunnelization methods so much talked of in Germany and practised by Sauerbruch and his school are likely to be abandoned, in this country at least, in favour of other forms of motors where an operation of this type is considered desirable. The various forms of motors are illustrated by Dr. Whitman, but he does not record any personal experiences with the method. It may be hoped that we shall soon have the benefit of transatlantic experience of these operations.

The section on the treatment of injuries to nerves is adequate and well illustrated, as is that on attitudes of election when ankylosis of joints is inevitable, a subject of much practical importance. Some pages on curative workshops, vocational training, etc., conclude the book. We note with satisfaction that Dr. Whitman and most American orthopaedic surgeons have now adopted the diphthong "æ" in place of the "e," which was originally imported into the United States from France. They have thus removed the ground for the popular etymological association between "orthopedic" and "pes."

² *A Treatise on Orthopaedic Surgery*. By Royal Whitman, M.D., M.R.C.S. Eng., F.A.C.S., etc. Sixth edition, thoroughly revised. London: Henry Kimpton. 1919. (Roy. 8vo, pp. xii + 914; 767 figures. 36s. net.)

At the sixty-ninth annual commencement of the Women's Medical College of Pennsylvania, held at Philadelphia on June 15th, degrees were conferred on seventy-eight candidates.

MOTOR NOTES FOR MEDICAL MEN.

By H. MASSAC BULST.

THE LOT OF DOCTORS WITHOUT CARS.

WHILE the technical motor press has been issuing weekly numbers of at least pre-war proportions and chiefly concerned editorially with descriptions of so-called 1919 chassis, the fact is that the labour and other troubles have prevented such vehicles issuing in standard form in any appreciable quantity. As the facility of motoring does not consist in providing the public with reading matter about cars alleged to be in process of manufacture or supposed to be on the market, but in providing the actual car ready for service, one has reluctantly come to the conclusion that it is quite idle to give any more attention to the announcement of programmes for the time being.

But inasmuch that there is no gainsaying that the motoring lot of the medical man, especially if he sold his car on joining the service, is far from happy, it becomes a duty to give thought to the possibility of some scheme for providing essential facilities to those whose work is vital to the well-being of the community at large. It is easy to summarize the various directions in which a solution of the passing trouble cannot be sought. Allowing for happy exceptions, in the main the acquisition of used cars is not a satisfactory matter for the medical man from the mechanical point of view, while from the financial standpoint it would be grossly inadvisable, in that, though prices are not as wildly inflated as they were, nevertheless they are nothing like back to normal. It must be had in mind, too, that price fluctuations react always in exaggerated fashion, so that when the price begins to drop second-hand cars will fall far below their proper value when the inevitable occurs, as it must within twelve months.

As medical men cannot be numbered among the profiteers, the notion of risking a heavy loss in the way of depreciation of capital expenditure to solve a temporary problem is not to be contemplated. Besides, already here and there one hears of folk getting real bargains in used cars; consequently it is not at any given time possible to determine what is a fair current price of such an article. For instance, the other day I came across a man who acquired a Morris-Oxford light car which had not done more than 1,200 miles, and was in excellent condition, for £100; whereas the majority of light cars of that and other makers are commanding at least their original cost and some of them more.

TEMPTING PRICE SCHEMES THAT DO NOT MATERIALIZE.

The prices of such few examples of the current season's British production as are issuing are wellnigh prohibitive to the average medical man, apart from the fact that it is next to impossible to get delivery, as little or no reliance can be placed on promises as to dates. The very prices fluctuate, as they must necessarily do, for the Government is striking at the roots of industry in its dealings with the coal miners, who have lost the sense of the relation of the part to the whole—otherwise of themselves to the State and of this country to the rest of the world.

The only fresh point of the situation since last it was touched on would appear to be that the speculating company promoter sees a golden opportunity in the present troubles to float enterprises with large capitals with nothing more than the scheme of a car on a piece of paper, and the statement of the price at which it is to be marketed—which, seemingly, is not that at which the thing can be done, but that at which the public would like to be able to obtain a vehicle of whatever kind may be in question. Therefore medical men may avoid being disappointed if they will not allow themselves to build false hopes on propositions of this character. The most I have discovered about so called mass-production propositions of this caste to date is that, after going to allotment, hasty endeavours have been made to get together at least ten chassis in a hurry. If the public knew the little backyards and places where the parts and bodies are produced to serve such shifts, there would be no more chances of success for ventures of this sort. The medical man will not help himself by believing that, because he has placed an order, as numbers have done, satisfactory vehicles of the kind specified will materialize to schedule at the prices contracted for.

CAUSES OF DELAY.

As for the established section of the industry which has goodwill to lose, it is frankly unable to keep to programme either as to price or deliveries. Under a hundred heads its cost factors alter every month. It is rarely free of labour disputes in less than 5 per cent. of the total number of trades concerned in car production. Of course, it only needs a hold-up in one department to bring to a stop the production of a whole factory. Moreover, apart from the fact that the accessory industries are equally handicapped, and are therefore in the main also behind with deliveries, thereby constituting another cause of delay to the car-makers' output, the quality of the work of many of the key industries concerned with automobilism, and whose products have also to be purchased at post-war prices, is quite impossible. Take the foundry trade. In one case I know of, a British firm has hundreds of thousands of pounds locked up in cars that cannot be issued for lack of engines because it had to reject no fewer than 85 per cent. of the cylinder castings it has received. In another firm rejections under this head have averaged over 60 per cent.

GOVERNMENT PROFITEERING.

One does not draw aside the curtain to the medical profession for the purpose of creating depression, however, but merely because we must know the worst before we can see what is the most acceptable remedy that can be suggested at the moment. The Surplus Government Property Disposal Board has lately been advertising practically everything save motor cars for disposal; yet there are still large numbers of middle-sized vehicles to be disposed of and, perhaps, a few small ones. The trade seems to have had the opportunity of snaffling most of the latter when many Singer light cars were sold some months ago. These are really the only sort of war cars suitable for the average suburban or country practitioner, in that, with the exception of a certain number of Rovers, bought at one period for the use of the Royal Naval Air Service, a somewhat larger size of car, such as notably the 16-20 h.p. Sunbeam and the 25 h.p. Vauxhall, they are the minimum types that were needed to stand up to the work of light transport in the war zones. Though they are, perhaps, a degree too large for the ordinary medical man, provided he could acquire them at a reasonable price, it might pay him better to make use of such vehicles for the time being.

Unfortunately the Government seems to have gone in for a profiteering policy of its own in regard to disposing of motor vehicles, having actually sold one car requisitioned at the beginning of the war at double the price it gave for it then, yet the car has done four and a half years' service in the interval. The defence of the department concerned is that it took its chance of market fluctuations, and the value of the article having risen in the interval, it stands to gain in this instance. In face of the fact that this is the only Government department that ran itself from the point of view to profit and loss, and not for the sole purpose of defeating the enemy, the medical profession, which has done all the sacrificing and no profiteering, has happily a lever to use with the Government in demanding reasonable consideration at this moment.

HOW THE AUTHORITIES COULD HELP DOCTORS.

At the end of the war the big motor fuel distributing companies, which were completely disorganized, were short of lorries for deliveries. The British manufacturers with whom they had placed orders were woefully behind programme owing to labour troubles. In face of threatened strikes, however, it was essential to ensure that the motor vehicles of the country would be usable in the event of a hold up; therefore, the Government gave facilities to the petrol distributors to acquire large numbers of lorries no longer needed for the war. Some were new, some were used. Between them the emergency was satisfactorily provided for.

Therefore, the obvious argument is that, motor vehicles being essential to the work of the medical profession and its services essential to the well-being of the community, the Government must extend to the medical profession special facilities for acquiring all motor vehicles which it has to dispose of which could be in any way serviceable to doctors. All it has to do is to rule that they are to have the first opportunity of buying all such vehicles, instead of

their disposal being, as it has been to date, a golden opportunity for motor dealers to line their pockets.

OUTLINE OF A SCHEME.

If it is argued that it is impossible for the Government to deal with doctors individually, the answer is that the medical profession could be advised through its representative body of the total number and types of likely cars to be disposed of month by month and the prices required for them. Individual medical men could advise the Association, which could place its order in the gross. The cars could be grouped as new and those that have seen service but are properly repaired and in usable condition. Inasmuch as in disposing of surgical and dental instruments and appliances the Surplus Government Property Disposal Board makes special offers to demobilized R.A.M.C. officers and army dental surgeons at a discount of 10 per cent. for new goods and 33½ per cent. for used ones under the prices laid down in the priced list of medical stores, 1917, the same privilege ought to be extended in respect of the cars to be disposed of, in that medical men who sold their own vehicles to join the services in the great national emergency disposed of them before the artificial rise in prices occurred, and ought not to be penalized by the country for their self-sacrifice and patriotism.

For the rest, we may expect some lock-outs in the motor and allied industries now that the Government has decided to cease arbitrating in labour disputes, with the almost invariable result of arranging that higher wages shall be paid for less output. Moreover, the American industry will be at 100 per cent. production of post-war capacity by January 1st, and the Government has to settle with the importers at the end of this month. Therefore, the disease of unrest and insufficient output looks like being cured in some measure at no distant date.

A NOTE ABOUT FUEL.

The motor fuel situation is clearing gradually. The distributors of the country have given themselves until October 31st for what they call the reinstatement period, after which they expect conditions to be quite normal. Meantime, deliveries of cans, of which there was a great shortage, are coming through satisfactorily, and all the spirit being issued from now onwards by the leading distributors is of their own selection, purchasing, and importing. Therefore, unless the Government thrusts more of its own "faked" war spirit on to the public, of which there is no immediate prospect, it only remains for the stocks held by the retailers to be exhausted by the public before the motorists of the country will be supplied with post-war or ordinary motor spirit under the various brand names which have been revived to distinguish such fuel from the Government's war-time imports.

It is to the interest of the individual medical practitioner to make it known as widely as possible that users of utility motor vehicles, who are complicating the situation by their demands for No. 1 motor spirit, may return to "Taxibus," for instance, thereby relieving the disproportionate present demand for Pratt's Perfection, Shell No. 1, or what not.

Moreover, benzol, such as the Anglo-American Oil Company distribute, is bought from members of the National Benzol Association under the guarantee that it is up to their standard specification, therefore there should be no occasion to be shy of using it in a proportion which, I suggest, should not exceed one part to three of petrol. Retailers expressing inability to supply such benzol should be told that the company has such quantities that it is "clogging its stores," and "wishes the public would ask for it."

THE Bureau of Census, Washington, has issued a preliminary report which shows that in the birth registration area of the United States, which includes about 53 per cent. of the estimated population of the Union, 1,353,792 infants were born alive in 1917. This represents a birth rate of 24.6 per 1,000 of population. The births exceeded the deaths by 74.4 per cent. The mortality rate for infants under 1 year averaged 93.8 per 1,000 living births. The excess of the birth over the death rate for 1917, which amounted to 10.5 per 1,000, was somewhat greater than the corresponding excess for 1916—10.1 per 1,000—although it fell slightly below that of 1915.

THE ROYAL SANITARY INSTITUTE.

THE thirtieth Congress of the Royal Sanitary Institute, held in Newcastle-upon-Tyne from July 28th to August 2nd, was attended by some 1,073 persons, including official representatives from many allied and neutral powers, colonial Governments, the Admiralty, the War Office, and the Ministry of Health.

A large programme of work was provided, and in addition to sectional meetings dealing with (A) Sanitary Science and Preventive Medicine, (B) Engineering and Architecture, (C) Hygiene of Maternity and Child Welfare, (D) Personal and Domestic Hygiene, and (E) Industrial Hygiene, six conferences were held by representatives of sanitary authorities, representatives of port sanitary authorities, medical officers of health, engineers and surveyors, veterinary inspectors, and sanitary inspectors and health visitors.

The twenty official meetings were well attended, and the eighty-three addresses, lectures, and papers presented to the Congress were in most cases followed by keen discussion and debate.

In his inaugural address the President, the Duke of Northumberland, welcomed the delegates to this Congress, which he stated was probably the most important ever held by the Royal Sanitary Institute, as it would enable the lessons in preventive medicine learnt during the war to be applied to the prevention of disease amongst the industrial population.

SECTION A.—SANITARY SCIENCE AND PREVENTIVE MEDICINE.

Professor Sir G. Sims Woodhead, the president of the section, was unfortunately unable to be present owing to illness, but his address was presented by Dr. W. J. Howarth. In it he stated that as a result of the war the value of the individual to the State had come to be fully appreciated and much had been learnt as to the possibilities of saving life. He advocated State-aided research into the causes of disease, and said that the knowledge so obtained should be widely disseminated to prepare the way for legislation.

Two sessions were devoted to the work of the section. At the first the subject for discussion was the rat problem, and papers were submitted dealing with the zoology of rats, their relation to disease, and measures for controlling the rat population. The treatment and prophylaxis of venereal diseases was discussed at the second session, which was the best attended sectional meeting of the Congress. The balance of opinion was against the use of prophylactics, on the score of sentimentality.

SECTION B.—ENGINEERING AND ARCHITECTURE.

The President, Major-General Scott Moncrieff, K.C.B. (late R.E.), traced briefly the improvements which had been effected in the construction of barracks and hospitals for one section of the population, namely, the army.

Mr. R. Brown, of the Ministry of Health, said that the Government were anxious for schemes to be submitted by local authorities as early as possible, and would assist with labour, transport, and material, of which last they had more in hand than was likely to be required for some time. The Government aimed at 100,000 houses being built in the first year and 200,000 in the second.

Mr. Cotterell pointed out that opportunities were now offered to develop new towns on carefully planned lines, and new schemes should be so arranged as to form the nucleus of new and improved industrial centres.

Mr. W. H. Knowles, F.R.I.B.A., suggested that a ring of schools should be built on the outskirts of every large city.

SECTION C.—HYGIENE OF MATERNITY AND CHILD WELFARE.

This proved the most popular section and showed the highest average attendance.

The first subject discussed was the unmarried mother and her child, and it was argued that the question of proper provision for mother and child was a national responsibility and should not be a local burden.

Dr. H. Scurfield (M.O.H. Sheffield) read a paper on mothers' pensions, and following upon it a resolution was passed and forwarded to the Council of the Royal Sanitary Institute requesting them to consider the advisability of urging the Ministry of Health to adopt a system of mothers' pensions which would enable necessitous widows, deserted

wives, wives of disabled men, and the mothers of large families to care for their children in their own homes.

The second day was devoted to the consideration of the causes of disease and death in the antenatal period and the organization of antenatal hygiene.

Special attention was drawn to the importance of the midwife as a factor in any scheme.

The danger of venereal diseases was emphasized, and it was insisted that diagnosis should be early and accurate, while treatment should be immediate, adequate, and easily accessible.

SECTION D.—PERSONAL AND DOMESTIC HYGIENE.

There was heard much adverse criticism of many present household methods and appliances, together with suggestions in the direction of improvement.

Papers dealing with national kitchens, central heating and hot water supply for groups of cottages, and how to fit the small house to the needs of the tuberculous, were also submitted.

SECTION E.—INDUSTRIAL HYGIENE.

In the course of his presidential address Sir Thomas Oliver stated that although general amelioration of factory conditions commenced several decades since, still the rate of improvement was slow. The great thing in industry was to avert "breakdowns," and the length of the shifts must be regulated by the physical ability of the workers. Tribute was paid to the value of the Daylight Saving Act in providing an opportunity for the worker to enjoy an hour's extra sunshine in the evening. In conclusion, he said that an industrial revolution was proceeding, the trend of which, if wisely guided, would be towards social improvement.

In an important paper on the effect of occupation upon the incidence of pulmonary tuberculosis, Professor E. L. Collis, Director of the Institute of Preventive Medicine, Cardiff, concluded that industry is associated with undue prevalence of a type of phthisis which causes death in middle age, and the determining factor may be defective ventilation either of the workshop or of the lungs.

Dr. F. Shufflebotham (Newcastle-under-Lyme), in a paper entitled "Health conditions of the coal mining industry," contended that there was much room for improvement in the housing and working condition of the miner, and suggested that the temperature of "hot" seams be reduced to 77° F. or less, that lamps of increased candle power be introduced whereby nystagmus could be checked and eventually wiped out, while many accidents could be avoided, and that accidents should be notified and published weekly.

Dr. E. F. Pratt, Newcastle-upon-Tyne, contributed a paper on factory accidents, their cause and prevention.

CONFERENCES.

Sanitary Authorities.

At the conference of representatives of sanitary authorities, following the address by the President, the subjects of municipal hospitals, crematoria, and municipalities and health were discussed.

Port Sanitary Authorities.

On July 30th the representatives of port sanitary authorities met. Dr. J. Howard-Jones put in a further plea for an international standard of hygiene of crews' quarters on merchant ships, pointing out that while under the new housing schemes not more than twelve houses were to be built to the acre, seamen were only allowed 72 cubic feet of space in their sleeping quarters.

Marine Hygiene.

At night Surgeon Rear Admiral Sir Robert Hill, Medical Director-General R.N., delivered a lecture to the Congress on marine hygiene. While conditions in the navy and mercantile marine differed somewhat, they had, he said, one very important point in common—namely, the limited amount of sleeping and working space; he hoped that the experience gained in the navy would be applied to the amelioration of the merchant service. It was, he considered, significant that tuberculosis should remain one of the main causes of invaliding, for it showed that the men's environment must be improved by all means at their disposal.

Medical Officers of Health.

The conference of medical officers of health was the most important of the series, and the business occupied two mornings. In the presidential address Professor Henry R. Kenwood (President of the Society of Medical Officers of Health), giving an account of the proposed activities of the Red Cross in times of peace, said that it would be the aim of the League of Red Cross Societies to contribute in every practical way, within the limits of the available resources and without distinction of nationality, to the betterment of the health circumstances of the world, and particularly to succour the people in those areas which were most necessitous. This League, which was a corollary of the League of Nations, was establishing a central bureau in Geneva. Its first efforts would be directed towards combating typhus in Poland.

In a paper entitled "Progress of water purification," Sir A. C. Houston gave a short review of the subject. Dr. W. Allen Daley (M.O.H. Bootle) advocated a scheme whereby one health authority would be responsible for all public medical work in each area. Dr. G. A. Auden (School Medical Officer, Birmingham), in dealing with the position of the special school in educational organization, suggested that special training in educational psychology and the diagnosis of mental deficiency should be given to school medical officers, and that some organized system of dealing with backward children should be introduced.

Dr. E. S. Buchanan, speaking on the subject of epidemic diseases brought into prominence by the war, mentioned that eighteen small outbreaks of small-pox had occurred already this year; only by constant vigilance and attention to vaccination could the disease be kept at bay. Dealing with typhus, he emphasized the importance of the association with famine and misery, and stated that while epidemic spread was unlikely, there were possibilities of local occurrence. With the resumption of the pilgrimages to Mecca the danger of the reappearance of cholera increased. Dr. Neech (M.O.H. Halifax), in a paper on the after-care of the sanatorium patient, with special reference to future housing schemes, urged that as treatment of phthisis had proved unsatisfactory it was important to concentrate on prevention. This he proposed to secure by an ambitious scheme for rehousing practically the whole population in bungalows with open-air bedrooms.

Engineers, Surveyors, and Veterinary Inspectors.

The conference of the engineers and surveyors to county and other sanitary authorities was mainly concerned with the housing question, while that of the veterinary inspectors dealt with the importance of the inspection of cattle in relation to the control of contagious diseases of animals and the fuller development of a wholesome meat and milk supply.

Sanitary Inspectors and Health Visitors.

The most important feature of the conference of sanitary inspectors and health visitors was a plea for the recognition of the important part played by women health visitors in social reconstruction and the need for a higher standard of education, which should be rigidly enforced.

THE POPULAR LECTURE.

Sir Robert W. Philip, President R.C.P.E., took for the subject of the popular lecture, "The heritage of health." In a fascinating address, which held the audience spell-bound, the lecturer showed that while, with relatively few exceptions, all children were born quite healthy, most of the weakness and sickness of life were the outcome of ignorance or neglect of simple physiological laws. Health ideals must be created and a higher conception of health developed under the guidance of the medical profession.

Exhibitions and Excursions.

During the Congress a very successful child welfare and mothercraft exhibition was held in the Rutherford College under the auspices of the Newcastle Maternity and Infant Welfare Centres.

An excellent local programme had been arranged reflecting great credit on the local secretaries. With the exception of a sharp shower of rain on the Thursday beautiful sunny weather prevailed throughout the week and enabled those who attended the garden parties to see Alnwick Castle and the famous Jesmond Dene at their best.

British Medical Journal.

SATURDAY, AUGUST 9TH, 1919.

THE TREATMENT OF MENTAL DISORDER.

THE question of the treatment of incipient insanity has been discussed from time to time in this JOURNAL, and there is a growing body of opinion that reform in this direction is urgently needed. All those who are best qualified to judge are convinced that the lunacy law as it now exists prevents the treatment of mental diseases from reaching the level required by modern standards and aspirations. At present the law is such that mental disease cannot be treated, except in the home of the patient, without certification. The public entertain a natural prejudice to the procedure of certification, and it is felt that the law must be amended so that mental clinics may be developed upon the lines of a general hospital, quite distinct from existing asylums, and in which patients may be admitted without the stigma of certification. Such a reform would prevent much unnecessary certification, it would ensure treatment for a patient before he drifts into a chronic and incurable condition, and it would prove of considerable educational value to the medical profession. At the present time it might be said that psychiatry occupies a position in relation to modern medicine analogous to that of a certified patient to society; it is out of contact with the current of medical thought and practice and remains as a more or less isolated medical interest. Clinics for mental disorders would do much to remedy this state of affairs and would serve to widen the study of this most important branch of medicine.

Active steps are now being taken in various directions to bring about an amendment of the Lunacy Act which will meet the needs of the case. Especially significant is the attitude towards the problem of the Asylum Committees which represent those members of the public who are most intimately acquainted with the practical working of lunacy law. Reference was made in our issue of January 25th, 1919, to the newly constituted National Council of Institutions for the Treatment and Care of the Mentally Afflicted (Mental Hospitals Association) in which most of the English asylums are represented. This important and influential council, in spite of the fact that it has been concerned largely with pressing industrial problems in connexion with asylum employees, exhibits a thoroughly progressive spirit in regard to the treatment of insanity, and it urges a drastic amendment of the lunacy law as a matter of urgent national importance. Foremost in its recommendations is a reform which will make it possible for local authorities to establish special mental hospitals for the treatment of incipient or actual mental disease without certification. We understand that recently a deputation from the executive of this council, under the leadership of Alderman Morgan Thomas, ex-Lord Mayor of Cardiff, was introduced by Lord Digby, Chairman of the Dorset County Asylum, to representatives of the Home Department and the Board of Control. The deputation was sympathetically received and an intimation given that the Government would shortly introduce legislation on the subject. Such a deputation, expressing as it does the opinion of Asylum Committees, should do much to convince the Govern-

ment of the strength of public feeling in regard to the necessity for reform.

It is interesting to observe, also, that practical schemes are in process of development in regard to the suggested reforms. It is proposed to establish in connexion with King Edward VII Hospital and Medical School at Cardiff an in-patient and out-patient clinic for mental diseases, and a conference, presided over by Alderman Morgan Thomas, was held recently to formulate the details of the scheme. The meeting included members of the Hospital Committee and university, the Chairman of the Board of Control, Sir William Byrne, and Dr. C. H. Bond, one of the medical Commissioners. A scheme was outlined for the erection of a building near the infirmary for the modern treatment of mental disease and provided with facilities for research and teaching. The conference was unanimous in resolving to promote the object in view and a committee is to be formed to develop the scheme with the advice and co-operation of the Board of Control. The Cardiff Mental Hospital, with Dr. Edwin Goodall as medical superintendent, has, since its opening, always been prominent for research in mental disease, and it is to be hoped that this further progressive move will only be the forerunner of similar activities in the other teaching centres of the country. Schemes of this kind have, of course, their financial side. Such clinics as are proposed will involve a considerable initial outlay and will be more expensive than is the case in ordinary asylums. In so far as such centres of treatment should prevent many patients from being recruited into the class of the chronic insane a saving will ultimately occur, but the financial aspect is really a very secondary consideration in view of the social benefits which such reforms will bring about. Though the amending bill has not yet been adopted by the Government it is probable that a fair proportion of the maintenance charges and annual charges upon capital expenditure would be met by the State and the remainder by the local authority. It is probable, however, that some difficulty will be found in raising the money for the establishment of such clinics and their sites; there will thus be ample scope for generosity on the part of private individuals, and the public must be brought to realize the social importance of such hospitals.

In view of the fact, therefore, that the Board of Control, the Medico-Psychological Association, and the Asylum Committees are unanimous as to the need for reform, it would seem that the Government ought easily to be convinced of the necessity for early legislation, and it is to be hoped that an amending bill may be introduced during this year. Conditions created by the war have forced on the attention of many members of the medical profession the importance and interest of the psychoses and neuroses, and it now only remains for new legislation to make it possible to develop active centres of study, teaching, and research where this new interest may be guided and stimulated under the direction of qualified experts. It is by such means that psychiatry may attain in England the position and usefulness it occupies in other countries.

THE CONDITIONS OF INSURANCE SERVICE.

In our last issue attention was directed to the chief decisions of the Representative Body referring mainly to a future medical service when the Ministry of Health is in a position to make a complete revision of the present panel service. It remains now to

summarize the decisions of the Representative Meeting and the Conference of Panel Committees, referring more directly to the present panel service and only more remotely to a fully revised service, although, as already stated, it was not possible to avoid some overlapping in enumerating the subjects discussed at the two meetings.

In reply to questions in the Representative Meeting, Dr. Brackenbury, Chairman of the Insurance Acts Committee, assured the meeting that that Committee had not approached the Government with any fixed policy. Discussions had taken place the purport of which were before the Representative Meeting and the Conference, and the policy, if authorized by the two bodies, would be placed before the Ministry. Referring to the remuneration of panel practitioners, he repeated to the Representative Meeting what he had announced to the Conference, that as a temporary arrangement for 1919 there would be an all-round increase of 15 per cent., an additional 15 per cent., making 30 per cent. in all, for those with incomes under £500, and an additional 5 per cent., making 20 per cent. in all, on incomes between £500 and £1,200; the acceptance of this arrangement was in no way to invalidate the demand for a permanent increase. This offer was subject to the qualification that the maximum bonus on incomes under £500 should be £150 and for the rest £300.

Considerable discussion took place on the National Insurance Defence Fund, and the Solicitor of the Association assured the Representative Meeting that the members of the Insurance Acts Committee would be individual trustees of the fund, which would be quite separate from the funds of the Association.

A motion in the Representative Meeting protesting against the general tenor of M. 25 (report of Insurance Acts Committee) was lost on the assurance being given that the Committee was strongly against a whole-time State medical service, and it was agreed that the terms of any contract of service under the altered conditions should be sent to the Divisions in time to allow of discussion, especially with regard to extra services. As regards the medical referees, Dr. Brackenbury stated that they would probably be appointed by the Commissioners, would be paid whole-time salaries, would act not simply as referees but as medical advisers to the clinical health authorities, and would not interfere between doctor and patient. The meeting agreed that the referees should be appointed by the Commissioners, and should be men of wide experience in general practice. It was stated, further, that the old record cards would not be revived, but that a new form would be introduced which would probably serve as a continuous medical history, and would be settled by a scientific committee. The Conference of Panel Committees had already supported this idea.

Several resolutions were accepted in the Representative Meeting making obstetric practice optional to panel practitioners. The Conference had already accepted the proposal of the Insurance Acts Committee to the effect that attendance on pregnancy and labour should be part of medical benefit, but that panel practitioners should be at liberty to decline these services, which should be paid for out of a special fund altogether apart from the pool. The Conference had also decided that for the present the salvarsan treatment of syphilis should be regarded as outside the contract. The general method suggested by M. 25 for determining what services can be required from a panel doctor was accepted, as being simpler and more satisfactory than the present procedure. An extension of facilities for contracting out, that is, for allowing

insured persons to make their own arrangements for treatment, was advocated by a number of representatives, but did not meet with general approval.

The following subjects were dealt with more in detail by the Conference, though the Representative Meeting gave passing attention to some of them. A resolution was carried that the distribution of the local pool should be made not later than the last day of the quarter. Considerable discussion arose with regard to the payment for temporary residents; a number of representatives wished to retain the present system, but it was finally decided to accept the proposal of the Insurance Acts Committee (M. 25, para. 10). The result will be that the present temporary resident calculations as affecting the distribution of the central pool will be done away with, but the number of cases in areas where they have an appreciable effect will be taken into account in fixing the fraction of the central pool to be assigned to areas. A long discussion also arose about the limitation of lists. M. 25 had suggested that the individual panels might be limited to 3,000 insured persons, but a resolution was carried to the effect that while there should be no fixed limit, if the Insurance Committee brought to the notice of the Panel Committee the fact that a practitioner's list exceeded 3,000, and that for this reason the service was inefficient, the Panel Committee should satisfy itself as to the adequacy of the service, and, if found inadequate, the limit of 3,000 might then be imposed on the doctor concerned, with certain provisos to prevent hardship. Dr. Brackenbury stated that a considerable number of doctors had 6,000 on their lists, and one had 8,000. An addition was made to the resolution that there should be no reduced capitation for the larger lists. The suggestion of the Insurance Acts Committee that a minimum assured payment should be made to entrants into practice met with little favour and a resolution against it was carried.

On the question whether certain special services should be made a first charge on the pool there was evidently a good deal of misapprehension; it was pointed out, first, that the special services in question were not services by specialists but only such special services as are now, or in the future may be part of the contract of the panel doctor, such as the giving of anaesthetics and attendance at miscarriages; and secondly, that, provided the amount of remuneration was adequate, it made very little difference whether there was a separate pool for such special services, or they were made a first charge on a common pool. There were, however, some disadvantages in dividing the remuneration, the total of which was fixed, into two pools—one for ordinary and the other for the special services. In the end the Conference agreed with the Committee that there should be only one pool for the services required from practitioners under their contract.

With regard to persons who fail to produce medical cards or other proof that they are entitled to treatment, it was agreed that the doctors might charge fees which would be refunded on proof that the person was really entitled to treatment, provided that if a person through his own negligence unreasonably failed to produce evidence of his title, the fees should not be returned to him, but should be retained by the Insurance Committee, which would deduct them from the doctor's next account, as it would be unfair that the doctor should be paid twice over.

On the subject of change of doctor, it was resolved that there should be opportunity for change twice a year instead of once as at present. The subject of the mileage fund led to some sharp criticism from

rural practitioners, but, with the addition of a rider that the conditions in Scotland required separate consideration, the report of the Rural Practitioners' Subcommittee was approved. The question of the agreement entered into by panel practitioners led to a statement by the Solicitor of the Association which deserves careful reading, as it removes many misapprehensions (SUPPLEMENT, July 26th, p. 33).

The paragraphs of M. 25 referring to extensions of the medical service brought a promise that the question of payment for extra services would be placed before the Panel Committees, but it was not possible to discuss the payment until it was settled what extensions of the service were to be provided; it was, however, expected that it would be possible to present some idea of the amount of extra payment required to the October conference. If not, the new agreement would not be brought into operation until next April, but it was considered clear that the remuneration would be at a considerably higher scale than the present 7s. 6d. The Chairman of the Insurance Acts Committee outlined the arguments which the Committee thought would weigh in discussing the remuneration and the conditions under which the new services should be rendered. It was agreed that the Association should consult with other representative bodies, as the question of the extension of the service affected the whole profession, both those who are on the panel and those who are not. An amendment to M. 25 was carried disapproving, under present conditions, of general practitioner clinics. It was also resolved that a sufficient sum should be provided in the central pool to pay adequately for services to invalided soldiers and sailors and demobilized men whose health had suffered in the services, and it was explained that the present method of payment for invalided men would be ended.

On the motion, which was carried, that the Committee be authorized to continue the discussions with the Government for new terms and conditions of service, Dr. Brackenbury said that the Association was going to organize the profession with a view to refusal of service if satisfactory terms were not obtained on the lines of the amended reports, and the Committee was prepared to consider fully suggestions from Local Medical and Panel Committees. It was repeatedly made clear that the Insurance Acts Committee is strongly opposed to a whole-time State medical service. Its constitution as settled by the Representative Meeting makes it possible for persons who are not members of the British Medical Association to be returned as direct representatives of Panel Committees on the Insurance Acts Committee.

In a letter which is published in the present issue, Dr. P. Macdonald of York objects to the unwieldy character of the Conference, and rather commends the Association of Panel Committees, whose constitution he explains. Dr. Brackenbury replies by pointing out that in reality the central executive of the Conference is more directly representative of panel practitioners than the executive of the Association of Panel Committees, inasmuch as the latter is only in a fourth-hand relation with panel practitioners and is in no relation at all with non-panel practitioners, while the executive of the Conference (which has grown up under the auspices of the British Medical Association) is only two removes from the panel practitioners themselves and contains representatives not only of the British Medical Association, but of other important professional organizations, all of which are more or less concerned with the medical service of the country. This distinction is extremely important; the object of the British

Medical Association has been to get as direct a representation as possible of every section of the profession that can be concerned. The advantages of sectional or group conferences are fully recognized by the British Medical Association and such group conferences are in regular use, but in spite of the disadvantages under which larger conferences labour they have the great advantage that they offer a wider opportunity than any other scheme for criticism of the executive, which in all modern electorates is rightly regarded as so essential. To reduce the representation with the idea of making the Conference less unwieldy, or to limit the scope of discussion even of details, would give ground at once for a suspicion that the profession was being ruled by a few.

POST-GRADUATE INSTRUCTION IN AMERICA AND ENGLAND.

WE have received from Dr. Graham Little a letter in which he speaks of the cordial reception given to British delegates who visited the annual meetings of the American Medical Association and the American Congress of Physicians and Surgeons in June. Sir Anderson Critchett, Sir StClair Thomson, and Dr. Little himself were invited to give addresses to the sections of ophthalmology, laryngology, and dermatology respectively. The last named section was presided over by Dr. Jay Schamberg, who is the head of the laboratory which produces the American substitute for salvarsan, named "arsphenamine." It was stated that the quality of salvarsan imported from Germany deteriorated very sensibly in the early stages of the European war, and a considerable quantity carried by the submarine *Deutschland*, which evaded the blockade, was no better. Finally, Dr. Oliver Ormsby, professor of dermatology in the University of Chicago, made public the results of experiments on animals, which showed that the German supply was very toxic. The product made under Dr. Schamberg's direction in the laboratory at Philadelphia has proved a very excellent product and has entirely replaced in the States all other forms of Ehrlich's drug. Going on to speak of post-graduate study, Dr. Graham Little writes: "Exceptional interest was shown by our American colleagues in the proposals to organize post-graduate work for American students in London, and to provide opportunities for research, study, and social amenities. The Fellowship of Medicine, recently instituted by the Royal Society of Medicine, is a small beginning which deserves the support of all who are anxious (and who is not?) to promote the present cordiality of our relations with the United States. At the last meeting of the Senate of the University of London which I attended on the eve of my leaving England, a resolution was passed instituting a new doctorate in philosophy which is especially designed for the needs of American and overseas post-graduate students. The inception of a special hospital for research which shall be a home and a stimulus to American medical visitors to London also aroused the utmost interest, and the scheme was most attractively presented by Sir Arbuthnot Lane, the delegate to the meeting from the Royal Society of Medicine, whose enthusiasm could not fail to be infectious. It is, however, quite certain that the medical schools of London, if they wish to divert the American student from Berlin and Vienna to London, will have to exert a much more sustained effort than any yet evident. In particular, it will not do to try and combine the teaching of post-graduate with undergraduate students. The American universities themselves are conscious of the impossibility of this combination, and it is important to note that the great University of Chicago, which has at last absorbed Rush Medical College into its Faculty of Medicine, is immediately founding a college for post-graduate study with a separate building and staff but

comprised in the Faculty of Medicine, and it has been gracefully conceded that this post-graduate college shall retain the honoured name of Rush. In conclusion I would say that our American hosts urged us to persuade more of our students and colleagues to visit them, and there is no doubt that the warmest welcome awaits such visitors. The interchange has hitherto been very one-sided—for example, I crossed the Atlantic with an ophthalmic surgeon of Philadelphia, who told me this was his twenty-second trip to England."

FRANCO-AMERICAN MEDICAL RELATIONS.

M. TUFFIER, who among French surgeons is perhaps the most known and esteemed in other countries, has recently presented to the Académie de Médecine, Paris, a report on a memorandum by Dr. Dehelly, on the best means for establishing medico-chirurgical relations with the United States. The memorandum was sent to the Academy by the Franco-American War Committee. M. Tuffier showed that the arrangements in France were insufficient, a fact of which he had become convinced after a visit to America in 1913. He urged on the members of the Academy the need for immediate action. Before the war American doctors looked upon Germany as the centre for instruction, and already, he said, steps were being taken on the other side of the Rhine to resume university courses and to regain the influence lost by the war. In Brussels, also, an organization to attract medical graduates was being elaborated, so that there should be no delay in taking advantage of a propitious moment not likely to recur. He deprecated placing any reliance upon Government co-operation, which might be long delayed, or waiting for the establishment of new university organizations. If the desired co-operation was to be brought about there must be free exchange of ideas, of men, and of scientific material, and to this end the facilities for instruction in Paris and throughout France ought at once to be organized. Although for the post-graduate visitor there was at present no regular teaching, it could easily be arranged. The visitor needed a place at which he could ascertain what was going on from day to day. An association for the development of Franco-American medical relations already existed, and included a large number of teachers and hospital officers in Paris; foreign visitors could attend the instruction given in medicine, surgery, and the specialties. At the Saint Louis Hospital there was a very complete programme—clinical practice, theoretical lectures, demonstrations, and laboratory work. The Collège des Etats-Unis d'Amérique established by eminent French and American men of science, under the patronage of the United States Ambassador and the French Minister of Public Instruction, already provided a central office. Every American arriving in Paris found there a list of all the courses in progress in Paris, or elsewhere in France, and the addresses of all the laboratories where instruction could be obtained or researches carried on. It was intended to establish a club in connexion with the Collège, with reading, writing, and conversation rooms. An office on the same lines was to be organized in New York for French students. Though the Franco-American College and Association in Paris fell short of all that might be wished, they yet, in M. Tuffier's opinion, afforded a beginning of co-operation between France and America.

VILLAGE CENTRES FOR DISABLED MEN.

At the first annual meeting of the Village Centres Council the administrator, Major Garthwaite, D.S.O., reported that the Enham Village Centre, in Hampshire, had been opened for ex-service men on May 30th, and that there were now thirty men in residence receiving medical treatment and undergoing training, mainly in horticulture, agriculture, and forestry, but also in workshops for basket-making, electrical fitting, and carpentry. The medical director,

Dr. Fortescue Fox, said that the interval between a man's discharge from the army and his reception at Enham varied from one to forty-three months, with an average period of twelve months at his home. Nineteen out of the total of thirty men at Enham had not done any work during the time, ten had attempted to return to work and had broken down; all were now working at Enham under medical supervision for from two to six hours a day. Nearly half the cases were under the care of Captain Douglas-Morris, R.A.M.C., neurologist. Several of the men had paresis after fracture of the skull, and were quite unfitted for town life, but had improved in the country. Patients with old wounds of the arm, attended by stiffness and wasting, were put to light curative work, such as thinning grapes, clipping hedges, sawing or wood cutting. All the men should be regarded as neurasthenic, and a large proportion of them would never be able to compete with able-bodied men in industry, so that village centres would have to provide special industries for permanently subnormal men. Re-education and the choice of an occupation should be based upon exact measurement of each man's physical and mental capabilities, and an estimate of his family circumstances, and the condition of the labour market. The industry of the disabled, if properly guided, could make a very large addition to the production of the country. Sir George Makins, G.C.M.G., vice-president, who was in the chair, and Sir Rickman Godlee both expressed the hope that the type of disablement selected for the Enham Centre should be such as could be effectually treated, so that a considerable number of cases could be passed rapidly through the centre.

INTERNATIONAL CONGRESSES.

MR. ADOLPHE SMITH, known to numerous members of the medical profession as the representative of the *Lancet* at many medical congresses, has contributed to *The Times* an essay in three chapters on the Pan-German Internationale. It is brilliantly written and composed with authority, for he is fully and closely acquainted with all that has happened at the socialist congresses, called of the "Internationale," since 1882. His main thesis is that as the military caste headed by William II worked for world dominion by force of arms, so Marx and his rather clumsy lieutenant Engels worked to obtain for German socialists a command over all the labour organizations of the world. For the delusion of the foreigner the German socialists declared themselves the enemies of militarism, but the events of 1914 proved that whatever shade of red they were all were working for German domination of all the nations from the Eastern shores of Russia to the Western shores of America. The same ambition was gradually disclosed at medical and other scientific congresses. At the International Medical Congress in London in 1881 the German members took a share proper to the representatives of a nation claiming equality with others. The great men of the Congress were Pasteur and Lister, Paget and Bigelow, Virchow and Huxley. But after that, as international congresses, whether of medicine or hygiene, succeeded each other, the German professors became more and more overbearing, and the feeling grew that their methods conflicted with the free spirit of scientific inquiry and discussion. Mr. Adolphe Smith, than whom few have had better opportunities of judging, does not hesitate to say that these arrogant methods were part of the general scheme. "It has been my privilege," he writes, "to attend nearly all the international congresses of hygiene, and several of the international congresses of medicine, of the medical Press, of the war against tuberculosis, and of other kindred movements. Here, among members of the liberal professions, as in working-class congresses, the German delegation acted with the same military discipline. The science which they represented was a secondary consideration; the interests of Germany, the advertising of

German achievements, not to say German goods, was the first object. In all fields of action the German as an internationalist needs to be studied with far greater care than as yet has been bestowed on him. We must no longer be deceived by the nominal purpose of a congress; the political interests that are hidden behind must be fathomed. . . . Science is supposed to recognize neither frontier nor private interests, but to be devoted to the pursuit of truth. To the German it would appear as if the sole mission of science is to serve Germany. And this is pan Germanism, not internationalism." Before the war opinion was gaining ground in many countries that it was not worth while to continue the series of international medical congresses. They had grown too large and heterogeneous, the material brought before the multitudinous sections was commonly stale, and there was a suspicion that the motive with which much of it was presented was personal or, at the best, national advertisement. Mr. Adolphe Smith's observations will strengthen this view. If in future there are to be international congresses of members of the medical profession, it would be better that they should be limited in scope. The international congresses of surgeons, ophthalmologists, physiologists, and anatomists have been useful gatherings, for specialists in these subjects were in a position to judge the real value of men and their papers, and there was comparatively little room for pretence or political propaganda.

INDUSTRIAL FATIGUE AND SCIENTIFIC MANAGEMENT.

THE Industrial Fatigue Research Board was appointed at the end of 1917 by the Department of Scientific and Industrial Research to investigate the relations of the hours of labour and other conditions of employment to the production of fatigue, having regard both to industrial efficiency and to the preservation of the health of workers. This board has recently issued two reports.* One of these, by Ethel E. Osborne, M.Sc., on the output of women workers in relation to hours of work in shell-making, arrives at results for which previous investigations have prepared us. The investigations were concerned with the first operation to which the rough forging is subjected; it consists in cutting off the end portion of the forging to reduce it to the required length. It is considered the hardest work in shell-making, must be done rapidly, and entails constant changing of shells. For eighteen months the women doing this in the National Ordnance Factory worked on shifts of twelve hours' duration, with night and day work in alternate weeks. It then became evident that the hours were affecting the women adversely, and the shifts were shortened. Some time previously the machines had been changed to a type which considerably reduced the demands for violent physical exertion. The method in which the investigation was conducted is described at length, but we can only notice the chief general results. Under the earlier scheme the average number of hours worked was 55.85 a week, under the shortened scheme 35.65 a week. On the long hours system the average number of shells each operator turned out in an hour was 8.17; on the shortened shift it was 8.70. Study of the actual fraction of the total working time occupied in the automatic cutting of shells and in their handling respectively—the latter being a period in which speeding up was possible—showed that the work accomplished in 100 minutes of the long hour system was carried out in 80.5 minutes of the short system—a decrease of 19.5 per cent. in time. Taking the average hourly output of shells per hour of actual work as 100, the average hourly output of shells per hour in the factory under the long hour scheme was 85.43, and under the short

hour scheme 92.41. The second part of the report is based on a study of actual hourly output; it shows a uniformly low efficiency in the last hour of the long shifts, whereas no such uniformity was to be observed in the case of the short shifts. In some instances there was no falling off at all. A comparison of the records of the same worker's output for the long and short shifts respectively showed a lower hourly output during the later hours of the long shifts. The investigation afforded no evidence of a detrimental effect of night work in comparison with day work. The second report, by Dr. C. S. Myers, F.R.S., gives an account of a remarkable experiment carried out, with the consent of the workers, by Mr. Vincent Jobson, managing director of the Derwent Foundry Company, Derby. The first step was to analyse the various jobs in order to arrive at the best method, by the elimination of all superfluous movements. This involved the proper arrangement of the tools and materials, the establishment of standard sets of movements for the process, and the training of the men. When the system was got going the number of hours of work was reduced and a special system of payment devised. The result was an enormous increase of output in spite of the reduced hours of work. This increased output, combined with the diminished cost of production, has been beneficial to the firm and largely increased the wages of the employees, without causing any increase in fatigue, but rather on the whole, apparently, a decrease.

MEDICAL ASSISTANCE IN OLD SIAM.

In the *Medical Journal of the Siam Red Cross* for April, 1918, G. Coedès, Conservator of the National Library at Bangkok, gives an account of medical assistance in Siam in the twelfth century, as described in Sanskrit inscriptions found in Siam and Cambogia. In 1182 a prince who on his coronation assumed the name of Jayavarman (the Favourite of Victory) ascended the throne. Unlike his predecessors, who professed Brahminism, he was a fervent Buddhist. His religion was inspired by the charity and pity for the unhappy which are characteristics of all the different sects of the disciples of the Great Merciful One. One of the chief aims of Jayavarman VII was, as inscriptions prove, to cover his empire with a network of hospitals. One of the most important inscriptions is on a large stele found at Ta-Prohm. It is in Sanskrit, and bears a date corresponding to 1186 A.D.; it sets forth in detail the annual cost of the King's good works. It states that there were 102 hospitals scattered about the various provinces of the kingdom; for the sick in those institutions there were required yearly 117,200 khārikā of rice (a khārikā is equivalent to 1.536 kilos). The production of this rice employs 81,640 men and women dwelling in 838 villages. Particulars are given as to the clothing, foodstuffs, medicinal substances, and remedies of various kinds supplied annually from the royal stores. Offerings of rice were made to the patron divinities daily; the remains were given to the patients. Exploration has brought to light nine other steles with inscriptions also dated 1186 which indicate the situation and the charters of foundation of nine of the hospitals. Five of the steles were found in Siamese and one in French territory. The three others were found in Cambogia. Of the nine hospitals there is nothing left. Like all buildings not having an exclusively religious character they were constructed of wood and light materials. Stone ruins of chapels connected with the hospitals have been found beside some of the steles. The text of the nine inscriptions is identical, with slight variants; they are, in fact, royal charters regulating the organization of each hospital. The hospital is said to be under the invocation of the healing Buddha, Bhaishajyaguru-vaiduryaprabha, still to-day one of the most popular Buddhas in China, Japan, and Thibet. The four castes might be treated in the institution. There were two

* H. M. Stationery Office (through any bookseller), 6d. and 2d. respectively.

physicians, each having one man and two women as his servants; two storekeepers who distributed remedies; two cooks who were required also to remove flowers and grass and to clean the temple; two servants charged with the preparation of the offerings to Buddha; fourteen infirmarians whose duty was the administration of remedies; six women who heated the water and pounded medications; two women who peeled rice. The total number of assistants lodged in the hospital was thirty-two. There were besides sixty-six workers living at their own expense; this brings the total to ninety-eight. The duties and rights of each official and servant were exactly defined. The staff were exempt from taxation and from public duties unconnected with their employments.

Medical Notes in Parliament.

Pensions Ministry: The Medical Services.

THE medical services occupied a large place in the review of administration and statement of future arrangements given by the Minister of Pensions on July 31st. The vote was for £45,855,000 to be added to a sum of £27,000,000 voted on account. Sir L. Worthington Evans, in opening, however, said that this estimate of nearly £73,000,000 was already out of date. The 20 per cent. bonus to officers' retired pay and to alternative pensions to officers and men and their widows, with other alterations, will this year cost a further sum of over £2,000,000, and the extra expenditure involved in the recommendations of the Select Committee's report would raise the expenditure for the remainder of this year by £11,000,000; thus the total estimates for the year will come out at £86,000,000. The effect of the recommendations on a full year will, of course, be still larger, and it is reckoned that on the present basis the rate next year will be about £96,000,000, or more than double what it was in the year ended April, 1919. The figures of distribution in summary, as payments were made on June 30th, were as follow: Officers and nurses drawing retired pay numbered just under 20,000; officers' widows just under 9,500; officers' dependants just under 5,000; officers' children just over 9,000; men, 875,000; widows, 216,000; dependants, 279,000; and children, 968,000. The full total, allowing for the odd numbers, was 2,340,000. The number of pensioners thus is almost exactly three times as great as the population of Liverpool.

Decentralization.

Sir L. Worthington Evans next spoke of the action he had taken since he came into office in January, to meet the many complaints of delay. A scheme for decentralization was adopted, whereby eleven or thirteen regions will be complete self-contained administrative units, under a regional director advised by a regional advisory committee. The Local Pensions Committees within each region will communicate direct with the regional director, and all medical boards and arrangements for medical treatment will be dealt with by the regional medical officer. The Scottish, Irish, and Welsh regions have already been established in Edinburgh, Dublin, Belfast, and Cardiff respectively, and the South-East of England region has been started in London. It is still for consideration whether two other regions shall be joined with this region, or whether the original proposal of thirteen regions will be carried out. He hoped that the North-West region would be inaugurated during the coming week in Manchester, and he would create the other regions as rapidly as possible.

Method of Making Awards.

In describing the method of awards of pensions for men, he said that before demobilization began the discharge documents of men coming out of military hospitals were sent to Chelsea, and awards were made on the fairly complete records then furnished. During the last six months about 150,000 first awards had been made in cases of men discharged from hospital, in addition to 274,000 renewals. With demobilization, two other classes of claimants appeared—namely, the "Z" men and the Article 9 cases. The "Z" men were those who, passing through dispersal stations, made claims; these claims were examined either by the medical officer of their unit or by some other army doctor. About 385,000 presented claims, and these, with the men's papers from the record offices, were sent to the Minister. In addition, there were others who from some reason or other, some because they feared that claiming would delay demobilization and others because they were

then well, had not made claims. They could still do so under Article 9. In January he found that sufficient provision had not been made to deal with the claims of the "Z" men, and an emergency branch was established for them alone. Through February and March the arrears increased, but by the middle of June had disappeared. The greatest number of awards in any one week was 35,800, a remarkable performance, considering that each claim required separate investigation. Of the 385,000 claims, 303,000 were admitted, and awards made of pension, allowances, and gratuities, and 81,403 were rejected. He was not satisfied with the position in regard to the Article 9 cases, and the Local War Pensions Committees had been authorized, upon the report of the local medical referee, to make full advances pending the decision whether the claim was admitted to pensions or not. There was still considerable delay, and a special inquiry was being conducted to improve the procedure. Experience gained in dealing with these cases showed that much greater simplicity could be introduced into the Chelsea system. Improvements would be made.

Delays.

Early in the year he found that the complaints of delay in settling appeals against refusals to grant pensions were justified. There were cases pending since 1917, and many more which had been unsettled for a year. The two officials in charge of this section had now both left the Ministry, and the section had been completely reorganized; its output had been increased, and it would, he hoped, be still further improved, but until decentralization was completed, the ideal could not be reached. Last January two appeal tribunals heard cases. Now fifteen had been constituted, and arrears were being overtaken, but he was not satisfied that many more tribunals would not be required. Before he went to the Ministry, he heard many complaints that officers were not getting their pensions, and on becoming the Minister, he asked the Parliamentary Secretary to take the chair of a small Interdepartmental Committee, with representatives of the War Office and the Pensions Ministry, to consider the position. The Committee recommended that all officers should be kept on pay by the War Office until their papers were transferred to the Ministry of Pensions. The War Office, however, did not accept this suggestion, so the next best plan was adopted. The Treasury authorized advances to officers in necessitous cases, pending adjudication of pensions, and some 7,400 advances had been made to cover the time necessary for obtaining the officers' papers, or to have a medical board. The staff of the Officers' Branch had been increased from 85 to 430, and a pension was now awarded within twenty-one days of the receipt of the officer's paper. A distinguished soldier had been appointed to act as "Officers' Friend"; he and his staff of twelve officers had had interviews and correspondence with over 12,000 officers and their relatives; he called attention to delays, and was applied to on every conceivable question. Further, a small booklet, stating clearly to what officers are entitled, had been published. In addition, a small committee had considered the "Officers' Warrant," as officers had been omitted from many concessions made to men. These anomalies had now been removed. A bonus of 20 per cent. was payable on that part of the retired pay which was granted for service disability. Thus the minimum retired pay was now £210 instead of £175. A separation allowance was also payable of £50 to a wife, or £40 to a dependant, if the officer was in hospital. Children's allowances were formerly granted if the officer's disablement amounted to 50 per cent. or more. This limit had now been removed. Medical treatment could be given to an officer pending settlement of his claim to pension, and artificial limbs were supplied and repaired by the State. Pre-war disability retired pay was brought up to the current rate. Widows' pensions, granted in respect of previous wars, had been increased to the rates of this war. These substantial advantages, removing many grievances, did not seem, however, to be fully known. The 20 per cent. bonus was now added to the retired pay and to the pension of officers' widows, so that it ceased to be a bonus and became a regular part of the allowance. In making this increase, the Ministry set forth that after three years, if the cost of living fell, the allowance would be subject to automatic reductions as in the case of the men's pensions.

The Medical Division of the Ministry.

Sir L. Worthington Evans next spoke at length as to the medical services. He had been fortunate, he said, in securing as chief medical officer Colonel Webb, who brought special knowledge of the requirements of the serving

men who were now pensioners. The work of the medical division was probably the most important of any. It dealt with the provision of medical treatment in hospitals, clinics, and convalescent centres. Demobilization had transferred the duty of providing hospitals and clinics from the War Office to the Ministry of Pensions. Two hospitals had already been taken over, and the transfer of others arranged. The British Red Cross had offered the use of some of their hospitals, and provided ambulances for the conveyance of cot cases. Queen Alexandra consented to be President of the Pensions' Nursing Service, and he had been fortunate in securing as matron-in-chief Miss M. E. Davies, who would act with an advisory committee. He hoped also to have ready very shortly certain convalescent centres at Blackpool, Epsom, and elsewhere, in which men while suffering from disability requiring more or less prolonged out-patient treatment would be able to employ their time to their own advantage, by receiving preliminary training to fit them for their after-life. He had been impressed by the number of out-patients attending hospitals for perhaps half an hour a day, upon whose hands time hung heavily. If such men were admitted to convalescent homes they would, while under treatment, be capable of much useful training. Moreover, experience showed that many slightly disabled men, attracted by the high wages prevalent in the later stages of the war, went back into industrial life too soon, and were in many cases breaking down. For them the convalescent centres should be of great use.

Medical Boards.

From April 1st the central and regional staff of the Ministry of National Service was transferred to the Pensions Ministry. From August 4th it was taking over from the War Office the re-survey boarding of officers. Some idea of the extent of the increase of the work of the medical boards might be got from the fact that 230,000 men were examined by medical boards in the first six months of this year. There had been rapid increase in the number of men boarded owing to demobilization, and 45,000 men were examined in June. Under the system hitherto prevailing the medical officers at the head quarters of the Ministry, commonly known as the "Chelsea doctors," had reviewed the decisions of these boards. They were authorized to alter the amount of a man's assessment, even though they had not examined the man. Many complaints had been made, and the Select Committee had recommended that any case of doubt should be sent for rehearing, either by the same, or by a new board, for examination before the assessment was altered. He agreed with that recommendation, and indeed had previously decided to make the change.

Medical Appeal Boards.

While it was probably impossible to arrange for appeal boards before the Ministry of Pensions had its own medical personnel available to sit on boards, and specialists, both surgical and medical, at its hospitals and clinics, to constitute the boards, it would be possible to set up the appeal boards as soon as the medical personnel in the regions had been completed. Thereafter a definite procedure would be laid down, which would be followed in all cases; if the medical assessor, on scrutinizing the report of the board, was not satisfied that substantial justice had been done, either to the pensioner or to the taxpayer, he was to refer the case either back to the same board or to an appeal medical board before any alteration took place. Similarly, if the pensioner was not content with his assessment, he would be entitled to appeal to a medical appeal board, whose decision would then be treated as final, subject to the proviso, which was in the man's interest, that if he fell ill during the final period he would still have the opportunity of going to a medical referee, who might give him temporarily a higher allowance pending the reconsideration of his case by the board. This arrangement of appeal boards would entail a large increase in the medical personnel, which could be supplied only if not only the permanent medical staff of the region was available for boards, but also the specialists attached to the hospitals and clinics, and probably in some cases the medical referees, were available.

Artificial Limbs.

The Committee, upon which several members had served, had made several recommendations, which were being carried out. Perhaps the most important was that an expert committee would review the various forms of artificial limbs at present made with a view to standardization, by selecting the best from each limb. The execution of repairs would be facilitated if every maker could repair

every limb. It was proposed that fitting centres should be established in connexion with orthopaedic hospitals throughout the country, and that repair dépôts should be opened in populous centres so that minor repairs could be made in a short time. The question had also been referred to the Committee, to what extent fibre pylons should be supplied and used by men with artificial limbs. He fancied that fibre pylons would take their place alongside artificial limbs much as a slipper compared with a boot, and that a man with an artificial limb, coming home from his daily occupation, would be glad to put on a light fibre pylon. However, that was primarily a surgical question, and he had referred it to the expert committee.

Tuberculosis.

In agreement with the Minister of Health a joint committee had been appointed to investigate the provision made for pensioners suffering from tuberculosis. This committee had now reported, and immediate consideration would be given to their recommendations. In closing the references to the work of the Medical Division, Sir Laming thanked Sir Arthur Pearson for his continuous services to the blind, and he also thanked those people who in various parts of the country were doing splendid work in providing and managing hospitals and homes for the paralysed and disabled. During the Minister's allusion to the blind, several strangers in the gallery—civilians who were blind—made a protest as to the lack of State provision for such sufferers. They were immediately led out by the officials.

The Complaints Section.

The Minister came finally to the report of the Select Committee, which had been issued on the previous day. The Cabinet had already considered it at two meetings, and hence it could not be said that there was delay in decisions upon it. In regard to the proposed special inspection or inquiry department, he could tell the House that a part of this suggestion had operated for several months. He had set up a Complaints Section, and each complaint had been investigated, and a record kept of how long it took for a proper solution to be reached. The Committee went further and suggested that any case not dealt with within a prescribed time should be automatically reported to the department and inquired into. To carry out that suggestion it was essential that there should be proper progress reports from each branch of the Ministry. He had recently appointed a statistical officer to see that such information was forthcoming, and as soon as this was complete it would be possible to work along the lines of the recommendation.

Employment and Training of Discharged Disabled Men.

Of the male staff at head quarters 81 per cent. was drawn from these classes. All new appointments of chief officers of the Local War Pensions Committees were to be made from the same classes.

Independent Appeal Tribunals.

The Government would accept the recommendation of the Select Committee that appeal tribunals should be set up under an authority independent of the Ministry of Pensions. A bill would be introduced as soon as possible to give power to the Lord Chancellor for setting up appeal tribunals as to entitlement. The tribunals would consist of one legal representative, either a barrister or solicitor, who would be chairman of the tribunal, and a disabled officer in officers' cases, and a disabled man in men's cases, with a medical practitioner. Any refusal on the part of the Ministry to a claim for pension on the ground that the disability was not attributable to nor aggravated by military service, or was due to serious negligence or misconduct by the claimant, would be subject to appeal by the claimant to this independent tribunal. Similarly, a widow or motherless child whose claim to pension was rejected on the ground that the death of the officer or the man was not due to military service would have the right to appeal. Thus a statutory right would be granted to assert a claim to pension, and a statutory court independent of the Ministry would be the final judge whether the right existed in a particular case.

Alteration of Assessments.

The Select Committee had suggested that when a man came up for a fresh board and a fresh assessment of pension, he should have the right to go before an independent appeal tribunal to appeal against the medical assessment. The Committee urged that an appeal would be of no use unless the medical men upon the appeal tribunal were more authoritative than the men on the

original medical board. He did not know what proportion of the men the Select Committee thought would appeal, but if one in ten appealed, there would be something like 70,000 in six months, and the delays would be so great that the appeals could not be heard before the pension had expired. Moreover, it would be impossible to get the authoritative consultants and specialists in sufficient numbers to form the appeal tribunal. Reform was not possible on these lines. He agreed, however, that it was wrong for any medical assessor who had not seen a man to alter an assessment made by a board who had seen a man, and he had already stated that as soon as the reasonable organization was complete, medical appeal boards would be set up to which either the man or the department could appeal, in the event of the assessment being challenged. Any outside tribunal dealing with these assessments would cause so much delay as actually to deprive the man of the benefits which the Select Committee desired him to obtain.

In reply to Lieut.-Colonel Ashley, who asked why an independent tribunal should cause more delay than would the tribunals connected with the Pensions Department, Sir Laming said that these tribunals would not be connected with his department. In each region there would be an appeal medical board, which would consist partly of the permanent staff, partly of the staff of hospitals and clinics, and, if necessary, there would be a medical referee, but this would be a totally different class of tribunal from that which the Select Committee suggested. The appeal boards would be constituted by doctors partly on full service and partly stationed and in charge of hospitals and clinics all over the country. They would be available at any moment if they were wanted for a board. It would not be possible, he thought, to get consulting specialists, physicians and surgeons to hold office at the beck and call of any independent tribunals. Having explained the position as to flat-rate pensions, Sir Laming said that the new rates, which would involve changes in pensions and allowances for a million people, could not be brought into operation until about September 3rd.

In the debate Major Cohen (who lost both legs in the war) spoke of the serious delays involved in the procedure of getting an artificial limb renewed when it was obtained from the State. He asked if it would not be possible to adopt some procedure like that used in France. He believed that 75 per cent. of the cases there were of agricultural labourers, and therefore distributed over a wide area. For this purpose the country was divided into various centres, each with its own hospital. All that a pensioner who required anything done to a limb had to do was to go to the local police, purely for identification, and they sent him to the nearest fitting hospital, where the limb was repaired, and he was sent back to work in a couple of days.

Mr. Hogge paid tribute to the administrative ability of the Minister and complimented the Select Committee on their report. He was not, however, altogether satisfied as to the proposals in regard to appeals.

Sir Montague Barlow, who was Chairman of the Select Committee, also confessed that he was not quite satisfied upon what had been said on the question of statutory right. In regard to the regional areas everything would depend upon the type of man who was got to be director. As to appeals on amount, he understood the difference between the Select Committee and the Minister to be as follows—the Committee suggested independent appeal tribunals. The mere constitution of the board did not matter very much. The Committee wanted a lay element, and they wanted doctors, if possible, of superior authority to the doctors of the ordinary board. The Committee suggested tribunals of an independent character, who would sit for the tribunal work alone. The Minister suggested appeal boards, which were really similar to ordinary medical boards, with different names, and that they could sit, whenever desired, because they would consist of the ordinary medical staff of the Ministry. If that were the only possible alternative, it must be submitted to, at any rate for a time, but there was nothing to which the men attached greater importance than free right of appeal to some kind of independent properly constituted authority. The difficulty he saw about the Minister's proposal was this: A board made a finding with regard to a man, assessing him, say, at 50 per cent. disability. The man was not satisfied, and wanted to go to another board. Under the proposals of the Select Committee, assuming them to be carried out, the man would go to an outside authority, who might find against him, but there would be a lay element, and he would feel that he had all possible consideration. Under the proposals of the Minister, the man would go to another board similarly constituted to the boards before which he had already appeared, and not only that, but it was a board which was expressly under the control of the Minister, because it consisted of the ordinary medical staff in the employment of the Ministry, either whole-time men or part-time men. The man would not have the same confidence in such a body as in an independent tribunal. The Committee on Tuberculosis, of which he was deputy chairman, had found that there were some 30,000 to 40,000 tuberculous discharged soldiers. The tuberculous soldier was only

one part of the problem of tuberculosis throughout the country, and must fit into the ordinary machinery of treatment. The Committee was of opinion that the sanatorium must be developed, and that training colonies must be made the natural adjunct of the sanatoriums. But the mere provision of training colonies was not enough. Provision must be made for the men discharged from them, and a beginning would be made by providing for the discharged soldier. The only possibility to offer him was either the best possible housing conditions in specially prepared houses, or that the Government should provide permanent village settlements alongside the sanatoriums.

Mr. Hodge, who was Minister of Pensions previous to the change in January, congratulated the present Minister on the success he had achieved.

Mr. W. Graham, speaking with experience of committee work in the south-east of Scotland, said he had come to the conclusion with regret and hesitation that they were probably on the wrong lines in gathering together comparatively large numbers of neurasthenics under one roof, and the same criticism applied with far more emphasis to the cases of epileptics. In fact, efforts in that direction broke down because the patients would not remain together, and the plan had to be abandoned, more or less in despair. He thought the Ministry should devise a system of boarding out the worst cases of neurasthenia.

Dr. Murray said that one of the most cruel duties that could be placed on medical boards was that they should be asked whether a certain disease had, or had not, been caused or aggravated by service in the war. It was not a question that should be put to a medical board. It would save a great deal of heartburning if the Government came to the conclusion that if a man were disabled or died on service from whatever cause, he should be entitled to the same consideration as one in whose case a board had decided that his disability was due to his service. Dr. Murray said that medical board work was new to medical men. The doctors on these boards did not act on their own unaided intelligence—they got orders from above. Many of the criticisms levelled at the individual doctors on these boards, and against individual boards, should be levelled at the Ministry of Pensions, and those who directed them there. Thus the assessment had to be according to percentages, but he thought it would be found that 95 per cent. of the medical men on the boards were inclined to put the most liberal interpretation on the regulations sent them from head quarters. He suggested that a clerk should be provided for the medical board. Too much clerical work was put upon the men who examined.

Sir L. Worthington Evans doubted whether the French system of applying artificial limbs was better than our own, but he was quite alive to the need of a speedier method of getting repairs done. He still felt a difficulty in going further in regard to declaring the statutory right of appeal, but was willing to consider any words that would strengthen the position. With regard to the question of appeal on amount, he said that if he yielded to the request made to him in the debate, the administration would break down.

State Medical Services.

Mr. Lyle asked the Minister of Health, on August 5th, whether any representations had been made to him with regard to the establishment of a State medical service, and whether in that case he would indicate their nature and state whether the Ministry had considered them and with what result. Major Astor replied that several different proposals had reached Dr. Addison from time to time as to new schemes for public medical services. The development of local medical services of various kinds was certainly contemplated by the Ministry of Health, but the opinions of the Consultative Councils would be sought before any substantial steps on these lines were decided upon.

Illness amongst Salonica Troops.—Captain Guest, in a written reply (July 31st), stated that the returns from Salonica during the period from January 1st to July 5th gave an annual ratio for dysentery per 1,000 troops of 16.17 admissions to hospital and 0.27 deaths. Corresponding figures for the previous three years were: 1916—45.7 admissions and 1.01 deaths; 1917—25.6 admissions and 0.61 deaths; 1918—53.6 admissions and 1.00 deaths. All demands for mosquito curtains and nets had been met.

Uncertifiable Mental Cases.—Major Astor, in reply to Colonel Wedgwood, said that the Minister of Health and the Home Secretary were considering the provision of convalescent homes for early uncertifiable mental cases, and it was hoped that legislation on the subject might be shortly introduced.

Tuberculosis amongst Ex-Service Men.—Mr. Parker, on behalf of Dr. Addison, gave Lieut.-Colonel Raw, on August 4th, an assurance that the Minister of Health would at once consider the report of the Special Committee on Tuberculosis amongst ex-service men, and discuss the matter with the Minister of Pensions, who, jointly with himself, appointed the Committee.

HONOURS.

THE following are the statements of services for which the decorations announced in the *London Gazette* of February 15th, 1919 (BRITISH MEDICAL JOURNAL, February 22nd, 1919, p. 227) were conferred:

Bar to D.S.O.

Captain (acting Lieut.-Colonel) James Henry Fletcher, D.S.O., M.C., R.A.M.C., commanding 36th Field Ambulance.

For most conspicuous gallantry and devotion to duty near Mametz on August 26th, 1918, when in command of bearers. With another officer he crawled out under heavy machine-gun fire into "No Man's Land," dragged back two wounded bearers to a more sheltered spot, and after dressing them crawled back for assistance, organized two squads of bearers and brought the wounded men in under heavy fire; also two more wounded men found lying out. He set a splendid example to all serving under him. (D.S.O. gazetted July 18th, 1917.)

Major (temporary Lieut.-Colonel) Francis Cornelius Sampson, D.S.O., 91st Field Ambulance, R.A.M.C.

For exemplary devotion to duty on the night of October 3rd-4th, 1918, at Le Harque (north of St. Quentin) when this area was heavily bombed. This officer, regardless of personal danger, by his initiative and personal influence organized and accompanied relief parties and was instrumental in the rapid evacuation of the wounded. The bombing was very severe and the casualties heavy, there being thirteen amongst the R.A.M.C. bearers alone; the actual number of killed exceeded forty. (D.S.O. gazetted January 14th, 1916.)

D.S.O.

Captain Patrick Augustine Ardagh, M.C., N.Z.M.C., attached 1st Battalion Auckland Regiment.

For conspicuous gallantry and devotion to duty during an attack east of Masnières. Being forced to place his dressing station in a spot constantly shelled by the enemy for thirty-six hours, he continued to dress wounded while shells fell on the station. He attended not only his own battalion wounded but men of three other battalions, and worked continuously without sleep all the time. He displayed high courage and resource and was the means of saving many lives.

Major Orvil Ard Elliott, C.A.D.C., attached 5th Canadian Field Ambulance.

For marked gallantry and devotion to duty. As the infantry advanced he followed up closely, and although many times forced to pass through heavy enemy barrages he kept in close touch with the battalions and kept establishing collecting posts as far forward as possible. He was the direct means of saving many lives, and throughout the operations his untiring efforts and disregard for his personal safety were a constant source of inspiration to those about him.

Temporary Major Charles Fraser Knight, 133rd Field Ambulance, R.A.M.C.

For conspicuous gallantry and devotion to duty in personally supervising the collection of wounded and visiting forward posts regularly under heavy shell fire. It was largely due to his energy and disregard of danger that the large number of wounded in his sector were successfully cleared. This was during the operation against the Hindenburg line, east of Ronsoy, on September 27th, 28th, and 29th, 1918.

Lieut.-Colonel Stanley Paulin, 11th Field Ambulance, C.A.M.C.

He was in charge of the evacuation of the brigade wounded in the operations about Cambrai. For the five days of that battle he worked day and night with very little rest. He was always leading and directing his men, and by his splendid example was responsible for the wonderful work done by those under him. His work under heavy shell and machine-gun fire was admirable.

Second Bar to the Military Cross.

Temporary Captain George Oliver Fairclough Alley, M.C., R.A.M.C., attached 2nd Battalion Royal Irish Regiment.

For conspicuous courage, energy, and initiative during the operations on October 8th, 1918, in front of Niergnies. He followed up the battalion in the attack, dressing and evacuating wounded under heavy shelling, eventually establishing his aid post right forward in a section of trench in the rear of the front line. Here he dressed and evacuated wounded, not only of his own battalion and brigade, but of battalions operating on the right and left flanks. Throughout the day he behaved splendidly and by his fine devotion to duty saved many lives. (M.C. gazetted June 4th, 1917; first bar gazetted September 16th, 1918.)

Lieutenant (temporary Captain) William John Knight, M.C., R.A.M.C., attached 89th Field Ambulance.

During the operations east of Ypres from September 28th to October 3rd, 1918, he was in charge of the stretcher-bearers attached to a brigade. He led his bearers in the rear of the attacking infantry, dressing the wounded as they fell, and seeing that every case was carried away from the battlefield. During the whole of the advance he showed an utter contempt for danger, dressing the wounded under shell, machine-gun, and rifle fire. Later, when the advance came to a standstill, he established touch with all the regimental medical officers and personally conducted the evacuation of wounded from the regimental aid posts. On many occasions he went forward with stretcher squads to bring back wounded to the regimental aid posts. He displayed great gallantry throughout and did admirable work. (M.C. gazetted May 31st, 1916; first bar gazetted February 18th, 1918.)

Temporary Captain (acting Major) Maurice Aloysius Power, M.C., R.A.M.C., attached 148th Field Ambulance.

For conspicuous gallantry and devotion to duty whilst in charge of bearers during the operations on Niergnies on October 8th, 1918. He personally followed the attacking troops to the final objective, establishing bearer relay posts en route, all the while utterly regardless of personal danger, though exposed to heavy enemy shell fire. His skilful organization of the evacuation of wounded and his maintenance of touch with all battalion medical officers ensured the speedy evacuation of casualties. He set a splendid example to all ranks under his command. (M.C. gazetted January 18th, 1918; first bar gazetted January 11th, 1919.)

Bar to the Military Cross.

Captain (acting Major) John Bernard Cavenagh, M.C., R.A.M.C.(S.R.), attached 113th Field Ambulance.

On October 1st, 1918, when the advanced dressing station, Cambrai, was shelled, he went out to see about his men and ordered them under cover quite regardless of his own safety. On this occasion he was slightly wounded, but made no mention of it. Again, during the period from October 11th to 15th, when his advanced dressing station at Douvrin was being shelled, he displayed great coolness and courage. Following on this, while advanced dressing stations were in turn established at Berclau, Provin, Camphin, Les-rouquet, Templeuve, Bachy, Rumes, and Taintignies he displayed great initiative and daring in keeping in close touch with the infantry. It was chiefly due to his sound judgement and coolness during the most trying circumstances that all the wounded and sick were so successfully evacuated. (M.C. gazetted September 17th, 1917.)

Temporary Captain Claude Norman Coad, M.C., 74th Field Ambulance, R.A.M.C.

For great gallantry and devotion to duty when in charge of bearers during the heavy fighting on October 11th between Avesnes and St. Aubert. It was due to his fine personal example and total disregard of danger that over 400 casualties were evacuated on that day. He carried on his work often in front of the forward posts under heavy artillery and machine-gun fire, until all the casualties had been brought back. (M.C. gazetted July 26th, 1917.)

Captain (acting Major) Thomas Frederick Corkill, M.C., R.A.M.C.(S.R.), attached 139th Field Ambulance.

While acting as officer in charge of forward bearers during the operations from September 29th to October 3rd, 1918, south-east of Ypres, he not only showed great resource in dealing with difficult evacuation to advanced dressing station, but a total disregard of danger. He personally frequently visited all posts at all times both night and day with most untiring energy and courage. (M.C. gazetted September 26th, 1917.)

Temporary Captain (acting Major) John Edgar Davies, M.C., 131st Field Ambulance, R.A.M.C.

For conspicuous gallantry and devotion to duty at Engfontaine on October 26th, 1918. Hearing that there were 1,000 civilians in the captured town, he volunteered to go into it, interviewed the mayor, and make the necessary arrangements for the distribution of smoke helmets. He entered the town under heavy bombardment and made his way to the cellar occupied by the mayor, through streets swept by enemy machine-gun fire. Several casualties occurred on the way up to a support battalion, and these he attended to and removed to safety. (M.C. gazetted September 16th, 1918.)

Captain Franklin Fletcher Dunham, M.C., C.A.M.C., attached No. 5 Field Ambulance.

During operations about Neuville Vitasse, August 26th, 27th, and 28th, 1918, for conspicuous gallantry and devotion to duty. He organized stretcher parties under heavy shell fire and located and dressed many wounded. On the 28th the stretcher-bearers under him moved practically with the infantry, and he personally directed the clearing of wounded from "No Man's Land" in daylight, under heavy machine-gun fire. His initiative and coolness were the means of saving many lives. (M.C. gazetted October 18th, 1917.)

Captain (acting Major) Frederick Gamm, M.C., R.A.M.C.(S.R.), attached 2/3rd (Home Counties) Field Ambulance, R.A.M.C.(T.F.).

During the attacks and counter-attacks near Peiziere from September 22nd to 24th, 1918, when it was found impossible to obtain in the village a suitable spot for an advanced dressing station, he took up an ambulance car and used it as a dressing room, working under constant shell fire all the time. His boldness and devotion to duty undoubtedly resulted in the saving of many lives, and the mitigation of much suffering. (M.C. gazetted July 26th, 1918.)

Captain (acting Major) William Claverling Hartgill, M.C., 55th Field Ambulance, R.A.M.C.

For conspicuous gallantry and devotion to duty when supervising the evacuation of brigade casualties during the attack on Ronsoy, September 18th, 1918. He early established his various posts and went forward and assisted in clearing wounded of his own and other brigades under heavy machine-gun and shell fire. He worked unceasingly, and it was greatly owing to the co-ordination of the arrangements and his personal supervision that casualties were cleared in a markedly efficient and speedy manner. Throughout he has done fine work. (M.C. gazetted January 1st, 1917.)

Captain (temporary Major) Robert Alexander Hepple, M.C., R.A.M.C.(S.R.), attached 28th Field Ambulance.

For conspicuous gallantry and devotion to duty during the operations at Roulers, Menin Road, and Ledeghem, September 28th to October 5th, 1918. As officer in charge of bearers he worked incessantly day and night, personally keeping in touch with the battalions in spite of shell and machine-gun fire; he never once lost touch with the regimental medical officers, evacuating the wounded with the utmost rapidity, thereby saving numerous lives. (M.C. gazetted July 26th, 1918.)

Temporary Captain (acting Major) Benjamin Knowles, M.C., R.A.M.C., attached 88th Field Ambulance.

For conspicuous gallantry and initiative in charge of stretcher-bearers during operations east of Ypres from September 28th to October 3rd, 1918. He led his stretcher-bearers following a barrage during the attack, and organized relays for his men along the road of evacuation. Later, he visited regimental aid posts, often under heavy fire, and several times took up ambulance cars to casualties, carrying them away under fire. For six whole days he superintended the evacuation of wounded from the forward areas, and it was due to his great energy and disregard of personal danger that the wounded were evacuated without a hitch. (M.C. gazetted March 26th, 1918.)

Temporary Captain Alexander Campbell White Knox, M.C., R.A.M.C., attached 2nd Battalion Royal Sussex Regiment.

For conspicuous gallantry and devotion to duty throughout the operations north and south of the river D'Omlignon, from September 18th to 24th, 1918. As medical officer of the battalion he organized and supervised the evacuation of the wounded in the most perfect manner, despite shell fire and gas. Besides superintending the work at the regimental aid post, he personally supervised the work of the stretcher-bearers with the leading waves of the assaulting troops.

Owing to his energy and personal supervision, every wounded man was attended to and evacuated without delay. He did fine work. (M.C. gazetted January 1st, 1918.)

Temporary Captain (acting Major) Harold Dunmore Lane, M.C., R.A.M.C., attached 1/1st North Midland Field Ambulance.

For conspicuous gallantry and devotion to duty. On October 3rd, 1918, during the attack on Ramicourt and Wancourt, he, who had already done magnificent work during the capture of Bellenglise on September 29th, 1918, and since that date, had worked unceasingly under heavy fire, pushed forward through the enemy's barrage, and, although wounded, continued to search for and dress wounded under heavy shell and machine-gun fire. By his absolute disregard of danger he set a splendid example to the men serving under him. (M.C. gazetted October 18th, 1917.)

Captain John Shaw Mackay, M.C., 12th Field Ambulance, A.A.M.C.

For conspicuous gallantry and devotion to duty on September 18th, 1918, south of Le Verguer. He moved forward with his bearers closely in rear of advancing battalions and under heavy machine-gun and shell fire, and by absolute disregard of his own personal safety was able to keep in close contact with brigade regimental medical officers. By this action the wounded were evacuated in the quickest possible manner, all congestion at regimental aid posts was prevented, and undoubtedly many lives were saved. (M.C. gazetted January 18th, 1918.)

Temporary Captain James David MacKinnon, M.C., R.A.M.C., attached 4th Battalion Liverpool Regiment.

During the operations on September 29th and October 10th-11th, 1918, at Villers Guislain and Le Cateau, he displayed consistent and conspicuous gallantry in attending to wounded under heavy fire, and saved many lives. His example of coolness and devotion to duty was very fine. (M.C. gazetted September 16th, 1918.)

Captain (acting Major) William Archibald Miller, D.S.O., M.C., R.A.M.C.(S.R.), attached No. 6 Field Ambulance.

For conspicuous gallantry and devotion to duty from September 27th to September 29th, 1918, when in charge of stretcher-bearers during the advance from the Canal du Nord to the Canal de St. Quentin. He worked for three days without rest, and repeatedly led his stretcher-bearers to the front line, exposing himself to direct fire from enemy machine-gun posts. Especially on September 28th, he led his bearers across the canal in close touch with the infantry, and brought back wounded through intense machine-gun and shell barrage. By his fine behaviour he saved the lives of many men. (M.C. gazetted November 14th, 1916.)

Captain Laurel Cole Palmer, M.C., 13th Field Ambulance, C.A.M.C.

In the operations before Cambrai he was in charge of stretcher-bearer squads from September 27th to September 30th, 1918. During this period he had absolutely no rest day or night, and was constantly under heavy shell fire; and on the 28th he personally brought up field ambulance squads, and carried out the wounded from in front of the front line under heavy shell and machine-gun fire. His untiring energy and disregard of personal danger were admirable. (M.C. gazetted February 1st, 1919.)

Captain Joseph Gregor Shaw, M.C., 12th Field Ambulance, C.A.M.C.

During operations near Cambrai from September 26th to October 1st, 1918, he was in charge of a party of stretcher-bearers clearing the 12th Canadian Infantry Brigade. He went for four days practically without sleep, during which time he was constantly superintending clearing operations in the vicinity of the regimental aid posts. After two days, his senior officer having been gassed, the total responsibility devolved upon him. During this time, while constantly exposed to shell and machine-gun fire, his conduct was splendid, and he was the means of saving the lives of many wounded. (M.C. gazetted February 1st, 1919.)

Captain (acting Major) James Calvert Spence, M.C., R.A.M.C.(S.R.), attached 34th Field Ambulance.

For conspicuous gallantry and devotion to duty while in command of a bearer division, during the attack on Oisy le Vergor and the subsequent operations from September 28th to October 2nd, 1918. In addition to handling his bearers with marked skill and initiative, he reconnoitred and selected sites for regimental aid posts under heavy fire. Throughout the operations he showed untiring energy and complete disregard of danger. His fine leading of bearers on several occasions through heavy barrages enabled the wounded to be rapidly cleared, and undoubtedly resulted in the saving of many lives. (M.C. gazetted September 17th, 1917.)

Captain Donald George Kennedy Turnbull, M.C., 11th Field Ambulance, C.A.M.C.

During the recent operations before Cambrai, September 29th, 1918, it was reported that there were still a great many wounded out in front of the regimental aid posts of another brigade. He at once proceeded up the line with all available bearers and under heavy fire investigated the conditions as to wounded. He got them all out so that none were left during the night of September 29th-30th, thus assisting materially in preventing deaths from exposure. (M.C. gazetted July 25th, 1917.)

(To be continued.)

ORDER OF THE BRITISH EMPIRE.

The following officers of the Royal Navy have been appointed Officers of the Military Division of the Order of the British Empire (O.B.E.) in recognition of services during the war:

Surgeon Lieutenant Commander Roger Aiken Rankine, R.N.

For valuable services in connexion with anti-malarial work at the British Naval Base, Corfu.

Surgeon Lieutenant George William Marshall Findlay, R.N.

For valuable services as Medical Officer of the Royal Naval Dépôt, Port Said.

England and Wales.

IN-PATIENT ACCOMMODATION FOR BRISTOL PENSIONERS.

From the report of the meeting of the board of guardians it appears that Bristol is not to have a hospital for the in-patient treatment of pensioners, as the Office of Works had decided that the buildings at Southmead are not suited for a hospital as far as the temporary hutments are concerned, while the guardians required the permanent buildings for the accommodation of sick poor. The Ministry of Pensions, with which the guardians have been in correspondence, appears to think that suitable accommodation for the pensioners can be found at Bath, presumably at the War Hospital.

The history of Southmead Hospital is as follows: In August, 1914, the board of guardians had nearly completed a new infirmary, and when the great demand for more beds for wounded and sick soldiers came the War Office by arrangement took over the new building, attaching it to the 2nd Southern General Hospital as a section, thus providing about 1,240 beds. To provide this large number of beds temporary hutments of the hospital type were put up, and it is these additions which the Office of Works finds unsuitable without considerable alterations. Southmead has been for a considerable time a special surgical hospital for orthopaedic cases. On the dispersal of the medical staff of the 2nd Southern General Hospital the personnel was found from Territorial and temporary commissioned officers of the R.A.M.C., and from July 1st has been nominally under the Ministry.

It would appear from the published account of the board of guardians' meeting that they found some difficulty in getting a definite statement from the Ministry as to the date when the infirmary they had just built would be returned to them, and it may be conjectured that the rather precipitous action of the Ministry is due to the pressure brought by them for an answer. This is evident from the proposal to send pensioners requiring indoor treatment to Bath. That city has a well equipped war hospital of the hutment type, but it is twelve miles from Bristol, and it would appear more fitting that the city of Bristol, with its 20,000 pensioners, should have accommodation of its own for its own men. Further, the unnecessary delay, inconvenience, and risks caused by a journey of only twelve miles for men requiring indoor treatment seems not to have been taken into account; and the change is felt to be a slight to those who have been in charge of the hospital for the past four years.

As a matter of fact, the buildings used by the 2nd Southern General Hospital at the Royal Infirmary are still unoccupied and, if current report be true, are likely so to remain for some time, as it is doubtful whether the Committee can afford to open the wards again at present. These wards require considerable repairs and cleaning, but they are not in an unusable state. It does not appear that the Committee of the Royal Infirmary has been approached on the matter, though it is almost certain that if they were, a working agreement could without any difficulty be reached. Perhaps the worst part of the whole matter is the state of uncertainty and ignorance in which those who have to do with the matter of treatment of pensioners are kept, for the communication on the giving up of Southmead and the provision of some other hospital has been between Major-General Bond, representing the Ministry, and the board of guardians, while the Pensions Committee have heard not a word. The local Commissioner appears to be in the same position as the Pensions Committee.

THE University of Liège has conferred the honorary degree of doctor on Her Majesty Queen Elizabeth of Belgium.

SENATOR FRANCESCO DURANTE, who has held the chair of surgery in the University of Rome for forty-six years, has retired under the age rule on completing his seventy-fifth year. He delivered his final lecture on June 6th to an audience which included all his colleagues, the Rector magnificus of the University and the Director-General of Higher Education representing the Minister. A fine bust, from the chisel of the distinguished sculptor Ettore Ximenes, presented by Professor Durante's pupils, has been placed in the great hall of the Policlinico.

Correspondence.

A POST-GRADUATE SCHOOL IN LONDON.

SIR,—I have read with great interest the letter which appears in your issue of August 2nd, p. 150, signed by "Observer." It expresses what has been in the minds of many of us for months past, for we have noted with disappointment and regret the valuable time that has been spent—I might say wasted—by the gentlemen who have, I think, for over two years been considering and planning how a really national scheme for post-graduate training could be established in London. Schemes have been devised, revised, and re-revised, but no businesslike steps have been taken to realize any of the schemes. A few months ago we hoped that at last they would "get a move on," for a well-attended meeting of really representative people was held in the Royal Society's house, presided over by Sir William Osler, and beautiful resolutions were formulated and carried with acclamation. The meeting, I believe, formed itself into a "Post-graduate Association," and appointed an executive committee, but is there such an association in any recognized understanding of the word? Indeed, has anything effective been done since that meeting? I believe I am right in saying that nothing has been done beyond further talk. Had the project been in the hands of really businesslike men with power of organization the post-graduate school might have started within three months of the first proposal. *Vires acquirit eundo*, and it would have been infinitely better to have made a start, no matter how humble, in faith that the thing would grow, instead of waiting until an ideal scheme could be elaborated in every detail, which only time and experience could prove to be of real value.

The profession is indebted to the Royal Society of Medicine, which generously gave its hospitality to the Fellowship of Medicine, a committee of which, when the call came about last Christmas for post-graduate work to be arranged for returning army medical officers, made a start in about three weeks, and as most of us know, with brilliant success. If the *soi-disant* Post-graduate Association had more at heart the tremendous importance of London being recognized as a great post-graduate centre rather than the realization of their own dreams and schemes, and if, recognizing that however distinguished they might be professionally, they are not organizers, and would hand over the whole thing to the Fellowship of Medicine, many of us feel sure there would be a businesslike post-graduate scheme in full working order by the beginning of October. If something practical is not done at once the London profession will have lost an opportunity that will probably never recur, and while we would rather see post-graduate centres in New York and in Paris than in Vienna and Berlin, post-graduate students will have lost probably for ever the opportunities which London possesses for such work—greater than any city in the world.—I am, etc.,

London, W., Aug. 1st.

W. ARBUTHNOT LANE.

SIR,—Your correspondent, "Observer," rightly urges that we will lose the unique opportunity in our history of making London a great post-graduate centre if we do not promptly establish a full and permanent curriculum of study and instruction.

Not only is New York enlarging and organizing her post-graduate instruction, but Philadelphia and other cities are preparing schemes of study for the post-graduate, either separate from graduate classes or in the same institutions as the latter. The prospect of success of these ventures is enhanced when we recollect (1) the abounding prosperity of America at present, (2) her population of 100 millions, with a proportionate number of medical men, (3) the eagerness of these latter for instruction and for "keeping up to date," (4) their readiness to pay well for value received, (5) the great facilities in U.S.A. for obtaining cadavers for technical training and for operative surgery, and (6) the liberality and patriotism with which wealthy American citizens give pecuniary support to teaching and research.

But all this, even if very successful, would not militate

against thorough and well organized teaching in Europe. All Americans have a strong and very natural desire to see and study in the schools on this side, and it adds to their reputation to have enlarged their views and experience by crossing the Atlantic. At the present time, in spite of anything the yellow press or politicians for their own ends may say to weaken it, there exists, in all the professional circles I mixed in during a recent two months' visit, the very warmest feelings of esteem, admiration, and affection for British medicine and surgery, as well as for its exponents, its literature, and its history. Those American colleagues who have mixed with us here or in France during the years of war are loud in their expressions of appreciation of our good fellowship. I have heard them not only in England, but even more warmly enunciated in America. Transatlantic *confrères* who have come here in former years, duly accredited or with letters of introduction, are equally warm in their gratitude for the welcome given them, and for the wealth of clinical and pathological material made available for them. But some of the rank and file, on the other side, occasionally, but courteously, gave me to understand that they had received nothing but "the cold shoulder"; that there was nowhere for them to apply for information on any matter of medical interest; that they found no organized classes; that they lost much time in wandering from one hospital to another; and that, not infrequently, after many futile efforts, they packed up and went on to Vienna or Berlin. One of the leading surgeons in Canada told me that, wishing to learn the technique of cystoscopy, he came—naturally—to London. There he spent three weeks in trying to get the necessary instruction and practice, but, meeting with no success, he went on to Berlin, where, in three weeks and for a fee of £6, he obtained the teaching and the training he was in search of.

No Canadian and no American I met ever wants to enter a Berlin or a Vienna clinic again, if he can get what he requires in this country. It is therefore entirely "up to us" not to throw away this great occasion. If we lose it we will have only ourselves to blame. A Canadian physician, who is connected with the largest medical school in his own country, who has been over here for four and a half years on war service, and who therefore knows well the conditions on both sides of the ocean, assures me that if we do not seize this moment he is certain that within five years the post-graduate classes of Vienna and Berlin will again be crowded, chiefly by English-speaking students.

But the opportunity is not lost, and has not been neglected. The Fellowship of Medicine, which aspires to other duties as well, has by its emergency post-graduate scheme so well satisfied the 400 surgeons of the Dominion and American armies who have registered at No. 1, Wimpole Street, since the beginning of this year, that they are returning to their own countries full of gracious gratitude for what it has been possible to do for them under the still present difficulties of war's aftermath. The Post-graduate Association has worked out plans for the difficult task of co-ordinating the various and detached teaching interests of London. Had the *aristice* not come upon us rather unexpectedly, these plans would doubtless have advanced to a practical programme. Now, it only requires the amalgamation of these two efforts—namely, the temporary scheme of the Fellowship and the broad-based plans of the Association—to secure a united front and a successful effort. There is certainly not room for two ventures, and we have learnt from the war by the failure of unconnected efforts to appreciate the motto of Belgium—"L'union fait la force."

The first steps in this amalgamation have already been taken. When it is completed the profession can unite in supporting it, and in appealing to the Government and the public for helping what can most certainly be called a "work of national importance."—I am, etc.,

London, W., Aug. 5th.

STCLAIR THOMSON.

THE TEACHING OF MEDICAL HISTORY.

SIR,—The broad issues of historical research, the discussion of methods to make plain the significance of those who *quasi cursores vitæ lampada tradunt*, must be left to such scholars as Dr. Singer, but I can, without presumption, support his plea for other reasons.

In the ten years during which I have had charge of the

* The proceedings of the meeting were reported in the BRITISH MEDICAL JOURNAL of May 3rd, 1919, p. 551.

department of medical statistics at the Lister Institute many young post-graduate students have carried out epidemiological researches in the laboratory. My experience has been that the student realizes quite well the importance of statistical methods and the necessity of familiarizing himself with the current literature of the disease which he intends to investigate epidemiologically; but it has seldom, if ever, occurred to him that the past history of the disease is an equally essential datum. Yet an epidemiologist whose backward vision is limited by the year of the discovery of the tubercle bacillus is not in a better position than that of a would-be jurist who attempted to deduce the general principles of law from an exclusive study of the current practice of the courts.

This is not the fault of the student; not only does he hear no lectures, there are very few books which can safely be put into his hands. For the beginner, Hirsch or the third volume of Haeser's treatise are but dull reading; Creighton's book, although as interesting as a novel to any young man with a sense of style, is not an altogether safe guide.

The evil results of all this we see every day in the multiplication of new and mysterious diseases, the easy contempt of classical researches which have not found a *sacer vates* in the epitomists of current journals, and the vulgar clap-trap of conquests and stampings out of diseases. Sir Clifford Allbutt has again warned us that we are mainly engaged in the manufacture of technicians, and the technician whom Sir Clifford censures is the modern representative of that Athenian blockhead who, as Dr. Johnson said, was the greatest of blockheads. It is possible that historians themselves are not altogether guiltless in this matter. Perhaps some of them do not do enough to dispel the notion that medical history is a sealed book to all who cannot read Hippocrates in the original, while the cant that we can find the solution of all our riddles in the pages of Hippocrates or the writings of Sydenham is not much more respectable than that which proclaims bacteriological millennia and the worthlessness of past experience.

Surely it is possible even now and without the creation of much new academic machinery to save the medical student from the extremes of sciolism and bookishness. When he has completed his course in the pure sciences and before he becomes immersed in matter, acquiring the technical knowledge which enables him to practise the art of the physician, surgeon, or pathologist, he might be offered a short course of lectures on the history not so much of medicine in general as of diseases, the decline of plague, the rise of the continued fevers, the ups and downs of the zymotics, the strange story of the agues and influenzas. This is a humble proposal and its execution could not do much to foster scholarly research; but we must not let the best become the enemy of the good.—I am, etc.,

Loughton, Aug. 4th.

MAJOR GREENWOOD.

HYPERPYREXIAL HEATSTROKE.

SIR,—With reference to Captain Sinderson's letter (BRITISH MEDICAL JOURNAL, July 19th, 1919) regarding a possible connexion between hyperpyrexial heatstroke and sandfly fever. I would like to mention that I have repeatedly met extensive outbreaks of this type of heatstroke under conditions which entirely excluded the possibility of sandfly fever playing a part in its causation—namely, on the transports which brought the British troops direct from England to Mesopotamia in August, 1917.

In one of these instances the ship had left Durban fifteen days previously, and had made a non-stop run to the Shatt-el-Arab lightship in the Persian Gulf. Since Capetown and Durban were the only ports of call, and no outbreak of any febrile disease had occurred during the whole voyage until the heated regions at the mouth of the Shatt-el-Arab river were reached, it might be fairly concluded that neither sandfly fever nor malaria played any complicating part in the heatstrokes which marked the termination of this voyage.

Sandfly fever is accompanied by very definite and unpleasant symptoms, which were entirely absent from the large majority of my cases of heatstroke in Mesopotamia.

The after-fever, which often follows heatstroke, has come to be regarded as evidence that the disease is toxic in nature, but it must be remembered that absolute sup-

pression of sweating often persists for one or two weeks after the attack, and this state of affairs, combined with the presence of a high atmospheric temperature (and certain physiological factors) will fully explain the continuance of the pyrexia.

In ordinary fevers, too, if sweating is not already evident, a subcutaneous injection of pilocarpine will be followed by profuse diaphoresis. In heatstroke, on the other hand, pilocarpine is powerless to produce sweating, though copious salivation takes place. From this I conclude that some damage (probably of the nature of fatigue through previous over-sweating) has occurred to the sweat glands themselves, which prevents their action even when stimulated by the most powerful diaphoretic known.

There can, of course, be no doubt that any febrile condition complicating heatstroke will hasten the onset of hyperpyrexia, and I have seen a considerable number of cases in which sandfly fever has done so, but there is much evidence to support the opinion that heatstroke is a distinctly separate clinical entity, due to failure of the sweat glands, and is not necessarily associated with sandfly fever, malaria, or any other febrile disease.—I am, etc.,

Hull, Yorks, Aug. 2nd.

K. G. HEARNE, M.D.

THE PANEL CONFERENCE.

SIR,—I have now attended several Conferences of Panel Committees, including the last, and each successive Conference has strengthened the impression the first of them made on my mind of the futility of these unwieldy meetings as a means of arriving at wise decisions either on medico-political policy or, indeed, on details of medical administration.

The shortness of the period that can be given to them, the overburdening of the agenda, which is probably unavoidable, the jumble in that agenda of trivial administrative details, which, nevertheless, give rise to long and useless discussion, with important principles of policy whose consideration has perforce to be rushed; the clashing of opposing views which tends to make delegates more desirous of scoring a point than of contributing to the discussion only what will help the Conference to arrive at the wisest decision—all tend to create an atmosphere in which wise deliberation is difficult, if not impossible.

It is true that some improvement might be effected if the agenda were so arranged that important matters of principle were taken first and administrative details left until afterwards, and if, where there are several similar motions or amendments, the best were picked out for discussion. I endeavoured at the last Conference to get the Conference to agree to this, but it decided otherwise, with the consequence that some members of the Conference had to leave before some of the most important matters on the agenda paper were reached.

I believe that it would not have so decided had not the Chairman misled the Conference by saying that time would probably be saved by taking the agenda as it stood. I use the word "misled" in no opprobrious sense, as no one appreciates better than I what a really fine Chairman Dr. J. A. Macdonald is.

Such arrangement of the agenda could easily be made by a very little careful work before the Conference. A small committee of two could do it in half an hour.

But even were the agenda perfectly arranged, and the discussion perfectly managed, the unwieldy character of these Conferences make them a quite unsuitable instrument for deciding the policy of the medical profession. The delegates come from all parts of the country, from areas which have hardly any knowledge of what other areas are doing, or how they are thinking, and but little opportunity of getting this knowledge.

The remedy is, I believe, to abandon these regular Conferences as instruments for determining policy, and to make use of them exceptionally only to register decisions if necessary on some few questions of principle only, and to organize the profession on a sectional basis, as shown forth in skeleton form in the plan of organization projected by the Association of Panel Committees.

It is not yet certain what body is finally to be the mouthpiece of the medical profession, or if there may not be more than one body to deal with different matters. But whatever it is to be, I believe that two things are necessary

to make it a success in the struggle that is before the profession :

1. That it should adopt this sectional organization.
2. That the profession should put its hands deep into its pockets and finance it not only adequately but generously.

I enclose a copy of the Explanatory Memorandum of the Association of Panel Committees in the hope that you may find it worthy of comment, but for the benefit of your readers who have not seen it and may not see it, may I condense its most important provision :

The country is divided into sections ; seven are suggested. Each Panel Committee appoints delegates, who attend a sectional conference once annually.

The principal function of this conference is to appoint a sectional committee.

The sectional committees will meet frequently and will each appoint a member of the Central Executive.

This Central Executive will be the negotiating body, but from its very nature it must be in close contact with sectional committees, so that matters of policy as well as of administrative detail must perforce be thrashed out in the sectional committees.

It is a very different matter to deliberate on such things in comparatively small and compact committees which meet frequently, and whose members know each other, from tossing them over in an unwieldy, disjointed annual Conference.

When necessary in a crisis, and to register a decision on some single important issue, the summoning of all the sectional committees together would in effect be to summon a body comparable to the present Conferences, but it would be a very different and much less unwieldy instrument.

This plan has the merit that it is applicable to any representative body. The Insurance Acts Committee could be elected on this plan and take instructions from, and refer matters to, its constituent bodies in this way.

It is high time the profession thought about these matters, as time is pressing, and the Ministry of Health and reconstruction of the Insurance Acts is urgent. I trust that you may consider this a sufficient excuse for this long letter.—I am, etc.,

York, July 28th.

PETER MACDONALD.

SIR,—Dr. P. Macdonald has courteously allowed me to see his letter, and I hope you will permit me to make a few observations upon it. Dr. Macdonald is sincerely anxious to make the Conferences of Panel Committees as useful as possible, and to put them into proper relationship with all other means of consultation that the profession may possess. The Insurance Acts Committee shares this anxiety. This consultative machinery has not yet acquired its final form. It is still in process of evolution, and all sincere efforts to help it to perfection must be welcomed.

There are two aspects to be considered—(1) the conduct of the business of the Conference itself, (2) the relationship of the Conference with the Panel Committees on the one hand and with the executive body (the Insurance Acts Committee) on the other. Neither of these is so simple as Dr. Macdonald would have it appear. In connexion with the former, for instance, the "small committee of two" which he asks for actually sat to arrange the agenda of the last Conference for much more than the "half an hour" which he considers necessary, and the result, though the Conference as a whole accepted it, failed to satisfy an important minority. The difference between "important matters of principle" and "administrative details" as applied to individual motions is not always viewed alike. But I agree, and I think the Insurance Acts Committee would agree, that, if this difficulty could be got over, it is desirable that the main purpose of the Conferences should be to register decisions on important questions of principle in connexion with medico-political matters which had previously been considered by Panel Committees individually or in groups, rather than to debate details concerned with the application of such principles. To this I believe we shall come when individual practitioners have learnt to make more use of their Panel Committees, and when those committees have learnt more adequately to consult their own constituents and neighbouring committees.

This brings me to Dr. Macdonald's "sectional" or, as I prefer to call it, "group" organization. Some two years ago the Insurance Acts Committee decided that some such

organization was necessary, and it was one of the important points in the programme of the Association of Panel Committees which a few committees formed a little later. The Insurance Acts Committee has divided Great Britain into some thirteen regions, and has encouraged the co-operation and consultation with each other of the Panel Committees within each region. The "sectional organization" laid down in the scheme of the Association of Panel Committees is not very different from the group arrangement of the Insurance Acts Committee, but the Committee has preferred to allow each group to develop its method of co-operation on the lines which seemed best in the local circumstances rather than to impose from the centre any particular method. As a fact, several different methods are now in being, and a little longer time will enable us to determine which are the most useful and convenient. Grouped conferences will almost certainly become a more important feature of our organization.

As Dr. Macdonald states, in the scheme of the Association of Panel Committees each of the sectional conferences, composed of delegates from the Panel Committees in the section, appoints a sectional committee, and each sectional committee appoints a member of the Central Executive. In this case the executive is only in a fourth-hand relationship with insurance practitioners, and is in no relationship at all with those sections of the profession who, though they must be affected by a State insurance scheme, are not actually working under it. In the organization which has grown up under the auspices of the British Medical Association, on the other hand, the executive committee of the Conference is only two removes from the insurance practitioners themselves, being directly elected (as to a majority of its members) by the members of the Panel Committees in each group; and it contains in addition an important representation of the British Medical Association as the most widely representative body in the profession, and of certain other important professional organizations. I think it may now be said that the latter method of organization has proved its worth, and has commended itself as the most useful and appropriate to the great majority of Local Medical and Panel Committees.

Under these circumstances, is it too much to ask Dr. Macdonald to unite his forces whole-heartedly with ours, so that together we may improve both the conduct of the business of the Conference and the representative character of its committees, and so that the funds on which, as he states, its success so largely depends, may be generously supported and placed on a firm basis?—I am, etc.,

London, N., July 29th.

H. B. BRACKENBURY.

INSURANCE TERMS AND CONDITIONS.

SIR,—The extra payments for 1919 on the ground of the increased cost of living, having been approved by the Panel Conference, are probably beyond discussion; but, in view of its bearing on the settlement for 1920, it is important that all possible explanation of this approval should be given to members. The payments are distinctly less than those made to civil servants of similar incomes. Presumably this is in accordance with the principle, enunciated in the fifth quarterly circular, that a proportion of our panel income must be deducted, as representing expenses, before the true net income can be found. This, of course, is true. But these expenses have themselves increased in much greater proportion than the maximum extra allowance of 30 per cent. It seems to follow, therefore, that if the amount estimated as expenses is not to count in reckoning the extra grant it should be the subject of another and larger grant. I am quite aware that the Association was unable to produce detailed statements of the increased cost of urban practice, but the main items are well known. They are motors and running costs, service, cleaning material, redecoration, rent, and rates. Rates have gone up about 30 per cent.; all the others, except rent, have gone up by 70 per cent. or more. There should be no difficulty in fixing a rough average percentage for these expenses, and making a grant accordingly. If neither this special grant be given nor the "expenses" be allowed to share in the 15 per cent., it does seem that our net income for 1919 (before the addition of the 15 per cent.) will be actually less than the net income for 1913; so that even if 15 per cent. on our gross incomes be the true equivalent of 20 per

cent. on the civil servants' net incomes, we shall still be worse off than they by this reduction in our net incomes—and even the civil service increase is by no means equivalent to the rise in the cost of living.

Probably this point has been considered, but an explanation would be comforting.—I am, etc.,

Newcastle-on-Tyne, July 27th.

T. L. BUNTING.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

SIR,—As one of those who started the discussion of this subject in your issue of June 21st, I am greatly interested in the letters which continue to appear.

All honour to the men who volunteered for service; they deserve to be well treated, and to have it made up to them now they have returned. I do not think, however, that the Territorials and others who were compelled to join up can claim to be in the same category as the volunteers. While it was a hardship and a loss for some men to join the army medical service, it was an advantage for others, and there were many men, only just qualified, who profited thereby. Would they prove as satisfactory as those who have worked on those boards for nearly two years?

Let me give some particulars of my own case. I am a country doctor, over sixty years of age, and my residence is fourteen or fifteen miles from the county town. I was one of the first to join the recruiting board when it was thrown open to civil practitioners in November, 1917. I took two sessions a week, and generally worked the full two and a half hours at each session, which necessitated an absence from home each time of four and a half hours. Since recruiting stopped I have had one session a week on the pensions board, with occasionally a second. We always have a list of ten cases to examine, but sometimes one or two do not turn up. As a rule no member of the board has more than two sessions a week, and all demobilized men are given a chance to join. The clerical work used to be undertaken by the clerks, but some time ago it was ordered by the Ministry of Pensions that members of the board should perform this duty.

Now, Sir, I have given particulars of my own case; I do not think that I am injuring very much those who have served.—I am, etc.,

MEMBER OF RECRUITING AND PENSIONS BOARDS.

July 28th.

* Our correspondent will see that one aspect of this matter was discussed at the Annual Representative Meeting (SUPPLEMENT, p. 49), and that a resolution was adopted to the effect that the minimum fee should be two guineas for each session not exceeding two and a half hours, and that the number of pensioners examined at one session should not exceed eight.

THE NEW R.A.M.C. CONTRACT.

SIR,—As one who joined the R.A.M.C. during the first year of the war, perhaps I may be allowed to make a few remarks on the present state of affairs. As you rightly remark in your leading article on this subject in your issue of August 2nd, the present difficulty is largely due to the action of Mr. Winston Churchill in scrapping early in the year, suddenly without consultation with the medical profession, the scheme for demobilization which had been carefully worked out by the Central Medical War Committee. His excuse appeared to be that there was a great shortage of civil medical practitioners, but, like many others who were demobilized in January last, I did not find this to be the case.

I cannot help feeling that one of the great obstacles—probably the greatest obstacle—to medical men joining or rejoining the R.A.M.C. is distrust of the War Office. It must be remembered that the country is not now at war, and so appeal cannot be made to the patriotism of the medical profession. No doubt the authorities thought that £550 a year would have attracted the newly qualified men, but, on the other hand, those men who join are not certain of a year's service, and, moreover, they may have to serve in any part of the world, with the risk of contracting malaria and other tropical complaints; and, above all, they have to remember that the time they will spend in the R.A.M.C. will be almost entirely wasted, the little experience they will gain being of small value to them in after-life, while during their period of service they will miss any chances of competing for public appointments.

As regards those men who have served, I think I may say that the majority joined up for patriotic motives; they did not for many reasons like the service; they felt that they were not treated with the consideration they deserved, and they resented the discipline enforced often by men who were their inferiors as regards professional knowledge, although their seniors, owing to their being regular officers in the R.A.M.C.

The greater number of these men having once returned to civil life, with wives and families to provide for, and having recommenced to pull their practices together or to get into their hands the threads of the duties of their public appointments, are not at all likely to rejoin, especially to be paid at the same rate as the newly qualified man who has had no army experience. This leads me to mention an old-standing grievance—namely, the system whereby all temporary officers were and are paid alike. It is extraordinary that in the eyes of the War Office every medical man, no matter if he be just qualified with any qualification or has the highest qualification, and perhaps twenty years' experience, is of equal value.

What are the remedies for the present difficulty in obtaining temporary medical officers? It appears to me they are:

1. Let all officers be engaged for a period of at least one year.
2. Allow all officers to leave the service (terminate their contract on giving a month's notice if they obtain a public appointment or have exceptionally urgent private reasons. They will thus not be debarred from competing with their fellows in civil life.
3. Let the newly qualified be given the rank of lieutenant and the pay offered be £500 per annum.
4. Offer demobilized officers who have served less than three years the rank of captain and £600 per annum. Pay of temporary captains serving to be £600.
5. Offer demobilized officers who have served to the satisfaction of their superiors in the R.A.M.C. for at least three years, and those who are still serving and who have more than three years' service, pay at the rate of £700 a year, the rank of major, and responsible posts for which they are best fitted—for example, as specialists, or in charge of divisions as registrars, etc.

Those entered as captains might also possibly provide some specialists. The present scheme does not appear to make any provision for obtaining the services of specialists, which is a most important point.

I have good reason for thinking that if the five suggestions enumerated above were carried into effect sufficient temporary officers would be obtained, for, after all, with many men there is the feeling that money is not everything, and any way, to me the honour of holding His Majesty's commission even is a great attraction.—

I am, etc.,

August 5th.

EX-SERVICE MAN.

SIR,—I quite agree with your correspondent of August 2nd. Why not make up the difference in pay received by Territorial and Special Reserve M.O.'s for the last four and a half years or so to that received by the temporary officer. It certainly would stimulate confidence in the Government, which I personally have lost.

I might mention a concrete example. I joined the Special Reserve in 1914, and have been on their rates of pay up to date. My brother qualified in 1915, and has a temporary commission, and although he is younger and more recently qualified, has drawn more pay since than I have.

When Government rights the wrongs which it has connived at so long, it might get more support from demobilized and new men. My advice to any aspirant will be, "Timeo Danaos et dona ferentes."—I am, etc.,

Blackley, Aug. 5th.

J. G. BENNETT.

SURGICAL INSTRUMENTS FOR SERBIA.

SIR,—May I make an appeal through your widely read JOURNAL to medical men and surgeons for instruments of any sort and description to assist in the re-establishing of hospitals in Serbia? I have just returned from relief work in that ruined country, and have had ample opportunity of seeing the great need for every kind of help required.

Many doctors have been posted to various places only to find no hospitals and a complete absence of medical instruments and requisites of all descriptions; it has occurred to me that if your readers would overhaul their cupboards

they could find many instruments they could spare, and thus help one of our bravest and most faithful allies. I will undertake to personally distribute any gifts, and here render most grateful thanks to kind donors.—I am, etc.,

E. HAVERFIELD,
Commissioner for Serbian Red Cross.

Serbian Red Cross Society in Great Britain,
9, Ennismore Gardens, S.W.7.

Universities and Colleges.

UNIVERSITY OF LONDON.

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL.

THE following elections to scholarships have been made:

Burney Yeo Scholarships: J. W. Hirst, C. F. T. East. Senior Scholarship and Todd Prize: E. A. L. Crichtlow. Jelf Medal: H. Kamal. Tanner Prize: Miss D. E. P. Jolly.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.

The following appointments have been made:—Lecturer in Anatomy, and Head of the Anatomy Department: Mary L. Keene, M.B., B.S. Demonstrators of Anatomy: John W. Ebdon, M.B., B.S., Lawrence Abel, M.B., B.S., Mary Hounsfield, M.B., B.S., Mary Joll, M.D., B.S. Lecturer in Forensic Medicine and Toxicology: Bernard H. Spilsbury, M.B., Ch.B. Demonstrator in Pharmacology: Eleanor Scarborough, M.B., B.S. Demonstrators of Physiology: M. Ross-Johnson, D. Woodman, B.Sc.

The following scholarships have been awarded for session 1919-20:

Isabel Thorne Scholarship: K. H. Bowman-Manifold. Agnes Guthrie Dental Bursary: Kathleen C. Smyth. Gilchrist War Workers Scholarship: G. M. L. Summerhayes. Sarah Holborn Scholarship: Annie Sydenham. Dr. Margaret Todd Scholarship: Greta Hartley. Bostock Scholarship: Lucy Parker. St. Dunstan's Medical Exhibition: M. Pedersen. Mrs. George M. Smith Scholarship: Agnes H. S. Gray. Mabel Sharman Crawford Scholarship: Lucy Parker.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN ordinary comitia of the Royal College of Physicians of London was held on July 31st, the President, Sir Norman Moore, Bt., being in the chair.

On the report of the Censors Board, it was resolved that Arthur Edward Gladstone be declared to be no longer a Licentiate of the College.

Dr. Frederic Percival Mackie was admitted to the Fellowship of the College.

The following gentlemen, having passed the required examination, were admitted Members:

Thomas Beaton, M.D.Lond., L.R.C.P., Cecil Clinton Birchard, M.B.Toronto, Reginald St. George S. Bond, M.B.Edin., Manrice Davidson, M.D.Oxon., L.R.C.P., Alan Worsley Holmes a Court, M.B.Sydney, Arthur Edwin Horn, M.D.Lond., L.R.C.P., Sydney Fancourt McDonald, M.D.Melb., Douglas Murray McWhae, M.D.Melb., Thomas Archibald Malloch, M.D.McGill, Ludlow Murecott Moody, M.B.Lond., L.R.C.P., Julian Lionel Preston, M.B.Lond., L.R.C.P., Archibald Cathcart Roxburgh, M.B.Camb., L.R.C.P., Joseph Wilkie Scott, M.D.Glasg., Frank Shufflebotham, M.D.Camb., Eric Clarence Spaar, M.D.Lond., Robert Maxwell Trotter, M.D.Aberd., William Balcombe Winton, M.D.Camb.

Licences to practise Physic were granted to 78 candidates, and diplomas in Public Health were granted in conjunction with the Royal College of Surgeons to 12 candidates:

Lionel Danyers Bailey, Malcolm Barker, Cyril Douglas Day, Herman Falk (Major I.M.S.), Walter Henry Grace, Mervyn John Holmes, Tam Legge, Richard Douglas Passey, M.C., Eva Louise Cairns Roberts, William Leslie Webb, Harold Edward Whittingham, John Pryce Williams.

Appointments to various offices were made on the nomination of the President and Council. The Censors elected were Sir Wilmot P. Herringham, K.C.M.G., C.B., Sir Humphry D. Rolleston, K.C.B., Dr. Raymond H. P. Crawford, and Sir John Rose Bradford, K.C.M.G., C.B.

The gift by Lady Allchin of a portrait of the late Sir William Allchin, by Sir Luke Fildes, R.A., was accepted, and the thanks of the College accorded to Lady Allchin.

The Baly medal was awarded to Dr. Leonard Hill, F.R.S. The award is made every alternate year to the person deemed to have most distinguished himself in the science of physiology during the two years immediately preceding the award, which is not restricted to British subjects.

The President announced that the Streatfeild scholarship had been awarded to Dr. F. G. Cawston of Durban, Natal.

Reports from the Conjoint Examining Board of England were received and the recommendations adopted, namely, that the Central Secondary School, Sheffield, the Grammar School, Barnstaple, King's School, Rochester, and the Grammar School, Normanton, be recognized for instruction in chemistry and physics; that the St. Paul's Schools for Girls, West Kensington, and the Municipal College, Grimsby, be recognized for instruction in chemistry, physics, and biology.

It was resolved to recognize the course of instruction in pharmacology and practical pharmacology in the medical department of the University of Cape Town.

The Committee reported that it agreed with the recommendation of the Council of the Royal College of Surgeons to the effect that it was not desirable to institute a special examina-

tion in ophthalmology conducted by ophthalmologists. The Committee was of opinion that the present regulation required a sufficient period of special instruction in ophthalmology to enable teachers of ophthalmology in the medical schools and hospitals to hold class examinations, and to introduce such conditions for attendance on the course as they considered desirable before certificates of attendance were granted by them. The Committee therefore recommended that no alteration should be made in the present regulation relating to instruction and examination in ophthalmology.

The Committee also recommended and it was decided that the modification in the examination in practical pharmacy agreed to in 1915 should now be put into force. The medical schools will be notified that an examination in materia medica and pharmacology will be substituted for that in practical pharmacy. Revised regulations with the new synopsis already authorized by the Royal Colleges will be issued.

CONJOINT BOARD IN ENGLAND.

THE diplomas of M.R.C.S., L.R.C.P. have been conferred upon the following seventy-eight candidates who have passed the final examination in medicine, surgery, and midwifery:

W. S. Adams, R. G. Addenbrooke, R. J. Allison, J. C. Andrews, M. Aronsohn, G. A. E. Barnes, C. Blunet, T. G. D. Bonar, Hilda C. Bowser, Sarah A. F. Boyd-Mackay, W. E. Bracey, G. A. A. Bradnaek, Ella M. Britten, Anna B. Broman, H. M. Brown, Nai Cheua, B. Y. H. Christmas, S. M. Cohen, P. C. Collyns, A. J. Cox, Ursula B. Cox, E. A. L. Crichtlow, I. J. Cruchley, H. E. Cumming, G. L. Cutts, J. C. Davies, H. Dryerre, C. Duncombe, T. G. Evans, T. Fernandez, Kathleen Field, F. L. Fonseca, H. M. Gerson, F. J. Good, H. H. Goodman, Dorothy M. Greig, O. S. Hillman, Aga Mohamed Kazim, H. W. Kerfoot, V. R. Khanolkar, H. J. Levy, D. Livingston, E. S. Longton, Aziz Abd El Sayed Mansour, M. Marcus, A. Marsh, A. Y. Massoudi, Kathleen H. Matthews, C. Moffatt, V. G. Mobile, F. Moor, F. Morcos, J. E. B. Morton, V. A. Newton, J. G. Nolan, A. G. Ord, E. R. Ormerod, A. A. Osman, Sigrid L. S. Pearson, G. A. Pennant, G. S. B. Philip, T. H. A. Pinniger, H. Reid, B. R. Reynolds, C. H. St. John, Olive B. Sharp, G. J. Sophianopoulos, F. G. Spear, Mary S. Stocks, J. G. Strachan, Sonia Strachan, S. R. Tattersall, B. M. G. Thomas, D. V. Townsend, A. B. K. Watkins, F. F. Wheeler, A. H. Whyte, Gladys M. T. Williams.

* Under the Medical Act, 1876.

† Under Regulations dated October 1st, 1884.

The Services.

TERRITORIAL FORCE DINNERS.

LIEUT.-COLONEL D. N. HAMILTON, R.A.M.C.(T.F.R.), honorary secretary of the Territorial Force Medical Officers' Association, informs us that the committee of that association is making arrangements for a dinner in October next for Territorial Force medical officers. Communications should be addressed to Colonel Hamilton at 37, Russell Square, London, W.C.1. We announced some time ago that Lieut.-Colonel A. R. Henchley, D.S.O., R.A.M.C.(T.F.), was forming a committee to arrange for a dinner for Territorial Force medical officers.

LIEUT.-COLONEL J. F. DONNAN, C.B., late R.A.M.C., has been awarded the degree of Doctor of Laws, LL.D., *honoris causa*, by the National University of Ireland, in recognition of his services in the field during the 1914-18 campaign and previous wars.

Obituary.

DANIEL LOVETT HUBBARD, M.B., B.S.,

Bordighera.

DANIEL LOVETT HUBBARD was born in 1861, began his medical education at King's College Hospital in 1880. A hard worker and keen sportsman (he was in the Hospital Rugby football team) he gained the good will of all who knew him. He was one of the house-surgeons to the hospital in 1886. Afterwards he went to the Durham University College of Medicine, and took the degrees M.B. and B.S. in 1887. He started in practice under the late Dr. William Bell of New Brighton, but after his marriage in 1901, with Margaret, the eldest daughter of the late Mr. E. C. Fernihough of Rock Ferry, he went to Lynton, North Devon. A few years later his wife's health compelled him to live out of England, and he settled in Bordighera, where for over twenty years his name has been a household word, and he gained to an unusual degree the complete confidence and deep affection of all his patients.

With the coming of the Italian Expeditionary Force Hubbard threw himself heart and soul into the British Red Cross work, and earned the admiration and regard of all with whom he came in contact. But his health completely broke down under the strain, and his heart became seriously affected. He was brought over to England early

in May, but became gradually weaker, and died quite suddenly on July 23rd. His body was laid to rest at the Hampstead Cemetery on July 26th. The funeral was attended by his immediate relatives and many friends, among whom were Sir David Ferrier, F.R.S., Dr. C. O. Hawthorne, Dr. Bogle, and Mr. Berry, Consul at Bordighera. Whatever Hubbard's hand found to do, he did it with his might. A wise physician and large-hearted friend, he made his profession respected wherever he went. R.I.P.

WYNDHAM RANDALL, L.R.C.P. EDIN., M.R.C.S.,
Bridgend, Glamorgan.

WE regret to announce the death in his 73rd year of Dr. Wyndham Randall, Bridgend, which occurred on July 17th. He was a member of a well known and much esteemed family in South Glamorgan, and was born at Bridgend. He was educated at Cheltenham and St. Bartholomew's Hospital, London. Dr. Randall was the doyen of the profession in the district; he spent nearly the whole of his professional life in his native town, and by his many sterling qualities won the confidence of his colleagues. To within a few years of his death he was medical officer to the Bridgend and Cowbridge Board of Guardians and medical officer of health to the Bridgend Urban District Council and also to the Penybont Rural District Council. The loss of a son—a captain in the R.A.M.C.—in the war was a blow from which he never recovered. It was indeed an irony of fate that Captain Randall should have been killed upon the threshold of a professional career which promised to be of much distinction. Captain Randall had a brilliant scholastic and medical record before he graduated with honours in his finals at the London University. Dr. Randall was deeply interested in all matters appertaining to his profession, a thoughtful and regular reader of current medical literature.

Though he held strong and decided views on many controversial questions, both political and otherwise, views not always accepted by his friends, yet, however much they differed from him, none doubted his sincerity and all loved his companionship. Dr. Randall's written reports to his councils were well prepared, concise and to the point, and gave proof that he was well abreast of modern teaching in all matters appertaining to public health. All that was mortal of Wyndham Randall was laid to rest in St. Bride's Major Churchyard on July 22nd, amid every manifestation of respect and affection. His wife survives him, and for her much sympathy is felt.

CAPTAIN ROBERT CECIL DICKSON, R.A.M.C. (S.R.), died in India, from the effects of an accident, on June 16th. He was the elder and last surviving son of Dr. G. C. Dickson of Carnoustie, and was educated at Edinburgh University, where he graduated M.B. and Ch.B. in 1911. He joined the Special Reserve of the R.A.M.C. as a lieutenant on August 5th, 1914, on the first day of the war, and was promoted to captain on April 1st, 1915.

Medical News.

THE Potassium Compounds Order and the Glass Control Orders have been suspended.

DR. WILLIAM EWART BULLOCK of Hendon has by deed poll changed his name to William Ewart Gye.

SIR JAMES MACKENZIE DAVIDSON left £23,783 net personalty.

A FRENCH national congress of natality and population will be held at Nancy in September (25th to 28th) under the presidency of M. Augusto Isaac.

THE Old Students' Dinner of the London Hospital will be held on Thursday, October 2nd, at Princes' Restaurant. Sir Bertrand Dawson, G.C.V.O., C.B., will preside. This will be the first reunion of old students since the outbreak of the war. Application for tickets should be made to one of the honorary secretaries, Mr. Hunter Tod, 11, Upper Wimpole Street, W.1, or Dr. Charles H. Miller, 32, Devonshire Place, W.1.

A WAR Section of the Royal Society of Medicine has been formed for dealing with questions affecting medicine and surgery in the Navy, the Army, and the Air Force.

The first meeting will be held on November 10th, when the president, Sir Robert Hill, K.C.M.G., C.B., Medical Director-General R.N., will deliver an address. Among the officers of the Section are representatives of the navy, the army, and the air force, India, the naval and military auxiliary services, and of Canada, Australia, New Zealand, South Africa, and the Colonial Office. Further information can be obtained on application to the Secretary of the Royal Society of Medicine, 1, Wimpole Street, W.1.

DR. JAMES TAYLOR has been gazetted deputy lieutenant for Banffshire. Dr. Taylor was elected provost of Keith in November, 1913, and still holds that office. He has been honorary sheriff substitute for Banffshire since last January. He holds a commission as Major R.A.M.C. (T.), and received the Territorial Decoration in September, 1915.

THE twenty-eighth congress of the French Surgical Association will open in Paris on October 6th under the presidency of Dr. Ch. Walther, surgeon to the Pitié. The questions proposed for discussion are: Closed traumatic lesions of the wrist; treatment of cancer of the tongue by cutting operation; paranephric tumours. Further information may be obtained from the general secretary, Dr. J. L. Faure, 10, rue de la Seine, Paris (6e).

THE Board of Education has issued to local authorities draft regulations for the training of health visitors. Two types of courses are to be recognized—the one, a full course of two years' duration, intended for ordinary students, and a shorter course of one year's duration for trained nurses and other persons already possessing substantial knowledge or experience. It is stated that if a health visitor is to undertake duties connected with midwifery she should be required to obtain the certificate of the Central Midwives Board. The courses are to be given at recognized institutions and the student must pass the examination at the completion of the course. As a rule, courses will be recognized only if they are conducted by, or in close association with, a university institution. The general policy desired by the Ministry of Health is that practically only those women should be appointed to salaried posts as health visitors who possess a good general education, followed by a course of special training, as above outlined.

Letters, Notes, and Answers.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

The postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology, Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

RECURRENT HERPES.

L. H. would be glad to hear of the probable cause and suggestions for a treatment of a case of herpes in a healthy young woman of 30, occurring on the right cheek on an average every four or five weeks during the past ten or twelve years.

LETTERS, NOTES, ETC.

MERCANTILE MARINE MEDAL.

THE Board of Trade makes the following announcement (August 4th, 1919):

With reference to the award by His Majesty the King of the British War Medal and the Mercantile Marine War Medal to members of the Mercantile Marine, and to crews of Pilotage and Lighthouse Authorities' vessels, the President of the Board of Trade desires to make the following further announcement:

(a) All applications should be made on the forms which are provided at Board of Trade Mercantile Marine Offices, at the Offices of Associations and Unions of officers and men of the Mercantile Marine, and at the Offices of Pilotage and Lighthouse Authorities. If, however, an applicant is unable to attend at any such office, a written request may be sent to the Marine Department, Board of Trade, London, for an application form. Applications may be made on and after August 5th.

(b) Officers, men and women, who have served during part of the war in the Royal Navy, R.N.R., or under special Naval

Engagements (that is, Form T 124 and its variants), in the Army, or in the Royal Air Force, have in many cases performed service during some other part of the War which would entitle them to the Mercantile Marine War Medal. Such officers, men and women, will be awarded the Mercantile Marine War Medal if their claims are approved, apart from any further medal which they may be awarded under the regulations of the Admiralty, War Office, or Air Ministry.

(c) Qualifying service will in all cases be service at sea, and not service in harbours, rivers, or other inland waters.

(d) Legatees or next-of-kin of deceased officers, men and women, will not be entitled to participate in the preliminary distribution of medal ribands, but must await the distribution of the medals, to which the usual quantity of riband will be attached.

(e) The preliminary issue to any applicant of medal riband cannot by itself entitle the applicant to the subsequent award of the corresponding medal.

Hospital Ships.

DR. G. H. JONES (Deddington, Oxon) writes: I write to voice the prevalent feeling amongst the members of the hospital ship service that the Government should bestow the Mercantile Marine medal on the staff sisters and personnel serving on hospital boats during the war. When it is pointed out that out of something like fifty hospital ships more than twelve were either mined or torpedoed, with a correspondingly heavy toll of life among medical officers, sisters, and other ranks, the claims of this branch of the service to the medal are great.

After all, although not for a moment depreciating the wonderful part played by the Mercantile Marine, they were nearly all armed, and so could offer some sort of defence. Not so the hospital boats, which were dispatched sans guns, sans escort. They were flung forth to the tender mercies of the Hun, with the results we know.

Throughout the war the hospital ship service has received scant acknowledgement, the services of six men only being recognized, and the bestowal of the medal would tend to relieve the feelings of neglect and indifference at present existent. If ex-hospital ship medical officers would approach their respective members the matter would be ventilated in the House, and I feel sure, as the justice of the claim is so apparent, that a tardy recognition of their hazardous services would be secured. It is a matter the medical members of the House might fittingly adopt.

WAR MEDALS AND HOME SERVICE.

"OVERSEAS, R.A.M.C.," writes: In support of "A. M.'s" letter, allow me to state that, in addition to the medical officers in the Eastern Command, there are men of other branches of the service who will consider it a gross injustice if not granted a war medal. One would think that no gun was fired at an enemy or that no men were killed and wounded in the command.

ENDEMIC GOITRE AND POLLUTED WATER.

DR. THOMAS FENTEM (Bakewell) writes: In reply to Captain Oliver Latham, may I say that after graduation in 1892 I made the subject of endemic goitre the subject of investigation? I embodied the results of that investigation, and my view as to the etiology of this disease, in a thesis I presented for the degree of M.D. in the University of Edinburgh in 1896, twenty-three years ago. Those views are very similar to the ones expressed by Major McCarrison in his book on the subject. I lay no claim to priority, for probably some investigator at an even more remote date had come to similar conclusions. One of my old Edinburgh teachers often reminded us that "there is nothing new under the sun." Here is an example of the truth of that.

OLD AND NEW R.A.M.C. CONTRACTS: NET EMOLUMENT.

THE following calculations have been made in the attempt to show the net effect, when the effect of assessment of income tax is taken into account, of the remuneration under the new contract offered to volunteers as compared with the earlier contract, based on pay of 24s. a day. The war bonus, sometimes called the Army of Occupation bonus, but of much wider application, has been omitted from the calculations, inasmuch as it will in any case come to an end at the date officially declared to be the termination of the war.

Comparison of Net Emoluments after Payment of Income Tax.

I. Old Contract.—£438 plus £60 gratuity.

Income tax liability:		£	s.	d.
Assessable pay	...	438	0	0
Deduct—				
Wife allowance	...	£50 ¹		
Uniform allowance	...	£25		
Life assurance allowance	...	£25		
Abatement	...	£100—200	0	0
Net assessable pay	...	238	0	0
Duty at 1s. 3d. in the £=£14 17s. 6d.				
Net total emoluments	£438+£60=£14 17s. 6d.=	483	2	6

II. New Contract.—£550 inclusive.

Assessable pay	...	...	550	0	0
Deduct allowance as above	...	...	200	0	0
New assessable pay	...	...	350	0	0
Duty at 1s. 9d. ² in the £=£30 12s. 6d.					
Net total emoluments	£550—£30 12s. 6d.=	519	7	6	
Net increase under new contract is therefore—					
£519 7s. 6d.—£483 2s. 6d.	...	that is	36	5	0

If the officer or his wife were possessed of private income, to the extent of say £100, the income tax payable under the old contract conditions must be calculated at the rate of 1s. 9d. and would amount to £338³ at 1s. 9d.=£29 11s. 6d., in which case the comparison between the two contracts would be:

	£	s.	d.
Old contract, £498—£29 11s. 6d.	468	8	6
New contract, £550—1s. 9d. in the £ on £450	510	12	6
Increase	42	4	0

NOTES.—¹ The wife allowance for last year was £25, but the new allowance of £50 for 1919-20 has been taken for purposes of comparison. The life assurance allowance is, of course, purely an arbitrary figure, intended to represent the normal case. ² The rate rises from 1s. 3d. to 1s. 9d. when the total income rises over the £500 limit. ³ On the assumed facts the abatement of £100 would be set against the private income.

ALCOHOL AND VENEREAL DISEASE.

"PERPLEXED" writes: Dr. Home in his letter on the above subject (August 2nd, p. 154) omits to state that during the past forty years there has been a great increase of temperance and that the medical profession have found an increase of venereal disease during the same period. In war time there were further restrictions on drink and a still further increase of disease. Why has increased temperance been accompanied by increased venereal disease both in peace and war?

MOSQUITOS AND SANDFLIES.

THE existence of the disease commonly called "sandfly fever," and the suggestion that it may have something to do with hyperpyrexial sunstroke, may justify the reproduction from the *Pioneer* of the following verses, even were their intrinsic merits not considered to be sufficient:

The 'skeeter's 'arf a gentleman;
'is 'eart is mostly white;
'is way is surface-fightin'
And 'e mainly moves in sight;
'e's regulation methods for
Attacks at night and dawn;
Through long monsoons 'is big platoons
March to a Klaxen 'orn.
The Sandfly, 'e's a gas attack;
'e don't stand up to fight;
'e's slim and 'e's elusive,
And 'e snipes your camp at night;
'e submarines below the sheets,
'e's burstin' full o' wits;
'e's a Frontier Pathan's guile and a black Marsh
Arab's style,
But 'e chiefly learned 'is dirty tricks off Fritz.

SARHADDI.

A CORRECTION.

IN Dr. Arthur Mills's letter on sudden death under an anaesthetic (BRITISH MEDICAL JOURNAL, August 2nd, page 152, column 1, line 15 from foot), for "but its toxicity is liable to produce spasm," read "but its toxicity, its liability to produce spasm."

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 32, 35, 36, 37, 38, 39, and 40 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 33, 34, and 35.

THE following appointment of certifying factory surgeon at Thorne (Yorks, West Riding) is vacant.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

					£	s.	d.
Seven lines and under	...	...	...	...	0	6	0
Each additional line	...	...	...	...	0	0	9
Whole single column	...	...	...	...	4	0	0
Whole page ...	...	...	...	...	12	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *postes restant* letters addressed either in initials or numbers.

The Montgomery Lectures IN OPHTHALMOLOGY.

DELIVERED IN TRINITY COLLEGE, DUBLIN, JUNE, 1919.

BY

GORDON HOLMES, C.M.G., C.B.E., M.D., F.R.C.P.,
PHYSICIAN, ROYAL LONDON OPHTHALMIC HOSPITAL; PHYSICIAN TO
OUT-PATIENTS' NATIONAL HOSPITAL FOR THE PARALYSED
AND EPILEPTIC, QUEEN SQUARE, LONDON.

LECTURE I.—THE CORTICAL LOCALIZATION OF VISION.

IN my first lecture I will attempt to place before you the evidence we now possess as to the regions of the surface of the brain where the images of objects that fall on the retinae excite visual sensations.

Owing to the decussation of a portion of the fibres of the optic nerves in the chiasma, each optic tract conveys impressions from the same sides of both eyes—that is, impressions excited by the retinal images of objects in the opposite halves of the visual fields. And since each tract terminates in the primary optic centres of the same side, and the optic radiations that spring from here pass to the same side of the brain, a total lesion of any part of the one optic system above the chiasma produces hemianopia, or blindness in the opposite halves of the visual fields.

It has only been within recent years that, as a result of many anatomical, physiological, clinical, and pathological investigations, we have acquired any accurate information as to the region of the cortex where retinal impressions excite visual sensations. These investigations indicate that the visual centres lie within and along the lips of the posterior parts of the calcarine fissures, and that they probably correspond to that portion of the cortex characterized by the presence of Gennari's line, which Professor Elliot Smith has called the area striata. In most brains this striate area extends around the occipital pole on to the lateral surface of the hemisphere.

Until lately, too, we possessed very little evidence of the manner in which the different segments of the retinae are represented in the visual cortex, but, owing to the large number of cerebral injuries that have been produced by gunshot wounds, the late war has given us an unequalled opportunity to investigate this problem. Numerous observations by myself and others have provided fuller data on which to discuss it. In March, 1916, I published, in collaboration with my colleague, Sir W. T. Lister, a communication on this subject; last year I was able to amplify the views which we then put forward, and to-day I wish to place before you such final conclusions as I can draw from a very large number of observations.

Two facts tend to make these conclusions less convincing than they might be. In the first place my earlier observations were made in France, where it was not possible to keep patients long under observation, and the defects of vision that were then recorded might be, to some extent, due to the temporary dynamic changes in the brain generally associated with gunshot injuries of the skull rather than to local destructions of the visual cortex. That areas of local blindness did not, as a rule, alter materially after the first two or three weeks is a strong argument that they were not produced only by such transient disturbances, and this assumption is confirmed by the fact that in some of the patients I have been able to examine as long as three and a half years later the state of the visual fields was practically unaltered. I have also had the opportunity of supplementing my earlier observations by the examination of several cases in which the visual disturbances were of much longer standing.

In the second place, since I have been able to correlate my clinical observations with the causative anatomical lesions in a few cases only, it has been possible for the most part to determine the portion of the brain that was injured only by measurements of the sites and the depths of the wounds. This method is certainly inexact, though the position of the area striata can be determined approximately, for theinion, or external occipital protuberance, has a fairly constant relation to its posterior end. In mesial sagittal sections of several heads I found that the posterior ends of the calcarine fissures lie 2 cm., or $\frac{3}{4}$ in., above its tip, and that the fissures extend forwards and

upwards at an angle of about 25 degrees from there to a depth of about 4 cm. By careful measurement of the injury to the skull, or of the position of retained missiles as seen in stereoscopic radiographs, in relation to theinion the portion of the visual area that is injured may be determined approximately. Further information was obtained in many cases by examination during operations of the site and extent of the damage to the brain.

We must, however, await the opportunity of correlating the visual defects with the anatomical lesions that caused them in a large series of cases before finally receiving such conclusions as I can place before you into the body of accepted fact, though if these conclusions establish a hypothesis that can explain all our observations, or is at least not at variance with them, there will be strong presumptive evidence that it represents the truth.

I have selected as far as possible cases with long-standing or permanent visual defects to illustrate this lecture.

DESTRUCTION OF THE STRIATE AREA ON ONE SIDE.

Let us first consider the effect of a lesion which destroys the whole of the area striata of one hemisphere. A deeply penetrating gunshot wound of the occipital region immediately to one side of the middle line, and not more than 5 cm. above theinion, that passes forwards parallel to the mesial sagittal plane, must do so. I have seen several men with such wounds, and all had complete hemianopia, or total blindness to the opposite side of the fixation point. This blindness extends almost invariably up to the fixation point, or at least to within one degree of it, which is certainly within the margin of error of our clinical methods. The more accurate and delicate the methods employed the nearer is the blindness found to come to the point on which the eyes are directed. Observations on an ordinary perimetric cannot be exact enough to decide this question, but it can easily be verified by examination by a Bjerrum's or other screen which is placed at a distance of one or two metres from the patient's eye. This is the method I have employed to investigate vision in the neighbourhood of the fixation point.

In hemianopia due to vascular lesions of the visual cortex the blindness rarely extends up to the fixation point, and in this respect it differs from that produced by a traumatic injury of one occipital pole. The explanation of this difference will be considered later in this lecture. The area of blindness is liable to be more irregular, and does not involve central vision so constantly, when it is due to injury of the optic radiations.

We turn now to the cortical representation of those portions of the retinae which lie above and below the horizontal planes through the maculae. Local lesions in the region of the calcarine cortex frequently produce blindness in either the upper or the lower homonymous quadrants: the following case is an example of superior quadrant hemianopia:

CASE I.

Pte. J. was wounded by a fragment of shell which penetrated his steel helmet in April, 1918. He was unconscious for a few minutes only, and on coming to noticed that his sight was affected. It improved rapidly after an operation that was performed on the same day, but he experienced some difficulty in reading when he was first examined three weeks later.

The wound was represented by a small defect in the skull immediately to the right of the middle line and just above the lateral sinus. An oblong piece of shell casing, which measured $3 \times 1 \times 1$ cm., and several fragments of bone were removed from the brain, which was softened and disintegrated for a considerable distance beneath the fracture.

When he was seen three weeks after he had received the wound there was complete left superior quadrant hemianopia, which reached exactly up to the fixation point, and, in addition, a peripheral contraction of the left lower quadrants. The latter gradually disappeared, so that five weeks later vision was lost in the upper quadrants only. The blindness still extended up to the fixation point, but it did not everywhere reach the horizontal meridians; there was a narrow zone along these in which a small white object was indistinct and frequently not perceived (Fig. 1). In the lower left quadrants white appeared greyish, and the colour of red and green test objects 10 mm. in diameter could not be recognized. Central vision was $\frac{3}{4}$ in each eye.

Here we have a case in which a penetrating wound close to the middle line, immediately above the lateral sinus, and consequently below the level of the right calcarine fissure, produced an absolute superior quadrant hemianopia. It is therefore evidence that the lower halves of the retinae are projected on to the lower parts of this

area striata. The loss of colour vision in the inferior quadrants was associated, as is the rule, with the slight degree of amblyopia there, which was indicated by the apparent indistinctness and greyness of a white test object in this portion of the field.

On the other hand, when blindness of the lower homonymous quadrants of the visual fields occurs as a result of cortical injuries, it is always associated with wounds above the level of the calcarine fissures. I have already recorded several cases with this condition, and it is not sufficiently rare to need specific illustration here. These cases go to prove that the upper halves of the retinae are represented in the upper or dorsal parts of the visual cortex, just as the lower segments of the retinae are projected on to its lower portion.

If a lesion of one occipital lobe above the level of the calcarine fissure produces an inferior quadrant hemianopia, bilateral lesions in this position should cause blindness below the fixation point. I have seen eight cases of more or less pure inferior horizontal hemianopia, and in all of these the cerebral wounds were above the level of the calcarine fissures and involved, as far as could be determined, the upper portions of the striate areas. I have chosen the following case as an example, as it was possible to observe the patient ten months after the infliction of the wound, and its site indicated that it was the visual cortex rather than the optic radiations that were injured.

CASE II.

Pte. L. was wounded in March, 1918, by a machine-gun bullet. He was unconscious for a short time. During the first few days he could distinguish only light from darkness, but his vision then improved rapidly. Its condition became stationary after an operation was performed three weeks later in a German hospital, for he had been made a prisoner of war. He states that when he tried to read during the next three months he always seemed to see the figure of a white hen to the left of the point to which his eyes were directed. I examined him in January, 1919.

The wound was represented by a healed and depressed scar, under which a trephine opening about 2 cm. in diameter could be felt. This involved the middle line of the skull; its centre was 5 cm. above theinion. Radiographic plates did not reveal any foreign bodies within the skull.

His central vision was $\frac{5}{6}$ in each eye. There was a large area of blindness in both lower quadrants, which was more extensive on the left than on the right side, and in the seeing portions of the left lower quadrants vision was misty and indistinct. (Fig. 2.)

In this case the injury of the brain was obviously above the level of the calcarine fissures, and it was consequently the dorsal portions of the areae striatae that must have been most severely injured.

I have not observed a pure case of superior horizontal hemianopia; the probable reason is that gunshot wounds involving the lower portions of both striate areas would necessarily produce such injury of the torcula as would be probably fatal.

CORTICAL LOCALIZATION OF CENTRAL VISION.

If the evidence from these and similar cases shows that the upper halves of the retinae are represented in the upper or dorsal parts of the calcarine areas and the lower in the lower or ventral, we may now turn to the consideration of the cortical localization of macular or central vision. The most satisfactory evidence on which to base conclusions would be obtained from cortical lesions that produce complete loss of central vision in both eyes. I have seen and recorded a certain number of these. The case that is cited here as an illustration was the only patient who was observed at a long period after the infliction of the wound.

CASE III.

Pte. G. was wounded by a large portion of shell that penetrated his steel helmet in May, 1918. He was unconscious for seventeen hours. In the casualty clearing station, where an operation was performed on the same day, a depressed fracture of the skull was found in the occipital region, and a mass of bone was removed from the longitudinal sinus and from the brain on each side of it. He was blind for the first three days, but his vision then rapidly improved to its present state. A month after the infliction of the wound his visual fields were examined by Mr. J. B. Lawford, who discovered a scotoma almost identical in size and position with that which I found nine months later.

Ten months after the injury the wound was firmly cicatrized; beneath the scar there was a more or less circular defect in the middle line of the skull and to the left, which involved the base of theinion and extended $4\frac{1}{2}$ cm. upwards from it. Its lateral diameter was 5 cm. The vision was less than $\frac{5}{6}$ in each eye (according to his records it was $\frac{3}{4}$ when he enlisted in November, 1915), and he could not even recognize the other men in the ward. He saw nothing plainly, and had some difficulty in recognizing the distance of objects from him.

His peripheral vision was unaffected; he could see a circular white object 10 mm. in diameter to the natural limits in both eyes, but examination with a perimeter and by a screen revealed a large area of absolute blindness, which extended about 3 degrees to the left of the fixation point and from 12 to 18 degrees to its right. Central vision was totally abolished. (Fig. 3.)

Above and to the left of this scotoma there was a small area in which white objects could be seen, but they appeared dull and dim; colours could not be recognized here, nor in a zone of about 2 degrees to the left margin of the scotoma.

The site of the wound makes it probable that both occipital lobes were injured at the posterior ends of the areae striatae, which were opposite the centre of the trephine opening. And both the position of the wound and the clinical symptoms indicate that the injury was more extensive on the left than on the right side.

This case illustrates the type of blindness that is produced by superficial injuries of both occipital poles—that is, by wounds that injure the posterior parts of the striate areas. In all such cases we find peripheral vision intact and central vision abolished. They are consequently evidence that central or macular vision is represented in the more posterior parts of the visual areas, and that this region is not concerned with peripheral sight.

The evidence to be obtained from unilateral lesions confirms this opinion and also supports the conclusion we have already arrived at, that the upper parts of the retinae are connected with the upper parts of the visual cortex and the lower with the lower.

Homonymous paracentral scotomata are frequently produced by injuries of the polar region of one occipital

lobe. The visual fields in the following case represent a characteristic type:

CASE IV.

Pte. S. was wounded by a fragment of shell in October, 1913, and was operated on in a casualty clearing station on the same day. He was unconscious, or at least remembers nothing that happened, during the first few days. Then he discovered that he could not see properly to his left, but he frequently noticed flashes of light to this side which he compared to ordinary gunflashes. He had also a feeling that "there was always something standing on the left side, a person or something," but he could distinguish no form. His vision improved quickly, but became stationary within a few weeks.

The wound was represented by a healed vertical scar in the occipital region immediately to the right of the middle line. Beneath it there was a defect in the skull, $4\frac{1}{2}$ cm. in vertical length and 2 cm. broad, which extended from 1 cm. above theinion upwards, parallel to the mesial sagittal plane of the head.

I examined him in February, 1919. His vision was $\frac{5}{6}$ in each eye. He complained that in reading he had difficulty in finding the beginning of a line or paragraph, and even the first letters

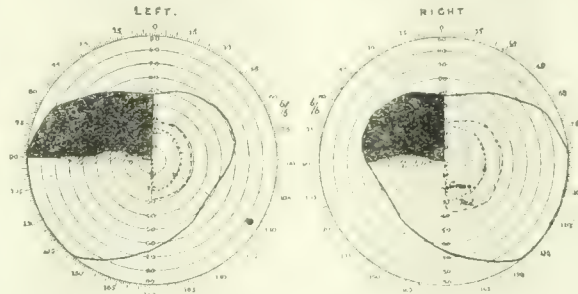


FIG. 1.—Case I.

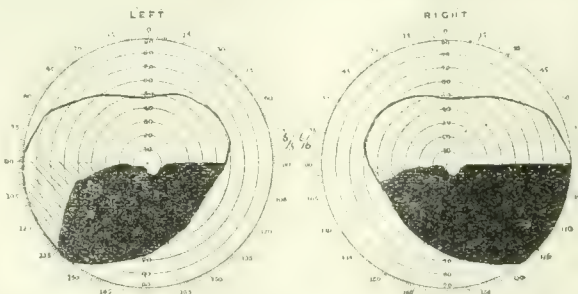


FIG. 2.—Case II.

of a long word. In the street he often failed to see people in front of him and to his left. The peripheral limits of his vision to a circular white object 7 mm. in diameter were normal, but there was a large left paracentral scotoma which extended from the fixation point to about 20 degrees to the left. Its edges were remarkably sharp and definite. (Fig. 4.)

In this case an injury of the right occipital pole, which must have involved the posterior end of the area striata, caused a left homonymous paracentral scotoma. This is the condition of the visual fields most commonly associated with lesions of this region. The scotoma generally extends up to the fixation point, and usually its size can be seen to bear a close relation to the depth of the wound. Such cases supplement the evidence we have already obtained that the centre for macular and perimacular vision lies near the posterior ends of the hemispheres. In another case, with a similar defect in the left sides of the visual fields, total destruction of the posterior part of the right striate area was found on *post-mortem* examination, when death took place five weeks after the infliction of the wound.

Smaller paracentral scotomata are frequently limited to either the upper or lower homonymous quadrants. Their position in the field of vision always bears a close relation to the site of the wound—that is, they lie below the fixation point when the injury involves the upper and posterior end of the calcarine area, and above it when the ventral portion of the visual region is damaged. The following case is a typical example of an inferior paracentral scotoma.

CASE V.

Lieut. H. was wounded in November, 1915, by a bullet. He found at once that he could not see the ground at his feet properly. When he was examined four days later his only complaint was that on trying to read he could not see the lines immediately below that on which his eyes were directed, though the rest of the page was visible to him. There was a tangential scalp wound with its entry 2.5 cm. above and 4 cm. to the right of theinion, while the exit was in the middle line 2 cm. above theinion.

Peripheral vision was undisturbed, but there was a small absolute paracentral scotoma in the left lower quadrants, which extended from the fixation point outwards and downwards to about 9 degrees. This patient was examined again recently, more than three and a half years after the infliction of the wound. Peripheral vision to both white and colours is unrestricted, and his visual acuity is 3 in both eyes, but the paracentral scotoma remains practically unaltered, the only change being that he can now recognize a moving white object between 6 and 9 degrees from the fixation point, where he was at first totally blind. But in this narrow zone vision for white is still very defective, and colours cannot be recognized. (Fig. 5.) The only inconvenience he experiences is in his work as an accountant; in "running up" a column of figures he adds them correctly, but in "running down" a column he often fails to see the left-sided figures, that is, the hundred and the thousand units.

CASE VI.

This case is an instance of a superior paracentral scotoma. Pte. A. was wounded in September, 1918, by a fragment of shell which burst behind him while he was riding. He was dazed for a time but did not lose consciousness, and was able to ride alone to the first aid post, though his sight was considerably affected. He noticed no subjective visual phenomena. He was immediately transferred to a casualty clearing station, where part of the missile that was embedded in his skull, and splinters of bone that had been driven through the dura mater into the right occipital lobe, were removed. The wound healed rapidly.

The wound, five months later when I examined him, was represented by a scar slightly above and to the right of theinion, with roughened bone and a defect in the skull beneath it. Radiographic plates revealed a small circular trephine hole, 2 cm. in diameter, its centre being $1\frac{1}{2}$ cm. above theinion.

He stated that his vision, which was at first seriously impaired, improved quickly, and that it was as good when he reached England a fortnight after being wounded as it was when I saw him. He complained only that he had difficulty in reading, as he generally missed the first few letters of long words.

His central vision was 3 in each eye, and on examination with a perimeter the peripheral limits of the fields were found to be normal. He had, however, a small absolute scotoma to both white and colours to the left of the fixation point. It was carefully mapped out by the aid of a screen; the greater part of it lay in the left upper quadrants, into which it extended 5 to 6 degrees from the fixation point, but a small part projected into the lower quadrants. Its edges were remarkably sharp, and were identical to white and colours; an object moved from it into the seeing portions of his fields appeared suddenly as if it had come from behind a screen. The blindness extended directly up to the fixation point. (Fig. 6.)

In Case v the inferior paracentral scotoma was obviously due to an injury of the visual cortex produced by the wound which was situated above the level of the calcarine fissure; while in Case vi, where the scotoma lay chiefly in the upper quadrants, the causative lesion must have affected the lower and posterior part of the striate area, as the wound was immediately above theinion.

Bilateral paracentral scotomata are less common, but when they occur they furnish further confirmatory evidence of the conclusions to which we have already come. The following is a good illustrative case:

CASE VII.

Pte. B. was wounded by a machine-gun bullet which passed through his steel helmet in July, 1916. He was dazed or semi-conscious for a short time. He then walked alone to the dressing station, but repeatedly fell into shell holes and across obstacles as he could not see the ground before his feet. An operation was performed on the third day after the infliction of the wound, and a fortnight later he was transferred to England, where he remained in hospital for four months. During this time he stated he could see quite well, and was not aware that his vision was in any way affected. He volunteered for active service, and came to France again in July, 1918. I examined him in August of that year, more than two years after he was wounded.

The wound was indicated by a transverse horizontal scar, 8 cm. in length, which was bisected by the middle line and crossed it 4 cm. above theinion. Radiographic plates revealed two small circular openings in the skull, one on each side of the middle line; their lower margins were $2\frac{1}{2}$ cm. above the point of theinion.

His central vision was 3 in each eye and the peripheral limits of his visual fields for both white and colours were normal. There was, however, a large absolute bilateral inferior paracentral scotoma, more extensive in the right than in the left quadrants, which on the right came to one degree from the fixation point, and $2\frac{1}{2}$ degrees from it on the left. This area of total blindness was surrounded by a zone in which a moving object could be seen, though it appeared grey and indistinct, and in which the colours of test objects could not be recognized. Except in this amblyopic area the colour fields were normal. (Fig. 7.)

In this man both hemispheres were obviously injured above the level of the calcarine fissures, and the resulting blindness was limited to the inferior quadrants. The fact that the blindness did not extend into the immediate area of the fixation point is probably to be attributed to the escape of the posterior extremities of the visual cortex.

Not infrequently two or more scotomata coexist, which may be separate from one another or united into a complex figure. It is on these cases that we can most easily test our hypothesis, and if by it we can explain the occurrence of the blind areas as a result of the anatomical sites of the wounds we have a strong argument that it is correct. The following case is an instance:

CASE VIII.

In this patient I found a right inferior paracentral scotoma, while to the left of the fixation point there was a similar

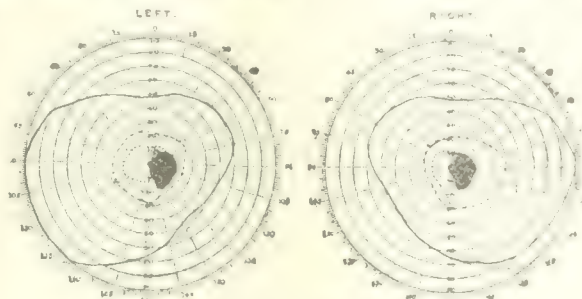


FIG. 3.—Case III.

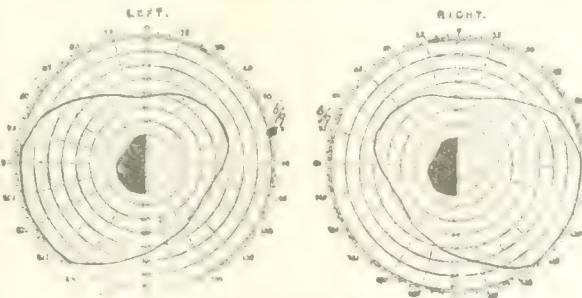


FIG. 4.—Case IV.

area of blindness, chiefly above the horizontal plane. This observation was made on a man six weeks after he received an oblique gutter wound which crossed the middle line of his skull 2 cm. above theinion; it passed from below upwards and to the left, and consequently injured the lower portion of the area striata on the right side, producing the left superior scotoma, and the upper part of the visual cortex on the left hemisphere, causing the defect in the right inferior quadrants. (Fig. 8.)

This series of cases illustrates the evidence that my observations can furnish on the cortical localization of central and pericentral vision. It proves that the macular and perimacular regions of the retinae are represented at or near to the occipital poles of the hemispheres. It is probable, indeed, that the portion of the area striata which frequently spreads over the occipital pole and on to the lateral surface of the brain may be the centre of macular sight. The frequency of paracentral scotomata is consequently accounted for by the more exposed position of this part of the visual area than of that which lies on the mesial surfaces of the hemispheres. It seems very probable, too, that the maculae have anatomically larger representations in the cortex than the less highly specialized peripheral zones of the retinae, and in this we may find the explanation of the frequency of small areas of blindness in the neighbourhood of the fixation point, though the causal lesions may be relatively gross.

LOCALIZATION OF PERIPHERAL VISION.

If all our experience points to a posterior representation of macular vision in the calcarine regions we may by exclusion assume that the centre for peripheral vision lies in the anterior part of the visual areas. There is, however, relatively little direct evidence of this. It is true that this region of the brain is not uncommonly injured by gunshot wounds, but as the anterior part of the calcarine area is surrounded on each side by the optic radiations that carry all visual impressions corticalwards, the visual defect produced by such a cortical lesion would be complicated by the presence of blindness due to interruption of the fibres of the radiations. Riddoch has, however, observed a case in which peripheral contraction of both halves of the visual fields was associated with the presence of a missile and fragments of bone between the mesial surfaces of the occipital lobes, in such a position that the anterior parts of the areae striatae were probably injured. I have also recorded a case with loss of peripheral vision in the homonymous fields in which a missile was localized at the junction of the calcarine and parieto-occipital sulci. The following case is further evidence in this question:

CASE IX.

Corporal W. was wounded by a fragment of shell in October, 1918. He was dazed for a few moments, but noticed no affection of his sight. He was operated upon in a casualty clearing station next morning. His wound healed quickly, and he remained free from symptoms, except headache, till February, 1919. Then one morning his right side became suddenly numb and weak, and a dull black spot appeared in vision; he referred it to the lower margin of the outer canthus of his right eye, and repeatedly tried to rub it away without success. After some minutes he began to see flashes of light, "like lightning, uncoloured," which flashed from the black spot towards the centre of his eye; these persisted for ten or fifteen minutes. Then he lost consciousness and was probably convulsed. This was the only severe fit he has had, but two minor attacks on an average have occurred every day since then. These always commence with the appearance of one or two black spots, which he refers to the lower margin of the right outer canthus. They are at first very faint, but become more and more distinct, and then flashes of light begin to shoot from them towards the

centre of his right eye; these may persist as long as thirty minutes, and appear whether his eyes are closed or open. In these attacks he feels strange, as if he were going out of his mind, and after them he has considerable headache.

He was examined in May, 1919, seven months after the infliction of the wound.

The wound was represented by a small circular trephine opening immediately to the left of the middle line of the skull, with its centre slightly above the lambda—that is, 8 cm. above the inion. Radiographs revealed an irregular piece of metal in the brain; in antero-posterior views it was seen slightly to the left of the middle line, and when measured on lateral stereoscopic plates it was localized in the antero-inferior part of the left cuneus, immediately posterior to the junction of the calcarine and parieto-occipital sulci.

His visual fields were repeatedly examined. He perceived a circular white object 10 mm. in diameter to the natural limits of his fields, but in the periphery of the lower right quadrants it was blurred, indistinct, and greyish, and often disappeared

from vision for a moment, especially when it was not moved. It also seemed much smaller in this region, which extended to about 45 degrees from the fixation point. He could, however, distinguish the relative sizes of two objects presented to him in succession in this area as accurately as in homologous parts of his left fields, and recognize the shape of test objects, though the recognition was less certain. When an object 2 mm. in diameter was employed this amblyopic area was more extensive, especially near the vertical meridians. (Fig. 9.)

The fields for red and green objects, 10 mm. in diameter, were approximately normal and equal in the right and left temporal fields; but when a large red object 30 mm. in diameter was used he failed to distinguish its colour, or saw it only as indefinite greyish-red, in the amblyopic area, though its colour was distinct out to 70 degrees in the lower left quadrants.

The radiographic localization of the missile in this case shows that it was in or near the anterior part of the area striata of the left hemisphere, and the occurrence of amblyopia in the periphery of the lower right quadrants suggests that this is the part of the visual cortex that is concerned with peripheral vision below the horizontal. Further, it was here that the visual spectra, which were undoubtedly due to discharges from the neighbourhood of the irritant lesion, always first appeared.

The missile was removed three weeks ago by Lieut.-Colonel P. Sargent. It was found on the left surface of the falx and probably lay in the anterior and inferior part of the cuneus. Since the operation he has had only one visual attack, which occurred on the second day after it.

Our observations so far indicate that the upper homonymous parts of each retina are projected on to the upper portion of the opposite visual area, and the lower halves of the retinae on to its lower. Further, all our facts go to prove that

the centre for macular or central vision lies posteriorly in the visual cortex, while that for peripheral vision is situated anteriorly in it. The representation of the intermediate zones of the visual fields from the fixation point outwards are probably arranged in this order from behind forwards in the visual cortex.

There are numerous observations, however, which make it probable that a further localization is possible within the visual cortex. It is, for instance, not uncommon to find blindness in the homonymous visual fields limited to areas in the region of the vertical meridians. In most of these cases that I have seen this loss was associated with hemianopia, or at least a large area of blindness, in the opposite halves of the fields, and the injuries that produced them were penetrating wounds of one occipital lobe, which probably caused a superficial damage on the mesial surface of the other hemisphere. The following case is an example of this condition.

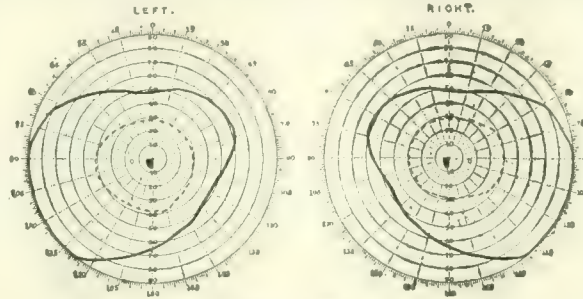


FIG. 5.—Case V.

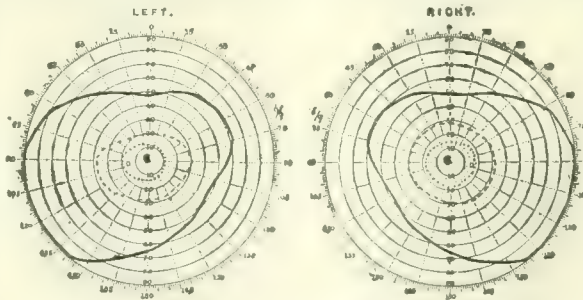


FIG. 6.—Case VI.

CASE X.

Pte. H. was wounded in September, 1918; he stated that he was unconscious for several days. At the operation, which was performed on the day of the wound, a depressed fracture was found in the left occipital bone a short distance above the lateral sinus, and several fragments of depressed bone were removed from a deep track in the brain. I examined him six months after the infliction of the injury.

The wound was represented by a circular trephine opening immediately to the left of the middle line of the skull, with its centre 4 cm. above the inion. No foreign bodies or retained missiles were visible in radiographic plates.

His central vision was 3 in each eye, and he believed as good as it had ever been; but he had an absolute right homonymous hemianopia, which came exactly to the fixation point. He was also completely blind in the mesial portions of the left lower quadrants, except in a small area within 3 degrees of the fixation point. This blind area lay approximately between the inferior vertical meridians and the radii at 45 degrees from them. (Fig. 10.) Vision to both white and colours was unimpaired in the remaining portions of the left halves of the fields.

In this case the right-sided hemianopia was obviously due to the deep penetrating wound of the left occipital lobe. The loss of sight in the left halves of the fields shows that the right visual cortex also must have suffered, and the position and the nature of the wound makes it probable that the damage to the mesial surface of this hemisphere was superficial and probably limited to the surface of the cuneus. That portion of the area striata that lines the walls and the floor of the calcarine sulcus, and consequently lies further lateralwards, probably escaped injury.

I have seen many cases in which superficial injuries of the mesial aspect of the one hemisphere were associated with blindness along the vertical meridians of the visual fields. This suggests that the part of the area striata which is exposed on the surface of the hemispheres is concerned with vision in the neighbourhood of the vertical meridians, while the visual cortex that lies more laterally in the walls and the floor of the fissures is that which subserves vision along the horizontal radii. Wilbrand and Henschen's celebrated case, in which a narrow homonymous scotoma that extended from the fixation point horizontally outwards to 60 deg. was associated with a softening of the floor of the fissure, is complementary evidence of this hypothesis. I have not seen such a scotoma produced by a war wound, but this is not surprising, as any missile which penetrated the brain to the bottom of the calcarine fissure would necessarily injure the fibres of the optic radiations that pass to other parts of the visual cortex, and consequently produce more extensive blindness.

Such observations as these, which are only selected illustrations from a large number of cases, indicate that there is a definite areal representation of the retinae in the visual cortex. There can be little doubt, too, of the general principles of this localization; the macular regions are represented posteriorly and the periphery of the retinae more anteriorly in the occipital lobes, while the upper and lower portions of the retinae are projected on to the corresponding parts of the visual cortex. Further, the mesial horizontal segments of the retinae are probably projected in the neighbourhood of the floors of the calcarine fissures.

And not only is each segment of the retinae represented in a definite portion of the visual cortex, but this representation is fixed and immutable, so that if a part of the visual cortex be totally destroyed there will be a permanent blindness of the corresponding segment of the visual fields. Only so can we explain the persistence of such a small scotoma as in Case v, which, when examined three and a half years after the infliction of the wound, was found

almost identical in size and position as within the first few days of the injury. In Case III, too, the blind area remained unaltered between one and ten months after the injury. There is no place here for the theory of vicarious representation of the function of parts destroyed by other regions of the brain.

It is true that the functional loss observed immediately or shortly after the infliction of the wound is generally considerably greater than the permanent blindness, but this can be only expected since, in addition to destruction of a portion of the brain, gunshot injuries produce less severe damage with temporary loss of function in a zone around it. Hine has studied the early recovery of this temporary functional loss and the rules that govern it, and I have had many opportunities of observing it too. It is, however, the rule, as far as the visual cortex is concerned,

that this temporary blindness or amblyopia disappears within a few weeks and leaves only the permanent defect, provided that there is no sepsis, inflammation, or hernia formation. For this reason observations made within a few weeks of the infliction of the wound can be utilized in the problem of visual localization. That sight may later return in portions of an area that was at first blind is no valid argument against

the employment of such cases in the problem of the cortical localization of vision, for any scheme of localization that is true must explain the form and distribution of these temporary changes as well as the permanent loss of function.

Escape of the Macula in Vascular Lesions.

There are other questions that must be considered shortly. The homonymous hemianopia that is produced by a penetrating gunshot wound of one occipital lobe differs from the ordinary form of hemianopia due to vascular lesions that is met with in civil practice. In the latter the blindness rarely reaches up to the fixation point; as a rule there is a zone of normal vision to about 3 degrees to 8 degrees wide around it. This escape of central vision has excited considerable controversy. The one school explained it by the hypothesis that the maculae are not represented

in the occipital visual areas, but elsewhere in the brain. But not only has no case, as far as I am aware, of macular blindness due to disease of this hypothetical centre been recorded, but all the observations on visual disturbances due to local wounds of the brain that have been made during the war are directly opposed to it. A second explanation was that there is a bilateral representation of maculae, that as each macula is represented in both hemi-

spheres of the brain a unilateral lesion cannot abolish or disturb central vision. This hypothesis, too, is untenable, as when hemianopia is due to traumatic destruction of one occipital lobe the blindness usually extends to the fixation point, and the more accurate the methods of investigation, the smaller is the apparent escape. (My observations were made on screens placed one or two metres from the patient, and the margin of error was consequently small.) The same is true with regard to paracentral scotomata; when the most posterior region of the area striata is destroyed the blindness comes, as a rule, immediately to the fixation point. The probable explanation of macular escape in hemianopia due to vascular lesions is to be found, as Lister and I suggested more than three years ago, in the anatomical arrangement of the arteries that supply the occipital poles. Here, in the region of the posterior end of the striate areas, where the centre of macular vision is placed, the middle and posterior cerebral arteries meet, and if the circulation in the branches of the one is blocked

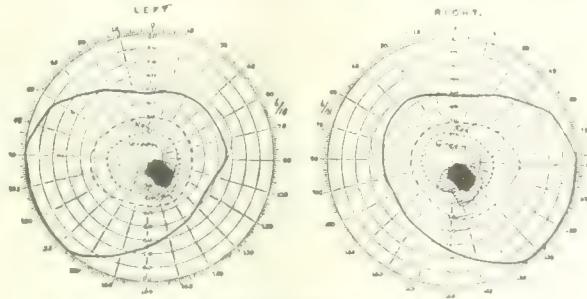


FIG. 7.—Case VII.

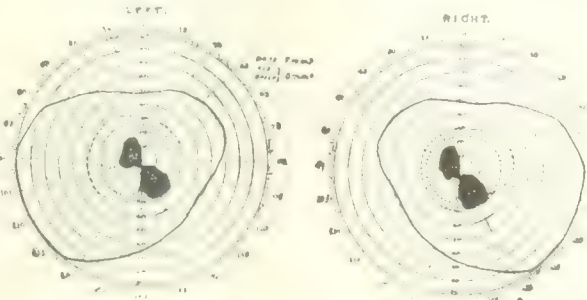


FIG. 8.—Case VIII.

by an embolism or thrombus the portion of the brain in this watershed area may obtain arterial blood from the branches of the other, since there is always a certain amount of overlap. The cerebral softening due to the occlusion of an artery is rarely as extensive as its anatomical distribution. This explanation not only disposes of the difficulty of the macular escape, but is confirmatory evidence of the localization of central vision.

Loss of Colour Vision.

The second question we must consider is what elements of vision are represented in the area striata, which we assume to be its cortical centre. We may here deal particularly with the question of colour vision. In the cases I have selected to illustrate my arguments, the loss of vision was complete in the portions of the fields that were coloured black; here there was total loss of all visual perception. But in a few cases, as in Case ix, there was only amblyopia or diminution of sight, and in others, as in Case vi, a zone of diminished vision surrounded a patch of complete blindness. Areas of amblyopia are in fact very common.

In these amblyopic areas the state of vision varies considerably. If the disturbance is severe only large white objects when moving may be recognized, but they appear "dim and misty," or "dirty and grey" instead of white, and the patient has no clear idea of their outline or size. When they cease to move he sees them no longer; they disappear. Smaller white objects may not be visible within this area or in some part of it; in fact the blind area generally varies indirectly in extent with the size and brightness of the object by which it is mapped out. In such areas colour cannot be perceived.

When the affection is less intense, white objects of moderate size can be seen even when at rest, though they appear indistinct and greyish, but small test objects may disappear momentarily from vision. The patient frequently states, too, that the objects presented to him seem smaller than they do in normal parts of his fields; but we have not here a specific loss of the appreciation of visible size, since the patient has always an idea of the magnitude of the object, if he can see it, and I have always found that he can distinguish the relative sizes of two test objects presented in succession almost as accurately as in homologous normal parts. The dimness and indistinctness of the visual image cause him to judge the object to be smaller than it is; he misinterprets the defective perception as smallness. In these cases colour perception is generally lost, too, or only relatively large areas of red and green can be recognized; but then their tints are usually pale and indefinite.

Finally, in the mildest degrees of amblyopia even small white objects can be perceived, whether in motion or at rest, though they usually seem dim; and red and green—the only colours that I have systematically used—do not appear in their natural tones; a deep red is often "yellowish red," and green "pale or greyish."

I have seen no case in which colour vision was lost in portions of the fields in which the perception of white was unaffected, and I know of no conclusive evidence that a purely isolated loss of colour vision ever results from lesions of the mesial surfaces of the hemispheres in the region of the visuo-sensory cortex.

EFFECT OF BLIND AREAS IN DAILY LIFE.

We may now consider how these large or smaller areas of blindness affect the subject. We know from ordinary clinical experience that a man with homonymous hemi-

anopia is frequently unaware that he has lost one half his seeing field, and that he learns to appreciate it only by experience. And the same is, as a rule, true with respect to blindness produced by traumatic cortical lesions. A man with complete hemianopia rarely complains spontaneously, when he is first examined, that he cannot see to the one side, and there is, as a rule, no subjective blackness or mistiness to this side unless central vision be affected; this part of visual space simply does not exist for him. And this holds true, too, for small patches of blindness to one side of the fixation point. A man with a left paracentral scotoma which extended to the fixation point constantly jolted into people who passed on his left side in the street; his consciousness seemed to be so little aware of his blindness that he rarely took precautions to avoid accidents which might occur through it. Even more

striking is the effect of a small paracentral scotoma limited to either the upper or to the lower quadrants. Case iv, for instance, saw only the feet or legs of a person approaching on his left side, and connected this part with the idea of a whole man only by a deliberate act of attention. Similarly in reading he and many others missed small words and letters, and Case v failed to include the left-sided figures in the column

he was adding; even after long experience he continued to miss them. These patients fail to realize their own blindness; the space not seen is simply space that does not exist for them, and they are no more conscious of its absence than is the normal person of his own blind spot. When, however, central vision is affected, so that the object on which the eyes are directed cannot be seen distinctly, the patients generally complain of a mistiness of vision, or of a blackness in front of their eyes when the blindness is here complete, though on careful questioning it is generally found that this is not a positive sensation of blackness but a state of not-seeing.

Positive Visual Phenomena.

Positive subjective visual phenomena are not uncommon during the first few weeks after the infliction of the wound. The most common form is the appearance of flashing lights or stars, which may be either white or coloured, in a part of the blind or amblyopic area. It is rarer that these subjective phenomena occur at a later period; Case ix, which is recorded here, is an example. In another man the local epileptiform seizures with which he suffered always began with the appearance of lights of all colours on the margin of an area of peripheral blindness, which grew brighter and brighter

until they became intolerable as he lost consciousness; he exteriorized these centrally produced sensations so vividly that on one occasion he assaulted an orderly who stood beside him "for flashing those awful lights into my eyes." In a third case, brilliantly coloured stars appeared on the margin of a paracentral scotoma. Incidentally, the occurrence of colours in these sensations produced by discharging lesions in the calcarine region is an argument that colour perception depends on this portion of the brain.

In a second type of these visual sensations of central origin more complex figures appear in the blind area. These, which are more or less constant and do not move, are always extremely indefinite; a few men complained that there always seemed to be "a man or something" standing on their blind side, and one man with inferior horizontal hemianopia stated that when he tried to read there seemed to be a white hen on the lower part of the left page of the book. But when questioned these patients

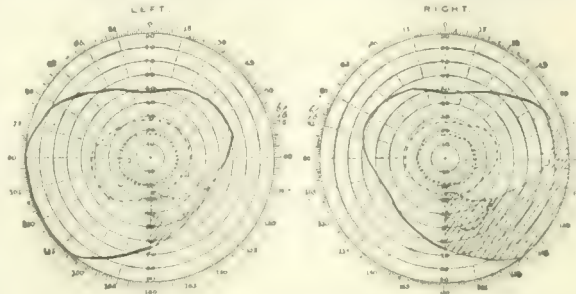


FIG. 9.—Case ix.

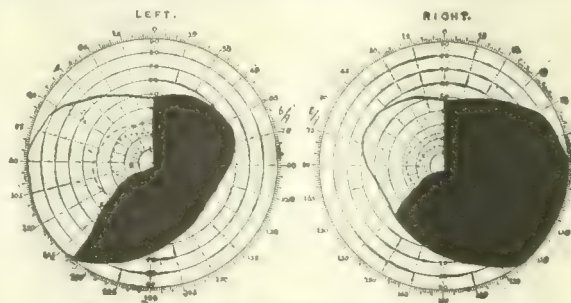


FIG. 10.—Case x.

admitted that they could never recognize a shape, there was only a "feeling that there was something there," something too ill defined to describe. These indefinite forms appeared only in the early stages and generally in blind areas that were recovering. They are probably due to the misinterpretation of feeble and indefinite sensations excited in functionally depressed areas of the visual cortex.

A CASE OF SYMMETRICAL GANGRENE (RAYNAUD'S DISEASE).

BY

EDWIN GOODALL, M.D.LOND., B.S., F.R.C.P.,

TEMP. LIEUT.-COLONEL R.A.M.C.,

OFFICER-IN-CHARGE WELSH METROPOLITAN WAR HOSPITAL
(CARDIFF CITY MENTAL HOSPITAL).

The patient whose case is here related was admitted on May 22nd, 1919, to the Welsh Metropolitan War Hospital from the Bath War Hospital with a diagnosis of subacute mania, possibly general paralysis of the insane. It was reported that the pupils were unequal and sluggish, that there were facial and lingual tremors, and greasiness of the skin of the face. The duration of the mental attack was given as four days.

History.

Patient was 42 years of age. The information supplied by his wife showed nothing of note in respect of family or personal history. His present illness was said to have supervened after five years' military service. The following are extracts from the medical case-sheet received on admission of the patient to this hospital, the medical notes having been taken whilst at a hospital in Cairo:

Admitted on March 26th, 1919, suffering from bronchitis, bronchopneumonia, and Raynaud's disease. Arterio-sclerosis noted, also patches of bronchopneumonia in both lungs, with pleuritic rub over right breast.

On April 11th diarrhoea, with blood and mucus in evacuations; no protozoa; no history of dysentery; urine alkaline, albumin present with phosphates.

On April 17th gangrene threatening the right foot, which is cold and blue; pain, with loss of sensation. Urine, occasional trace of albumin, no casts, no sugar.

On April 18th left foot bluish, right foot improved; little and fourth toes very purple, tender.

On April 20th gangrene threatening both hands, more in right; blue and cold, numb, painful.

On April 21st hands look like Raynaud's disease. Feet almost recovered.

On April 28th hands a little better; fingers still black.

On April 30th feet practically recovered, but little toe of right foot still bluish; fingers improving; still black, numb, and cold.

The patient was stated to have had malaria, but no data were given.

On admission to this hospital it was noted that he showed general wasting; the radial arteries were somewhat thickened; the temporals were not evident. No abnormality of heart; tremor of hands and tongue, and unsteadiness of gait; speech normal; pupils equal, react normally to light and accommodation; knee-jerks brisk; superficial reflexes normal. Systolic blood pressure 152, diastolic 130.

The blood was examined on May 29th and June 17th, with the following result:

Red blood corpuscles 4,933,333 and 5,360,000 to the c.mm.; white blood corpuscles 7,383 and 13,750; haemoglobin percentage, 85 and 95; colour index, 0.87 and 0.95; relative white cell count shows large lymphocytes 48.5 per cent.; small ditto 6.0 per cent.; neutrophils 43.5 per cent. On the second occasion these figures were 34.5, 18.0, and 46.25 per cent. (lymphocytosis). No other peculiarities.

The urine was examined on three occasions—

May 27th: Specific gravity 1026, acid, no sugar, no albumin.

May 30th: Specific gravity 1024, acid, no sugar, no albumin.

June 26th: Specific gravity 1016, slightly alkaline, no sugar, no albumin.

The "Wassermann" reaction, for which I am indebted to Captain H. A. Scholberg, R.A.M.C. (T.), was negative in serum and in cerebro-spinal fluid. Cells in cerebro-spinal fluid 2 to the c.mm. Nitrogen in 1 c.cm. of cerebro-spinal fluid (Stanford's method; for this estimate I am indebted to Dr. R. V. Stanford, research chemist at this hospital) 14.5 hundredths of a milligram.

Although the patient was restless, garrulous, excited and grandiose, he was not, according to the above laboratory findings, a general paralytic. The photographs sufficiently indicate the state of the fingers. The dark portions were gangrenous—black, dry, and insensitive; the nails were still preserved on each finger. The skin of the fingers above the gangrenous portions was reddish-blue, tense, shiny and sensitive to touch; the gangrenous portions, although insensitive to light touch, were sensitive to pin-prick and to deep pressure. The hands generally were somewhat livid; toes, nose, and ears not affected.

On June 30th, the date of writing this report, the patient appears to be almost well from what was presumably an attack of subacute mania. There are no physical indications of general paralysis. It is noted; however, that both pupils are slightly excentric, and there is greasiness of the facial skin. Systolic blood pressure 148, diastolic blood pressure 128; mummification of affected finger-tips; line of demarcation between living and dead portions very obvious.

Raynaud, in his original thesis, published in 1862, states that, out of 25 cases of symmetrical gangrene seen by him, 20 occurred in women and 5 in men; the patients were all under 30, excepting one aged 48. Oppenheim¹ describes the disease as developing exclusively or principally on the basis of the "neuropathic diathesis." Amongst exciting causes, emotional disturbances—fear, etc.—take first place. Sometimes the condition has been preceded by infectious disease—typhoid, influenza. Young women up to 30 years of age are the usual victims, but of the 4 cases which Oppenheim had seen 3 were men. Photographs of the condition given in Oppenheim's work are almost identical with those accompanying the present description. In Raynaud's Plate 1, showing the toes of two feet affected by symmetrical gangrene, the condition is much less advanced than in the case here recorded. For the photographs accompanying these notes I am indebted to Dr. Stanford.

There is no question in this case of ergotism. The bread eaten by this patient whilst in Egypt was the same as that issued to the troops in general. I do not recollect a single instance of this disease amongst the cases of mental disorder seen by me, whether in public institutions or consulting practice, during my twenty-nine years' experience.

I desire to take this opportunity to draw attention to the micro-quantitative methods of estimating the constituents of cerebro-spinal fluid devised by Dr. R. V. Stanford. That for nitrogen is described in the *Zeitschrift für Physiologische Chemie* (Bd. 86, H. 3, of 1913). Details of the results in a large number of cases are given in that paper, and a great many more have been dealt with since. The conclusions are summarized as follows in a memorandum kindly supplied to me by Stanford:

The number of hundredths of a milligram of total nitrogen contained in 1 c.cm. of the cerebro-spinal fluid of a patient is called the "nitrogen number" (NN). In the normal sane individual the nitrogen number is about 15. In the great majority of insane patients, not suffering from general paralysis or gross brain lesion, the NN is between 15 and 20. In a few cases it was found to be higher, but in only one case above 25. In cases of general paralysis the nitrogen number is nearly



always above 20, and generally about 30 or more. In a small percentage of cases a nitrogen number below 20 was found, but the patients were either in a remission or in what may be called a stationary state. In such cases a second puncture after an interval of time would probably settle the diagnosis (compare Table I, bis, loc. cit.). Details are given in the paper cited, where will also be found the figures relating to a patient who was examined when in remission, and subsequently, when the disease had resumed its course, the nitrogen number varied accordingly.

One other exception must be pointed out. The wasted brain of the senile dement is well known *post mortem*. Corresponding with this, it is found that patients who have been insane for a long period, especially if of advanced years, have high nitrogen numbers. Such cases would, however, never be confused with cases of general paralysis. Regarded as an aid to diagnosis in general paralysis, the nitrogen number is very much more reliable than any means hitherto proposed, but in the present state of the investigation of the subject it must be taken in conjunction with the clinical observations.

The above reference to Stanford's method is made with a view to promoting its use as a routine procedure in diagnosis, in cases of organic and functional disease, as seen in neurological and psychiatric practice.

REFERENCE.

¹ *Lehrbuch der Nervenkrankheiten.*

THE EFFECTS OF A SCORBUTIC DIET ON THE ADRENAL GLANDS.*

BY

ROBERT McCARRISON, M.D., D.Sc., F.R.C.P.,

BREVET LIEUTENANT-COLONEL I.M.S.

(From the Pasteur Institute of S. India, Coonoor.)

THE effects of a scorbutic diet on the adrenal glands have been studied in guinea-pigs fed on a dietary of crushed oats and autoclaved milk. The naked-eye changes consist in enlargement of the adrenals with increase in their weight and in congestion.

The weight of the adrenals of guinea-pigs dying in consequence of the scorbutic diet is approximately double that of health. Whereas the gross weight of both organs in healthy guinea-pigs ranged between 0.390 and 0.520, with an average weight of 0.467 gram, in guinea-pigs fed on the scorbutic dietary the weight of both glands ranged between 0.850 and 1.150 grams, with an average weight of 0.955 gram. The increase in weight due to the scorbutic diet is even more marked when the weight of the glands is calculated per kilo of *original* and of *final* body-weight.

The histo-pathological changes are haemorrhagic infiltration and disintegration of the cellular elements of the cortex and medulla. These changes occur in animals which may exhibit no clinical evidences of scurvy during life. They are to be regarded as pre-scorbutic in character. The areas of haemorrhagic infiltration are circumscribed, and are situated around the periphery of the adrenal cortex.

The adrenalin content of the suprarenals of guinea-pigs fed on a scorbutic dietary was estimated in five animals by the method of Folin, Cannon, and Dennis. One gland was used for this estimation and the other for histological study. In some cases the right and in others the left gland was used for the estimation. There is no evidence that the organ on one side is more affected than that on the other. On the presumption that each was affected to a like degree the total adrenalin content of both adrenals was calculated from the results obtained with one gland.

It was found that in spite of the fact that the weight of the organs is more than twice as great, the total quantity of adrenalin in the two glands in guinea-pigs fed on a scorbutic diet is less than half that present in healthy guinea-pigs. Similarly the total adrenalin per kilo of *original* body-weight (that is, the weight of the animal before the experiment commenced) is little more than half that of health. When calculated against the *final* body-weight of the guinea-pig the total adrenalin per kilo of body-weight is found to be less markedly reduced—that is to say, the total adrenalin production does not diminish in proportion to the diminution of body-weight. The total adrenalin per gram of gland is less than one-fourth of that found in health. In one guinea-pig in which a coliform organism was cultivated from the heart's blood at autopsy,

the adrenalin content was considerably less than in the other four animals in which no infection was detected by aerobic methods of culture.

A pronounced reduction in the amount of adrenalin in the suprarenal glands is thus found to result in guinea-pigs from a scorbutic dietary of crushed oats and autoclaved milk.

It is of interest to direct attention to the fact that the total adrenalin per gram of gland in healthy pigeons is approximately ten times greater (0.0023 gram) than in healthy guinea-pigs (0.00023 gram). This greater proportion may bear some relation to the fact that uric acid is excreted as such in aves. A further point of interest in connexion with these results in guinea-pigs is the contrast they afford to the great increase in the adrenalin content of the adrenal glands which occurs in pigeons wholly deprived of accessory food factors of all classes. I have found that the adrenalin content of these organs in aves is largely dependent on the class of accessory food factor which is absent from the dietary. When, for example, fresh butter, which contains accessory food factors of the "A" class, is added to a dietary of autoclaved rice, the adrenal glands of pigeons so fed do not, as a rule, contain an amount of adrenalin out of proportion to that found in health; exceptions occur in approximately 10 per cent. of all pigeons so fed. Nevertheless, the evidence so far available, both in birds and mammals, points to the dependence of the functional perfection of the adrenal glands on the adequate provision in the food of accessory food factors of all classes. It appears that lack of factors of the "A" class with excessive production of adrenalin is associated with the occurrence of oedema in aves, and that in guinea-pigs lack of factors of the "C" class, with diminished production of adrenalin, is associated with haemorrhage into the body tissues.

SUDDEN DETACHMENT OF AORTIC INTIMA (SO-CALLED DISSECTING ANEURYSM).

BY

CRANSTON WALKER, M.D., B.Sc.,

PATHOLOGIST, BIRMINGHAM GENERAL HOSPITAL, ETC.,

AND

LENA WALKER, M.D., Ch.B.

THE clinical events in the following case may be attributed to the stripping of the aortic intima. From the history of a very sudden onset, without any previous warnings, it may be assumed that the intima began to strip suddenly, that it gave rise to severe shock, and to pain which was referred rather vaguely. The condition of the left leg was probably due to a portion of the loose intima happening to occlude, completely or partially, one of the main arteries to the limb and so shutting off too much blood supply for full muscular metabolism to be carried on; later, collateral channels would be opened up.

As the shock from this stripping nearly killed the patient before his admission, it may be surmised that his sudden death after admission was due to the onset of a second stripping, although two such events could not be traced *post mortem*.

Clinical History.

The patient was a large, well built, muscular man of 65, a plasterer, a steady and respected workman and apparently of temperate habits. He had had no recognized illness since childhood, and was believed by himself and his neighbours to be in hearty good health up to the moment of his sudden seizure.

At 10.30 a.m., after no particular exertion or excitement, he fell to the ground without warning. It is uncertain whether he lost consciousness—bystanders described the occurrence as a "fit"—but within a few minutes he was seen to be conscious and a little later complained of pain in the chest and said that he had lost the use of his left leg.

He was admitted to the General Hospital, Birmingham, about three-quarters of an hour after the event. He was fully conscious, but distracted by abnormal sensations. He complained chiefly of pain and loss of use in the left leg, and also of pain under the sternum; but his chief cause of distress appeared to be some oppressive sensation or conviction for which no words came handy. He felt certain he was about to die. He was restless and pallid, the skin surface was rather cool, the respirations were irregular, rather rapid, and frequently deepened voluntarily. Thus far his aspect was like that of a man suffering from a severe haemorrhage and from pain.

* Abstract of a paper appearing in the July number of the *Indian Journal of Medical Research*. Abstracts of previous papers on the Pathogenesis of Deficiency Disease were published in the *BRITISH MEDICAL JOURNAL* on February 15th, 1919, p. 177, and on July 12th last, p. 36.

Examination did not reveal any paresis of the face or upper extremities. The pupils were rather large and reacted to light and accommodation. The patient could move his left leg, but with deficient force; the paresis appeared to affect the whole limb indifferently; there were no movements or groups of muscles specially affected; the knee-jerks were normal; the plantar reflexes were not elicited.

The cardiac impulse could not be felt. To percussion, the left ventricle was slightly enlarged. The heart sounds were very faint, but otherwise not abnormal. The heart rate was increased and diastole was somewhat shortened, but there was no other disturbance of rhythm. The pulse was rapid, exceedingly small, and of such a character as to cause immediate anxiety as to life. The radial arteries were somewhat thickened. On further examination of the chest nothing of importance was found. The urine, withdrawn by catheter, was pale (specific gravity 1008), and showed a faint trace of albumin on boiling. Two or three hyaline casts were found on centrifuging.

After removal to the ward the patient was much collapsed, and complained of extreme substernal pain. The arterial blood pressure, systolic, was found to be 180 mm. Hg.

The patient was given, with great caution, inhalations of amyl nitrite and small doses of sodium nitrite by the mouth, treatment being controlled by frequent measurements of the arterial blood pressure, which was not allowed to fall below 150 mm. Hg. There was no sudden relief of pain, but after an hour or two the patient felt much better, and there was some return of power in the left leg. He was allowed small quantities of warm fluids.

He passed a fairly comfortable night, and next day appeared considerably better; the leg paresis was further diminished. There was no change in the physical signs, except an improvement in the heart beat; no further chest signs developed. Early in the evening he died suddenly while making a slight exertion.

Post-mortem Examination.

The body was that of a well-nourished man, appearing even after death younger than his years.

The pericardium contained two or three ounces of blood-stained fluid; the heart showed hypertrophy of the left ventricle, and interstitial fibrosis; the coronary arteries were somewhat atheromatous. The aortic arch as seen *in situ* was enormously distended, irregular in outline, mottled and dusky in colour.

The heart, pericardium, and the whole of the aorta with the iliac arteries and femorals as far as the apices of Scarpa's triangles were removed entire and then laid open.

On the posterior aspect of the ascending aorta was a pouch-like dilatation about the size of a small Tangerine orange, not unlike a diverticulum, but with a less definite ring. It was limited by the aortic valve-ring below, but extended above to the innominate artery. The descending aorta and main branches showed an even contour; the media and externa, firmly sclerosed, maintained the rotundity of the vessels.

The lumina of the dilated ascending aorta, of the remainder of the aorta, and of both iliac and femoral arteries were filled by recent loose *post-mortem* clot and by what appeared to be calcareous débris; there were no *ante-mortem* clots. On carefully washing away the blood the apparent débris was found to be the compressed and sheath-like intimal coat, which in some places was wholly detached from the media, in others was adherent by means of a few fibrous tags, and in other parts again was normally attached.

A high degree of fibrosis was present throughout all the coats of the arteries concerned. The intima was the seat of severe atheromatous disease. It was studded with plaques of all sizes and thicknesses; some were an eighth of an inch in depth, many were extensively calcified, and others were undergoing central necrosis. The intima was perforated in several places by these atheromatous "ulcers"; the highest perforation was about an inch above the aortic valves; here the intima was very brittle, and there was an irregular tear which appeared to start in an atheromatous hole. On the cardiac side of the tear the intima was just separated from the media as far as the valve ring; the stain of blood in the pericardium may have oozed through the interstices of the intrapericardial outer coats. Distal to the tear the intima was lying entirely to one side of the distended pouch.

In the thoracic aorta the intima in part retained its lumen, but in the abdominal aorta and iliac arteries the intima was for the most part crumpled up against one side. For considerable stretches the blood must have passed through the aorta chiefly outside the intima, but it was impossible to decide which were the patent channels and where had been the strongest currents.

The other vessels and organs showed diffuse sclerosis in excess of the amount usually present at the age of the subject. There was marked chronic interstitial nephritis.

How can Intimal Stripping or Dissecting Aneurysm be Brought About?

An anatomical condition similar to that found in the present case is described in nearly every textbook of pathology and of surgery under the heading of dissecting aneurysm, and the impression is given that the spectacle is very familiar. In some 2,500 *post-mortem* examinations we have not met with a similar case. A search through the literature shows that, although references to over a

hundred cases can be found, the condition is very rare. The so-called dissecting aneurysm is encountered more frequently in museums than in practice, and far more frequently still in textbooks.

The production of dissecting aneurysm has not been explained quite satisfactorily. Nearly all accounts agree that profound atheromatous disease is a necessary precursor. Next, a breach in the intima is required, and this may take place in three ways: A patch of atheroma may enlarge and destroy the wall of a vas vasorum; or it may involve the intima of the main vessel, become pultaceous in the centre, and break down to form a so-called atheromatous "ulcer"; or the intima may split. Splits of the intima have been figured several times,³ and have been described, especially by Peacock.⁴ As a rule they run transversely, and may complete the circuit of the aorta; they have clean-cut edges as though made with a razor, and are nearly straight. They are most commonly situated in the ascending aorta or first part of the arch, but may occur elsewhere. Probably these splits occur on longitudinal stretching of the aorta when the intima has become relatively rigid and brittle—that is to say, when its deformation per stress is reduced, and when relatively small deformation produces rupture.

At this point some authors¹ distinguish between dissecting aneurysm and intramural haematoma. The latter occurs when the blood slowly infiltrates the pultaceous matter of connected patches of atheroma and may in time replace it; the process is gradual, and cannot be the immediate cause of sudden clinical disasters.

The "dissecting aneurysm proper" is often supposed to start as a bursting of the intima into a weakened atheromatous patch, and is generally described as a forcible burrowing of the blood from some breach in the intima between the layers of the media, the motive force being the blood pressure. In our case the blood lay in most places just outside the internal elastic lamina, it might be described as between intima and media or between inner layers of the media. The situation appears to be the same in the majority of previously recorded cases.

The mode of production, however, requires narrower scrutiny. The fact that breaches in the aortic intima, due to cracks in atheromatous plates or occurring in atheromatous "ulcers," are far commoner than dissecting aneurysms shows that a gap in the intima is insufficient explanation of its being stripped from the media. The matter can be made clear by physical considerations.

The pressure of the blood outwards is balanced by the sum of the pressures of the arterial coats inwards. (For the purposes of this argument the variations of pressure can be neglected.) Of these coats, the normal intima contributes little, owing to its tenacity; an atheromatous and more rigid intima may contribute much more inward pressure. If the intima is breached, at that spot the outer coats alone must exert inwards a pressure equal to that of the blood outwards; if their physical condition is such that they do so with only little stretching, no harm results; but if the outer coats stretch much, before their inward pressure balances that of the blood, then an ordinary saccular aneurysm develops. A normal intima being thin, pliant, and attached to the media, would stretch with it, but a rigid atheromatous intima would not; it would either hold the media *in situ* at the edges of the gap, or, if the quantitative difference between the pressure of the blood and that of the outer coats became sufficient, the media would tear from the intima; the latter might remain intact *in situ*, or might be more or less broken during the tearing. Detachment of the intima is therefore comprehensible where there is atheroma and bulging of the outer coats.

But in many cases, and in our case beyond the aortic arch, the intima has been detached without any bulging of the outer coats, so that no abnormality has been suspected until the aorta was opened up. In such cases, contrary to the implication of textbooks, it is physically impossible for the pressure of the blood to cause detachment of the intima. For, granting a gap in the intima, granting even a commencement of stripping caused by some other means, for the pressure to continue the stripping it would have to bulge the intima inwards, against the pressure of the blood in the lumen; the blood outside the intima may be at a lower pressure, but cannot

be at a higher pressure than the blood in the lumen. When a portion of intima is already detached, the blood is at the same pressure on each side of it, and it has no impulse to move at all.

Blood pressure may, as in the predescribed circumstances, strip the media from the intima, but cannot strip the intima from the media.

The production of aneurysms is generally considered statically, as a pressure problem. There is a dynamic factor at hand in the motion of the blood. The velocity of the blood in the aorta varies considerably, its maximum is about 120 cm. per second; at this instant each centimetre length of the blood column has about 6,000 ergs of kinetic energy, or, in gravitation measure, about 2 centimetre-grams. A nearer calculation is not worth while, as we do not know how much of the energy is available for co stripping. The total kinetic energy even at a maximum is not great, but the maxima recur some 4,000 times an hour, and a fraction of the energy in each is capable, in time, of producing appreciable mechanical results.

It may be surmised that if an intima were already extensively undermined and perforated by atheroma, detachment might be accelerated by the energy of the moving stream. If tags of intima were partially detached, they could be projected into the lumen as flaps, so directing more of the kinetic energy towards stripping. Finally, a flap might be thrown right across the lumen, causing a dam; then the whole of the kinetic energy would be diverted to intima stripping, and, as well, a powerful pressure factor would be called into play; the blood pressure below the flap and within the intima would rapidly fall towards zero, while the pressure above the flap and outside the stripped portion of intima would rapidly rise towards ventricular systolic pressure. Here, then, is a possibility of sudden and violent stripping of the aortic intima, supposing there to have been a previous partial undermining and detachment; the preparatory process may be very gradual and insidious.

SUMMARY.

1. A man of 65, apparently in good health, fell down suddenly and nearly died; he recovered somewhat, and complained of intense substernal pain and of pain and paresis of the left leg. About thirty-eight hours later he died suddenly.

2. The *post-mortem* examination disclosed the greater part of the aortic intima lying free in the lumen. The aorta was extensively atheromatous.

3. The mechanism of the process, and of the so-called dissecting aneurysm, is discussed. It is maintained that, in the absence of bulging of the outer coats, static considerations alone do not provide an adequate explanation, but that the motion of the blood is a significant factor.

REFERENCES.

¹ Bender: Article "Die Gefässe" in Aschoff's *Pathologische Anatomie*, vol. ii, Jena. ² Boström: *Deutsche Arch. f. klin. Med.*, vol. xlii, pp. 143, 1887. ³ Osler: Articles, Aneurysm, in Albutt's *System of Medicine* and in Osler and McCrae's *System of Medicine*. ⁴ Peacock: *Trans. Path. Soc. Lond.*, vol. xiv, 1863, and vol. xvii, 1866. ⁵ Schede: *Firch. Arch.*, vol. xcii, pp. 52-85, 1908.

NOTES ON LIVER ABSCESS.

FOUNDED ON CASES AT A STATIONARY HOSPITAL, PALESTINE.

BY

C. GIBSON, M.B., B.S.LOND., F.R.C.S. EDIN.,

LATE TEMPORARY CAPTAIN R.A.M.C.

This paper deals only with aspects of the disease presented in five cases of liver abscess seen in this hospital between September 28th and November 2nd, 1918.

The site of the abscess had an important relation to the result in these cases. According to the position of the abscess the cases may be divided into epigastric and subdiaphragmatic.

A. EPIGASTRIC.

In Cases I, II, and III the abscess was epigastric, was diagnosed comparatively easily, and the result of operation was apparently successful, the patients being transferred by ambulance train to Kantara on the twentieth, fourteenth, and twenty-eighth day respectively after operation, and subsequently to Cairo and Alexandria.

In these cases the abscess was large and single. No second abscess was discovered at operation, nor were there suspicious signs or symptoms during the time the patients remained under observation.

In one case (II) the abscess was in the left lobe, and the liver was adherent to the abdominal wall over it. In two cases (I and III) the abscess was in the right lobe, and no adhesions were present between the visceral and parietal peritoneum. In Case III, free sero-sanguineous fluid was present in the peritoneal cavity at operation.

B. SUBDIAPHRAGMATIC.

In the remaining cases the abscess was closely sub-diaphragmatic, diagnosis was rendered difficult by the presence of pneumonic signs, and was made certainly only at *post-mortem* examination. These cases are considered at length under differential diagnosis.

The accompanying synopsis of cases gives the history, symptoms, signs, bacteriological findings and results.

CASE I.

History of bacillary dysentery in June, 1918. Admitted September 28th, on the eleventh day of illness, with pain in the epigastric and right hypochondriac region, nausea, and constipation. Liver enlarged, four fingerbreadths below costal margin, with localized tenderness. General rhonchi present in lungs. Highest temperature 102.6°. The leucocyte count was 20,000. Three examinations of faeces showed large number of dead amoebae, variety doubtful, probably *A. histolytica*. Pus from abscess negative for amoebae.

Operation October 4th. Patient transferred on twentieth day after operation.

CASE II.

History of two attacks of diarrhoea, the first in August, 1918, with presence of mucus; the second on October 26th, at onset of illness, without blood or mucus. Admitted on November 2nd, on seventh day of illness, with pain in left epigastric and umbilical regions. The liver palpably enlarged and locally tender in the left epigastric region. Highest temperature 102°. General rhonchi present in lungs. The leucocyte count was 10,800. One faecal examination gave a negative result, but *A. histolytica* was present in pus from abscess.

Operation November 8th. Patient transferred on fourteenth day after operation.

CASE III.

History of two attacks of diarrhoea—the first in May, 1918, severe with presence of blood and mucus; the second in August, 1918, three days' diarrhoea without blood or mucus. Admitted October 19th (seventh day of illness) with severe pain, continuous with exacerbations in the right epigastric area. Liver enlarged to level of umbilicus in right mid-clavicular line. Liver tenderness present, but badly localized at first. Highest temperature 103.2°. General rhonchi present in lungs. Large quantity of muco-purulent sputum. He was much emaciated. The leucocyte count was 17,000. One examination of faeces was negative. Pus from the abscess was not examined.

Operation on October 28th. Patient transferred on twenty-eighth day after operation.

CASE IV.

No history of diarrhoea. Admitted on October 29th, third day of illness. History of abdominal pain, with vomiting at onset. Liver not enlarged downwards. Signs of pleurisy and consolidation at base of right lung, general rhonchi present in rest of lungs. Pain present in diaphragmatic region, in right mid-axillary line, and in right shoulder; tenderness present in same region, but not constant. Highest temperature 103°. One faecal examination was negative, but *A. histolytica* was found in pus from the abscess at *post-mortem* examination.

CASE V.

History of diarrhoea negative. History of pain in right hypochondrium off and on for one month. Pain more severe and accompanied by vomiting on November 12th. He was admitted on the eighth day, after severe pain. Liver not enlarged downwards; signs of consolidation present at base of right lung, and general rhonchi present over rest of lungs. Tenderness over right costal margin early, absent later. Two examinations of faeces negative. Two amoebic abscesses present on *post-mortem* examination on November 13th.

Admission to hospital in above notes signifies transfer from other hospital to the hospital referred to in particular.

Cases.	Operations.	Deaths.
Epigastric 3	3	0
Subdiaphragmatic ... 2	0	2

Diagnosis.

A history of diarrhoea or dysentery is of value when obtained, but a negative history may be given, as in Cases IV and V. In one case only did the patient state

that he had suffered from dysentery, and inquiry from the hospital at which he had been treated elicited the information that the diagnosis had been bacillary dysentery, for which he was treated, but that thirteen days previous to his discharge an immotile cell (*Amoeba histolytica*) was seen on microscopic examination of the faeces.

Pain was present in all cases. A man with a large liver abscess has had severe pain during its formation.

Tenderness over some part of the hepatic area was present in all cases at some period of the illness, and was maximal over the site of the abscess.

Enlargement of liver was present in Cases i, ii, and iii, the firm edge being easily felt; it was not present in a downward direction in Cases iv and v, and was not observed in an upward direction, pneumonic signs being present at the right base on admission.

Pyrexia was swinging, possibly with less regularity than that due to other abscesses. There was slight jaundice in two cases. Sweating was pronounced in Case ii and in Case iv, but only during the terminal collapse.

Bacteriological Findings.—The presence of *Amoeba histolytica* in the faeces is very valuable; but failure to find it is of very little value unless several examinations have been made. To obtain satisfactory results the specimens must be examined shortly after evacuation. In none of these cases was *A. histolytica* definitely found in the faeces. In one case (i) the presence of large quantities of dead amoebae, probably *A. histolytica*, was reported; in the other cases findings were negative. It will be noted that *A. histolytica* was present in the pus of the abscess in two cases.

Leucocytosis.—In Case ii the leucocyte count was only 10,800, in spite of the presence of a large abscess. I am indebted to Captains R. T. Jones and J. W. Fox, R.A.M.C., of No. 1 Military Laboratory, for these results.

Differential Diagnosis.

I. The diagnosis from primary right basal pneumonia rests on the presence of some abdominal symptoms, swinging temperature, and tenderness over some part of the hepatic area, before any pulmonary signs are noted at the right base, showing clearly that the pathological condition at the right base is secondary to some condition causing these symptoms and signs—namely, liver abscess. Cases iv and v illustrate these points. They were admitted to hospital with right basal pulmonary signs at the time that epidemic pneumonia was prevalent, and their condition was attributed to this disease; but the pneumonic condition was secondary.

Case iv had abdominal pain, nausea, and vomited in the early stage of his illness. His tongue was very coated on admission, though the stools passed were normal in appearance.

Case v had general abdominal rigidity and tenderness and a dry coated tongue. He improved upon daily enemata, which caused the evacuation of scybalous masses. In neither of these cases was enlargement of the liver downwards found, and tenderness over some part of the hepatic area was a transient sign.

Among the patients with malaria who died of epidemic pneumonia and upon whom *post-mortem* examinations were made in the same period, the pneumonia was present at the right base in several, and the physical signs present were right basal pneumonia with an enlarged liver, in some cases showing slight general tenderness. The patient was already suffering from two clinical entities and it seemed unreasonable to expect that a third should be added. The possibility of liver abscess in these cases was considered and dismissed.

II. The diagnosis from malarial hepatitis depends on the presence of splenic enlargement. I saw one case only in which the diagnosis of amoebic hepatitis, probably with abscess, was definitely made, and, although the liver was enlarged, tenderness was neither marked nor localized, and a blood film, positive for malaria, cleared away any doubt. In none of the cases was the spleen enlarged.

Number of Abscesses.

As already stated, in those cases which came to operation one abscess only was found. On the other hand, in the cases which came to *post-mortem* examination, the abscesses were multiple. Recently I have seen a case in which two abscesses were drained at operation, one in the

left epigastrium, the other in the body of the right lobe, drained by resection of the rib. In Case iv the abscess had burst into the pleural cavity. This patient had severe pain in the right shoulder. In Case v the abscess had burst into the peritoneal cavity.

In conclusion, I thank Lieut. Colonel F. E. Roberts, D.S.O., R.A.M.C., for permission to publish these cases, and my colleagues at — Stationary Hospital for their help.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ANOXAEMIA IN NASAL OBSTRUCTION.

To convince a patient that his troubles—which were many and “vague”—were due to intermittent blockage of his left nostril, I instituted a series of tests of which one was a walk of four miles. The first walk was carried through with the left nostril blocked; the second with the left nostril clear. The patient described his sensations thus: “The first walk my feet were as lead; in the second I felt they had wings.”

Another test was that the patient walked four miles, and at intervals, regulated by the feeling of weight in his feet, he cleared his left nostril by pressing the nose to the left side. After his return he said, “I was surprised. When I pushed my nose to the left, and thus instantly gave free passage to air through my left nose, I found my pace of walking immediately increased enormously. I felt as if I had been shot from a gun.”

I thought this statement interesting at the time—October, 1917. I think it of more interest now. In the *BRITISH MEDICAL JOURNAL* of July 19th, 1919, I read in Dr. Haldane's lecture:

The senses become dulled without persons being aware of it, and if the anoxaemia is suddenly relieved by administration of oxygen or other means the correspondingly sudden increase in powers of vision and hearing is an intense surprise.

Presumably nasal obstruction must cause anoxaemia. What is true of the sensory powers must be true of the motor powers. My patient's word was “surprised.”

CHAS. J. HILL AITKEN, M.D.,
Medical Officer in Charge Camps, B.T. in France.

DIAPHRAGMATIC HERNIA.

It may be interesting to record a case of diaphragmatic hernia I saw in India. I have not the exact data, but the sequence of events was as follows:

A private in the 1/10th Middlesex Regiment was admitted to Chakrata Hospital, Himalayas, suffering from acute abdominal pain with vomiting. He had been wounded in Mesopotamia in the left hypogastrium, and the exit wound was between the shoulder blades. Apparently treatment had been temporarily successful, and he was transferred to the hills, convalescent. He stated that he had eaten a large number of new walnuts, and considered this the sole cause of his trouble.

He was examined, and a diagnosis of probable diaphragmatic hernia made, as the left chest was tympanitic, and the patient was suffering severely from shock.

Arrangements were made for operation, and anti-shock measures were instituted, but he collapsed suddenly, and died almost immediately.

Post-mortem examination showed that the stomach had forced its way through a small hole in the diaphragm, and was lying in the left pleura. The organ was congested and full of gas, and had apparently become semi-strangulated.

It seems to me probable that the diaphragmatic hole was too small to interfere much with normal functions until the advent of gastric and intestinal irritation, which had produced strong peristalsis, and so helped to force part of the abdominal contents upwards. It may be the pressure was raised to a dangerous point by the continuous bending double of the patient, or again the hernia may have been the primary cause of the epigastric and hypogastric pain. Death, I think, was due to pressure on the heart causing syncope.

J. G. BENNETT, M.C.,
Late Captain R.A.M.C.

Manchester.

A VESICAL CALCULUS WITH MEMBRANOUS COVERING.

DURING the early part of the present year I had as a patient a young private soldier who had had stone in the bladder for four months. There was great frequency of micturition, with pain at the point of the penis as the bladder walls gradually pressed down towards the trigone. No blood was to be seen, except some corpuscles visible on microscopic examination. There was marked cystitis. On rectal examination no hard body could be felt, and a sound also gave a negative result. At the time x-ray examination was not possible, and cystoscopic examination was likewise not available. Thus one had to judge for the most part by symptoms, examination, so far as it could be performed, not providing much help towards an accurate diagnosis.

Bladder lavage gave a certain amount of relief for a short time only, as also did internal medication. I performed suprapubic cystotomy, and removed a stone of a curious sort from the bladder. It was oblong, and nearly the size of a small hen's egg. It was soft and membranous on the outside, and the membranous covering could be moved freely on a hard underlying mass. The covering was rather friable. This softness explained the negative findings on examination with the sound. The bladder was very contracted, and its walls thick and inflamed.

On making a section of the calculus, which was obviously of a phosphatic nature with a small fairly hard central core, the outer membrane was found to be tri-laminar, composed apparently of mucoid material impregnated with phosphates. The specimen was shown to some other surgeons, who all said they had never seen a similarly constructed calculus.

The opening made in the bladder was closed, after removal of the calculus, and the space of Retzius drained by means of a wisp of gauze for a few days. The bladder was drained by a rubber catheter inserted through the urethra. This was removed on the eighth day. Urine was now passed normally and symptoms had disappeared. The abdominal wound, which had seemed to be closing well on removal of the gauze drain, now began to leak urine to a slight extent, and a catheter was reintroduced by the urethra for about a week. The wound healed well, and the patient was completely relieved of his symptoms, which had been very acute.

The case is of interest because of the unusual nature of the calculus, and because of the degree of difficulty in making an exact diagnosis in absence of aid from x rays and cystoscope.

A. E. CHISHOLM, F.R.C.S. Edin.,
Late Captain R.A.M.C.

THE CURE OF MULTIPLE WARTS
ON THE FACE.

In an interesting communication by Dr. Charles Ind, in the JOURNAL of July 5th, p. 11, mention is made of the failure of ionization with magnesium sulphate to cure small warts.

The cause of failure lies, I believe, in the omission of an important detail. Each wart must be superficially pricked with a fine needle before ionization. This can be done with great rapidity, and causes no discomfort, and with a current of 20 to 25 milliamperes no complaint is made of anything beyond a slight pricking sensation. The warts show no change for from seven to nine days and then vanish. I have treated many cases, and have never seen a failure since I adopted this method.

Henley-on-Thames.

W. LONGWORTH WAINWRIGHT.

ASPIRIN IDIOSYNCRASY.

In the JOURNAL of July 12th Dr. Karunaratne records an interesting case of aspirin idiosyncrasy. It is a fact not sufficiently well known that a patient with a low blood pressure and nasal polypi cannot safely take aspirin. Even one grain may cause symptoms similar to those described by Dr. Karunaratne. Antipyrin and oxyquinoloin cachets have a like effect, but phenacetin can, as a rule, be taken. Consequently there is great danger in giving aspirin indiscriminately in cases of asthma, especially as it is well known to give great relief in many cases. It is always

risky if the patient has or has had nasal polypi, but if there is a high blood pressure unpleasant results are not likely to follow.

London, W.

ALEXANDER FRANCIS.

Rebuelus.

THE FUTURE OF MEDICINE.

It is not often that a book appears like Sir JAMES MACKENZIE'S *Future of Medicine*.¹ Every thoughtful medical man should read it, not only for its professional instruction, but in order to test his mental elasticity and power of fair judgement, to see if he can weigh without bias an unacceptable thesis, in this case a rather forcible indictment of medical methods and education as they now exist. The message is plain, independent, even iconoclastic, and certainly does not contain the smooth things that please the present-day Pangloss. The author has already stated his views in various papers, but here there is a connected argument running throughout the three, at first sight somewhat distinct, parts entitled "Critical," "Personal experiences," and "Constructive." His argument may be stated thus:

For the prevention of disease a knowledge of the early stages before structural damage has been done is essential. Further, the principle that a knowledge of symptoms is essential to any inquiry into the effects of remedies has never been properly recognized, and its neglect has rendered much investigation sterile, left our knowledge of drugs in a state of confusion, and made our pharmacopoeia mainly a storehouse of bygone beliefs. The correct assessment of symptoms, an accurate understanding of the mechanism of their production, and their bearing on the future health of the patient, are very difficult problems, and it is perhaps natural that the study of medicine has hitherto chiefly been devoted to the late effects of disease, as shown by physical signs in the wards and morbid changes in the *post-mortem* room. The failure of medicine to detect the early stages of disease is due to the fact that the patient's sensations have never been adequately investigated. In order to correct this the most experienced physicians, with all the most efficient means at their disposal, should logically see out-patients in the early stage of symptoms, when further changes can be arrested; and the younger members of the hospital staff should look after the advanced cases in the stage of physical signs in the wards.

But more than this is necessary for the efficient observation and assessment of symptoms; the patient must be under continued supervision, and this is the function of the general practitioners, who have opportunities that are rarely, if ever, open to the hospital physician as such, and should be recognized as having a definite part in the advancement of research. In reply to the possible retort that they have for all time had these opportunities without using them, it is pointed out that until comparatively recent times the teachers of medicine and those who have done so much to advance our knowledge have been to all intents general practitioners, such as Harvey, Hunter, and Jenner. The author's experience in general practice gradually forced on him the question, "Do I understand the meaning of one single sign or symptom in all its aspects—for example, the mechanism of its production or the bearing of its cause upon the patient's general health?"—and he had to admit that he did not. This led to an investigation into the significance of pain, and in the article on this subject, and in others on cardiac affections in Part II of this work, the method of investigating symptoms, acquired with much labour, is set forth as a suggestion of what may be done in the case of other symptoms. One of the objects of this book is to show that medicine can be made more simple in its practice, and at the same time more efficient. For it has become extremely complex; specialism has reached an extreme degree, and in the use of laboratory methods there is the risk that the patient may be ignored by the physician, who thus loses the opportunity of gaining much valuable information by investigating the patient's symptoms. For successful

¹ *The Future of Medicine*. By Sir James Mackenzie, M.D., F.R.S. London: Henry Frowde, and Hodder and Stoughton. 1919. (Demy 8vo, pp. 238. 8s. 6d. net.)

research a thorough training in symptoms, and personal contact with the patient, rather than seclusion in a laboratory, is the proper course. In order to show that this simplification of medicine is possible, Sir James Mackenzie applies it to one organ—the heart—and insists that what has been done in this direction can also be effected in the case of other organs, if the same lines of investigation are pursued.

The methods of medicine determine medical education and are reciprocally influenced by it. On this important subject the author speaks with no uncertain voice. The vast majority of students ultimately become general practitioners, but their teachers have not been through the mill of general practice, and accordingly much of the students' time is wasted in learning details that will not be of any use to them in future practice. Anatomy and physiology are generally taught by specialists, and so often become somewhat divorced from practical application. In every medical school there should be a teacher with a broad outlook on the whole field of disease, so that he may be able to give the students a proper perspective of the different sections. This place was once occupied by the physician, but during the last fifty years the laboratory workers and the surgeons have made such progress that they have to a large extent usurped his position. As an attempt at adaptation to new conditions the high road to a physician's post often lies through the laboratory, and the regulations for appointments to teaching hospitals tacitly exclude a training in general practice, which is the really efficient means of gaining more than a superficial insight into the problems of disease. A young man should be encouraged to enter general practice with the object of eventually gaining a place as a teacher in a well equipped hospital, where he will be able to solve the problems he has had to face in practice; and in the meanwhile every medical school should have one or more teachers who have been in general practice for ten to twenty years.

These views, which are the outcome of much thought and deep conviction, may appear startling and therefore very possibly arouse opposition, but this is not a rare experience, for the reformer's crown is seldom complete without thorns or pinpricks.

PHYSIOLOGY AND MEDICINE OF AVIATION.

THE time has undoubtedly come for such a book as *The Medical and Surgical Aspects of Aviation*,² edited, and for the most part written, by Major GRAEME ANDERSON, who is surgeon to the Royal Air Force Central Hospital. A sketch of the history of medical interest in aeronautics and aviation is followed by a chapter on the selection of candidates, in which many of the tests employed are described. This is followed by a chapter on the applied physiology of aviation by Lieut.-Colonel Martin Flack, R.A.F.; it is a very valuable contribution, for it deals with the first principles. He begins by pointing out that the most important factor in the art of flying is the nervous control and co-ordination of the reflexes necessary for the management of the many accessory parts. The preliminary idea of the motor side of these flying reflexes can be obtained by studying the fundamental effector movements (effector responses) necessary to flying. These fundamental movements are, with the arms a fore-and-aft and a side-to-side movement; with the legs a to-and fro push of the rudder bar. In no other acquired accomplishment has man to keep so many groups of antagonistic muscles in a state of static wakefulness or to perform such a variety of co-ordinated leg and arm movements. The art can only be learnt by practice, but the pupil must have an innate disposition to acquire rapidly a new series of reflex acts. As this quality is required for excellence in all sports, the man who is good at sports is more likely than another quickly to become a good flier. The exercise coming nearest to flying in respect of the number and nature of the movements to be co-ordinated is, perhaps, horsemanship, and the possession of a good pair of hands and a good sense of balance in riding is a valuable basis for the acquisition of the art of flying; it is, however, no more than that.

On the sensory side the flying man is guided by impulses from the eyes, from the ears, from the skin,

and from muscles and joints. There is no need to insist on the importance of visual impressions; the auditory are of consequence also, especially in the detection of defect in the running of the engine. The importance of the cutaneous impressions is very great, but less obvious. The pilot gathers information from the "feel" of his seat, from alteration in the direction of air pressure on the cheeks, and from the "feel" of the joy-stick and the impressions from the joints and muscle sense brought into play in its manipulation. We are thus brought to conclude that the requisites of a flier are a good vision and hearing, and a quick effective response to impulses thereby received; a good sense of balance in which impulses derived from the skin, muscles and joints play as important a part as those derived from the semicircular canals; and a delicate co-ordination of muscular movements, particularly in the interplay between the antagonistic muscles concerned in the various movements performed by those muscles. With training the whole of this delicate machinery eventually becomes automatic, and until it does the aviator cannot do those things for which he is sent up—to photograph, to observe, and to fight.

All these points in the acquisition of the art of flying are briefly, but very clearly and adequately, discussed by Colonel Flack. He then considers the various forms of strain to which the flier is subject, including the special physical strain in high flying due to the diminished proportion of oxygen. At about 11,000 ft. the air contains two-thirds of the normal proportion of oxygen—that is, 14 per cent.; the depth of breathing is increased, the blood pressure slightly raised, and the pulse quickened. Up to this height there is, as a rule, no obvious discomfort, but above this various symptoms arise, one of the most important being the mental exaltation, attended by confusion, to which Dr. Haldane referred in his recent lecture on anoxaemia. Colonel Flack recommends that the inhalation of oxygen should be begun at about 10,000 ft.; its introduction in such a manner as to make up for the deficiency of oxygen enables flying officers to keep at great heights in comparative comfort, for with enough oxygen there is neither respiratory nor cardiac distress, nor any period of exaltation or confusion of the senses. The diminution of atmospheric pressure in itself produces little or no effect, except the expansion of gases in the intestines, which, by pushing up the diaphragm, may interfere with respiration. It is partly on this account that the aviator should be careful in diet, especially with regard to a meal taken immediately before flying. Owing to the wear and tear of the organism, due to the repeated and intermittent strain upon the nervous, respiratory, and circulatory mechanisms, all aviators, after a longer or shorter time, suffer from fatigue; its treatment and the general management of the health of the aviator are fully discussed. We have said enough to show that this chapter is one full of interest to the physician.

The next two chapters deal with the psychology of flying, and *aéro-neurosis*. In the former, Major Graeme Anderson gives a table of the motives assigned by 100 consecutive pupils for taking up aviation. About half appear to have joined owing to the act of reaction and interest they found in the idea of flying, and the number is increased to 74 when the novelty of flying, a desire for excitement, the opportunity for individual action, and mechanical interest, are included. The motive is stated to be important in deciding whether a pupil will become a good aviator. The same chapter contains an analysis of the replies to a long series of questions filled up immediately after flying alone for the first time, and a good description of the author's own sensations. In a later chapter is embodied a note by Surgeon Oliver H. Gotch, R.N., based on notes of 200 selected cases of flying officers who broke down in respect of flying whilst on war service. The conclusion is that when a toxic element could be excluded the beginning of the breakdown was in a large majority purely mental, dating from some particular impression, experience, or act. The breakdown usually takes the form of neurasthenia, but occasionally of hysteria. One not unsatisfactory conclusion with respect to prognosis is that the shorter the flying experience the worse the prognosis, but the longer the experience the better the prognosis. The types and causes of aeroplane accidents and methods for their prevention are discussed by Major Anderson in a long chapter, containing a large number of striking illustrations.

² *The Medical and Surgical Aspects of Aviation*. By H. Graeme Anderson, M.B., Ch.B., F.R.C.S. London: Henry Frowde, and Hodder and Stoughton. 1919. (Demy 8vo, pp. xvi + 255; 27 plates, 20 figures. 12s. 6d. net.)

An analysis of 58 crashes brings out the fact that only one was due to a defect in the aeroplane, four to collisions, and four to unsuitable landing-places; whereas 42 were due to errors of judgement, either in getting off the ground, or, far more often, on landing. A chapter on the surgery of aviation does not contain much of novelty. In two chapters which, though a little beyond the scope of the book, are of general interest the effects of aeroplane bombs, and the precautions to be taken during hostile raids are discussed, and there is a final note on dope poisoning. A glossary of aviation terms is supplied, a bibliography, and an index. The book as a whole is to be thoroughly commended, although we could wish the author had revised his manuscript more carefully, to avoid a certain monotony of style and some lapses into ambiguity, defects which detract from the pleasure with which the book may be read.

OBSTETRICS.

PROFESSOR DE LEE'S *Principles and Practice of Obstetrics*³ has reached its third edition, and has been brought up to date without the need of any striking change. Abderhalden's reaction is relegated to what is becoming generally recognized to be its proper place—namely, as a matter of considerable scientific interest but of almost no practical value. As in previous editions "twilight sleep" is uncompromisingly condemned, but we imagine that the prevalence of abuse of the method on the other side of the Atlantic has necessitated in some degree the sweeping judgement of those speaking or writing *ex cathedra*. It is interesting to observe that the author is an enthusiast for the extraperitoneal or transperitoneal method of Caesarean section, of which he has had experience in twenty cases. "If the present promise is realized," he says, "when the next edition of this work appears, a complete realignment of the indications for the treatment of contracted pelvis in general, and of the methods of abdominal Caesarean section in particular, will be necessary." We shall await the next edition with interest but without sharing the author's expectations.

The great merits of this encyclopaedic work are so well known that they need not be expatiated upon. The new edition fully maintains its place amongst the very best works on obstetrics in American literature. It is beautifully illustrated and clearly printed. Is it the mixed origin of the population of Chicago that leads the author into frequent polyglot expressions? The legend to Fig. 363—"Retroversio uteri adherenta with prolapse of Ovaries in Culdesac"—is refreshingly catholic.

THE EXPECTANT MOTHER.

DR. MARY SCHARLIEB'S book, *The Welfare of the Expectant Mother*,⁴ forms one of a number of volumes called the English Public Health Series, edited by Sir Malcolm Morris, K.C.V.O. Such a series is a sign of the times; it signifies that the health of the people has now become in a real sense the business of the representatives of the people; it connotes such happenings as baby weeks, ministries of health, municipal maternity and child welfare schemes, preventive and curative infant health centres, and many other things which, little known before the war, are now the commonplaces of the newspapers. The present work in particular shows how public health has overflowed its banks, so to say, and swept midwifery into its main stream. The expectant mother and her nursing have found foster parents in the Houses of Parliament. The obstetrician may grumble at this invasion of his territory, and may imagine that the inference is lack of initiative on his part; but, whilst there may be a shade of justification for this conclusion in the profession's comparative neglect of preventive measures in pregnancy in the past, the obstetrician will wisely accept all that is now being done to supplement and reinforce his efforts for the comfort and safety of expectant mothers and their unborn infants.

Dr. Scharlieb's book is intended for members of local authorities, midwives, district and other nurses, school

teachers, and the large body of health visitors and other helpers in public health work, voluntary and paid. Looking at it with this scope clearly in mind, it may at once be said that it admirably serves its purpose. The first part, which has to do with the hygiene and pathology of pregnancy, is necessarily brief, but it is sufficient; and the fourth chapter, which deals with the somewhat novel relationships which Midwives Acts have introduced between doctors, maternity nurses, health visitors, and the midwives themselves, is detailed enough for all practical purposes, and is, indeed, one of the most useful in the volume. The second part is concerned with the administrative care of pregnancy, and it could not, it may safely be said, have been written five years ago. The titles of the chapters reveal the novelty of the subjects: Maternity centres and maternity homes, Antenatal dangers, The problem of illegitimacy or the unmarried mother and the unwanted infant, Laws and regulations concerning maternity welfare—are all of them terms with a content very different from that which they had before the war, and especially before such legislation as the Notification of Births (Extension) Act of 1915 and the Maternity and Child Welfare Act of 1918. Dr. Scharlieb gives a full account of these and other pieces of legislation, but somewhat inexplicably omits all reference to the Midwives (Scotland) Act of 1915, with its curiously enigmatical relation to the English Act of 1902. The book is excellent, and will find its way into many a health worker's hands, with great profit to the health worker whoever she be.

AN ENGLISH-ITALIAN DICTIONARY.

THE second volume of Mr. ALFRED HOARE'S *Short Italian Dictionary*,⁵ a book for the English student of Italian rather than the Italian student of English, is an excellent work that may be warmly commended to the attention of those who want a good English-Italian dictionary. It has the advantage of having been written by an author who knows English; and so is not stuffed with obsolete or dialect English words that are never used nowadays except by, say, authors of the kailyard school, the topical novel writer, the preciosity poet or the foreigner compiling an English word-book. Mr. Hoare's dictionary is of convenient size and well printed, and with more than the usual amount of truth may be said to supply a long-felt want. We wish it all success.

NOTES ON BOOKS.

THE seventeenth edition of Professor HARE'S *Textbook of Practical Therapeutics*,⁶ that well known American work, has been brought up to date by the insertion of knowledge gained in the recent war—the use of Dakin's fluid and dichloramine-T by Carrel's method, and the paraffin treatment of burns, for example—and purged by the omission of various drugs of German origin. It begins with a number of pages on general therapeutical considerations; half the book deals with drugs, considered in alphabetical order; next follow chapters on remedial measures other than drugs and on feeding the sick; at the end are 180 pages on the treatment of diseases, again in alphabetical order, and two indexes. It is a thoroughly practical work, clearly written, not overloaded with detail, and adequately illustrated. Its author has a great fund of experience in practice and experiment to draw upon; the book may be warmly recommended to the attention of all medical practitioners in want of a textbook of treatment.

DR. DE TARNOWSKY'S *Military Surgery of the Zone of the Advance*⁷ is a well written *vade mecum* on war wounds and diseases, compact, and adequately illustrated. It is a good example of a type of literature that will not, we earnestly hope, be wanted again, at any rate in this generation.

³ *A Short Italian Dictionary*. Vol. II, English-Italian. By Alfred Hoare, M.A. Cambridge: At the University Press. 1919. (Demy 8vo, pp. vi + 294. 7s. 6d. net.)

⁴ *A Textbook of Practical Therapeutics*. By Hobart Amory Hare, M.D., B.Sc., Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College of Philadelphia, etc. Seventeenth edition, enlarged, thoroughly revised and largely rewritten. London: Henry Kimpton. 1919. (Med. 8vo, pp. 1023; 145 figures, 6 plates. 28s. net.)

⁵ *Military Surgery of the Zone of the Advance*. By George de Tarnowsky, M.D., F.A.C.S., Surgeon to Cook County and Ravenswood Hospital, Chicago, etc. Philadelphia and New York: Lea and Febiger. 1918. (4½ by 6, pp. 330; 35 figures. 1.50 dols.)

⁶ *The Principles and Practice of Obstetrics*. By Joseph De Lee, A.M., M.D., Professor of Obstetrics at the North-Western University Medical School, etc. Third edition, thoroughly revised. Philadelphia and London: W. B. Saunders Company. 1918. (Sup. roy. 8vo, pp. 1089; 949 figures, 187 in colour. 56s. net.)

⁷ *The Welfare of the Expectant Mother*. By Mary Scharlieb, C.B.E., M.D., M.S. 1919. London, New York, Toronto, and Melbourne: Cassell and Company, Ltd. (Cr. 8vo, pp. xi + 152. 5s. net.)

The social complications of congenital specific disease declaring itself at the end of adolescence are not, perhaps, the happiest of material for the novelist. Still, no doubt they have their uses as such; and readers in search of a delicate description of the troubles that may occur when the congenital infection becomes patent will find it in Mr. GEORGE COLMORE'S novel *The Thunderbolt*.⁸

In a pamphlet on *The Physiological Feeding of Children*,⁹ both medical practitioners and intelligent laymen will find a large quantity of sound reasoning and advice on this important subject. Dr. PRITCHARD, the author, emphasizes the importance of maintaining a due balance between the different constituents of children's diets, pointing out in particular that there is often a deficiency of the mineral constituents in the daily food of town children, remediable by giving a larger proportion of green vegetables and fruit than is usually provided. He also dwells on the importance of vitamins, lecithin, extractives, and water (not less than two or three pints a day) in these dietaries; and, after setting out the general character of the meals that should be given to children, has several interesting pages on the digestibility of foods, and the connexion (often remote) between indigestibility and indigestion. Tables of calorie values are given at the end of the pamphlet, and also a large sheet showing a week's menus for children aged from 1 to 2.

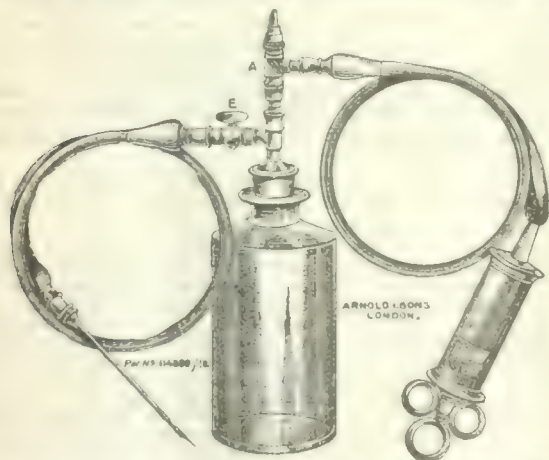
⁸*The Thunderbolt*. By George Colmore. London: T. Fisher Unwin, Ltd. 1919. (Cr. 8vo. pp. 352. 7s. net.)

⁹*The Physiological Feeding of Children*. A chapter written for the fourth edition of *The Physiological Feeding of Infants*. By Eric Pritchard, M.A., M.D., M.R.C.P. London: H. Kimpton. 1919. (Demy 8vo. pp. 59. 3s. 6d. net.)

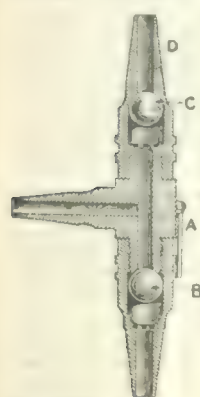
MEDICAL AND SURGICAL APPLIANCES.

A New Aspirator.

DR. HOPE ROBSON (Southampton) has designed the aspirator here illustrated. It consists of a valve chamber A, attached to the ordinary aspirator bottle; the vacuum, or negative pressure in the bottle, being produced



with a syringe connected by rubber tubing to the valve chamber; no exhaust pump is needed, the instrument being so designed that it will work with any ordinary syringe, such as an ear syringe. The valve chamber



aspirator bottle. No tap is required between the valve chamber and the bottle, the ball valve B acting automatically seals the opening from the bottle, thereby

preventing any loss of vacuum. There is nothing to get out of order, and the parts take to pieces and can be readily sterilized. The valve chamber can be detached and used where suction is required, as in Bier's treatment; attached to a suitable glass receiver it makes a powerful breast pump. The exhaust at D may be used if required as a continuous force pump for either liquids or gases. The instrument is manufactured by Messrs. Arnold and Sons, of Giltspur Street, London.

DENTISTRY, THE ARMY, AND THE STATE.

At the annual meeting of the British Dental Association in London on August 8th, the president, Mr. Montagu F. Hopson, dental surgeon to Guy's Hospital, delivered an address in which he reviewed the share taken by dentists in the war. When it broke out, he said, the army had no organized dental unit either for home or field service. The resources of the British Dental Association were immediately placed at the disposal of the Government, and representations were made as to the lack of provision for dental treatment, and emphasizing the demand which must arise for its provision (1) to make recruits physically fit, (2) for men in the field, and (3) for dealing with wounds of the jaws and face. The expert advice thus offered was, Mr. Hopson said, rejected, and he continued as follows:

"That service dental arrangements were mis-handled, not to say bungled, is generally admitted. Failure to grasp the situation may have been due to ignorance on the part of the chiefs of the Army Medical Department to begin with, but they later displayed a culpable obstinacy in the matter which led to a grave wastage of man-power and a large amount of unnecessary and easily preventable disease and suffering amongst the troops in the field and the wounded in our hospitals. The policy of our executive was clear and definite, and was finally vindicated—namely, that with an acknowledged general shortage of dentists even to meet the needs of the civil population, they could most advantageously serve their country in the national emergency in their professional capacity, and that all should be mobilized for service. The slow stages by which the recognition of so obvious a fact was reached you are familiar with. Dentists commissioned as temporary lieutenants on the general list were appointed in dribbles, and were employed under the supervision of medical officers possessing no dental knowledge. There was an utter lack of organization. Examples of efficiency furnished by our Colonial Forces were persistently ignored. In the meanwhile, skilled and highly trained men were being wasted in the ranks, the proffered services of those possessing expert knowledge in the treatment of facial injuries were declined, and our dental schools, the nurseries of professional recruits, were depleted.

"For three whole years the Government remained indifferent to the value and importance of the dental surgeon as a national asset. As the war drew to its victorious close some sort of order gradually evolved in army dental arrangements, but there was still lacking that one essential to an efficient organization—an administrator possessing a dental qualification, and given unhampered authority over the men under his command. It is manifest that whilst army dental treatment must be closely linked with the Royal Army Medical Corps, it can never be adequate until a definite dental corps has been established, modelled on the lines adopted by our colonies and certain of our allies. Similar corps must be formed for the Navy and Air Force. Hence it is with profound regret, and no small amount of misgiving, that I read the new regulations promulgated as to dental service in the navy. They are unworthy of a great service and offer an indignity to our profession."

Dentists might well be proud of the services rendered to the nation during the war; no profession of its size did more gratuitous work, and all that it accomplished was done in spite of official opposition placed in its way. Some 1,300 dentists joined the forces and sixty were killed in action or died on service. A large number also rendered exceptionally valuable service as civilian dental surgeons in the treatment of wounds of the face and jaws in the war hospitals at home, and practically every man served his country in some way or another in a voluntary professional capacity.

Referring to the important report recently issued by the Dentists Act Committee, Mr. Hopson emphasized the statement that "the State cannot afford to allow the health of the workers of the nation to be continuously undermined by dental neglect. Steps should be taken

without delay to recognize dentistry as one of the chief, if not the chief, means of preventing ill health."

The position assigned to the dental profession was one of the chief outposts of preventive medicine. If it were to be held with success, a large and highly trained body of men would be required. Further, that outpost must be assured of all the help and succour it might need. *In other words, if dentistry was to help the State, the State must help dentistry in education and in research.* The new Education Act provided for the dental treatment of all children of school age. The Dentists Act Committee went a step further, and rightly insisted that dental treatment should be rendered available for all needing it. A Committee of the British Dental Association had drawn up a scheme for a complete public dental service. There could be no doubt that thousands of persons were receiving sickness benefit who would not be doing so had they received proper dental treatment. The Government had the recommendations of the Departmental Committee as a basis for legislation, and must act upon that.

The annual report, which was adopted, stated that the membership of the association had increased to 3,000, and that during the war seven members gained the D.S.O. (two with bar) and twenty-three the Military Cross (two with bar), while three had been awarded the C.B.E. and twenty-five the O.B.E. and M.B.E.

THE INFLUENCE OF ALCOHOL ON MANUAL WORK.

We refer at length elsewhere (p. 209) to the results of an investigation carried out by Dr. H. M. Vernon for the Medical Research Committee, on the influence of alcohol on manual work and on neuro-muscular co-ordination. One of Dr. Vernon's conclusions is that for every individual there exists some moderate dose of an alcoholic liquid which is without appreciable influence on neuro-muscular co-ordination, but he adds: "It does not follow that such a dose is without effect on the more complex nervous processes of the brain."

To Dr. Vernon's report Dr. Major Greenwood contributed an account of some experiments on himself which seem worthy of extended notice because made under conditions which departed little from the normal routine of a busy man leading a sedentary life. They were directed to ascertain the speed and accuracy, before and after taking known quantities of alcohol, of his use of a typewriter and of an adding machine, with both of which he was familiar. The trial with the typewriter consisted of copying a passage consisting of nine Latin hexameter lines containing 355 letters, spaces and stops, and involving eighteen further movements for striking capitals and moving the paper carrier. The passage was typed eight times on each day, four times before and four times after dinner.

Each set of four typings comprised (a) a first *slow* typing, the passage being written down at about the pace I usually adopt for letter writing; (b) a *fast* typing—that is, one made at a rate which seemed subjectively a good deal faster than (a) but not so much faster that I had any difficulty in striking the keys; (c) was a repetition of (a); and (d) was a repetition of (b). Hence each series comprised two "slow" and two "fast" trials. The actual time at which the before-dinner series was carried out varied, but was usually between 8.30 and 8.45 p.m. (summer time), and always within a few minutes of dining. The after-dinner series was arranged to commence from thirty to forty-five minutes after the alcohol had been drunk.

Alcohol was taken in the form of port wine of known strength; either one or two glasses were drunk, the actual quantities of absolute alcohol taken being 18.5 and 37 c.cm. On the non-alcohol evenings I drank tea with my dinner, either two or three teacupfuls of an ordinary infusion without sugar. I adopted this practice because the disadvantage of using a caffeine-containing beverage on the control evenings seemed outweighed by the advantage of preserving the normal routine, it being my regular practice to drink either a glass of wine or some cups of tea with my evening meal.

An examination of the results did not show, either in respect of speed or average mistakes, any departure from the general level when 18.5 c.cm. of alcohol (one glass of port) was taken. When two glasses of port (37 c.cm.) were taken there was a decided deterioration in the quality of the work done. These results were in general agreement with those obtained by Dr. Vernon, and Dr. Greenwood considers that certain divergence in detail might be due to the fact that the slow rate of typewriting was familiar and not easily disturbed, whereas the fast rates were not normal, and liable consequently to be disturbed

by drug action or otherwise with greater facility. Dr. Greenwood continues:

I think it is of importance to take account of the interruption of habit in experiments of this kind. I suppose most sedentary workers lead regular lives, particularly with respect to the routine of their meals. I have, for certainly ten years, been accustomed to drink a small quantity of wine at dinner, but I cannot recall ever taking more than a single glass of a fortified wine when I intended to do any work after dinner. It is a matter for consideration whether the fact that (in the 37 c.cm. experiments) my routine was broken through may not have influenced the result. While a single glass of port wine produces in me no subjective effects save a slight increase of well-being, two glasses lead to an appreciable vertigo. The fact, however, that the deteriorating effect in any case is more accentuated at the rapid rates of typing, where there is less leisure for introspection than at the slow rates, is possibly significant.

With the adding machine experiments were made after a meal with and without alcohol respectively, and also for six days when taking alcohol during the afternoon without food. On this series of experiments Dr. Greenwood makes the following observations:

If the alcohol experiments with food be compared against a mean of the non-alcohol experiments made before and after, the deterioration—measured in terms of mistakes—amounts to 42 per cent., whilst a similar comparison in the fasting experiments shows a deterioration of 74 per cent. This latter figure is of the same order of magnitude as the deterioration experienced in the typing series when twice the volume of alcohol was taken but with a meal. The result is therefore in agreement qualitatively with those of Dr. Vernon and other investigators, testifying to the specially unfavourable action of alcohol taken on an empty stomach. Quantitative comparison is naturally excluded by the variations of other conditions (time of day, nature of task, etc.).

Dr. Vernon found a general average increase of 69 per cent. in the number of mistakes when 30 c.cm. of alcohol were taken with food. Dr. Greenwood in his typewriting series found an increase of nearly 80 per cent. after 37 c.cm. To prevent the production of an exaggerated idea of the effect, it should perhaps be noted that the calculations refer to the relation between the number of mistakes and not to the percentage of mistakes to the actual movements. Dr. Greenwood records that in experiments (fast typewriting) before dinner his mistakes ranged from 3.4 to 4.1; after dinner without alcohol from 2.6 to 4.3; after dinner with one glass of port his mistakes numbered 4.3; with two glasses of port 6.5. The mistakes occurred in 373 movements.

Dr. Greenwood's general conclusion, founded upon experiments on himself and two other subjects, all agreeing very well with one another, are as follows:

1. Small doses of alcohol, well within the limits of what would be deemed by all moderation, do not sensibly affect the speed of performance of such semi-automatic operations as typing a memorized passage or setting down and adding a row of figures on a mechanical calculator, but gravely depreciate the accuracy of performance. Two glasses of port wine in a person accustomed to drink a glass of wine have this effect when the wine is taken with food. Less than this is sufficient to produce a result if taken on an empty stomach.

2. Should the task set be very familiar to the subject, the above conclusion does not hold. Such small doses of alcohol did not exert any measurable effect upon the number of mistakes in either a typing or adding test made with a speed of performance to which the subject had become familiarized by long practice. None of our experiments bring out any effect upon the slow additions or typings, experiments which were made at a speed to which we were quite accustomed.

3. A corollary of 2 is that we cannot confirm Dr. Vernon's observation attesting the particularly unfavourable effect of alcohol upon the first of a series of experiments performed under its influence. For the reason just given, this does not involve any contradiction between the two sets of experiments. We had not realized beforehand the possible importance of this habit factor, and in order to test the point as to an inferiority of first trials it would have been necessary to reverse the order and to have made the series run fast, slow, fast, slow, instead of the other way round.

From the practical standpoint, these results seem to me to emphasize the importance of Dr. Vernon's general conclusion that moderate doses of alcohol affect the accuracy of semi-automatic work more than a casual observer might suppose, while the way in which this effect seems accentuated in work performed under relatively novel conditions is much what ordinary experience would lead us to expect.

Lastly, as to the experimental method, I think that the irregularity of the time equivalents of mistakes and the seeming impossibility, at any rate with short series of experiments, of arriving at a quantitative measure of the effects of practice, suggest that in future experiments it would be advisable to perform the tests at as uniform a rate as possible, measurements not being made until a training period has elapsed sufficient in length to render subsequent improvement with practice very slight.

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SATURDAY, AUGUST 16TH, 1919.

AIMS AND METHODS OF MEDICAL EDUCATION.

For some years before the outbreak of the war medical education was the subject of much keen criticism and analysis with a view to reconstruction. Mr. Abraham Flexner's detailed reports, to the Carnegie Foundation for the Advancement of Teaching, on the medical schools of the United States and Canada (1910), and of Europe (1912), and the report of the Royal Commission on University Education in London (1913) gave rise to much discussion, especially on the vexed question of whole-time teachers. This conception at first met with considerable conservative opposition, but is now generally accepted, at least in principle, though it remains to be seen to what extent it will be carried out in this country. In America it was started before the war; at the Johns Hopkins Hospital Drs. T. C. Janeway, W. S. Halsted, and J. Howland were appointed on the whole-time basis to chairs of medicine, surgery, and pediatrics early in 1914. Professor Janeway's lamented death has led to the appointment of Dr. W. S. Thayer, who has been so long and so eminently connected with this great school.

The delay in this country, accentuated by the war, though regrettable in some respects, has given time for more mature consideration, and possibly may thereby ensure a more complete solution of the problems of medical education than is included under the heads of whole-time teachers and the co-ordination of laboratory research, important as they are. Sir George Newman's "Notes on Medical Education," addressed to the President of the Board of Education last year, and the symposium at the Edinburgh Pathological Club¹ have given broad reviews of the problems, and Sir James Mackenzie, who contributed to the Edinburgh discussion, has in his recently published *Future of Medicine* (reviewed on page 204) emphasized an aspect of medical education which must be taken into account in any scheme of reconstruction.

His argument is briefly as follows: The teacher of practical matters must be one who has experience of what he teaches, and yet medical students, the great majority of whom ultimately go into general practice, pass, during their curriculum, through the hands of a large number of teachers no one of whom may have had any experience of the life work of a general practitioner. As a result the future general practitioner's education is defective; it is true that he learns medicine, but it is mainly that of physical signs and advanced disease, and he has few opportunities for becoming acquainted with the detection and prognostic significance of the symptoms of incipient disorder. In other words, medicine from this point of view shows little evidence of passing out of the period of morbid anatomy into that of disordered function, which is the direction that metabolic and other methods of research indicate as likely to ensure progress. Sir James Mackenzie's exceptional experience as a general practitioner

for twenty-eight years and then as a London consultant for eleven years lends weight to his dictum that those whose practice has been confined to the hospital ward, the laboratory, and the consulting room, have no conception of the difference between their work and that of the general practitioner. The observation of early symptoms offers a great but much neglected field for research to men in general practice, who should be so educated as to be able to make the best of their unique opportunities. In order to accomplish this the teacher must have the necessary experience, but the path to the staff of a teaching hospital runs through the laboratory and not through general practice, and the resulting uniformity has drawbacks, such as a restricted outlook and even inefficiency. Sir James Mackenzie maintains, therefore, that every school of medicine should have one or more teachers with ten to twenty years' experience of general practice, who from constant and intimate association with patients in the course of private practice have acquired to an exceptional degree the ability to detect and assess the manifestations of disease, and are thus able to instruct the students, their broad and human outlook serving to counteract any undue specialism born of intensive application to a particular branch of medicine. No doubt the choice of this new hospital teacher might present some difficulties and would require much care, but if it became recognized that these posts, with consulting practices, were open to men who would train themselves in general practice, a great incentive would be provided.

Sir James Mackenzie's scheme deserves attention, and there appears to be room for such a hospital physician rich in the experience of general practice, as the colleague of the whole-time professor and the ordinary consultant. Most men of fifty can call up the names of hospital teachers who started life as general practitioners, so, after all, the scheme is not on quite unknown lines, though in the future they may be improved.

DRINKING—THE CAUSE OF DRUNKENNESS.

THE Medical Research Committee has recently published two reports¹ on the absorption and on the early effects of alcohol and alcoholic beverages. The one by Dr. Edward Mellanby relates the results of a long series of experiments on dogs in which by chemical estimation of the amount of alcohol in the blood it was sought to ascertain the rate of its absorption and of its disappearance; the other, by Dr. H. M. Vernon, is founded on experiments on man designed to elucidate the influence of alcohol on manual work and neuro-muscular co-ordination. Of the two reports Dr. Vernon's is of the more general interest, since its application to man living under normal conditions of town life is direct, but Dr. Mellanby's results coincide sufficiently closely to justify their application to man. His chemical estimations, in fact, explain some of Dr. Vernon's observations.

Dr. Vernon performed a large number of experiments on himself and others. Briefly stated, the main results are that moderate quantities of alcoholic liquids can produce measurable effects, that these effects are very distinctly diminished if the alcohol is taken with a meal, and that pure ethyl alcohol is slightly less toxic than whisky, brandy, and claret when the liquid taken contained the same amount

¹ *Edinburgh Medical Journal*, 1918; republished (1919) for private circulation (W. Green and Son, Ltd., Edinburgh) under the title *An Inquiry into the Medical Curriculum*.

¹ H.M. Stationery Office. Medical Research Committee: Special Report Series. Dr. Mellanby's Report, No. 31, 1s. net, post free; Dr. Vernon's, No. 34 (not yet on sale).

of alcohol. The experiments were made on eight men and five women. The observations concerned the accuracy and speed of typewriting in seven subjects, of using an adding machine in three, and of target pricking in six. In the last method a sheet of squared paper with dots at regular intervals is suspended vertically; the subject stands at arm's length and with an awl pricks two vertical rows of dots, the first down and the second up. The results were much the same for the typewriting and adding machines and for the target, but the use of more than one method enhances the value of the experiments.

Stated generally, the effect of a dose of alcohol (pure, potable spirit, or wine) which produced any effect was to decrease speed and increase mistakes. The observed effect on accuracy was greater than on speed; the evidence on this point does not seem conclusive, but it is of minor importance; in estimating results a factor combining speed and error was used. When taken on an empty stomach alcohol was found to be about twice as toxic as when taken with food, and the degree of dilution made only a slight difference. A dilution at 5 per cent. had about three-fourths as much effect as dilutions at 20 or 40 per cent. when the alcohol contained in the quantity of liquor taken was the same. The difference is attributed to slower absorption from the greater bulk of fluid, and we gather that Dr. Mellanby would agree. The same explanation is applied to the smaller effect of alcohol when taken with food. This conclusion is borne out by Dr. Vernon's observation that the effect following ingestion of alcohol on an empty stomach reaches its maximum sooner, that this maximum is higher, and that the effect passes away more quickly, than when the same dose is taken with food. Dr. Mellanby's conclusion from dogs is that the rate of accumulation of alcohol in the blood, after it has been introduced into the stomach, apparently the empty stomach, is rapid, and reaches its maximum in from half an hour to two hours, but that the rate at which it disappears is very slow, much slower than Dr. Vernon's experiments would suggest. The disappearance, it should be remembered, is due to oxidation. Dr. Mellanby found that fat inhibits absorption of alcohol to some extent, more especially that of the stronger solutions of alcohol he gave. Of the foods he used milk was the most effective in delaying absorption into the blood, but he doubts whether the whole of this effect is due to the fat in milk. Dr. Vernon made a few experiments on the influence of the quality of the meal on speed and accuracy. He found that when the meal contained a large proportion of fat the effect of the alcohol was produced a little later, did not reach quite so high, and was decreased less rapidly than when the meal was fatless. His explanation is that in the first place fatty food is digested more slowly than fatless, and delay in the digestion of a meal as a whole must delay the complete absorption of the alcohol taken with it; and in the second place, that as fat has a considerable solvent power for alcohol, a portion of the alcohol cannot be absorbed until the whole of the fat is absorbed likewise. The second reason seems more valid than the first, which, so far as we know, is no more than an *obiter dictum*, but a discussion of both would be interesting.

One point which Dr. Vernon seems to have established conclusively is that above a certain minimum, which appears to vary in different individuals to an extent that is of practical consequence, "the adverse influence of alcohol on neuro-muscular co-ordination varies in arithmetical progression with the quantity taken" in, we assume, a given time. The increase

in target errors, for example, was directly parallel with the amount of alcohol taken, so that the chart shows a straight line from a certain small dose to the largest. Dr. Mellanby found that when a certain small dose was exceeded the amount of alcohol at its maximum in a unit volume of blood is proportional to the amount administered (if the stomach and intestine be empty). The absorption of alcohol into the blood in dogs is very rapid, and the same seems to be true of man; its disappearance is slow but quite regular; he thinks that if a second dose is given before the whole of the first has disappeared from the blood the amount of alcohol in the blood will be the greater by about this proportion. With regard to intoxication, Dr. Vernon concludes that the obvious signs of that condition are not due to the toper being suddenly overcome by the last glass. He was nearly drunk before, and the last glass merely took him over his border line. These conclusions are very much the same as that expressed in Sir Wilfrid Lawson's epigram which annoyed so many worthy people at the time it was uttered—"Drinking is the cause of drunkenness."

With regard to the onset and duration of the effect of alcohol, we may take Dr. Vernon's statement in his summary as fairly representing the conclusion to be drawn from all the experiments; this is, that "the effect reached its maximum half an hour after taking alcohol on an empty stomach, and might completely disappear in two hours. When the alcohol was taken with food the effect was slightly longer in reaching its maximum," and, as we gather, longer also in falling away from it.

The experiments do not give much information as to tolerance for alcohol. Dr. Vernon obtained some evidence of a rather rapid establishment of a slight degree in himself, and if there is no fallacy in one of his experiments, on a man who had been a heavy drinker of whisky for three years but for a year had reduced himself to three pints of beer a week, the tolerance or immunity persists for a long time—a year in this instance.

One sentence in Dr. Vernon's report, to which attention is called in the introduction, has drawn a certain amount of ridicule, the aim of which, we think it not uncharitable to assume, was to discredit the whole inquiry. It is that "the effect of drinking alcohol with and without food . . . has been curiously ignored by most previous investigators." Taken in its context as referring to scientific experiments, experiments, that is, in which an attempt has been made to obtain an accurate measure of the quantity of alcohol and of the effects, the statement is correct, but taken in a general sense to include rough social and clinical observation and experiment, it is not. To advise a man to take alcohol only at a meal is a commonplace of the consulting room, the main reasons perhaps being the belief that the irritating effect of the alcohol on the gastric mucous membrane will be the greater if not mixed and so to say diluted by food, and recognition of the evil effects of nipping between meals on the character, and the great liability of the establishment of the chronic alcohol habit.

Alcoholic beverages have been used so long and so widely that a folklore has grown up as to their relative "wholesomeness," as to the various parts of the system they severally most affect, and as to the character of the symptoms of the intoxication each produces. About such matters neither Dr. Vernon nor Dr. Mellanby has anything to say, rightly no doubt, for the subject is a by-way of history with little relation to their inquiries.

THE FOOD POSITION IN GERMANY.

It could not, of course, be expected that a reading public perturbed by the Zachariassen conspiracy, and excited to frenzy by the soul-shattering revelations of Miss Douglas-Pennant and Miss O'Sullivan, would be able to devote time to the lucubrations of a mere physiologist. It is, however, possible that Professor Starling's report on food conditions in Germany¹ is nearly as important as the discoveries of Scotland Yard or the revelations of Sir John Hunter.

So far as concerns past events, the investigations of Professor Starling and his colleagues, Mr. Guillebaud and Mr. McDougall, may be described as a statistical verification of the general conclusions expressed in Professor Starling's Oliver-Sharpey lectures. The immediate cause of Germany's failure was the adoption of a national food policy unsound in principle and unworkable in practice. The errors of principle were (1) an attempt to ration all the essential foodstuffs; (2) an attempt to maintain the head of cattle. These were physiological errors. Correlated with these were social-economic errors, such as winking at evasions of the law by powerful interests, and the systematic favouring of the agrarian parties. The practical consequence was that, although, in 1917-18, the total available food, after meeting the needs of the army, would, had it been equally divided, have given each average "man" over 3,000 calories per diem—not much less than the 3,300 calories assumed by the Allies to be sufficient—actually, the working and middle class populations of the cities obtained little more than 1,500 calories. The food producers continued to consume about their pre-war ration of 4,000 calories, and even the surplus was not available for equal sharing, some 25 per cent. being disposed of through illicit channels and therefore being only available for those who could pay fancy prices. Even now, "the man who will feed as he did before the war, can still do so, but at a cost ten times what he paid previously. I was informed of one household which before the war spent 25,000 marks a year on food and servants, but now spends 250,000 marks a year on the same objects."

The result was that the urban populations were starved and the national resistance collapsed. The consequences, so far as these are expressible by mortality figures, were exposed by us in a recent note on Dr. Döring's monograph. Professor Starling does not add much to this branch of the subject; but he does provide a painfully vivid account of the "general apathy, listlessness, and hopelessness" of the population. We do not know how better to summarize it than in the words of Isaiah: "And gladness is taken away, and joy out of the plentiful field; and in the vineyards there shall be no singing, neither shall there be shouting: the treaders shall tread out no wine in their presses; I have made their vintage shouting to cease."

The patriotism which can enable a man to read Professor Starling's account with pleasure is, we hope, an uncommon attribute. Such is the condition of Germany now; what of the future? Professor Starling's view is that under the most favourable conditions, even if Germany is treated by the world as a sick child to be nursed back to health, at least one and perhaps two generations must pass before she can recover her previous efficiency. In the coming year, unless supplies, estimated by Professor Starling as about a quarter of the normal food imports of the United Kingdom, supplies which Germany has no credit to purchase, are introduced into the country, it

is idle to expect the German workmen to put forth their full powers. "This is the condition of Germany at the present time—her supplies of food and raw material exhausted, and her spirit broken. But the social machine is still intact; her factories and a great part of her coal mines, with many hundreds of years' reserves, are intact, and she possesses not only trained scientific foremen of industry, but also the most industrious, docile and skilled workmen in Europe. There are no marked feelings of resentment against the Allies, especially against the English, and they are ready to work for whoever will feed them and clothe them. There is, in fact, in Germany a magnificent business paralysed for lack of working capital, and to be controlled by anyone who will supply this working capital."

The conduct of all human affairs rests upon a physiological basis. In the ordinary action of an artificial civilization this is overlaid by strata the arrangement of which receives all the attention of publicists. Events of the past four years have brought us back to the primordial rock. Germany failed to conquer the world; she may still perhaps play the part of Samson. Professor Starling has enunciated the physiological problem; it remains to be seen whether that problem can be solved. The public do not yet realize that this is not merely one of many problems the world has to face but the dominant issue of the time. There is a vague impression that the bidding of Germany in the world's food market will raise home prices and that the competition of her manufactures will reduce wages and profits—that is all. What will happen if the "Hun" remains unfed and unproductive does not seem to interest the man in the street.

THE UNIT SYSTEM IN MEDICAL SCHOOLS.

On July 26th we called attention to the delay which had occurred in making the allocations to medical schools out of the increased parliamentary vote for universities and colleges in the United Kingdom, and we pointed out that the delay was for many reasons particularly serious for the medical schools, since, in view of the fact that the new session must be opened in a couple of months, it was very essential that they should know where they stood and be able to make their arrangements in accordance with the scale of financial assistance they were to receive. On August 2nd we were able to announce that certain London medical schools which had prepared schemes for the reconstruction of their clinical teaching had been officially informed that they could count upon financial assistance from the State based upon the approved expenditure incurred in carrying out these schemes. We understand that in consequence a certain number of medical schools in London have prepared preliminary schemes for the experimental application of the unit system on a part-time basis for the heads of the units, and that among those which have their preparations well advanced are the medical schools of St. Thomas's Hospital and St. Bartholomew's Hospital. We hear that Sir Cuthbert Wallace, K.C.M.G., will probably be the head of the surgical unit at St. Thomas's Hospital and Mr. G. E. Gask, D.S.O., of that at St. Bartholomew's Hospital. Neither appointment will be whole-time, thus conforming to the original condition that the head of a clinical unit should be, not a whole-time academic officer, but one who, being actively engaged in clinical practice, is prepared to make his teaching duties a first consideration. The head of the unit, as professor, would have two assistants, and about sixty beds and a laboratory; a pathologist would form an essential officer of the unit. Further, it is intended that the staffs of the medical and surgical units shall work in close relation the one with the other, so that the

¹ H.M. Stationery Office. Cimd. 280. 1919. Price 6d. net.

teaching may be kept in unison on natural clinical lines. A decision has not yet, we believe, been reached with regard to the heads of other units, but it now seems probable that on the opening of the winter session there will be units, in medicine and surgery at least, in four London medical schools.

BIRTHDAY HONOURS.

A LIST in continuation of honours previously granted on the occasion of the celebration of the King's birthday was issued on August 13th. The baronetcy conferred upon Mr. H. Gilbert Barling affords recognition of conspicuous services, academic, surgical, and military. Sir Gilbert Barling is Vice-Chancellor of the University of Birmingham, and before that was Dean of its Medical Faculty. He is consulting surgeon to the Birmingham General Hospital, and during the war has acted as consulting surgeon, with the rank of Colonel A.M.S.; he received the C.B. in 1917. An interesting announcement is the knighthood conferred upon Dr. Robert Charles Brown of Preston. He was born there on October 2nd, 1836, in the house in which he now resides. He is an honorary freeman of the borough, and is consulting medical officer to the Preston and County of Lancashire Royal Infirmary. He has been three times president of the Lancashire and Cheshire Branch of the British Medical Association, and on the third occasion in 1913 delivered an address in which he recalled the "Surgical Milestones" of his day. He has been a generous benefactor of the town of his birth, and has shown his readiness to assist in what he felt to be good causes elsewhere; one instance was his presentation to the Cambridge Hospital for Special Diseases of a very complete x-ray installation. Sir Robert Brown's influence has been wide, and it has always been exerted for the betterment of medicine and the maintenance of a high standard of professional conduct. The honour of knighthood is conferred also upon Mr. W. Ireland de Courcy Wheeler, surgeon to the household of the Lord Lieutenant in Ireland and to the Mercer's Hospital, Dublin. During the war he served, with the rank of honorary lieutenant-colonel, as honorary surgeon to the forces in Ireland, to the Dublin Hospital for Wounded Officers, to the Duke of Connaught Hospital for Soldiers, and to the Military Orthopaedic Centre, Blackrock. The same honour is conferred upon Mr. J. W. Y. MacAlister, secretary of the Royal Society of Medicine for the last thirty-two years. The amalgamation of the numerous medical societies in London into the Royal Society of Medicine was brought about very largely through his efforts. He was also largely concerned in the recent formation of the Fellowship of Medicine, which we hope has a great future before it, in spite of some present signs of slackness or disunion. We may note also the baronetcy conferred upon Mr. Laurence Philipps, who, with his wife, presented the Rookwood Hospital for disabled sailors, soldiers, and civilians to Wales as a part of the Welsh National Medical School.

HEALTH CONSULTATIVE COUNCILS.

WE understand that the Committee of Selection appointed by the Minister of Health to advise him as to the persons to be appointed to the Medical Consultative Council, which must be set up under the Act, has reported, and that Dr. Addison will probably shortly be in a position to announce the names of the members. It will be remembered that on May 28th Dr. Addison, in reply to Dr. Farquharson, said that it was his intention so soon as the Council was set up to refer to it various questions in respect of the development of local health services, and that he would not submit any proposal to the Government on these matters until he had obtained the advice of the Council. It is intended to appoint four Consultative Councils: (1) Medical and Allied Services; (2) National Health Insurance (Approved Societies' Work); (3) Local

Health Administration; (4) General Health Questions. Each Council is to consist of not more than twenty members, and must include women. It is, we believe, the intention that two of the members of each Council shall be women. The Minister of Health will be the President, and the Parliamentary Secretary the Vice-President, of each Council, and each will have a chairman, vice-chairman, and a secretary. To the Council concerned will be referred questions arising upon orders and regulations proposed to be made, questions of principle and scientific difficulty, and other questions concerning the powers and duties of the Minister, who undertakes to place at the disposal of the Council the information required to enable it to consider matters thus referred to it. Each Council will have power to ask the Minister to refer to it any questions relative to its department. It may also present to the Minister a report on any matter, even though not referred to it, and the Minister must receive and consider such report. A member of a council holds office for a term of three years, but will be eligible to be reappointed for another term. In the selection of members of the other councils the Minister is following the same procedure as in the case of the Medical Council. He has, for instance, asked a number of bodies to suggest names of suitable members for the Local Health Administration Council. The bodies so invited are the Association of Municipal Corporations, the County Councils Association, the Urban District Councils Association, the Rural District Councils Association, the Association of Poor Law Guardians, the London County Council, and the National Association of Insurance Committees.

AN APPEAL FROM NORTH RUSSIA.

THE following telegram, dated Archangel, August 9th, has been received by the British Medical Association: "We, physicians of the Northern region, are, together with the rest of the population, experiencing great anxiety, having heard of the impending departure of the brave British troops. We have been informed of the resolution passed on July 27th by the conference of the Labour Party, and we assert that the allied troops defending this region from the Bolsheviks are in no way serving the interests of reaction or restitution of the old régime. The anti-Bolshevik struggle carried on, with the help of the allies, by the Northern region aims at putting an end to civil war and to create a truly free country on genuine democratic principles. Bolshevism, while ruining our country, destroys all State foundations and all the achievements of the civilization of mankind. The sparsely populated Northern region is doomed to destruction if left to her own weak resources. The moral effect of the departure of the allied troops during the height of the struggle will put a severe strain on the feeling of friendship and the belief in the fraternal assistance of the allies, and such a withdrawal will place the region in a considerably worse position than that of June, 1918. Millions of corpses and maimed Russian men, thanks to whose efforts the allies gained their well-earned victory, call to the British people to help their mothers, wives, and children, who are doomed to violation and destruction, while the whole region will be put to fire and the sword. We appeal to you British physicians to use your influence with your people to help us in the hour of our need, and that sufficient forces be sent to permit us to organize our own and establish order in the land now groaning under Bolshevik tyranny.—Praesidents Grenkoff, Fedossiev, Belilovsky."

MEDICAL ARRANGEMENTS IN THE AFGHAN CAMPAIGN.

IT has been known for some time to those who have paid attention to the matter that during the early stages of the war on the North-West Frontier of India, happily brought to an end by the declaration of peace with Afghanistan on August 8th, the troops suffered through the medical and

transport services being starved. It might have been hoped after the experiences of the first stages of the Mesopotamia campaign, and the severe criticisms of the Royal Commission, that the responsible members of the Government of India would have realized the folly of false economy in the equipment of services essential to the health and comfort of the force, yet the Mesopotamia error was repeated last May on the North-West Frontier, though on a smaller scale, since the operations were much less extensive. The difficulties encountered by the medical services were seriously increased by an epidemic of cholera which broke out in June at seven different points and lasted twenty days, during which there were 1,663 cases and 566 deaths, including 6 British officers and 15 other ranks. The epidemic was brought to an end through the efforts of the medical staff, in spite of the lack of adequate resources. The number of men evacuated to hospitals has been large, but not, it is said, larger than the very hot weather experienced made probable. A new scale of rations was adopted, but there was much delay in issue owing to the want of transport which during May and the early part of June hampered both the medical and the supply branches. The impression that the early preparations were wholly inadequate, although the probability that the Amir would attempt an aggression was foreseen, was confirmed by the issue about the middle of July of a communiqué by the Government of India. When that Government excuses itself any man who knows anything of its ways surmises that it has been accused of some serious failure. The communiqué was issued because a "very natural anxiety has lately been expressed in the press with regard to the health and comfort of the troops at the front." After specifying the places where ice machines and mineral water factories had been set up, and stating that the scale of rations both for British and Indian troops had been made much superior to any previously granted for campaigns in India, the communiqué continued: "Orders have been issued to all generals in command that medical officers are to ask for whatever they deem necessary for the comfort of the sick and wounded in their charge, and that their demands are to be met at once. Additional hospitals for 4,000 British and 8,000 Indian troops have been established in specially fitted barracks in proximity to the frontier, and electric light and fans, where none already exist, are being supplied to the former. Convalescent depôts for officers and soldiers have in addition been formed, mainly in the Murree Hills. Special arrangements have been made for the supply of fresh milk to the sick in hospital, and herds for this purpose have been so far at the front as places such as Dalka, Bannu, and Tank. The scale of equipment of Indian field hospitals has been reviewed and much augmented." It is then stated that arrangements had been made for the establishment of field force canteens for British and Indian troops at selected places on the frontier, and that the necessary personnel and stores had been dispatched. Rest camps for British and Indian troops had been organized at Umbala, Lahore, Rawal pindi, Nowshera and Peshawar, and Quetta. Tea-rooms were being established at various railway stations, and were to be extended to all stations and camps at the front. The communiqué concludes as follows: "To ensure that the above arrangements for the health and comfort of the troops are working satisfactorily, and up to the standard designed by the Commander-in-Chief, staff officers from general head quarters carry out, under His Excellency's orders, frequent tours of inspection at the frontier. Lieutenant-General Sir Charles Burchaell, the Director of Medical Services, is at the present moment making an extensive tour for the above purpose." The Hon. Mr. Hailey, Chairman of the Executive Committee of the Red Cross Council, is now at the front personally inspecting various hospitals and hospital arrangements. It is needless to add that the Red Cross

Society have given and are giving every help in their power, and that additional comforts for the troops are being systematically forwarded to the front by the 'Comforts for Troops' organization."

RECIPROCITY WITH CANADA.

THE Medical Council of Canada, at its meeting at Ottawa in June, received notification of the decision of British Columbia to relinquish its local professional examination for licence to practise in favour of the examination set up by the Canadian Medical Council. The means to be taken to establish reciprocity between Canada and the United Kingdom were further discussed, and Dr. R. W. Powell, Registrar of the Dominion Medical Council, was empowered to instruct standing counsel to draw up the necessary amendment of the Canadian Act, and to submit it to all the provinces in order to obtain consent for fresh legislation. Until reciprocity of practice has been established with every province of Canada, so that virtually reciprocity has been established with the Dominion itself, Part II of the British Medical Act, 1886, cannot be extended to the Dominion, and until this has been done by an Order of His Majesty in Council, the General Medical Council has no power to recognize the licence of the Dominion Medical Council. It follows that if the College of Physicians and Surgeons of British Columbia, with which province the General Medical Council in this country has not as yet been able to establish reciprocity, discontinues its own provincial examinations in favour of those conducted by the Dominion Medical Council there will still be no qualification granted in the province which can be registered by the General Medical Council until Part II of the Medical Act has been extended to the Dominion as a whole. The province of Saskatchewan, with which the General Medical Council has reciprocity, abandoned its own provincial examinations in favour of those of the Dominion Medical Council a few years ago, but soon afterwards changed its attitude and resumed its provincial examinations. The authorities of the General Medical Council would, we feel sure, welcome the arrival of the time when they would be in a position to extend recognition to the licence of the Dominion Medical Council.

SIR WILLIAM OSLER AT JOHNS HOPKINS.

THE *Bulletin* of the Johns Hopkins Hospital for July is an Osler number, for all but one of its 49 pages are devoted to appreciations, reminiscences, and descriptions of his manifold avatars. It is a memorial on which we see *rotiva veluti depicta tabella vita senis*. Dr. Henry M. Thomas contributes memories of the development of the school and of the coming of Osler. Lewellyn F. Barker describes him as chief of a clinic; W. T. Councilman gives an account of his early medical work; William G. MacCallum writes of him as a pathologist; W. S. Thayer as a teacher; Thomas R. Brown as he influenced the student; Thomas McCrae as he was in his relation to the patient; Louis Hamman tells of his share in the tuberculosis work of the hospital, and Henry Barton Jacobs of his relation to the tuberculosis crusade in Maryland. Thomas B. Fletcher describes Osler's influence on the relations of medicine in Canada and the United States; Edward N. Brush his influence on other medical schools in Baltimore and his relation to the medical profession, and Hiram Woods his influence in building up the medical and surgical faculty. J. A. Chatard writes of his relation to the book and journal club, and Marcia Noyes of his influence on the library of the medical and surgical faculty of the State of Maryland. Henry M. Hurd contributes early reminiscences, and Howard A. Kelly describes Osler as he knew him in Philadelphia and at Johns Hopkins. Thomas R. Boggs speaks of him as a bibliophile, and Edward N. Brush treats of his literary style. A bibliography of his published writings, compiled by Minnie Dwight Blogg, librarian to the Johns Hopkins

Hospital, extends to fifteen large double column pages; it includes 730 titles of books and articles and represents Osler's output for forty-nine years (1870-1919). The text is illustrated with portraits at different dates down to 1913. It is a homage of which, as coming from his professional brethren, Sir William Osler may justly feel proud, and is a proof of the deep and lasting impression left by him on his colleagues at Baltimore.

TEMPORARY OFFICERS R.A.M.C. IN INDIA.

LETTERS we receive from India, and articles and correspondence in the Indian newspapers, show that there is very great dissatisfaction among temporary officers R.A.M.C. detained in that country. Those among them who were serving in Mesopotamia and were ordered home expecting to be demobilized here, but have been retained in India, are especially sore. The instruction, we understand, was that those medical officers in Mesopotamia noted for demobilization by the Ministry of National Service should be released as soon as the commanding officer of the unit could spare them. When stopped in India on their way home these officers, or many of them, after a period of uncertainty at the base, were sent into the war zone and attached to new units under the command of the Commander-in-Chief in India. It would seem only too probable that they have thus lost the claim to priority for demobilization which they had established in Mesopotamia, and have passed out of the sight of the War Office at home, being now under the control of the Commander-in-Chief in India. They have also been made to suffer in pocket. Their pay, received in rupees in India, has been affected by the increase of the exchange rate on England. The standard rate was 1s. 4d. the rupee; in October, 1918, it rose to 1s. 6d.; in May, 1919, to 1s. 10d. The result was that the rupee equivalent of the sterling pay, which was 18 rupees a day, sank to 16 rupees in October, and to 14½ rupees in May. Before October the pay, as has been said, was 18 rupees, and rations and quarters were supplied. After May, as we understand, the receipts of a temporary medical officer were, stated in sterling, 24s. a day, 4s. 6d. Army of Occupation bonus, and 1s. 9d. ration allowance, a total of 30s. 3d., which at the rate of 1s. 8d. is equivalent to 18 rupees a day, the same as before October, 1918; but quarters, fuel, and light are not provided, and the ration allowance in money does not go very far. At the same time the purchasing power of the rupee in India has decreased. The Lieutenant-Governor of Bihar and Orissa, in receiving a deputation of the secretariat recently, freely admitted that this was so, and described the recent rise in prices as unprecedented. It is true, of course, that the credit in England for a remission home, whether in sterling or in rupees, is not affected, but the increased cost of living in India must make the margin for remission smaller, and of course, as every one here knows, the rise in prices makes the purchasing power of the £1 half or less than half what it was. The position of these officers seems all the harder because the officers of the Government of India, paid on a rupee basis, are receiving the same number of rupees as before, though their position with respect to remissions to this country is rendered more favourable by the rise in the rupee rate in London. The ruling that temporary officers R.A.M.C. should be paid the reduced number of rupees equivalent to the increase in the exchange on London was, it is stated, made by the Military Accountant-General, Simla, so that it would appear that the War Office was responsible for this unprecedented piece of shabby economy at the expense of officers anxious to resume the civil practice of their profession at home but retained in India owing to the embarrassments of the Government in that country. This is now to be remedied, as the Secretary of State for India stated in the House of Commons last week that he had arranged with the War Office that the sterling pay of

temporary officers R.A.M.C. shall be converted into rupees at the fixed rate of 1s. 4d., the rate at which, he added, the pay of non-commissioned officers and men has throughout been converted. Mr. Montagu did not say that this arrangement would have retrospective effect to October, 1918, but we hope we may assume it will. The War Office appears to be within its legal rights in detaining temporary medical officers in the service until the expiration of the contracts into which they have entered; in all probability the majority of the contracts run until the end of the present emergency. By the Act of Parliament passed last November the present emergency continues until the day on which the war shall be declared by Order in Council to be at an end. It was hoped, and indeed, expected, that the date would be August 4th, but the Order has not been issued, and we are therefore bound to assume that, technically and legally, the emergency still continues. The reasons given for detaining officers who left Mesopotamia in the expectation of coming straight home to be demobilized, were first, the mutinous outbreaks in India, and afterwards the war with Afghanistan. Peace was declared with Afghanistan last week, and though there is, no doubt, much political unrest in India, there is no rebellion. The War Office may now properly be called upon to bring home for demobilization Territorial, Special Reserve, and temporary officers, both those who were serving in Mesopotamia and those who have served in India.

TRAINING THE CRIPPLED.

THE Clinic for Functional Re-education of Soldiers, Sailors, and Civilians opened in New York a year ago is a large and well appointed institution affiliated with the Cornell Medical College. The clinic, which was fortunate in being able to obtain suitable buildings, comprises hydrotherapeutic, electrotherapeutic, and x-ray departments mechanical apparatus designed by Professor Tait McKenzie of the University of Pennsylvania, who during the earlier years of the war did so much for the British soldier, and Professor E. A. Bott of Toronto, as standardized for use in the medical department of the United States army, and a department for special therapeutic exercises and games, and for local massage. There are also workshops, rest and writing rooms, and an outdoor garden, where many of the exercises can be given. There are three wards for patients unable to walk, and an operating room for secondary operations. Treatment is offered free to the poor, but hospital patients referred by the city authorities, or accident insurance companies, by the War Risk Insurance Bureau, or similar organizations, are charged the same rates for board, operation, or treatment, as those organizations are accustomed to pay other hospitals and dispensaries in New York. We have received a reprint of the address delivered by Professor Tait McKenzie at the opening meeting, in which he described many ingenious types of apparatus for the restoration of function, such as a finger board for abduction of stiff fingers, another for stretching contractions and flexions of the fingers, appliances for exercising the wrist and fingers, and various devices for helping a man wearing an artificial leg to learn to walk. In training a man he first learns to balance himself, and this, it is said, can be done by suspending him by a belt under the arms, working from an overhead trolley, on the same principle as the aerial transporter crutch in use at the Prince of Wales Hospital, Cardiff, to help men who have lost both lower limbs to put on their artificial limbs. When he is beginning to walk the patient is induced to discard crutches and practise between parallel bars; next he learns to walk on a smooth level surface with one stick only, and to help him to learn to clear obstructions he practises walking over a ladder with widely spaced rungs laid horizontally, supporting himself on parallel bars at a convenient height. Then he walks through soft sand or on uneven ground, and up and down inclines and on a balanced beam. Finally, he may learn to play games by

means of special attachments for arms and legs such as have been designed by Professor Bott to allow the playing of tennis, billiards, and even bowls. The general principles are the same as those which have guided the method of training adopted at the hospital at Cardiff, but it is interesting to note individual differences in the manner of obtaining the same ends.

THE MONTGOMERY LECTURES.

We publish this week the first of two Montgomery lectures delivered at Trinity College, Dublin, by Dr. Gordon Holmes. Robert John Montgomery, M.A., M.B., F.R.C.S.I., who died in 1912, left money to the Board of Trinity College and the Council of the Royal College of Surgeons in Ireland jointly to establish the Mary Louisa Prentice Montgomery Lectureship in Ophthalmology. The bequest took effect in 1915, but the war interfered a good deal with the arrangements. The lecturer is appointed for one year, but is eligible for reappointment year by year for a period not exceeding five years; he will receive about £175 a year. For the first five years the appointment is in the hands of the Board of Trinity College, Dublin, for the next five years in those of the president, vice-president and council of the Royal College of Surgeons in Ireland. The lecturer is required to give one or more formal lectures in each year to members of the medical profession and medical students in Dublin upon a subject connected with ophthalmology, to which he has given attention during the previous year. Dr. R. J. Montgomery was himself on the staff of St. Mark's Ophthalmic Hospital, Dublin, now the Royal Eye and Ear Hospital.

TUBERCULOSIS COLONY IN CUMBERLAND.

The Cumberland County Council are to be congratulated on their enterprise in the purchase of Englethwaite Hall, near Cotehill, about seven miles south of Carlisle and close to a railway station on the Midland Railway. The site cost £5,000, and it is intended forthwith to convert it into a colony for tuberculous patients. The mansion stands in 32 acres of ground. There are four reception rooms and twelve bedrooms, and there is a smaller house in the grounds. There is also an excellent ballroom close to the mansion, which will form a suitable recreation room. The place will be run as a colony on the same lines as that at Papworth, Cambridge. It will be different from a sanatorium and do away with an unsatisfactory feature of sanatorium treatment by providing occupation. Men will be put to various trades as nearly approaching their own as possible. The County Council has authorized the purchase of the necessary furniture and fittings, and it is hoped that the new institution will soon be in working order.

Medical Notes in Parliament.

War Pensions Administrative Provisions Bill.—On the third reading of this measure, on August 8th, Sir James Craig, Parliamentary Secretary to the Ministry of Pensions, said, in reply to various criticisms, that the policy of transferring ex-service men for training from the Ministry of Pensions to the Ministry of Labour would be continued, but it should be clearly understood that no pensioner left the auspices of the Ministry of Pensions until he was certified by the medical staff of the Ministry to be fit to undertake the training the Ministry of Labour proposed to give him. Six very large and suitable industrial centres were being established. Far from the Ministry of Pensions parting with a man before he entered the industrial world, it was the desire and duty of Sir L. Worthington Evans to see that the responsibility of passing men on to the Ministry of Labour rested with the Pensions Department medical advisers. Mr. Hogge had asked whether, when a permanent pension had been awarded, it would be possible to allow a man who was dissatisfied to appeal. All that could be said at present was that there was a possibility of this being done. The matter had not been specifically discussed between himself and the Minister of Pensions, but there appeared to be no administrative difficulties in the way. The appeal was one on assessment. It really

meant an appeal to a rather superior medical board. He would submit to Sir L. Worthington Evans the request that the new appeal tribunals should be made available for rehearing the cases which had already been tried by the existing appeal tribunals; but he did not think that this was possible. Mr. Hogge, interpolating, asked Sir James to bear in mind that the new appeal tribunals would not operate until the present measure had been passed into law; and that no one who had a pension prior to that date would have a right of appeal to the new tribunals. Sir James, who had previously expressed the opinion that the new appeal tribunals could not be fairer or more practical than those now existing, said he would leave the door open, in the sense that he would represent to the Minister what had been said; but he did not wish to be thought to favour the suggestion. The bill was then read a third time.

Rupee (Rate of Exchange).—Sir A. Fell asked the Secretary of State for India, on August 6th, if the pay of the officers of the Royal Army Medical Corps and of the nursing sisters serving in India was now paid to them at a rate of exchange of a rupee for 1s. 8d. of pay, whilst it was paid at 1s. 4d. when they went to India; and if, in addition to this actual loss of pay, the purchasing power of the rupee had declined; if non-commissioned officers and men were paid at the same rate of exchange; and what was going to be done to remedy this hardship. Mr. Montagu replied: Assuming that the hon. member refers to temporary officers of the Royal Army Medical Corps and to temporary nurses of the Imperial Nursing Service, I have now arranged with the War Office that their sterling pay shall be converted into rupees at the fixed rate of 1s. 4d. The pay of non-commissioned officers and men has throughout been converted at the fixed rate of 1s. 4d. the rupee.

Pay of British Officers in Indian Army.—Mr. Montagu, in answer to Colonel Yate, on August 8th, said he hoped to be in possession within a fortnight of the proposals of the Government of India for a permanent revision of the rates of pay for British officers in the Indian Army, and he would do all he could to expedite a final decision when they reached him. Pending that decision the Government of India was making recommendations, which he hoped to have before him in a few days, for a scale of temporary allowances to hold good until the permanent scales were introduced.

Medical Arrangements for the North-West Frontier Operations.—Viscount Wolmer asked the Secretary of State for India whether there had recently been a serious outbreak of cholera among the troops of the 6th Indian Brigade at Ali Musjid, North-West Frontier, whether the medical personnel of the brigade was not up to the establishment strength, and whether there was a breakdown in the medical arrangements and an insufficient supply of anti-cholera vaccine. Colonel Yate asked what arrangements had been made for the health and comfort of the troops of the North-West Frontier, and what action was being taken with regard to the allegations recently published as to defects in hospital management and supply. In a written reply, on August 5th, Mr. Montagu reproduced the communiqué issued by the Government of India to which attention is drawn elsewhere (p. 213), and added that a specific inquiry was being made into each definite allegation as to defects in hospital management and supplies brought to his notice.

Clinics for Neurasthenic Ex-Service Men.—In a written reply to Major Prescott, on August 7th, Sir James Craig stated that it was hoped that soon a central neurological institution would be established in each region, available for both in- and out-patient treatment. It was recognized that in a great number of neurasthenic cases in-patient treatment was not required, and a number of clinics were being established in various parts of the country where expert out-patient treatment would be given. It was confidently expected that very soon ample accommodation would be available for the efficient treatment of these cases.

Hospital Ships at Archangel.—Mr. Churchill, in a written answer to Mr. Jodrell, on August 7th, stated that at that time there were no British women nurses in the port and town of Archangel. A matron and thirteen sisters were, however, on duty in a hospital ship which was stationed at Archangel from November 2nd to June 2nd last when the ship returned with them to Great Britain. The hospital ship went back to Archangel on July 7th with one matron and ten sisters, and left again on July 28th with the nursing staff on board. Two hospital ships were being used to evacuate patients from the military hospitals in North Russia.

Royal Army Medical Corps Appointments.—Captain Guest, in a written answer to a question by Major Lyle on July 31st, stated that the promotion of officers to the senior ranks of the Army Medical Service was made by the Army Council on the recommendation of a selection board, composed of major-generals of the Army Medical Service.

Medical Benefits under National Health Insurance.—Mr. Astor, replying to Mr. Godfrey Locker Lampson, on August 11th, said that the question of what changes, if any, in the existing medical benefits under the Insurance Acts would be proposed for 1920 had not yet been decided. Various improvements in the conditions of service, and the possible establishment of some of the additional matters that were suggested in the estimates of 1914 had been under consideration at the Ministry and in conference with the practitioners. He further discussed with the new Consultative Council the Insurance Committees, and with the approved societies, but these matters were not yet in a sufficiently advanced state to admit of any precise statement that day.

HONOURS.

THE following are the statements of services for which the decorations announced in the *London Gazette* of February 15th, 1919 (BRITISH MEDICAL JOURNAL, February 22nd, 1919, p. 227), were conferred:

Military Cross.

Temporary Captain (acting Major) John Richard Percy Allin, 90th Field Ambulance, R.A.M.C.

For conspicuous gallantry and devotion to duty in charge of bearers on September 29th, 1918, and following days. On the 29th, during the advance, he made his way through Lehanourt to Le Tronquay, despite severe shell and machine-gun fire. He promptly organized the evacuation of the wounded, and by his fine example and energy secured the rapid evacuation of over 250 casualties.

Captain Alan Fenton Argue, C.A.M.C., attached 87th Canadian Battalion, Quebec Regiment.

For conspicuous gallantry and devotion to duty. September 2nd-3rd, 1918, at the Dury-Arras sector. During the attack he accompanied the battalion during its advance under very heavy fire, and established his first aid post in a trench close to the front line reached by the battalion, and continuously during the day and night worked without any rest and under constant fire. Later he went to the assistance of a wounded officer under heavy shell fire, dressed his wounds, and remained with him until he died in his arms. Throughout he behaved admirably.

Temporary Captain (acting Major) Basil William Armstrong, R.A.M.C., attached 100th Field Ambulance.

For conspicuous gallantry and devotion to duty. During the fighting around Forenviller and Seranvillers on October 8th, 1918, he was in charge of the bearers clearing casualties of an infantry brigade. He constantly visited all the regimental aid posts, having to pass along roads and tracks subjected to very heavy machine-gun fire throughout the whole day. All his work was done in the open, and by his energy, disregard of danger, and skilful organization he succeeded in evacuating all the wounded in a very short time.

Captain Frederick Grant Banting, 13th Field Ambulance, C.A.M.C.

Near Haynecourt on September 28th, 1918, when the medical officer of the 46th Canadian Battalion was wounded, he immediately proceeded forward through intense shell fire to reach the battalion. Several of his men were wounded, and he, neglecting his own safety, stopped to attend to them. While doing this he was wounded himself, and was sent out notwithstanding his plea to be left at the front. His energy and pluck were of a very high order.

Captain James Harold Blair, C.A.M.C., attached 72nd Battalion Brit. Col. R.

For conspicuous gallantry and devotion to duty during the Bournon Wood operations before Cambrai from September 27th to October 1st, 1918. During the attack on September 27th he rushed ahead under heavy fire and rendered immediate medical attention to all wounded in the vicinity. During the attack on the 29th he followed the attacking troops closely and dressed the wounded as he went forward, and formed the enemy prisoners into stretcher parties. Immediately after the town of Sancourt was captured he established a regimental aid post there, and continued to work under heavy fire. His work throughout was of the highest order.

Captain Edwin John Bradley, R.A.M.C. (S.R.), attached 1/3rd (North Midland) Field Ambulance.

He was in charge of the bearers during the attack on the St. Quentin Canal on September 29th, 1918, and displayed great gallantry and initiative. He went forward and sought a position for an advanced dressing station in Belleuglise when it was being heavily shelled by the enemy, and finally organized collecting and relay posts on a route farther north. His dispositions were most skilful, and the rapid evacuation of the wounded was mainly due to the exertions of this officer.

Captain Miles Gillespie Brown, C.A.M.C., attached 85th Canadian Battalion, Nova Scotia R.

For conspicuous gallantry and devotion to duty during the Bournon Wood operations before Cambrai. On September 27th, 1918, he advanced with the attacking wave from the assembly position, and attended wounded in the open under constant machine gun and shell fire. He established his regimental aid post in an open trench, no other place being available. Later, after his assistant was killed beside him and his sergeant wounded, he continued his work with absolute coolness and outstanding devotion to duty. He behaved splendidly throughout, and saved many lives.

Captain Edwin Thomas Cato, A.A.M.C., attached 1st Battalion Australian Infantry.

In the operations near Hargicourt from September 18th to 21st, 1918, he showed untiring energy and devotion to duty in his care of the wounded, particularly on September 21st, when, in order to give early attention, he established his aid post in an open trench which was under shell fire and moved about the area continually, dressing wounded in shell holes and open country. By his disregard for personal safety and his cheerful confidence he set a splendid example to all.

Captain Herbert Troughton Chatfield, R.A.M.C. (S.R.), attached No. 6 Field Ambulance.

For conspicuous gallantry and devotion to duty from September 27th to September 29th, 1918, when in charge of stretcher-bearers. He frequently led his parties through machine-gun and shell fire to bring in wounded. He succeeded in keeping in close touch with the infantry throughout the advance to and the crossing of the St. Quentin Canal near Novelles. By his fine conduct and example he was instrumental in saving many lives.

Temporary Captain Thomas Clapperton, 141st Field Ambulance, R.A.M.C.

For conspicuous gallantry and devotion to duty during the attack on the Hindenburg Line on September 29th, 1918. Throughout the day he repeatedly conducted bearers to the most exposed parts of the line to search for casualties. Though his advanced bearer post at Berthaucourt was heavily shelled, he succeeded by his promptitude and energy in getting his wounded away without further casualties. His fine work was the means of saving many lives.

Captain (acting Major) Hubert Roy Dive, 1/2nd Mounted Brigade Field Ambulance, R.A.M.C., attached 230th Field Ambulance.

On September 21st, 1918, at Templeaux le Guerdard, when in charge of evacuation of casualties from the front line, he worked incessantly without rest under intense shell fire, exposing himself in the most fearless manner when bringing in casualties. He showed a very fine example of devotion to duty, and the successful evacuation was entirely due to his personal gallantry and initiative. He has been superintending the evacuation from the front line continuously since September 2nd, and during all this period has shown the greatest zeal and resource.

Temporary Captain Robert Donald, R.A.M.C., attached 35th Field Ambulance.

For conspicuous gallantry and devotion to duty on September 27th, 1918, during the advance on Epinoy. He dressed cases in the open all day under fire, and established a chain of aid posts as the infantry advanced. It was solely due to his unflinching zeal, his initiative, and absolute disregard for personal safety that a most difficult front line evacuation was carried out with the utmost rapidity.

Temporary Captain Alexander John D'Souza, I.M.S., attached 92nd Punjabis (Egypt).

For distinguished service and marked gallantry on September 19th and 20th, 1918. On September 19th, near El Medjel, when a report came back that an officer was severely wounded, he at once went forward under very heavy machine-gun fire to give immediate attention. His efforts for the wounded were unceasing, and he displayed a devotion to duty deserving of great praise.

Captain Lewis Hayes Fraser, C.A.M.C., attached Royal Canadian Horse Artillery.

On October 10th, 1918, near Le Cateau, when a battery commander was reported badly wounded at the observation post, this officer went forward some 1,500 yards through heavy fire to attend him. He arrived at the observation post just after the enemy barrage came down on it. Having attended to the battery commander, he went out of the trench and crawled about under the heavy barrage for nearly an hour attending to wounded infantry. He showed great gallantry and devotion to duty.

Temporary Captain William Balfour Gourlay, R.A.M.C. (North Russia).

Throughout the period October 7th to 15th, 1918, he showed exceptional devotion to duty in the care of the sick and wounded in the village of Borok, under frequent shell fire and several infantry attacks. His hospital at Borok had twice to be moved owing to fires caused by shelling; and though worn out by want of sleep and hard work he attended to the evacuation of the wounded when the troops moved back from the village, marching with them for a long distance and helping to ease them over bad roads under difficult circumstances. He set a fine example throughout of unselfish endurance in the performance of his duties.

Temporary Captain Norman Frankish Graham, R.A.M.C., attached 6th Battalion London Regiment.

Near Maricourt, during the operations of August 26th, 27th, 28th, and 31st, 1918, this officer showed the greatest courage and devotion to duty. On three occasions, when the battalion to which he was attached moved forward, he immediately followed behind the battalion and established his regimental aid post close up to the line, tending and superintending the collection of wounded under very heavy shell fire. He so organized the stretcher-bearer parties, largely using prisoners for this task, that the wounded were evacuated with a minimum of delay and discomfort. He was twice slightly wounded, but carried on.

Captain Gerald Wallace Grant, 4th Field Ambulance, C.A.M.C.

For conspicuous gallantry and devotion to duty near Vis-en-Artois, August 27th-28th, 1918. He was in charge of fifteen squads of bearers, and throughout the whole operations superintended the clearing of casualties under almost continuous fire from the area allotted to him. On the 28th he led his squads in advance of the infantry position, and under machine-gun fire succeeded in removing from shell holes several badly wounded men to the collecting post, whence they could be evacuated. He set a splendid example to those under him.

Temporary Captain Richard Perrott Hadden, 103rd Field Ambulance, R.A.M.C., attached 152nd Brigade, R.F.A.

For conspicuous gallantry and devotion to duty when some transport came under heavy howitzer fire near Tenbrielen on October 8th, 1919. He went straight to the place through heavy shelling to attend to a wounded man, and by his prompt action and disregard of danger, probably saved the man's life.

Captain Albert Robert Hagerman, C.A.M.C., attached 7th Canadian Battalion, Manitoba R.

For conspicuous gallantry and devotion to duty during the Bournon Wood operations before Cambrai. On September 27th, 1918, he followed close behind the attacking infantry and established a regimental aid post in the open under heavy shelling and dressed wounded under heavy machine-gun fire. On September 29th he established a dressing station in a forward trench, and for two days he worked unceasingly under shell fire in this position, dressing hundreds of wounded. He did admirable work.

Captain James Mann Henderson, A.A.M.C., attached 12th Battalion Australian Infantry.

During the attack near Jeancourt on September 18th, 1918, he established his regimental aid post immediately in rear of the jumping-off place, and attended to the wounded of his and of a supporting battalion under heavy shell fire in an exposed position. As the attack progressed he moved forward and treated large numbers of casualties in the open. By his energy, disregard of danger, and clever organization, he relieved a great deal of suffering, and throughout set a splendid example to those under him.

Temporary Captain Alexander Hunter, R.A.M.C., attached 63rd Division Engineers.

During the operations on Niergnies on October 8th, 1918, whilst attached to the advanced dressing station, when the advanced dressing station was being heavily shelled he went out to attend to some wounded. On his way he was knocked down by the explosion of a gas shell, but, though severely burned, he continued to attend to the wounded, displaying a remarkable coolness and utter disregard to personal danger. He refused to be evacuated, and remained on duty until relief.

Temporary Captain William Boyd Jack, R.A.M.C., attached 5th Battalion Leicester Regiment (T.F.).

For conspicuous gallantry and devotion to duty during the attack on Pontruet on the morning of September 24th, 1918. His regimental aid post was situated in a valley which was shelled consistently with gas and high-explosive shell. He had no dug-out, and his work was entirely in the open. From 5 a.m. till 3 a.m. the following morning he worked unceasingly, entirely regardless of danger, and his fine conduct saved many lives.

Temporary Captain Matthew James Johnston, R.A.M.C.

During an air raid on St. Omer on the evening of May 30th, 1918, four men had been buried at the Caserne d'Albret in the debris of part of the building which had been destroyed by bombs. He arrived immediately in an ambulance, and, in spite of the fact that the enemy planes were still overhead, set to work at once to effect a rescue. This had to be done in the dark, but the men were got out alive, and only one of them subsequently died. Other bombs were dropped near by whilst the work of rescue by this officer was still proceeding. On this, as on many other similar occasions, the conduct of this officer was very gallant.

Captain Charles Terrell Lewis, C.A.M.C., attached 10th Brigade Canadian Field Artillery.

For gallantry and devotion to duty. On August 29th, 1918, during the operation along the Arras-Cambrai road, two gun pits were set on fire by hostile shells. An ammunition dump was exploded and several men wounded. He hastened to the spot and dressed the wounded and removed them to a dressing station. Throughout the whole operations he was untiring in his efforts to afford immediate attention to the wounded, many times under severe fire.

Temporary Captain Charles William Berry Littlejohn, 140th Field Ambulance, R.A.M.C.

For great gallantry and initiative in the operations south-east of Ypres from September 28th to October 4th, 1918. During this period he was in command of forward stretcher bearers, and it was solely due to his energy and dash that close touch was kept with battalions and their wounded promptly evacuated. He exposed himself freely to sniping, machine-gun, and shell fire to get at the wounded of not only his own brigade but of other divisions, and by his fine conduct saved many lives.

Temporary Captain Alfred Mason, R.A.M.C., attached 229th Field Ambulance.

Near Moislains and Hargicourt, September 2nd to 25th, 1918. While in charge of the bearer division working in front of the advanced dressing station he was unceasing in his efforts on behalf of the wounded. Although his area was on many occasions subjected to very severe shell fire, and, although he was for some days himself ill, he succeeded through sheer gallantry and devotion to duty in maintaining touch with the regimental aid posts continuously during the advance, thereby securing the rapid evacuation of the wounded. His work was admirable.

Captain Harry Clarke Moses, C.A.M.C., attached No. 5 Field Ambulance.

For conspicuous gallantry and devotion to duty in charge of the advanced post of the right sector during operations round Neuville Vitasse, Wancourt, and Cherisy, August 26th to 27th, 1918. He was exposed to frequent enemy shelling, bombing, and machine-gun fire from aeroplanes, and when a shell exploded among a number of wounded awaiting evacuation he directed the adjustment of the marks on the wounded and succeeded in protecting them from all effects of the gas.

Lieutenant William Percival Nelson, R.A.M.C.(S.R.), attached 1/28th Battalion London Regiment.

At Rumilies, on October 8th, 1918, for gallantry and devotion to duty. During a very severe bombardment of both artillery and machine guns he constantly went out to the help of the wounded, attending them with utter disregard for danger, and was the means of saving several lives and alleviating a great deal of suffering. He has at all times set a striking example by his fearlessness and devotion to duty.

Captain John Archibald Nicholson, R.A.M.C.(S.R.), attached 1st Battalion Seaforth Highlanders (Egypt).

For most gallant conduct and devotion to duty near Tabors on September 20th, 1918. He moved about in the open under a heavy machine-gun fire to dress the wounded and bring them to a place of safety. Though casualties were very heavy, he continued to perform his duties with the greatest calmness and disregard of danger. He set a very fine example of devotion to duty and showed great courage.

Captain Kenneth Claud Funnell, A.A.M.C., attached 11th Brigade Australian Field Artillery.

For conspicuous gallantry and marked devotion to duty during the attack on the Hindenburg Line, south of Vendhuile, on September 29th, 1918. He dressed the wounded under very heavy shell fire, and organized a stretcher party and conducted them to the battery positions, and by his personal and untiring efforts assisted in getting them to the nearest dressing station, a distance of about 1,000 yards, and still under heavy fire. Throughout the day he worked splendidly.

Captain Allan Melrose Purves, A.A.M.C., attached 2nd Tunneling Company, Australian Engineers.

On September 29th, 1918, during the operations against the Hindenburg Line, in the neighbourhood of Bellicourt, he formed an aid post in a forward position. At this point the enemy put down a very heavy barrage, which lasted about six hours and caused heavy casualties amongst the road party and the infantry in the vicinity. The whole of this time he attended to the wounded in the open, showing great gallantry and devotion to duty, and undoubtedly saved many lives.

Temporary Captain Edward Rogerson, R.A.M.C., attached 2nd Battalion King's Royal Rifle Corps.

For gallantry and devotion to duty east of Masemy on September 18th, 1918, and during the operations of September 24th-28th. On September 18th he attended to and bandaged wounded men under heavy machine-gun fire. His actions undoubtedly saved many lives. During the heavy shelling of our positions on September 24th-25th he was conspicuous for his utter disregard of danger while carrying out his duties, and throughout the operations he set a splendid example to those under him.

Temporary Captain James Scott, R.A.M.C., attached 12th Battalion Manchester Regiment.

On October 12th, 1918, in front of Neuville, under heavy and accurate shell fire out in the open, he dressed the wounded without cessation. His cool courage under fire and his speed and skill, combined with his energy in keeping the stretcher-bearers going and in working eight enemy squads, saved many lives. He worked untiringly, and showed such spirit as inspired all who came near him.

Temporary Captain Thomas McCall Sellar, R.A.M.C., attached 1/18th Battalion London Regiment.

During the period August 23th to September 6th, 1918, the battalion was continually in offensive action. Most of the stretcher-bearers became casualties. Throughout this time he worked with such untiring energy and marked gallantry that the regimental aid post was constantly in touch with the attacking troops, and wounded were got back to the aid post by him continually organizing and leading forward small parties of bearers under heavy fire.

Captain (acting Major) Arthur Leonard Shearwood, R.A.M.C.(S.L.), attached 33rd Field Ambulance.

For conspicuous gallantry and devotion to duty on September 27th-28th, 1918, during and after the attack on Oisy-le-Verger and Epinoy, when in charge of the evacuation of the wounded from the divisional front by motor ambulance. He worked for thirty-six hours unceasingly, visiting forward positions and establishing car posts, under shell fire. His initiative and skill in carrying out these dispositions and his complete disregard for personal danger and fine example to all those under his command, saved many lives, and rendered the evacuation a complete success.

Captain Clifford Halliday Kerr Smith, R.A.M.C.(T.F.), attached 1/4th Battalion King's Own Scottish Borderers (T.F.).

During the enemy attack on Moeuvres on September 17th, 1918, this officer, when informed that there were many serious cases lying out requiring immediate attention, went forward in face of a very heavy artillery, rifle, and machine-gun fire, and gave them his personal attention. As those urgent cases could not have been brought to the regimental aid post in time for the necessary attention, this officer, by his prompt action and fearless devotion to duty, was undoubtedly the means of saving many lives of men in this battalion.

Captain George Alexander Smith, C.A.M.C., attached 47th Canadian Battalion, West Ontario Regiment.

For conspicuous gallantry and devotion to duty during the operations in front of Cambrai from September 27th-29th, 1918. He followed the battalion closely throughout the operations, showed great energy, and dressed many cases under heavy shell fire, working out in the open with practically no shelter. He set a very fine example to those under him.

Captain John Stirling, R.A.M.C.(S.R.), attached Head Quarters, 112th Brigade, R.F.A.

On August 26th, 1918, north of Maricourt, hearing that D/112th Brigade was being heavily shelled by the enemy, he immediately went to the battery and attended the wounded. Again, near Moislains, on September 9th, 1918, when battalions were suffering casualties from enemy long-range guns, he went to them and attended their wounded. His gallantry and devotion to duty on numerous occasions have been most marked.

Captain Joseph Townsend Stirling, 11th Field Ambulance, C.A.M.C.

For conspicuous gallantry and devotion to duty. During the attack on Bourlon Wood on September 27th, 1918, he dressed wounded in the open in the vicinity, under heavy shelling and machine-gun fire. Again on September 23th, when one of his men was killed and several others seriously wounded, he went to their assistance, got them dressed, and carried to safety.

Captain Richard Chapman Weldon, C.A.M.C., attached 2nd Canadian Motor Machine-Gun Brigade.

While in action east of Arras on August 29th, 1918, at Jig-Saw Wood and Artillery Hill, he was in charge of the regimental aid post, where he showed great gallantry and devotion to duty. The heavy and continuous shell fire made the work at the aid post both heavy and difficult, entailing constant work for thirty-six hours without rest.

Temporary Captain George Burkett Wilkinson, 25th Field Ambulance, R.A.M.C.

On the night of October 3rd-4th, 1918, at Waterdamhook, he was in charge of advanced dressing station. Every one had left the village on account of intense shelling. As wounded continued to come in, he carried on dressing and evacuating wounded regardless of the risk he ran till the advanced dressing station was closed down. He showed great courage and devotion to duty.

England and Wales.

TREATMENT OF DISABLED SOLDIERS AND CIVILIANS IN WALES.

THE Cardiff Mental Hospital at Whitechurch was lent to the War Office at an early stage of the war, and Dr. F. Goodall, medical superintendent, became commandant of the military hospital, which was known as the Welsh Metropolitan War Hospital. The hospital became an important centre for military orthopaedics, but it is now desired that it should revert to its original purpose. The Ministry of Pensions, however, seems to have assumed that it would be able to take over the hospital for its own purposes, and invited Colonel Goodall to act as medical superintendent under the Ministry of Pensions. The Managing Committee of the hospital, however, appears altogether indisposed to agree to the Ministry's proposal, and has adopted a resolution requesting the War Office to remove its patients and to hand over the hospital to the committee.

by December 1st next. At the quarterly meeting of the South Wales and Monmouthshire Joint (Disablement) Committee of the Ministry of Pensions last week the chairman said that the proposal to take over the hospital at Whichchurch as a pensions hospital had been made without consultation with them, and a resolution of protest was adopted. A further resolution was passed urging the Ministry of Pensions immediately to erect the necessary additional accommodation for orthopaedic patients at the Rookwood Hospital for the Disabled at Llandaff. As has already been announced, the Rookwood estate, which comprises thirty acres, with a mansion house, on the outskirts of Cardiff, was purchased by Mr. and Mrs. Laurence Phillips, and presented for the use in the first place of pensioners, and afterwards, according to the scheme set out by Sir John Lynn-Thomas, for the treatment of orthopaedic cases in civil life, as a part of the Welsh National Medical School. The Joint Disablement Committee of South Wales and Monmouthshire has recommended its own dissolution and the transfer of responsibility for the treatment of disabled men to the Commissioner of Medical Services of the Welsh Region, Ministry of Pensions.

INCREASED REMUNERATION FOR DOCTORS AT LONDON SCHOOL CLINICS.

The London County Council has raised the remuneration of doctors, surgeons, and aural and dental anaesthetists employed at school treatment centres and hospitals in connexion with the medical treatment of children attending elementary schools to a scale of £70 a year (that is, £1 11s. 6d. for one half-day session weekly). Under the agreements with the committees of the various centres, which have been in force since 1910 until the early part of the present year, the allowance in respect of medical service was at the rate of £50 a year for one half-day a week (that is, £1 2s. 9d. a half-day). Certain of the committees, however, found difficulty in obtaining adequate service at these rates, and in April last the Council agreed to increase the amount to £60 a year (£1 7s. 3d. a half-day). Representations were then made by a deputation from the Metropolitan Counties Branch of the British Medical Association, urging that the remuneration should be further increased in order that the payments made by the Council might conform to those made by other authorities, with the result that at its last meeting before the summer recess (on July 29th) the Council agreed to increase the remuneration to £70 a year, the increase to take effect as from April 1st, 1919, the beginning of the official year. With regard to the remuneration of dentists employed in connexion with school dental inspection and treatment, the Council decided in January last to raise the remuneration to £50 a year for one half-day's service a week, and further decided in June that where a dentist had been employed by the Council for four or more years and was certified as being a dentist whose services it was desirable to retain he should be paid at the rate of £55 a year.

Ireland.

DUBLIN HOSPITALS.

THE grave position in which the Richmond, Whitworth, and Hardwicke Hospitals have been placed, due to the Government's refusal to relieve their present distress, is unchanged. The institutions continue their present hand-to-mouth existence, only paying patients being received. The reply of the Chief Secretary to the Town Clerk, intimating that the Government cannot give any hope of financial assistance, makes the outlook even more gloomy. That the closing of the hospitals, which must ultimately be brought about unless the Government changes its present attitude, constitutes a public scandal, is the view of those most deeply interested in their work. The critical position of most of the city hospitals is shown by the following overdrafts in their respective accounts on May 30th, 1919:

Meath Hospital	£15,024
Richmond, Hardwicke, and Whitworth Hospitals	12,654
Royal Victoria Eye and Ear Hospital	6,742
Coombe Lying-in Hospital	6,303
Steevens's Hospital	5,924
Royal Hospital for Incurables	5,497

Mr. Barrington Jellett, chairman of the board of governors of the Richmond, Whitworth, and Hardwicke Hospitals, who resigned early in the present year, described the continued obduracy of the Government as a callous, cruel thing, which showed there was something very rotten in the administration. The refusal to increase the grant by a few thousand pounds to keep the hospitals open while money was being spent broadcast in less worthy causes was a grave scandal. The governors were appointed by the Government, who also approved of the appointments of secretary and matron, but notwithstanding the exercise of these powers, they refused to accept financial responsibility.

Surgeon Conway Dwyer, in an interview, stated that the hospitals open for the reception of cases from the city had, since the financial difficulties arose, been compelled to turn large numbers away. It had been the custom to treat country patients from all over Ireland, but they also had to be refused admission. In addition he pointed out that the House of Industry hospital constitutes one of the largest teaching medical centres in the city, and is attended by many students, and consequently great injury must ensue to medical education by the closing of these hospitals. A large number of nurses, many of whom had only entered on their period of training, have suffered a great loss, owing to their course being interrupted. The Richmond, Hardwicke, and Whitworth were, he said, the most thoroughly equipped institutions of their kind in the United Kingdom.

Alderman Captain McWalter, R.A.M.C., writes that it is clearly the duty of the Irish Chief Secretary, as head of the Irish Health Ministry, to provide the necessary funds; but he has refused. The alternative of putting the cost of the maintenance of the hospitals on the Dublin rates Dr. McWalter considers a serious step. The corporation may be satisfied to leave the working in the hands of the present governors, or it may insist on taking over the control itself. Such an action would have several important results. It would cost in the beginning, perhaps, £6,000 a year over and above the Government grant. In a short time this burden would increase to probably £12,000 a year, or an extra 2d. on the rates. Further, if the hospitals were on the rates the corporation would probably refuse to take country patients, and this would be a loss to the whole of Ireland. As much of the debt of the hospitals is said to be due to the treatment of sick and wounded soldiers, it is probable that they would no longer be received. The present cost of hospital treatment to the corporation, including the grants to all the hospitals, but excluding the cost of fever or tuberculosis hospitals, is about £7,000 a year. If once the corporation began to spend an extra £6,000 on any given hospital, the others would doubtless press their claims, and in a short time the expenditure on hospitals alone would be £30,000 a year. Dr. McWalter places the responsibility on the Government, which, he says, is drawing £39,000,000 a year out of the country; it ought not to be allowed to escape, but meanwhile the hospitals must shut and the poor must suffer.

India.

REAPPEARANCE OF EPIDEMIC INFLUENZA.

THE Government of India on July 11th issued a communiqué beginning as follows:

Outbreaks of influenza are reported from Bombay, Calcutta, Rangoon, and Madras. These outbreaks do not (save in the case of Bombay) appear to have attained serious dimensions. Nevertheless, they coincide in time with the preliminary outbreaks of last year; and though there is at present no reason to apprehend an epidemic of the same proportions, the measure of immunity conferred on any individual by a previous attack is uncertain.

The Government proposed that local governments should require the notification of ship-borne cases of pneumonia and of "violent influenza," and asked that it should receive intimation of all outbreaks in order that warning might be given to authorities and the public in neighbouring areas. Stocks of anti-influenza vaccine were being made ready, and surgeons and administrative medical officers were invited to ask for supplies to be ready on the spot in cases of emergency. The Sanitary Commissioner with the

Government of India has distributed a leaflet recommending as a preventive the douching of the nasal cavities and throat in the following manner:

(a) Dissolve one teaspoonful of salt in a pint of warm water; (b) gargle the throat with some of the solution; (c) place the remainder of the solution in a basin; (d) immerse the nostrils in the solution; (e) sniff slowly some of the solution up the nostrils until it is felt at the back of the throat; (f) raise the head from the basin, and allow the solution to flow from the nostrils into a bucket; (g) repeat this process two or three times. The whole ritual should be carried out four and five times daily.

The procedure, it is said, gave good results during the last epidemic in South Africa. The outbreak in Bombay has been the subject of a report by the municipal health officer, who speaks strongly on the insufficient water supply, overcrowding, and insanitary housing. Captain Malone, the specialist deputed by the Government of India to assist in dealing with the situation, is carrying on investigations at Parel Laboratory. Arrangements were being made to reopen roadside table dispensaries, and for establishing a spraying installation and disinfectant. A chamber has been erected where ten persons can be treated at a time, and should its use prove useful other similar installations will be set up.

THE ST. JOHN AMBULANCE ASSOCIATION.

The annual meeting of the St. John Ambulance Association in India was held at Simla on June 24th. The Viceroy, who presided, expressed his regret that, owing to the North-West Frontier campaign, it was not yet possible to turn the activities of the association entirely to peace conditions. He recalled that in August, 1916, with the help of the late Sir Pardey Lukis, and of the Red Cross and St. John Ambulance Association at home, an Indian branch of the Joint War Committee had been formed. The Indian Council had modified the organization so as to give fuller recognition to provincial centres, which now controlled their own finances and exercised a definite influence over the local organizations. The scope of the work would, it was hoped, be extended; it was, for example, proposed to consider the desirability of organizing classes in maternity work—a crying need; but if the work were to be extended greater financial support must be received. Acknowledgements were due to all those whose voluntary efforts had been given during the year, and the many medical officers who had given their time to instructing classes. Through the ample resources provided the Indian Joint War Committee had been able to take over complete responsibility for the widespread activities of the Red Cross in Mesopotamia, and also greatly to extend its work in the military hospitals in India. The forces in Mesopotamia owed much to the efforts of the Red Cross organization and the unstinted liberality of the Indian public. He believed that the records of the Indian Red Cross in Mesopotamia during the last year of the war would not compare unfavourably with that of the Red Cross anywhere else. The experience gained in Mesopotamia was of great value when the call came to enter on a fresh field of effort on the North-West Frontier; the Committee had found ready assistance from the Commander-in-Chief, who deputed a number of officers as Red Cross Commissioners, and fortunately it possessed considerable stocks in its Bombay dépôt. Large supplies were rapidly moved up and dépôts were opened at Rawalpindi, Peshawar, Kohat, Quetta, and Bannu, and the issue of comforts to hospitals and field units began within a fortnight of the commencement of hostilities. Looking to the future, the Viceroy said that it was clear that if the Joint War Committee was to meet efficiently the sudden strain that operations such as those on the frontier might throw on it, it must have a better equipped system of advanced dépôts and a scheme of finding without delay the necessary personnel of storekeepers, clerks, and similar establishment. It must have its own means of transport and a considerable stock of non-perishable stores ready to move up to any front which might require them. It was hoped that the Committee would shortly give place to a regularly constituted Indian Red Cross Society, adhering to the new world's league of Red Cross Societies, and having in common with the other adherents not only a military but a civil side. Civil work would probably begin with a scheme for assistance to civil hospitals.

VOLUNTARY EFFORT IN DISEASE PREVENTION IN BOMBAY.

The value of voluntary work in conjunction with that of the Bombay Health Department on the occasion of the outbreaks of epidemic diseases in the city is emphasized in a recent report of the Medical Relief Committee of the Corporation. The Committee refers to the success of voluntary co-operation which was asked for and readily obtained when epidemic disease was recently raging in the city, and records with gratification that on this occasion not only did a large number of individuals volunteer their services to the Health Department, but that important bodies, such as the Social Service League, the Humanitarian League, the Hindu Medical Association, and the St. John Ambulance Brigade, organized their men and resources and carried on relief work in co-operation with the department. A committee was appointed to frame, in consultation with the health officer, a scheme for future working of volunteers and voluntary organization in connexion with the Health Department. Under this scheme it is proposed that the city should be divided into fifty units, each consisting of about 20,000 people. Each unit should have a committee, consisting of a chairman, two secretaries, and two members. Each committee would have an organization consisting of one doctor, two nurses, and not less than ten volunteers, the municipality to retain on an annual retaining fee of 100 rupees thirty doctors, from whom a binding undertaking should be taken to the effect that when called at the outbreak of an epidemic they should be prepared to give their whole time on a remuneration of 15 rupees a day. Arrangements should be made by the municipality to keep in store sufficient materials to furnish and equip temporary hospitals of 200 beds. When once these hospitals are equipped by the municipality they should be worked by voluntary agencies as far as possible.

RURAL HEALTH IN THE PUNJAB.

The Board of Health has recommended the appointment of rural health officers in three districts: (1) in some particularly unhealthy district, such as Gurgaon; (2) in some particularly advanced district, such as Jullundur, where the rural population is likely to be ready to welcome measures of improvement; (3) in Rotak, because the district board there has shown special enterprise in appointing a rural health inspector of its own and raising a tax to meet the expense. The Board has laid stress on the importance of making the health officers a provincial service and not subordinated to district boards. On the question of curative and preventive staff within a district, the Board has recommended that the civil surgeon and the health officer should be separate authorities side by side, the latter corresponding to the Sanitary Commissioner and the former to the Inspector-General of Civil Hospitals.

WESTERN MEDICINE IN THE EAST.

The annual report of the South Travancore Medical Mission for 1918, issued by the London Missionary Society, states that the institution has seventeen hospitals and dispensaries scattered over a hundred miles from near Cape Comorin to the north of Quilon. To these some 120,000 patients come every year. The Neyyoor Hospital has accommodation for 60 in-patients, but in 1918 beds had to be provided for 100. During the year the wards in the women's department were frequently crowded. In the Jeper Homes there are 45 patients, 35 male and 10 female. Intravenous injections of sodium gynoacardate, according to the method of Leonard Rogers, was followed, when the disease was not far advanced, by improvement, but it is too early to say whether cures can be effected. During the two years previous to the date of the report the operation of posterior gastro-enterostomy was performed 75 times. Every year the number of people in Travancore who applied on account of gross lesions of the stomach and duodenum in the region of the pylorus became greater. Six or seven years ago such cases were scarcely ever seen in the hospital. In 11 of the 43 cases last operated on hookworms were found. Five of the 75 patients died after the operation, 4 of them of bronchopneumonia during the influenza epidemic, which affected Travancore very seriously. The total number of major operations performed during 1918 was 356 with 15 deaths; of minor operations there were 1,212.

Correspondence.

THE TERRITORIAL FORCE MEDICAL SERVICE.

SIR,—I have received letters from thirty-four territorial medical officers asking me to state my views in your journal.

The purport of their letters is that, as the senior medical officer (T.), I had rather an extensive acquaintance with all ranks, having previously had long experience as a Volunteer medical officer, having been intimately associated with the various Volunteer medical societies, having been chairman of the Senior Medical Officers' Association, on the committee of the Volunteer Medical Association, and commandant of the Volunteer School of Ambulance Instruction for fourteen years, during which time some 780 medical officers and over 12,000 non-commissioned officers and men had obtained their (p.) or A.F. E.596.

Sixteen years' experience as regimental medical officer and nineteen years as a brigade surgeon, during which time I never missed a training, and was senior medical officer to four different brigades, convinced me that the regimental system, however socially happy, was absolutely wrong, and militated against the medical officers ever being united, and so a powerful factor. As senior medical officer I had sometimes been able during the training of a brigade to get a medical officer of one unit to do duty with another, and others have been out with a bearer company.

Eventually in 1902, after numerous meetings of the Senior Medical Officers' Association, a scheme was submitted to the War Office, and later a deputation had an interview with the Under-Secretary. Ultimately the majority of our requests were granted, but the most important was refused, namely, that the Volunteer Medical Service should be represented at the War Office, as other branches of the Volunteer service were.

For several years after this I had a paper at the Annual Meeting of the British Medical Association on volunteer medical affairs, chiefly on training and organization. Later I was on a committee of the British Medical Association, of which Colonel E. Wilson, C.B., was chairman; we prepared a scheme for a Territorial Medical Service at the request of the War Office. In 1907, when Lord Haldane formulated his medical scheme for his Army Act, at a meeting of the profession at the Royal College of Physicians, at which he and the D.G.A.M.S. spoke in detail, Sir Frederick Treves proposed, and I was selected to second, the resolution recommending the Volunteer medical officers and profession loyally to support the scheme. I pointed out how desirable it would be to have a S.M.O. at the War Office, with temporary rank of surgeon-general. This did not fructify, and here I would mention that during the war numerous consultants of the *à la suite* Territorial staff and Colonial M.O.'s have been temporary surgeon-generals (now major-generals); no Territorial medical officer, pure and simple, has been similarly honoured.

In the R.A.M.C.(T.) the moving of Territorial M.O.'s should not only be permitted, but when desirable should be insisted upon; it can be generally carried out easily, if the A.D.M.S.(T.) has any tact.

I found out in the City of London Division, where all the units were comparatively near, and where I, having entirely retired from practice, could devote the whole of my time, and perhaps could spend more money on a hobby than many men in practice could, things were difficult: difficulties which must have been almost impossibilities for the A.D.M.S.(T.) of a wide area, because no man with a decent practice, if he could have afforded the money, could have spared the time.

Transfers from one division to another were also possible. I transferred several at their request, and one of the officers of the division succeeded me while another became the A.D.M.S.(T.) of another division.

From this it would be realized that all A.D.M.S.(T.) should be permanently employed, or receive consolidated allowance to recompense them for their loss of time and consequent diminution of fees. One should be permanently at the War Office as director of the Territorial Medical Service with the rank and pay of major-general.

Having been on duty at home all through the war, I can give no personal opinion as to the merits or demerits

of the executive personnel or equipment in the field. I would, however, suggest that for peace training field ambulances should be divided into four sections instead of, as at present, into three, so that when a brigade is entirely split up into regiments each should have its self-contained medical unit. I would also suggest that once in three years a general hospital should train in conjunction with its division, and that, as I had with the First London Division, members of the sanitary company should be attached to the units and brigades for training.

My suggestions may be summarized as follows:

1. A senior Territorial officer at the War Office, with rank and pay of major-general.
2. Consolidated pay for all A.D.M.S.(T.).
3. Increase of pay to all R.A.M.C.(T.) M.O.'s to meet increased cost of living and locomotion.
4. More use of R.A.M.C.(T.) schools.
5. Personnel of general hospital to train every three years with its division.
6. Sanitary company to detail men for camp to brigades.
7. Division of field ambulance in peace into four self-containing sections.—I am, etc.,

PETER BROOME-GILES,
Colonel A.M.S.

Military Convalescent Hospital, Ashton-in-
Makersfield, Lancs, August 3rd.

SIR,—The various letters on this subject have not drawn sufficient attention to the need for the formation of a separate and independent Territorial Force Medical Department. At the present time there is supposed to be such an arrangement, but it is really subservient to the regular service.

The Territorial Force Medical Department should have its own director-general and a staff composed of Territorial Force officers only; there are two reasons for this: in the first place they have had equal opportunities as the Regulars during this war for assimilating knowledge, with probably very much more front-line experience, and, secondly, Territorial Force officers would much prefer to "run their own show."

In view of the fact that the Territorial work is voluntary, it would seem to be only reasonable that so-called "half-pay" appointments should be offered to Territorial Force medical officers; the soldier would not suffer by this arrangement, as these officers would be men who were practising their profession daily, whereas the regular officer would probably have left the professional side of his work years ago.—I am, etc.,

August 5th.

T. F.

MALARIA REDUCTION IN CYPRUS.

SIR,—Nearly twenty-two years have now elapsed since I first saw one of the parasites of malaria in mosquitos (August 20th, 1897), and since you so courageously published my first description of that find (BRITISH MEDICAL JOURNAL, December 18th, 1897). It is therefore a suitable time to call attention to one of the most successful anti-malaria campaigns hitherto conducted in the light of that and of subsequent observations—the campaign in Cyprus. Details will be found in the annual medical report for 1918, published at the Government Printing Office, Nicosia, Cyprus, and obtainable from Government book-sellers in London.

The work was started in 1913, when the Governor, now Sir Hamilton Gould-Adams, G.C.M.G., invited me to report on malaria in the island, and when I drew up a scheme for him. The fall in the number of cases of malaria throughout the island has since then been steadily maintained during five years. The figures for district and rural dispensaries from 1913 to 1918 inclusive have been 7,342, 6,257, 4,371, 3,614, 2,593, 2,205. The total cases treated were 10,035 in 1912 and 2,414 in 1918. The average spleen rate of the children in the island has fallen *pari passu* from 1913 to 1918, as shown by the figures, 17.2, 15.3, 11.5, 7.6, 6.0, 5.1. There was a small recrudescence in the Famagusta district in 1918, ascribed to incomplete pumping of an extensive breeding lake owing to war conditions. The report adds a brief summary of the draining, filling-in, screening, oiling, stocking with fish, etc., executed during the year.

These results have been obtained with very small means indeed. The credit of them is due entirely to the Chief

Medical Officer of Cyprus, Dr. R. A. Cleveland, and to his worthy staff. I suppose that with the present organization of the medical profession it would be foolish to hope for them any rewards for a mere sanitary victory, however distinguished, such as are so frequently given for victories in other fields; but perhaps, Sir, you will allow me to express publicly my own humble personal thanks to them for the loyalty and determination with which they have followed the advice that I was privileged to give them in 1913. I should like also to thank the Government of Cyprus for its invariable support of their efforts.—I am, etc.,

London, N.W., Aug. 12th.

RONALD ROSS.

A POST-GRADUATE SCHOOL IN LONDON.

SIR,—I think it very doubtful whether any scheme of post-graduate teaching in London can succeed until there is one good general hospital which devotes itself entirely to the needs of graduates. To give special post-graduate instruction at an ordinary London teaching hospital is almost impossible, for the time and energy of the staff are already fully taken up by the claims of the undergraduate students. The ideal thing would be for a first class teaching hospital of central situation (such as University College or the Middlesex) to devote itself entirely to post-graduates and to affiliate to itself some of the special hospitals in its vicinity. If the teaching at the post-graduate hospital was chiefly done in the morning, special courses by selected teachers at the outlying general hospitals could be arranged in the afternoons. There should be a club house and secretarial offices, with an information bureau at the post-graduate general hospital, and three courses of instruction annually should be arranged, each lasting three months. Substantial fees should be charged and all teachers adequately paid. If these conditions are fulfilled there can be no doubt that London might become a great post-graduate teaching centre; till then I must describe myself as—

August 9th.

SCEPTICAL.

SIR,—The letters from Sir Arbuthnot Lane and Sir StClair Thomson in your issue of August 9th are timely. Post-graduate instruction has existed in London for many years, but it has been a poor sickly plant. During the last few months, thanks to the Fellowship of Medicine, it has revived, but it will again die down unless we in London very promptly see that this is not allowed. London ought to have, and it will be a national disgrace if it does not have, the finest post-graduate school in the world, for it has the best clinical material, but we must act quickly or other countries will forestall us. I know that some enthusiasts are at work on this subject; everyone in any way he can must help.—I am, etc.,

London, W., Aug. 12th.

WILLIAM HALE-WHITE.

SIR,—It is greatly to be hoped that the organization of a post-graduate school in London will not be delayed or even fall through while the Post-graduate Association and the Fellowship of Medicine are settling their differences. From many conversations I have had with visitors from the U.S.A. and from our own dependencies and colonies, I am quite sure they are all returning to their respective countries full of goodwill and gratitude for the arrangements made for them by the committee of the Fellowship of Medicine. The name is now well known, the committee is trusted, and the head quarters familiar. Surely it would be a grievous pity if this valuable asset in goodwill were to be scrapped by the setting up of a new and totally unknown body. Why not continue the name, unite all our forces, and make the scheme a grand success?—I am, etc.,

London, W., Aug. 12 h.

ERIC PRITCHARD.

THE ILEO-CAECAL SPHINCTER.

SIR,—Mr. Rendle Short's observations on the ileo-caecal valve in man will be welcomed particularly by all who are seeking to enlarge our knowledge concerning the mechanism of the ileo-caecal tract. Sir William Macewen

described a case very similar to Mr. Short's in his Huxley Lecture. I think that Mr. Short is right in his belief that his are the first observations on the effect of applying acid or alkaline media to the caecal mucous membrane on the opening and closing of the ileo-caecal orifice—at least, so far as man is concerned. In a paper published in the *Proceedings of the Anatomical Society*, November, 1903, I have reported equally negative effects on the ileo-caecal sphincter of the mouse. I published at the same time the announcement that the ileo-caecal orifice is guarded by a sphincter in man and in all vertebrate animals, this being, so far as I know, the first mention of the existence of such a sphincter. At the same time, and quite independently of my observations, not only was the existence of this sphincter announced, but the conditions under which it acts were fully described by Dr. T. R. Elliott.—I am, etc.,

ARTHUR KEITH.

Royal College of Surgeons, Lincoln's Inn Fields,
London, W.C., August 11th.

NATIONAL INSURANCE.

SIR,—I have been instructed by the President, Dr. John Playfair, and the Executive Committee of the Medical Guild to submit for your consideration the following suggestions embodied in certain resolutions passed at recent meetings of the Guild, after full consideration of the memorandum of the Insurance Commissioners and the report of the Insurance Acts Committee of the British Medical Association on the revision of the conditions of service under the National Health Insurance Acts and possible extensions of service.

1. Professional attendance and treatment given to any insured person by any registered medical practitioner acting solely on the usual understanding subsisting between a practitioner and his private patient, shall be recognized as medical benefit for that person, and such person shall receive a just contribution from moneys provided for medical benefit towards the payment of such attendance and treatment.

It has been estimated that there are approximately 20,000 insured persons in Edinburgh who receive professional attendance and treatment from non-panel practitioners, and as this number is increasing annually, it is a matter of justice that those persons should be allowed a money contribution towards payment of such attendance and treatment, especially when the fact is taken into account that the large sum of money for payment of the medical benefit of those persons is being paid to or distributed among the panel practitioners, who do not work, and never will have the opportunity of working, for this money. This statement is applicable to other towns and cities.

2. That obstetric practice should not be included within the range of national health insurance.

3. That tuberculosis should be excluded from the range of national health insurance.

4. That the National Insurance Acts as at present administered should not be extended, with the exception of specialist's advice to the present insured.

5. That a State medical service is of urgent necessity for the genuinely necessitous classes of the community, and for them only.

—I am, etc.,

FREDERICK PORTER,
Honorary Secretary.

The Medical Guild
65, Morning-side Road, Edinburgh.

SUPPLY OF SERUMS AND VACCINES FOR INSURANCE PATIENTS.

SIR,—In your issue of July 26th there appears a letter from Dr. Campbell of Duns, Berwickshire, showing that he was successful in having a supply of antitetanic serum "warranted" by the National Insurance Commission for Scotland. Presumably he is a rural practitioner who has contracted to supply necessary remedies, and the case is similar to that of Dr. Fisher v. the Hertfordshire Insurance Committee, where Dr. Smith Whitaker ruled that expensive remedies like serums and vaccines were "drugs" which must be supplied under the contract by the practitioner who undertook dispensing. As a natural corollary, this decision would be expected to include the supply of serums and vaccines by druggists on prescription by a panel doctor who did not dispense.

I applied for a supply of staphylococcus vaccine through

the clerk of the Northumberland Insurance Committee and received the following reply:

In reply to the question which you asked on the telephone as to whether you could supply (by prescription through a druggist) the vaccine referred to by you, I have to inform you that the Insurance Committee resolved that serums and vaccines could not be dispensed. I have spoken to the Chairman of the Medical Benefit Subcommittee and he confirms this. (July 23rd, 1919.)

The vaccine required was for an insured person for whom I had not contracted to dispense. Is it possible that Dr. Smith Whitaker, who lectured Dr. Fisher like a schoolboy in regard to the matter, and whose extraordinary decision is beyond appeal, has omitted to notify Insurance Committees that serums and vaccines are ordinary "drugs"?

I may state that in Northumberland the capitation fee allowed for drugs and appliances to doctors who contract to dispense runs about 1s. 3d. per annum.

I take this opportunity of referring to another extraordinary statement of the same commissioner made at the conference of medical practitioners at Newcastle-on-Tyne. Dr. Welsh of Felton, a rural practitioner, gave a capital exposition of the arduous work in a country district, and the inadequate remuneration allowed, and Dr. Smith Whitaker said it was understood that rural patients required very little attendance, and the rate of remuneration was accordingly fixed at practically the same capitation fee as in thickly populated districts. He surmised that the condition of things must now have changed since the institution of the National Insurance scheme. I can only suggest that he must be a very poor judge of human nature, and has never practised as a club doctor, or he would have understood that contract patients demand attendance and treatment for every trifling ailment, since it does not involve facing the payment of a proportionate bill.

Dr. Smith Whitaker also reminded us that 4s. 6d. is the capitation fee allowed by the Insurance Act, and the Exchequer grant of 2s. 6d. is an extra conditional on the keeping of records. I hope the Insurance Acts Committee will insist that, records or no records, the basis capitation fee for negotiation in regard to increased remuneration is 7s. 6d. and not 4s. 6d.—I am, etc.,

Blyth, Northumberland, July 30th. ARCHD. FAIRLIE, M.D.

LOCAL CLINICAL LABORATORIES.

SIR,—After attending conferences and reading correspondence and reports of meetings, one is at times tempted to wonder how far the profession as a whole is really interested in the establishment of an improved medical service. Such matters as remuneration, certificates, control, and the like are certainly important, but yet one feels that were it generally recognized that we were fighting for more than our own personal advantage such things would be more easily adjusted.

It seems to me that the most pressing necessity is the provision of adequate clinical laboratories. In M. 25 there is a brief reference to such, but no one seems to pay much attention to it. It may be that our indifference is due to the fact that one portion of the profession has adequate laboratory assistance while the other has scarcely realized what it is missing.

A good many of us were rescued from the slough of general practice and for a few years were enabled to indulge in a more scientific form of practice in the army hospitals. Now while we are in the process of sinking back to our former state I think many of us are still able to see some ways in which our work might be improved.

It would appear from M. 25 that the intention is, in the first place, at all events, to establish laboratories in connexion with the medical schools. This, I think, is utterly wrong. What we most want in practice is to have clinical laboratories scattered throughout the country, so that they may be within reach of the majority of the profession. To send a specimen from an obscure case to a central laboratory, have it examined by someone one knows nothing of, and receive a formal report, is frequently most unsatisfying. We should be able to meet the clinical pathologist, to discuss the case with him, and to consider jointly what is the significance of his report. How often one has had light thrown on dark places by such a consultation! What

I would urge is that a small laboratory under the charge of a clinical pathologist should be established in at least every moderate-sized county, and that consultations between the pathologist and the clinician should be encouraged in every way. By this means I feel confident a much more scientific spirit might be infused into the practice of medicine, with enormous advantage to the doctor, the patient, and the community in general. These local laboratories might be connected with a parent institution in the medical schools, where special research work could be carried out. The cost need not be great—a lesson that has been learned during the war.

There might at first be some difficulty in obtaining a sufficient staff of clinical pathologists; but men could be trained fairly rapidly, and if adequate salaries were paid and a system of promotion from small to large laboratories arranged, the demand would soon produce the supply.

I venture to press this matter at present because I feel confident it is of the utmost importance, and I would again emphasize my opinion that central laboratories will not meet the requirements of the profession. There must be a much closer relationship between the clinical and the scientific sides of the profession, and that relationship can best be fostered by bringing laboratories to the practitioners.—I am, etc.,

Hamilton, July 17th.

HUGH MILLER.

THE ETIOLOGY OF AORTIC REGURGITATION.

SIR,—One statement in Dr. Knyvett Gordon's letter (July 26th, p. 117) compels me to crave permission for a further remark. Dr. Gordon asserts that I do not bring "forward any evidence" that the endocarditis met with in scarlet fever is septic in origin.

I am surprised that Dr. Gordon should adopt such an attitude, since he laid stress upon the presence of micro-organisms in the diseased spots in the valves. If Dr. Gordon believes that scarlet fever caused the endocarditis, it is his place to bring forward evidence that the endocarditis was not septic in origin. It seems to me that the only way to prove that the endocarditis was not due to septic infection, but due to scarlet fever, would be to prove that the micro-organisms were the cause of the scarlet fever. In my last letter I assumed that Dr. Gordon would not consider that to be possible, and would admit the force of my contention.

In conclusion, it may be remarked that I have been interested in Dr. Gordon's experience regarding scarlet fever and endocarditis, but may repeat that I consider it to have no bearing on chronic valvular disease, the subject upon which I alone intended to comment when I ventured to express views upon the etiology of chronic aortic regurgitation.—I am, etc.,

July 30th.

THEODORE FISHER.

SUDDEN DEATH UNDER AN ANAESTHETIC.

SIR,—Dr. Levy states in his letter of July 26th: "I am not aware of any textbook which directs attention to the dangers of restricted chloroform or of intermittent administration." May I refer him, for a start, to two of the most familiar textbooks, Hewitt's and Dudley Buxton's? On p. 404 of the former and p. 228 of the latter (1912 and 1907 editions respectively) he will find continuity of administration and danger of insufficient dosage clearly dealt with. I doubt, in fact, whether a textbook exists in English which does not lay down similar rules to those there propounded, just as I am sure that no teacher to-day fails to impress on the beginner the need for giving chloroform without gaps and in quantity sufficient to maintain full anaesthesia.—I am, etc.,

London, W., July 31st.

J. BLOMFIELD.

SIR,—An anaesthetic experience of twenty years—the majority of patients having been throat cases—leads me to conclude that chloroform for tonsillectomies should be administered only by thoroughly experienced men, and, that when so given, it is as safe as ether, especially in the case of children, and gives a better anaesthesia for the surgeon. Up to eighteen months ago I never gave anything but chloroform and oxygen, except on the rarest occasions, for throat work. At that time two or three surgeons for

whom I gave anaesthetics were much impressed with the safety of open ether. Since then I have used it in a large proportion of my cases, but, on reverting a few weeks ago to chloroform and oxygen, the results have been better. Even with a preliminary injection of atropine with ether there is more secretion, more bleeding, a long induction period, and a large amount of the drug must be used. The two critical periods of a chloroform anaesthesia are towards the end of the induction, when the patient is inclined to struggle, and secondly, if the tonsil is forcibly dragged upon while being dissected off the pharyngeal wall. There is a simple remedy in both these cases. In the first, if there is marked struggling, changing over to ether for a few minutes saves the patient from a sudden large dose of chloroform, while the second can be obviated by gentler manipulations on the part of the surgeon.

In America many deaths have been recorded under open ether anaesthesia, and in a clinic of one well known throat surgeon I understand ether has been entirely given up in favour of chloroform.

In conclusion, I think that the anaesthetist ought to fall in as much as possible with the views of the surgeon with whom he is working, as the latter cannot do his work well if he is being worried by what he considers a dangerous anaesthetic.—I am, etc.,

HUGH R. PHILLIPS, M.D.,
Senior Anaesthetist, Italian Hospital;
late Anaesthetist, King George
R.A.F. Hospital, etc.

London, W., Aug. 5th.

INFECTIVE CATARRHS—SO-CALLED "COLDS."

SIR,—The term "chill" will persist because, as a matter of fact, in nine cases out of ten a chill—either in the form of a draught, a sudden change of temperature, wet feet or knees, etc.—is the exciting cause of an infective catarrh, notwithstanding all the theoretical arguments of all the scientists to the contrary. Behind the chill is an unstable vasomotor system, which in turn depends upon an unstable sympathetic nervous system, and lastly comes the micro-organism, which is the final cause of the catarrh.

With an unstable vasomotor system a chill produces a localized vaso-constriction, with a compensatory vasodilatation elsewhere. If this vaso-dilated area happens to occur in the mucous membrane of the nasopharynx or bronchial tubes, it provides, as it were, an incubator for the organism lurking there, which suddenly bursts into activity and a catarrh results. It is useless to try to prove that it was not the chill which supplied the spark to the conflagration. The oft-repeated argument that patients in sanatoriums and Arctic explorers do not suffer from catarrhs simply goes to show that in such people the vasomotor system is more stable—partly because they have become accustomed to cold and draughts, but even more because their nervous systems are more stable in consequence of their more regular life, with the absence of brain fog. Their nerve force, neuro-electricity, or whatever it may be called, is more stable. It is not being rushed about from one part of the body to another, as is the case with city workers, who use their brains actively for a time, then rush all their nerve force to the digestion of a too hurriedly eaten lunch, then send it back to their heads, and then to their legs to catch a train, and so on. I have lately had a striking instance in myself. I had a very long and strenuous day, but worked in a large room with a wide-open window. In the evening, being head-weary, I imagined that I was very hungry and ate more than I should have done under the circumstances. I then went for a walk and later in the evening sat for a time in a slight draught. I suddenly felt a chill, and that night, although my windows were open, I developed a severe catarrh, which laid me up for several days. I had not, as far as I know, been near anyone suffering from any kind of catarrh, and I had not been in a closed room. I had the necessary germ in me (where it had probably existed for months), and it only needed the proper conditions to enable it to burst into activity. These were supplied by the vasomotor system, which had been rendered unstable by the inconsiderate and uneven work put upon the nerve force during the day.

The most evil suggestion in the present correspondence, to my mind, is the general use of vaccines. Few things produce a more harmful effect upon the system as a whole than vaccines. A vaccine may give relief in a specific instance, but even then it is at the expense of the system

generally, and the continued use of vaccines does incalculable harm. Every time I meet a certain friend who is an eminent bacteriologist he tells me how he has just stopped an infective catarrh in himself by a vaccine. He reminds me of the asthmatic patients who claim that a certain specific remedy has cured their asthma. On asking how often they required to use the remedy, they reply: "Not more than ten or twelve times a day."

Until we can lead more healthy lives generally, and especially improve our nervous equilibrium, and thereby the stability of our vasomotor system, chills and infective catarrhs will remain with us. Open windows alone will not cure them. By all means let us do everything possible to prevent the spread of micro-organisms, but each one of us has sufficient organisms in his system to produce an infective catarrh, and no vaccines will eradicate them. What we need most is to do away with the internal conditions necessary for the propagation and development of these organisms.—I am, etc.,

London, W., Aug. 2nd.

ALEXANDER FRANCIS.

ETIOLOGICAL FACTORS OF TUBERCULOSIS.

SIR,—Dr. Batty Shaw's outspoken lecture that appeared in your issue of July 26th has given a new insight to the tuberculosis question which is in accordance with the advanced knowledge of the present day. Some of us who have been engaged for years in tuberculosis work have felt for a long time that the tendency to lay undue emphasis on the dangers of tubercle infection is neither scientific nor supported by clinical experience. Clinical observation has shown that tuberculosis is a disease of many years, that the so-called early case is really a recrudescence of an affection that had been active years ago and has subsided, that a large number of cases give no history of contact with infection, that infection has lost much of its significance since it is so universal, that clinical signs and symptoms of tuberculosis are much more reliable evidence than the presence or absence of bacilli in the sputum. If tubercle bacilli were absent in about 18½ per cent. of cases at the Brompton Hospital, our records give negative evidence in about 30 per cent. and those of Phipps Institute, Pennsylvania, in about 36 per cent. of cases. Even the theory of childhood infection, which is nearer the truth than contact infection in adults, only pushes back the problem to infancy, but does not solve it with any satisfaction. The logical outcome of belief in contagious or contact theory, as Dr. Shaw points out, is, or ought to be, strong antibacillary measures, such as compulsory notification of every case of tuberculosis, compulsory segregation of every patient from the time he brings up sputum, compulsory inoculation both for treatment and prevention, daily or frequent medical inspection and disinfection of every suspect case or home, prosecution, fines, and imprisonment for every offence or disobedience, etc. Are we prepared to go to such extreme lengths? If we are not, it is because we do not believe in their efficacy.

On the other hand, the very success of the open-air treatment in saving hundreds of lives all over the world proves that as better social and economic conditions and improved well-being cure or arrest the disease, so bad social and hygienic conditions must be its cause. My own conviction, strengthened by twenty years of close sanatorium work, is that tuberculosis is primarily a soil or social disease, that it is not the seed that creates the soil but more truly the soil that creates the seed or gives virulence to it. Tuberculosis is as common as civilization, and civilization means cow's milk, artificial food, tinned food, frozen food, faked food, adulterated food, stale food—all of which by depriving the organism of fresh raw materials and vital elements necessary in maintaining the normal health of the body starve and impair the tissue soil and metabolism and bring about a strumous or tuberculous condition. The cry of the tuberculous is a cry of hunger—hunger for more air, more light, more fresh food, more rest, and better living conditions. A strong conviction that tuberculosis is a social or constitutional disease would lend vigour and enthusiasm to widen every municipal and national movement to arrest the disease—such movement as fresh air homes, sanatoriums, health centres, colonies, garden cities, invalid homes or hospitals, etc. The very fact that there are at present many schemes for opening country homes and settlements for the broken down tuberculous soldier—broken in war or

at home—shows that we are on the right lines of treatment. But the profession must decide whether it is fundamentally a contagious or constitutional disease. It cannot face both ways. Meanwhile Dr. Shaw's lecture has taken us a step further in emphasizing the importance of improving environment rather than killing infection.—I am, etc.,

Wells, Somerset, Aug. 3rd.

C. MUTHU.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

SIR,—Sir Douglas Haig has forcibly expressed his lack of confidence in the existing Pensions Medical Boards, his opinion being founded on reports he has received from officers and men who have been before these boards and consider that they have received neither "sympathy" nor "sentiment." Why? Because the personnel of such boards has been and is still mainly composed of medical men who have never heard a shell burst or a bomb drop, and have not the vaguest idea of the environment in which the cases they examine received their injuries. How can such medical men, whose knowledge of the late war is drawn from the illustrated papers, expect to enter into the feelings of, say, a case of shell shock, or properly to assess his disability? Hence all the trouble, and hence Sir Douglas Haig's vigorous criticism.

As regards the work done by the members of the profession who stayed at home, nobody denies it. But they never risked their skins, and never lacked a bed or a roof over their heads. It is rather amusing, therefore, to hear them speak as if they had, with great self-denial, refrained from taking part in a pleasant picnic. And it is somewhat tragic to find that they have persuaded not only themselves but a considerable body of the public that this is so.—I am, etc.,

July 26th.

IN ARDUIS FIDELIS (T.F.).

The Services.

INDIAN MEDICAL SERVICE.

NEW RATES OF PAY.

The India Office notifies as follows:

The new rates of pay, of which particulars follow, have been arrived at by adding approximately 33½ per cent. to that portion of the old rates of pay which represented military grade pay. The old rates are shown in the second column for comparison. The new rates are effective from December 1st, 1918, and the necessary adjustments will be carried out as soon as possible.

A. Military Side.

These rates were previously announced in May, but at that time the rates for the civil side were not available. They are now republished with the civil rates in order that full information for the whole service may be available.

	(1) New Rate. Rs. p.m.	(2) Old Rate for Charge of a Regiment. Rs. p.m.
Lieutenants	550	(450) ¹
Captains	700	(550)
Captains (after 5 years' total service) ...	750	(600)
Captains (after 7 years' total service) ...	800	(650)
Captains (after 10 years' total service) ...	900	(700)
Majors	1,000	(800)
Majors (after 3 years' service as such) ...	1,150	(900)
Lieut.-Colonels	1,550	(1,250)
Lieut.-Colonels (of over 25 years' service) ...	1,600	(1,300)
Lieut.-Colonels (selected for increased pay) ...	1,750	(1,400)

The new rates are consolidated and include charge pay for the command of station hospitals.

The following rates are those for certain of the higher military appointments:

	(1) New Rate. Rs. p.m.	(2) Old Rate. Rs. p.m.
D.D.M.S. (if held by a Major-General) ...	2,650	(2,200)
D.D.M.S. and A.D.M.S. (if held by a Colonel) ...	2,150	(1,800)
A.D.M.S. of Army Headquarters of Medical Services, Army Headquarters ...	1,950	(1,600)
A.D.M.S. in the Field (when held by an officer below Colonel's rank) ...	1,700	(1,400)
Officer Commanding general hospital in the field of 500 beds ...	1,700	(1,400)
A.D.M.S., Army Headquarters ...	1,700	(1,400)

¹ In the case of a Lieutenant the rate for an officer in officiating charge only has been shown, as this is the most probable position of a Lieutenant.

B. Civil Side.

1. The rates for certain of the superior appointments are as follows:

	(1) New Rate. Rs. p.m.	(2) Old Rate. Rs. p.m.
Director-General	3,500	3,000
Deputy Director-General	2,150	1,500
Assistant Director-General	1,700	1,400
Surgeon-General, Bengal, Madras and Bombay	3,000	2,500
Inspectors-General of Civil Hospitals in non-Presidency Provinces ² ...	2,600	2,250
Sanitary Commissioner to Government of India	2,300-2,800	2,000-2,500
Sanitary Commissioner (for all provinces except Central Provinces and Assam)	1,800-2,100	1,250-1,800
Sanitary Commissioner, Central Provinces and Assam	1,550-2,050	1,250-1,800
Inspectors-General of Prisons, Madras, Bengal, Burma, Bombay, and United Provinces	2,100-2,300	1,500-2,000
Inspectors-General of Prisons, Punjab, and Bihar and Orissa	2,100	1,500-2,000
Inspectors-General of Prisons, Central Provinces	1,800	1,500-2,000

2. The distinction between first and second class civil surgeoncies is abolished, and holders of these appointments will, in future, be paid at the new consolidated rates, given under A above, according to their military rank. This change results in increases varying according to rank from Rs. 200-400 per mensem.

3. Holders of professorial and bacteriological appointments will, like civil surgeons, be paid at the new consolidated rates, given under A above, plus a special allowance of Rs. 250 per mensem. The resultant increase over the old rates varies from Rs. 150 per mensem in the case of junior captains to Rs. 400 per mensem in the case of senior lieutenant-colonels.

4. Holders of other special classes of appointments will receive the consolidated pay of rank, as under A above, plus special allowances of differing amounts—for example, alienists and plague officers Rs. 200 per mensem, superintendents of first-class gaols Rs. 150 per mensem, personal assistants to surgeons-general Rs. 100 per mensem, superintendents of second-class gaols Rs. 50 per mensem.

The examples above are not exhaustive, but are given as illustrations of the manner in which the principle previously announced has been carried into effect.

PALESTINE DISPATCH.

FIELD-MARSHAL SIR EDMUND ALLENBY, G.C.B., G.C.M.G., Commander-in-Chief, Egyptian Expeditionary Force, in the course of a dispatch dated June 28th, 1919, describing events in Syria and Palestine subsequent to the conclusion of the armistice with Turkey on October 31st, 1918, says:

The climate was trying and sometimes extremely unhealthy. That the health and morale of the men was maintained was due to their own inimitable spirit and willingness; to the constant care and foresight of the medical authorities; and to the organizations, official and private, which provided in spite of all difficulties for the comfort and recreation of the troops.

In recording his appreciation of services rendered, the Commander-in-Chief refers to the medical services as follows:

The medical services have dealt successfully with the difficulties of evacuation over long distances in a country of undeveloped communications, and have combated with excellent results the chief scourge of Syria and Palestine—malaria. I desire to mention the good work of Major-General A. E. C. Keble and Major-General Sir R. H. Luce as Directors of Medical Services at various periods.

The King of Hellenes has appointed Surgeon Commander Thomas W. Myles, R.N., to be an Officer of the Order of George I, in recognition of distinguished services rendered during the war.

² Corresponding to the appointments of surgeon-general in the three Presidency provinces.

³ Assuming that a civil surgeoncy is not held by an officer of lower rank than a captain.

Universities and Colleges.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

FIRST EXAMINATION FOR THE FELLOWSHIP.

A CORRESPONDENT, late R.A.M.C., who finds himself ineligible for the first examination for the diploma of Fellow on the special conditions issued by the College at the end of January, writes to express the opinion that facilities are to be given (and those in respect of ancillary studies difficult for a service man to return to) all who joined voluntarily should be given them. With regard to the subjects in which relief is given (morphology, embryology, histological or chemical methods, and physiological laboratory apparatus) he writes: A certain standard of knowledge in certain subjects has hitherto been demanded in the Primary Fellowship. If, however, the College could be satisfied that this standard had been attained by practical experience, they might reasonably allow a candidate to skip portions of the actual examination. For instance, one would consider it reasonable to allow a professor of anatomy to be passed

through the anatomy part of the examination without actually facing the examiners. But to apply this principle for these ancillary subjects because of military service is quite illogical. How can any one have attained by being on military service the standard of knowledge sufficient to warrant him being excused examination? Much more likely that his nomadic life will have diminished the knowledge he once had. If it were a question of the Final Fellowship, it would be a different matter. Many men must have had opportunities for getting practical knowledge of the subjects which would warrant the assumption that they were up to standard. Even then, to give the facility to some and not to others would not be fair.

Obituary.

DR. FRANCIS HENRY WEEKES, formerly of York, died at Malvern on July 31st at the age of 65. He received his medical education at St. Thomas's Hospital, and took the diplomas of M.R.C.S. and L.S.A. in 1877; he was house-surgeon to that hospital, and afterwards to the York County Hospital, a post he retained for some years, until he settled in general practice in York as the successor of the late Dr. Bird. He became surgeon to York Dispensary, and continued to be interested in surgery, taking the F.R.C.S.Eng. in 1885. For twenty-five years he had an extensive general practice in York and the neighbourhood, earning for himself a high place in the regard and esteem of all who knew him, not only for his professional ability, but for his gentle kindness backed by generous actions. He took the degree of M.D.Durh. in 1905, and his keen interest in the profession continued to the end. He had many other interests. All scientific subjects attracted him, but he took a special interest in archaeology. Of late years he travelled widely and with an observant eye. Many of his professional brethren and very many others will much regret to learn that he has succumbed to a long illness well and patiently borne.

LIEUT.-COLONEL WILLIAM HILL CLIMO, R.A.M.C.(ret.), died at Yateley, Hants, on July 22nd, aged 80. He was born at Blackrod, co. Mayo, on November 4th, 1838, and took the degree of M.D. Queen's University, Ireland, and the diploma of M.R.C.S.Eng. in 1860. He entered the army as assistant surgeon on April 1st, 1861, became surgeon on March 1st, 1873, surgeon-major on April 1st, 1876, and brigade-surgeon on March 19th, 1890, retiring on November 4th, 1893. In the regimental days he served in the Rifle Brigade from 1862 to 1868, and subsequently on the staff. He took an active part in the controversies which preceded the reforms in the Army Medical Service. While in India he published (1892) a series of papers pointing out the danger to the public health of Northern India arising out of the insanitary condition of Kashmir, and made various recommendations which he considered well within the resources of the Kashmir State.

CAPTAIN J. MACLEOD, R.A.M.C., was reported as accidentally killed, in a casualty list published on August 4th.

ERNST HEINRICH HAECKEL, the German biologist who died at Jena on August 8th at the age of 85, was born at Potsdam, studied at Würzburg under Kölliker and at Berlin under Johannes Müller and Virchow. There he took the degree of doctor of medicine in 1857, and afterwards spent some years in practice, but his true vocation was biology. He became extraordinary professor of comparative anatomy and director of the Zoological Institute at Jena in 1862. In 1865 a chair of zoology was founded for him and he remained at Jena for the rest of his life, refusing many offers of promotion. He travelled extensively for the prosecution of his researches in comparative anatomy. When Darwin's *Origin of Species* appeared in 1859 Haeckel at once accepted the new doctrine and pushed the theory much further than his more cautious master. Haeckel's literary activity was remarkable and continued unabated to the end of his life. He was intolerant and aggressive; his attitude towards religion was one of almost fanatical hostility and his teaching reached the extreme of materialism. Haeckel was one of the signatories of the manifesto issued by the German professors in October, 1914. His rabid hatred of this country, in which he had been welcomed as an honoured guest, showed the German temper at its worst.

Medical News.

DR. A. FINEGAN, Medical Superintendent of the Mental Hospital, Douglas, Isle of Man, who resigned the post on July 31st, has received a presentation from the staff. It consisted of a rose bowl; the presentation was made on behalf of the staff by Dr. Y. Kadam, A.M.O.

DR. ANTONIO JOSÉ DE ALMEIDA, the new President of the Portuguese Republic, began his political career while still a student of medicine at Coimbra, where he suffered imprisonment for three months; afterwards for some ten years he practised in the island of Sao Thomé, a Portuguese colony in the Gulf of Guinea. Since the revolution Dr. Almeida has been almost continuously in office as Minister.

MR. R. DAVIES-COLLEY, C.M.G., M.Ch., F.R.C.S., having completed his military duties, has returned to practice in London, and has resumed his work at Guy's Hospital.

It is proposed to establish in Italy a society for the study of questions relative to the alimentation of man and animals. A part of its work is to be the co-ordination of the results of investigators in all countries, and it proposes to publish a review giving a summary of researches. Communications should be addressed to Professor Napoleone Passerini, Istituto Agrario di Scandicci, Florence, or to Professor Ronoloni, Laboratorio di Patologia Generale, Via Alfani, 33, Florence.

THE French hospital founded at Athens mainly through the efforts of Dr. Portmann, a medical officer of the French navy, was formally opened by M. de Billy, the French Minister, in the presence of M. Athanassaki, Under Secretary of the state health board, Professor Bensis, dean of the faculty of medicine, and a number of representative Greek and French citizens. The hospital contains 53 beds, and there is a bacteriological department under the direction of Dr. Potiriades.

THE National Association for the Prevention of Tuberculosis will hold its seventh annual congress at the Central Hall, Westminster, in October. It will be opened on October 16th by Dr. Christopher Addison. The conference will be concerned with the discussion of the completion of tuberculosis schemes in relation to the Ministry of Health, and local authorities and Insurance Committees. On the first day the relation of the schemes to pensions boards and committees, and general practitioners, will be discussed, and addresses will be delivered by, among others, Sir R. W. Philip, professor of tuberculosis in the University of Edinburgh, Dr. Hermann Biggs of New York, Dr. Nathan Raw, M.P., Dr. Cunyngnam Brown (of the Ministry of Pensions), and Dr. F. N. K. Menzies (of the London Public Health Department). On October 17th and 18th the relation of the schemes to Red Cross and other voluntary activities, and the training of doctors and nurses will be discussed by, among others, Sir Arthur Stanley, G.B.E., Sir William Osler, and Sir German Sims Woodhead.

THE task of establishing an International Council of Scientific Research has been carried a step further by the meeting held last month in Brussels at the invitation of the King of the Belgians and Burgomaster Max. The scheme had its origin in a meeting called by the Royal Society in London last October. The second conference was held in Paris in November, when an international executive committee was appointed. Great progress has been made in establishing international associations for astronomy and geophysics, and steps have been taken to establish a similar association for chemistry; this proved a more difficult task owing to the numerous industrial applications. The meeting in Brussels prepared schemes for associations of a number of other sciences, including pure and applied biology. These schemes will all require national recognition, which it is hoped may be obtained before the first day of next year. The general assemblies of the council will be held in Brussels, but the business office will remain in London.

IN a report presented to the annual meeting of the American Medical Association it was stated that the number of medical practitioners in the United States was larger in proportion to population than in any other civilized country. According to the sixth edition of the *American Medical Directory*, completed in 1918, there were then 147,812 doctors in the States. The total population, according to an estimate furnished by the Census Bureau in 1918, was 105,253,300. This gives one practitioner for every 712 people. Statistics gathered just before the war showed that the proportion in European countries ranged from 1 in 1,500 to 1 in 2,500. The total

enrolment of medical students for the session 1918-19 is approximately 120,090, being 1,540 less than the number for 1917-18.

IN consequence of the occurrence of a small number of outbreaks of small-pox during recent months, the Ministry of Health has issued a memorandum for the use of medical officers of health with regard to the supply and use of vaccine lymph for the vaccination or revaccination of persons who may have been exposed to small-pox infection. It is considered necessary to emphasize the importance of obtaining the prompt vaccination of such persons, because cases have recently come to notice in which known contacts have not been offered vaccination promptly and subsequently have developed small-pox. It is the duty of the medical officer of health immediately to acquaint the public vaccinator and vaccination officer when cases of small-pox come to his notice, and of the public vaccinator to vaccinate or revaccinate at the public expense persons in his district who apply to him for the purpose and have not been vaccinated or revaccinated within a period of ten years. The Government Lymph Establishment will supply medical officers of health with lymph, which it advises should be used within a week. Only medical officers of ports in frequent communication with the Continent are advised to keep themselves supplied with stocks of lymph for emergency use. The memorandum contains the following further statement: "Recent experience shows that it is important to bear in mind that inspectors or others concerned with the removal of small-pox cases or the disinfection of their clothing, and members of hospital staffs who at any time are likely to come into contact with a small-pox case, should at all times be well protected by revaccination, and should not take the risk of waiting to be vaccinated until exposure to infection has occurred."

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL *alone* unless the contrary be stated.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

The postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitologu, Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

"P." asks for advice in the treatment of a man in whom, owing to neglected gleet, the inguinal glands have been destroyed, leaving a large suppurating cavity. The following methods of treatment have been tried: (1) Swabbing out with carbolic solution (1 in 40) night and morning, and packing with sal alembroth gauze; (2) swabbing with carbolic solution followed by painting with a solution of silver nitrate gr.xxx ad 3j; (3) swabbing three times daily with a solution of mercuric potassium iodide (1 in 1,000) and packing.

INCOME TAX.

J. E. L.—Can the cash basis method of return be insisted on if the surveyor objects?

. The cash basis system is in almost universal use, unless there are circumstances rendering the "cash" profit an untrue index of the true profit based on the value of the year's bookings. If there are no such circumstances in our correspondent's case he might ask the surveyor why he declines to accept the usual basis of return for medical practices, and write again if he has further difficulty.

E. S. H. W. inquires as to the purport of a request received from the surveyor with regard to the sale of a motor car, for information as to the cost and description of the new car.

. The surveyor has no statutory right to demand the information, but is presumably merely endeavouring to obtain it for the purpose of making a correct assessment.

There is no right to deduct as such a loss on sale of a professional car; the claim lies to deduct the expenditure incurred in replacing a car. The surveyor apparently seeks to know, first, that there was a replacement, and second, to what extent the purchase of the "replacement" car was merely a reinstatement; or, on the other hand—if the cost of the new car be greater than that of the original car—to what extent it represents a further outlay of capital on the equipment of the practice.

LETTERS, NOTES, ETC.

A COMPLICATED CASE OF HYDRAMNIOS.

E. F. writes: I was called to see a patient in labour. Having seen her previously at different periods, I knew there was a history of renal disease with cardiac complications. She gave a history pointing to six months pregnancy, but the abdomen was markedly distended and fluctuation was present. I felt what appeared to be a soft fetal head, and in a little time a macerated fetus of two months was born. The umbilical cord was prolapsed and pulseless. Having delivered this, I next ruptured the membranes and typical amniotic fluid came away, the quantity being about 12 pints. There was no shock or any unusual symptoms. After some delay a large placenta came away; to its distal aspect another umbilical cord was attached, and later on a six months fetus, healthy and normal, was born as a breech. The interesting features are the twins—one two months old, the other six months old. I can only account for this by the younger fetus being dead, whilst the other developed as the younger was macerated. The case may be summed up as follows: (1) Prolapsed cord; (2) macerated fetus of two months; (3) double placenta; (4) healthy fetus of six months born by breech. The patient later succumbed to fits of eclampsia.

ACCESSORY FOOD FACTORS.

A CORRESPONDENT calls attention to the fact that, in our notice of the memorandum on the importance of accessory factors in food, no mention was made of onions as possessing antiscorbutic qualities. In response to an inquiry, Dr. Harriette Chick informs us that onions were omitted from the table in the memorandum by an oversight. An exhaustive investigation of onions has not been made, but cooked onions were studied, and it was found that they are at least as good as cooked potatoes, and may be much better. In reply to another correspondent, we may point out that the memorandum, as was stated in the JOURNAL of July 19th, p. 84, noted that green leaves are a cheap source of the fat-soluble vitamins, the absence of which is believed to produce rickets. It is recommended that juices expressed from cabbages or other green-leaf vegetables—raw, or after steaming but not boiling for a few minutes—should be given, as also a teaspoonful a day of purees prepared from cooked spinach or lettuce.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 36, 40, 41, 42, 43, and 44 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 37, 38, and 39.

WORKMEN'S COMPENSATION ACT, 1906.

THE following vacancies are announced: (1) Second Medical Referee for the Sherifdom of the Lothians and Peebles, to be attached more particularly to the Midlothian County Court; (2) Specialist Medical Referee for cases of Industrial Disease in County Court Circuits Nos. 24, 28, 30, 31, and 54; (3) Medical Referee for County Court Circuit No. 11, to be attached more particularly to the Bradford, Keighley, Odley, and Skipton County Courts. Applications for (1) to the Private Secretary, Scottish Office, Whitehall, S.W.1, and for (2) and (3) to the Private Secretary, Home Office, by September 4th.

THE following appointments for certifying factory surgeons are vacant: Abertillery (Monmouth), Bishop's Castle (Shropshire), Borrisoleigh (Tipperary), Darlington (Durham), Staveley (Westmorland), Tallow (Waterford).

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.

An Address

ON

SOME APPLICATIONS OF EXPERIENCE GAINED
BY THE WAR TO THE PROBLEMS OF
CIVIL MEDICAL PRACTICE.READ BEFORE THE SOUTH MIDLAND BRANCH OF THE BRITISH
MEDICAL ASSOCIATION.

SIR WILLIAM HALE-WHITE, K.B.E., M.D.,

COLONEL R.A.M.C.(T);

CONSULTING PHYSICIAN TO GUY'S HOSPITAL.

(Abstract.)

WHILE much of our war experience will, we hope, not be of civil use, in some medical diseases it will be of great value. May we this afternoon consider the chief of those which have come under my own observation?

THE HEART.

The war has not increased our knowledge of organic valvular disease of the heart, but happily, thanks to T. Lewis and his co-workers, it has been more widely diffused. A large experience of Recruiting and Invaliding Boards has shown me that there has existed a considerable divergence of opinion as to the fitness of the heart for muscular work.

Occasionally there was a failure to remember what has often been taught at the bedside for many years—namely, that what really matters is not so much the noise we hear on auscultation, but whether the heart is doing its work efficiently. Often the louder a murmur is, the better, for a loud murmur may mean that the cardiac muscle is strong. A man doing his work as a dock labourer had a valvular murmur which could be heard with the naked ear one yard from the foot of his bed; another man with a valvular murmur won a walking race from London to Brighton. Apart from instances of persons with valvular disease who can do full muscular work, there are numerous patients who get on very well and lead useful lives if their work is adjusted to that which the heart can perform without further damaging itself. The doctor is of the greatest use, for he can prevent the patients with valvular disease from doing too little or too much; he can help them to find out the limit of their power and see that they always keep just below it.

Sometimes it was not recognized that a systolic murmur is by itself often no evidence of valvular disease—for example, there are haemic murmurs, murmurs at the impulse which disappear when the patient lies down or takes a deep breath, and probably other varieties of functional murmurs. I have heard several thousands of recruiting appeals. Many of the appellants were in a low grade because, owing to a murmur, the heart was considered a bar to a higher category when really it was perfectly healthy, and the category might have been higher, although the appellant, believing he had heart disease, wished to be rejected altogether. In many departments of medicine and surgery the early recruiting boards varied so greatly in their standards that the Ministry of National Service issued "General Directions for the Guidance of Medical Recruiting Boards." Those of us who drew up the medical part of these had many helpers, and, with the aid of Dr. T. Lewis, it was laid down that if the man's occupation did not prove his capability for physical exertion, and there was doubt about this, the board should see how he responds to exertion, and the following test was recommended:

1. The man's pulse is taken while he stands at rest.
2. He hops twenty times with the right and then twenty times with the left leg, always lifting the foot 9 in. from the ground, without a pause.
3. Immediately after this the movements of the chest and of the *alae nasi* should be observed while the man's attention is distracted by conversation. In health there should be no noteworthy breathlessness, and no pallor nor anxiety of expression.
4. The rate of the pulse is taken two minutes after the exercise and while the man still stands. In health it should not be more than five beats more than it was before the exercise.

With regard to diseases of the heart the following recommendations were made:

Heart (Diseases of the).—In all cases the heart should be examined with the man in both the erect and recumbent position. A systolic murmur is not necessarily an indication of disease of the heart. Most systolic murmurs heard only at the base of the heart and systolic murmurs wherever located which disappear during sustained inspiration do not indicate cardiac disease. If a systolic murmur definitely indicative of mitral regurgitation is present, the man should not be placed in Grade I.

A man with a well-compensated mitral regurgitant murmur who shows healthy response to the exercise test already given may be placed in Grade II, unless he has recently had a well-certified attack of rheumatic fever.

A man with a mitral regurgitant murmur, and showing but slight enlargement of the heart and no signs of failing compensation—for example, oedema of the feet, dyspnoea on slight exertion—and who is able to follow his civil employment, may be placed in Grade III—sedentary.

Cases of mitral stenosis are, under the most favourable circumstances, fit only for sedentary work.

No man suffering from aortic regurgitation is fit for Grades I, II, or III. A systolic murmur at the base does not necessarily, nor often indicate aortic stenosis. Aortic stenosis apart from regurgitation is rare, and cases in which it is suspected should be referred for special examination.

Enlargement of the heart always requires careful investigation. Examination to determine the size of the heart should always be made with the man lying down. A diffuse impulse is not to be taken as a trustworthy sign of enlargement of the heart.

Irregularity of the heart is not necessarily evidence of disease. Variations in the pulse rate with respiration and dropped beats are common irregularities and of no special pathological significance. They disappear when the rate of the heart is raised by exertion, irregularities indicating disease do not.

If it is suspected that a man has taken drugs with a view of altering the action of the heart, the examination should be deferred, and particulars of the case communicated to the Commissioner of Medical Services so that appropriate steps may be taken to arrive at a diagnosis.

A pulse rate up to 120 per minute is often, especially in youths, merely due to the excitement of examination, and in the absence of evidence of diseases producing a rapid pulse it may be disregarded.

In connexion with these recommendations I may add that by no means infrequently "dilated heart" has been diagnosed on insufficient grounds and the irregularity of the pulse due to extrasystoles has been regarded as serious.

It is especially important to think twice before telling a patient he has a weak heart, not only because by so doing we may restrict his or her work unduly, but also because there is no disease which the public hold in greater dread than heart disease; therefore if a patient considers his heart is weak, dilated, or diseased, when really it is quite able to meet all the demands likely to be made on it, he becomes obsessed with the idea his heart is not healthy. There are few more difficult to dispossess of an obsession than those who erroneously think themselves seriously ill with disease of the heart. Numbers of men have been made pathologically miserable because they believe themselves to have heart disease when they have not. To give one instance, a fine athlete, a gymnasium master, was totally rejected on account of a murmur and was told he had disease of the heart, but really the murmur was functional. He became morose, took no exercise, went about in fear of his life, and in a few months was suffering from serious mental depression and imagined he had all sorts of illnesses in addition to disease of the heart. Even then he responded normally to the exercise test. Surely it should have been self-evident that if he could do athletic feats with pleasure, the heart was for the object for which it was made—namely, pumping blood—quite healthy, and if he had been passed into the army he would not have become a case of depression very difficult to cure.

The chief applications of war experience to civil work are: The heart must be judged by the work it can do; it is the duty of the doctor to determine this and advise accordingly. Many systolic murmurs do not indicate organic disease; proper care must be taken before diagnosing a dilated heart. The commonest irregularities of the pulse are of no pathological significance. To tell a patient his heart is weak, dilated, or diseased, when it is not, may cause harm to him.

PLEURA AND LUNGS.

Several problems concerning injuries to the pleura and lungs have been of great interest, but fortunately such injuries are rare in civil medical practice. Our experience

of haemothorax has emphasized the necessity of draining the pleural cavity if the fluid effused is not sterile, and the tendency is now rightly to withdraw the fluid, even if sterile, unless the quantity is probably under 10 oz.; doing this helps the lung to re-expand quickly. Our object in pleuritic effusion is to get the lung back to normal as soon as possible, therefore breathing exercises should be begun early, usually directly after the fluid is taken out; when an empyema has been opened these exercises have the additional advantage of aiding the drainage of the pleural cavity. If the patient is up and about, walking, especially up a moderate hill, is the best breathing exercise. Do let us remember that if the fluid is infected, whether or not it is purulent, the chest must at once be opened. Delay means serious damage to the lung and pleura, and consequent difficulty in re-inflation. No empyema ought ever to be permitted to become large, and an Estlander operation ought never to be needed. The war has brought into prominence the question of the mode of production of pulmonary collapse in lungs not themselves directly damaged or diseased, but the cause of this is still under discussion. It occurs in many conditions, sometimes after operations on the abdomen.

EPILEPSY.

Few things in my war work have struck me more than the mistakes that have been made about epilepsy. A man, who passed into the army less than twenty-four hours before, was admitted into a military hospital suffering from a series of extremely severe epileptic fits, and he had had several fits before. Numerous appellants came before the recruiting appeal board who were epileptics, and numbers of epileptics have been invalided out of the army, having proved quite useless and unreliable. It is unfortunate that the epileptic has proved a difficult recruiting problem, for each passed in and subsequently invalided out cost the country many pounds in kit, food, and pension, quite apart from the harmful effect of army life on the patient. We are liable to forget that one person in every 1,500 in this country is epileptic, and that the proportion of epileptics is higher at the commonest recruiting age, for three-quarters of all cases of epilepsy occur in the first two decades and half in the second. The epileptic is a man of extreme instability of the nervous system, and is therefore particularly unfit to withstand the nervous stress of war—indeed, he is positively dangerous as a soldier, for not only may he have an attack at some crucial moment, but he may easily become insane. In a sense, the motor fit of an epileptic is much the same as mania, and the exhaustion unconsciousness after it is much the same as melancholia. Think, too, of the danger to everybody of the soldier afflicted with the automatism of epilepsy.

Petit mal is more likely to be overlooked than *grand mal*, and its attacks are at times either totally disregarded or they are ascribed to a weak heart. This is dangerous, for a person afflicted with *petit mal* is liable to severe epileptic fits, to mental aberration, to weak-mindedness, and is quite unfitted for a soldier, especially when we remember that alarm is the commonest excitant of an epileptic fit. It is important to bear in mind that the loss of consciousness may be only momentary and occasionally incomplete. Vertigo is a frequent symptom of these attacks, but loss of consciousness, apart from epilepsy, is extremely rarely associated with vertigo.

It was these considerations which made those who were responsible for the direction of medical boards make the following recommendations:

All cases of true epilepsy in which the diagnosis has been established, and in which there is definite evidence that the man has had an epileptic fit during the preceding seven years, should be rejected. Convincing documentary evidence should be supplied whenever possible, and the certifier should state whether he has seen an attack or its immediate results, and whether he knows of other cases in the family. The presence of symptoms of instability of the nervous system—for example, greatly exaggerated knee-jerks, mental deterioration, widely dilated pupils or tremor—should be regarded as sufficient corroborative evidence for purposes of rejection. If a man states that he is the subject of this disease, but no attacks have occurred for seven years, and there are no marked symptoms of instability of the nervous system, he may, if otherwise fit, be placed in Grades II or III. No man with a well authenticated history of epilepsy at any period of his life should be placed higher than Grade II.

I would plead that the lesson for civil practice that our army experience teaches is that we should be more on the outlook for epilepsy. To fail to recognize it is unfortunate, for not only do we omit to give the proper medicine, but we do not advise a suitable occupation, and many occupations are quite unsuited for epileptics.

NEURASTHENIA.

The word "neurasthenia" was employed so indiscriminately by those who appeared before recruiting boards that it lost its value to them. It was largely used by malingerers, shirkers, cowards, and *malades imaginaires*, amongst others; therefore boards were directed that attention need not be paid to it unless evident signs of nervous instability were present.

Taking the word "neurasthenia" to mean an exhaustion of the nervous system, in which continued emotion and preoccupation play a part, many more cases have appeared since the war began than we saw in times of peace, as might have been expected; but, when we consider the strain of the war, it speaks well for the British nervous constitution that neurasthenia was not more common. We all know what sailors, soldiers, and airmen have done, and the way in which innumerable civilians have worked has been astounding, and many who have filled me with admiration have been doctors. Thousands of men and women have been without holidays, have worked Sundays as well as weekdays, have taken great responsibilities, have undergone deep emotion, and have come through the four and a half years all right.

Although we cannot express nervous work in terms of calories, the war has taught us emphatically that there is such a thing as nervous exhaustion. This war has been so particularly horrible with its high explosives, aeroplane bombing, huge mines, and gassing and submarines, that the nervous system has been strained to an extent not reached in previous wars. Hence the number of neurasthenics has been large.

For every one man among the rank and file five officers in the army have been affected with neurasthenia. The proportion among officers is really much higher, as there are many fewer officers than men. This high proportion is due to the greater strain on the minds of officers. The men have simply to do as ordered, but the responsibility for success or failure rests with the officers, who have usually been young, and further, as many have told me, they have felt acutely that the lives of their men depended upon them.

The following description of war neurasthenia, derived from experience of my own patients and from accounts written by others, is, I think, correct. The circumstances which usually predispose to it in war time are much the same as in peace, but considerably more severe. Bodily fatigue, long hours of duty, shortage of food or drink, great exposure to wet and cold, are some of them, hence every effort has been made to avoid subjecting officers or men to these. But the most potent cause is mental fatigue, and the circumstances which lead to it in officers are constant anxiety and great responsibility, the need to be always on the alert and to be ready to make a quick decision on which momentous results depend; and it must be remembered that many of the officers are little more than boys, and yet for the sake of the men they must subjugate their own feelings and inspire confidence. The extreme desirability of lessening this mental fatigue is well recognized, and consequently the soldier is made as comfortable as possible, and when off duty restful means of amusement are provided.

The first evidence of impending neurasthenia is irritability, difficulty of concentration, a tendency to start at a sudden sound, and the condition is well described by one writer as jumpiness. Next, sleep comes tardily, the sufferer is restless, and, although awake, conjures up the experiences of the day, especially if they have been horrible, and when he falls asleep he is not much better off, for he dreams vividly of battles, explosions, and killing; these dreams lead to considerable nervous exhaustion, so that he wakes tired, reminding us that in seeking for a cause for this complaint in civil life we should always inquire as to dreams. As days pass on his mental fatigue increases, all the above symptoms become more manifest, he begins to suffer from fear, although previously courageous, he is constantly thinking of horrible sights, and is longing

for the war to end, or at any rate that he may be out of it, and hence he welcomes some wound that incapacitates him, or still more often he hopes he may be killed, and this state of mind will lead to reckless bravery. By this time a complete breakdown is near at hand, usually it is brought about by some incident of war which may not in itself be serious, such as a shell explosion or gassing, and the patient, who has generally lost flesh, looks anxious, his eyes are often a little prominent, he cannot concentrate his mind, he is extremely jumpy, probably tremulous, eats badly, sleeps badly, dreams horrible dreams every night, and ought to be sent to a hospital.

The treatment that our experience of the war has shown to be best for neurasthenia is that which should be used in civil life. The patient must be removed to quiet surroundings; he must rest, and if severely ill is kept in bed; he must have good plain food so as to slowly gain weight; and he must sleep, if possible without drugs; mere suggestion that sleep will come in the quiet of a hospital is often effectual; or a hot bath may be tried; if these fail, a little bromide or trional may be given, for sleep is essential; but, if given, soporific drugs must be rapidly gradually diminished; the patient must on no account be taught to depend upon them; opiates must never be used. After a day or two in hospital the doctor should kindly assure him that he will get well, and that he will not be sent back to work till he is well. Talk should never be about his past war experiences; visitors and nurses should be warned of this. We all know and have been made angry by the distracting kindly visitor who puts a patient back by saying, "Now do tell me how it all happened." This helping him to forget his war experiences must be carried out in his surroundings; he should not be in a ward with those badly wounded; and even if the medical officer is a colonel and the patient a lieutenant, the doctor should treat him as he would in civil life—that is, as a friend on an equal footing. Great care must be taken to show that we believe him to be recovering, and not to foster invalidism, so that early, an easy game at cards or light reading, is of great help. As soon as possible he should get up and take a little exercise, such as playing croquet, but he must never carry exercise to the point of fatigue. Whatever he does which turns his mind from the past and at the same time gives him confidence, is invaluable; therefore he should soon be allowed out a little, and for the quiet and country surroundings, a country convalescent home at this stage will accelerate recovery, not only in itself, but because the patient feels that he would not be sent to it unless he were progressing. But in every detail the same care to obliterate his war experiences, not to fatigue him, and to encourage him, must continue there. Sometimes his own home is a good place for him; often it is not, for his relatives may be extremely foolish, and will not carry out the principles just enunciated. Whether the case is slight or severe recovery depends very largely on the doctor; the man who makes a hurried or a pompous round is no good, but he who will take the trouble to show a real interest in his patient, and who will spare time to talk with him properly will be able to cure most, if not all, the cases of neurasthenia, and he will have his reward.

The neurasthenia of the civilian is the same, but less severe; he cannot concentrate, his brain will not work, he forgets, loses interest, and later on his sleep; he becomes dyspeptic and thin. The worst signs are insomnia and wasting, these call for prompt and drastic treatment. Hard work during the war caused many serious cases among civilians, but the treatment of them was, with obvious modifications, the same as for officers.

The war ought to have made all doctors more interested in neurasthenia than some of us have been. It has been said that in ordinary civil practice the absence of organic symptoms, the constant complaining with apparently little justification, the frequent relapses alternating with recovery up to a certain point, the time and attention needed for their cure, has made some doctors neglect their neurasthenic patients, many of whom have been set down as malingerers or as sufferers from imaginary ailments. Neurasthenia and hysterical patients are at least as entangling a study as those suffering from serious organic disease, and have the great advantage of being capable of cure; yet many doctors will not occupy themselves nearly so much with them as with those afflicted with, say, malignant endocarditis or cancer of the liver. Further, we have been

reminded that we should restrict the term to genuine cases; at present its use is often quite unjustifiable.

HYSTERIA.

It is impossible to say whether hysteria has increased since the war, for we do not know how frequent it was before, and many cases formerly regarded as afflicted with hysteria would not, according to some modern definitions, be regarded as suffering from it. Nevertheless, the war has emphatically called our attention to this fascinatingly interesting disease. Gowers used to say that 20 per cent. of women were potential hysterics, but the disease is certainly rare in civil life among men, although since the war there have been very many cases among soldiers.

These cases lend no support to the sexual hypothesis of hysteria fashionable before the war, and most are agreed that they can be explained best either by the hypothesis that hysteria is due to suggestion or by the hypothesis that in the hysteric the supraliminal consciousness is, in part, dormant, and it may be that both suppositions are correct.

That of suggestion has done great good by calling the attention of doctors to the fact that they must not suggest symptoms to the patient. Babinski is undoubtedly right in saying that doctors—and I would add nurses—suggest symptoms to patients. This is reprehensible and never ought to be done. To give two instances: A doctor sent a patient to a distinguished physician, now dead, who replied by letter saying he could find nothing wrong, but that the patient should be watched, for he was the kind of man that might later suffer from arterio-sclerosis and granular kidney. The doctor read this to the patient; he has been miserable ever since. Hearing the letter read suggested to him the symptoms of renal disease, with which he then made himself acquainted by reading; he is now constantly complaining of pain in the lumbar region, tests his urine weekly, and is always looking for oedema of the ankles. I have known a nurse say to a woman, who certainly had no signs of malignant disease: "It is a curious thing, but the last patient I saw with symptoms like yours had cancer." This, as might be expected, had dire results.

The war has reminded us that traumatism may lead to hysteria in at least two ways. A wound of the arm, for example, may suggest paralysis or contracture of it, and such cases, as has been shown particularly by A. F. Hurst and his co-workers at Seale Hayne, can usually be cured by persuasion and re-education. A good instance of this is that large numbers of men who were gassed suffered from hysterical symptoms, generally spasm of the eyelids, aphonia, or vomiting. Sometimes these cases have been deemed incurable, and have been pensioned out of the army as such, for it has not been recognized that the symptoms are hysterical and readily curable. No doubt in all these and allied cases the auto-suggestion causing the paralysis or other hysterical symptoms was rendered easy because the terrifying experiences of the war diminished the reliability of the supraliminal self. But apart from this, actual damage to the brain itself may diminish the power to resist auto-suggestion, and shell explosions apart from direct traumatism may, as Mott has pointed out, damage the brain by (1) commotion from aerial compression, (2) concussion, (3) decompression by embolism of bubbles of N or CO₂, (4) inspiration of CO, (5) inhalation of noxious gases. Not only may many symptoms following an injury be hysterical, but so may many symptoms in organic disease especially of the nervous system. A woman under my care for a tumour of the brain, diagnosed during life and found at the autopsy, some days had anaesthesia of one half of the body; this would disappear to be found again on the other half. For many years I have constantly taught students to try to separate the hysterical symptoms from those due to organic disease of the nervous system in the same patient. They may be found in almost any of such diseases, even organic hemiplegia, and are perhaps especially common in disseminated sclerosis. It goes without saying that we must be equally on the alert not to ascribe to hysteria symptoms due to organic disease.

The large number of soldiers, with or without wounds, suffering from hysteria has stimulated our zeal in curing it. Formerly, perhaps, our predecessors did not devote as much thought as they might to this, and young ladies were suffered to go for years suffering from the vapours,

as it was then called. In the first place, the patient's general health must, if necessary, be improved, for hysteria is liable to occur in those in whom it is below normal. Secondly, the treatment must be begun as early as possible, for, quite apart from its being always wise to get a patient well quickly, the longer hysteria lasts the more difficult it is to cure. Thirdly, as just mentioned, the doctor must most carefully avoid, by his mode of examination and by his wording of questions, suggesting symptoms. Visitors and nurses must also avoid suggestion. Nothing is more heartrending for the doctor than the well meaning visitor, who says: "Poor man! what a terrible time you must have had! The wonder is you have any power left in your legs." A sentence such as this will undo hours of hard work on the doctor's part, and it is because of this constant liability to the suggestion of new symptoms that it has been found advisable to treat hysterical soldiers in special hospitals where it is understood how to manage them, and where they are encouraged by seeing other patients getting well. This is an extremely influential part of the cure. Fourthly, and most essential, is the reawakening of the supraliminal consciousness and the making of suggestions powerful enough to overcome the hysterical symptoms. Sometimes this is not performed by the doctor. A soldier was invalided from the front for mutism; he had not spoken for weeks. He was playing draughts with another soldier, who cheated. The mute broke out in a torrent of abuse, and spoke ever after. A woman had lain in bed for years owing to hysterical paraplegia. The house caught fire; she ran downstairs fast enough to save her life. Hypnotism was employed for this part of the treatment, but is not at present much used as it is unnecessary. Persuasion and re-education are now largely practised, with excellent results. Men who have not been able to use one or other of their limbs or straighten their backs lose their disability in quite a short time. The medical journals, books on war neuroses, and the studies from the Seale-Hayne hospital give details of many cases. It is necessary that the doctor should convince the patient that a cure can and will be effected. Many employ electricity as a means of suggestion. We use at Guy's an effervescing mixture containing asafoetida and valerian; it is successful in many cases of mild hysteria; it acts by suggestion that it will cure, especially as the patient eructates into her mouth asafoetida and valerian during a great part of the day, and is therefore constantly reminded that she is going to be cured. The Weir Mitchell treatment, which often works wonders in the wasted hysterics, illustrates these principles. The general health is improved by the overfeeding and massage, the isolation removes the patient from the suggestions of her friends and her old surroundings, and a skilful doctor and nurse avoid suggesting new symptoms and devote their energy to suggesting to the patient that she will recover.

I trust the war has shown that we ought to give our best attention to hysteria, for the study of it is a pleasure in itself. It is very common; if you doubt this go to Lourdes. It is capable of cure; it is not, as some people seem to think, malingering. Remember Sir James Paget's famous saying: "The patient says she cannot, the friends say she will not, the doctor says she cannot will," and it is a curse to the patient, her friends, and her relations. Do you recollect what Fielding says in *Amelia*:

"These fatigues added to the uneasiness of her mind, overpowered her weak spirits, and threw her into one of the worst disorders that can possibly attend a woman—a disorder very common among the ladies, and our physicians have not agreed upon its name. Some call it a fever on the spirits, some a nervous fever, some the vapours, and some hysterics."
"Oh! say no more," cries Miss Matthews, "I pity you, I pity you from my soul. A man had better be plagued with all the curses of Egypt than with a vapourish wife."

GUERRERO, DOMINGO and ARGÜELLES have confirmed, in the *Philippine Journal of Science*, vol. xiii, the value of tartar emetic in the treatment of yaws in the manner described by Castellani in our columns on October 21st, 1916. The dose used was 1 grain. The number of doses varied from 15 to 18, and in those cases which recovered the medication was continued for five to twenty-seven days. Complete recovery took place in about two-thirds of the cases. In some symptoms diminished, but in others no improvement was observed. In five cases relapses occurred in from two to five months after the lesions had entirely healed.

The Montgomery Lectures IN OPHTHALMOLOGY.

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BY

GORDON HOLMES, C.M.G., C.B.E., M.D., F.R.C.P.,
PHYSICIAN, ROYAL LONDON OPHTHALMIC HOSPITAL; PHYSICIAN TO
OUT-PATIENTS, NATIONAL HOSPITAL FOR THE PARALYSED
AND EPILEPTIC, QUEEN SQUARE, LONDON.

LECTURE II.—DISTURBANCES OF VISUAL SPACE PERCEPTION.

WHEN my eyes fall on any visible object, as on this piece of chalk on the table in front of me, I perceive it and I can in addition form certain judgements on its spatial relations to myself and to other visible objects; and if it happens to be similar to something I have seen before I can recognize its nature. That is:

1. I can determine its position in space in relation to myself and consequently point to it if I can control and direct the movements of my arm.
2. I can also form an approximate estimate of its distance from me and therefore touch it if it be within my reach, or move immediately to it if it be further from me.
3. And if another object be within my field of vision, as this second piece of chalk, I can form an approximately correct judgement of the relative positions of the two, that is, whether the one is higher or lower, to the right or the left of, or nearer or further than the other.
4. When one of the objects casts its image on the periphery of my retinae I can move my eyes so that it comes directly into central vision, and, if it is within a short distance, converge and accommodate too so that its image is focussed accurately on my maculae.
5. I can estimate its size, both absolute and relative to that of other objects.
6. I can recognize that it has thickness and depth, or in other words that it is tridimensional.
7. Finally, I can identify it, that is, associate its visual perception with the memory images of similar or allied past impressions, and with other qualities that I have learnt by previous sense experience, as weight, brittleness, etc.

All these judgements that I can form about this piece of chalk, which has merely thrown an image on my retinae, may be disturbed, either individually or collectively, by cerebral lesions. To-day I intend to neglect disturbances of identification which are generally called visual agnosia, and to restrict discussion to affection of the spatial attributes that we associate with the visual perception of the object.

We must, however, consider briefly how we localize in space objects which we merely perceive by vision, and how we attain the spatial attributes with which we endow our visual perceptions. This has been the subject of much discussion. The two chief explanations are those that have been offered by the nativistic and by the empiristic hypotheses. The nativistic view attributes localization in space to innate properties of the sense organs or sensory centres, properties which are inherited and ready for use by the newly born animal. According to the empiristic school, on the other hand, all space perception is of intellectual origin and is acquired only by habit and experience, by the testing and controlling of visual sensations by tactile, muscular, and other sensations from all parts of the body. This empiristic view is of considerable interest here, as it was first put forward more than two hundred years ago by George Berkeley, then a Fellow of this College, in his celebrated "Essay towards a new theory of vision." A study of the disturbances and dissociations produced by disease may in this, as in many other subjects, contribute towards the solution of the problem, though it cannot by itself settle it.

During the late war I was able to observe eight men with gunshot injuries of the brain who had disturbances of spatial orientation. All presented more or less similar symptoms, and as most of them remained under observation for considerable periods it was possible to investigate them repeatedly. The detailed observations on seven of these cases have been published elsewhere.¹ These disturbances cannot be attributed to blindness or amblyopia,

for the acuity of central vision was good in all the patients, and though there were defects in the fields of vision in several these defects bore no relation to the symptoms, which were identical in other men in whom the fields were normal. The symptoms were also unconnected with paralysis and loss of sensation, and there was no serious degree of mental deterioration in any of them. One man only had aphasia of severe degree.

ABSOLUTE LOCALIZATION.

The most obvious symptom was the inability of the patients to determine the position in space, in relation to themselves, of objects which they saw distinctly. When I held up a knife in front of one man he said at once "that's a pocket-knife"; but though his eyes were directed on it he stretched out his arm in a totally wrong direction when he was told to take hold of it. Another man struck my face with his hand as he attempted to point to a pencil which I held two or three feet to my right side. Similarly when asked to pick up from a table objects which they could see and recognize, these men could never bring their hands directly to them, and often made very gross errors in their direction. One intelligent man described his experience when a meal was placed on a bed-table in front of him; when he tried to take a piece of bread he brought his hand under the table rather than above it, and on attempting to seize the cup he found his fingers first in the tea, and in his second attempt on a plate to one side of it.

This inability to recognize the positions of objects seen was obvious whether they were in central or peripheral vision, but in the latter case the errors were much greater; most of the patients, in fact, were eventually able to localize fairly well, though not with normal accuracy, objects at which they looked.

It was only when they relied on sight alone that they could not localize the positions of an object in space. If it touched any part of their own bodies they could always bring their hands to it immediately and correctly; touch gave them the necessary local knowledge that they failed to obtain from vision alone. This was well shown when one man was given a spoon and told to take soup from a bowl on the table in front of him; he succeeded in placing the spoon in the bowl only after repeated attempts, though he could always bring it accurately to his mouth, but when he was allowed to hold or touch the bowl with his left hand he fed himself without any difficulty. His left hand gave him the spatial information about the bowl that he could not obtain from sight alone. These patients also localized the direction of sounds as accurately as normal persons; when blindfolded they pointed in the direction of a noise, and walked towards anyone who called them, as readily and as accurately as a normal person can.

It was the estimation of distance that was most severely affected. When the patients attempted to touch any object near to them they frequently projected their hands far beyond it; or, if it were beyond their reach, they often tried to grasp it before their hands had reached it. One man, for instance, was asked to seize a piece of paper about six yards away from him; he at once extended his right arm towards it, and continued groping for it as he approached it, and even after his hand had passed it. They were also unable to make even approximately correct estimates of the distance of objects which they saw; a tall chimney about 500 yards distant seemed "perhaps twenty yards" from one man—in fact, he remarked: "Everything I see seems to be the same distance from me."

RELATIVE LOCALIZATION.

Not only were they unable to recognize the spatial relations to themselves of objects which they saw, but they could not determine accurately the relative positions of two objects that were at the same time in vision. When a silver and a copper coin, or two pieces of paper of the same size but of different colour, were held up in front of them they were often unable to describe their relative positions, and especially their relative distances from themselves. They either guessed indiscriminately that the one was nearer than the other, or confessed their inability to decide. One patient, for example, could not say which of two men, one dressed in khaki and the other in hospital blue, was the nearer when they were respectively seven and fourteen yards from him; and when he was shown a panoramic view, in which he recognized several promi-

nent objects, he confessed that he could form no conception how they were placed in respect to one another. But when he was allowed to touch or walk to two separate objects, he no longer entertained any doubt of their relative positions.

RECOGNITION OF LENGTH AND SIZE.

Another prominent symptom in all my patients was their inability to distinguish the absolute and relative lengths and sizes of objects they were shown. They could not estimate at all accurately the length in inches or feet of a line or rod, unless it were a familiar object that they recognized. They were always uncertain which of two pencils was the longer unless the difference was considerable, and they could not divide a line accurately; in many attempts one segment was made four or five times as long as the other, yet they were generally satisfied with their attempts. They failed, too, to find the centre of a circle accurately. I asked one patient to divide a large slice of bread equally between us, but the piece he kept for himself was at least six times as large as that which he gave me, and when I pointed out that the division was unfair he failed to see it until he touched the two pieces with his fingers.

IN WALKING.

The inability to localize objects in space by vision alone was very obvious when these patients were allowed to walk about. One man, when only a few yards from his bed, started to walk in a totally wrong direction when told to go to it, and another when asked to sit in a chair to one side of me walked up against me violently, and then explained he had no idea I was so near to him. Each was at first unable to find his way directly to any point to which he was asked to go though he saw it, or succeeded only after taking a devious route, but later most of them could go straight to a point when they kept their eyes fixed on it. In walking about they frequently collided with large obstacles, as they failed to realize their direction or their distance from themselves. Some of the men walked repeatedly up against walls, occasionally so violently as to hurt themselves, as they had no idea how near they were to them, though they saw them distinctly. One interesting feature was the difficulty they experienced in getting around obstacles which they encountered; on running into a chair, for instance, one man stood still for a moment, apparently perplexed as to how to avoid it, then shuffled to one side and when almost free back again, so that it was only after repeated attempts he succeeded in passing it. When, however, he was allowed to place his hands on it he felt his way round it at once, as easily as a normal person can in a dark room.

All these patients had great difficulty in learning their way about. One man who was in the same small ward for three months could not, even at the end of this time, go directly to his bed, though he could see and identify it, if he had to make two or three turns on his way. Another was tested day after day in an open space divided by a partition in which there was a gate, but even after weeks of training he could rarely go straight through the gate to a point in the other division which he knew. The visual impressions out of which they would normally construct their ideas of space were devoid of spatial qualities, and this made it impossible for them to obtain clear pictures of the topography of even small areas. The topographical memory of ways and places with which they were acquainted before they were injured was also severely involved, though the patients possessed good memory pictures of things that had been familiar to them. Those who were questioned on this point were unable to say how they would find their ways about in their old haunts. One man, who had lived in a small provincial town all his life, remembered that the railway station was near his home, but he could give no idea of how he would go to it from there, or to his workshop, which he knew was close by. Another man had a vivid memory of the trenches in a sector in which he had served for a considerable time, but he had no idea of the positions of the different trenches in relation to one another, or of how to go to any point in them. Though they could describe what they passed on the way, and even the general appearance of the streets, these patients retained no idea of the relations in space of the separate objects or streets to one another.

COUNTING AND READING.

The inability to recognize the position in regard to self of objects seen and the relative localization of several objects, as well as to retain a correct picture of the spatial relations which is normally acquired by sight, produced many other symptoms. My patients could rarely count correctly four or five similar coins or matches placed irregularly on a table in front of them. They generally turned their eyes from one to another and back again, counting and recounting till they became hopelessly confused, since they failed to recognize the mutual spatial relations of the coins and consequently had no means of distinguishing those they had already counted, as all were similar in appearance. When coins of different sizes and colour were employed they could distinguish those they had already included in their tally and consequently succeeded. And as touch gave the local information that was lacking in visual impressions they counted the coins quite readily when allowed to feel them with their hands.

The same disturbances accounted for their difficulty in reading. Though the patients could see the smallest type and recognize the written words they were often unable to read the words of a line in their proper order, and their eyes jumped irregularly from line to line, or even on to another paragraph or column. Their most constant difficulty was to find the beginning of the next line when they had finished reading the words of one. Writing was affected by the same factors. None of my patients, except one who was aphasic, had any trace of agraphia; they could write words and sentences correctly, but in the letters they attempted to write the individual words were placed so irregularly, and the lines ran so frequently across one another on the page, that the whole was scarcely intelligible.

RECOGNITION OF MOVEMENT.

The appreciation of movement was accurately investigated in only one of my patients. This man was never certain whether a moving object approached or receded from him when it moved in the line of his visual axes, but he detected the slightest lateral or vertical movement and recognized its direction at once. The smallest movement could be also detected by peripheral vision, but he was always uncertain of its direction unless its range was much larger than the normal person requires for its instant recognition.

VISUAL ATTENTION.

Another symptom which all these patients presented was a disturbance of visual attention. Every object in central vision seemed to absorb attention, so that images which fell on the periphery of the retinae were often unobserved; attention was incapable of noticing two or more visible objects at the same time. When the observer's hands were held up, one on each side of the patient's visual axes, he could instantly see the movement of either the right or the left, but not the simultaneous movement of both hands. When asked to look at a needle placed on the table he often failed to detect a pencil placed on one side of it, or if there were two pencils he could see only the one or the other at one time. This affection of visual attention was obvious in many other ways too. While sitting in the ward it was noticeable that the patients usually saw only what their eyes were directed on and they took little interest in what was happening around them, unless their attention was called to it by sounds or other sense impressions. In walking, too, they frequently passed without observing them things that would have excited the notice of normal persons.

This visual inattention was not due to blindness or other defects in the fields of vision, as no defects that could explain it were discovered after careful examination, and images were frequently perceived on portions of the retinae where similar images passed unnoticed immediately before or after. There was no regularity in perception. This is a condition that results not infrequently from lesions of the parietal lobes, and it may be a unilateral or a bilateral phenomenon. It is commonly found apart from disturbances of visual localization and is entirely independent of this. It plays a part, however, in some of the symptoms we have already dealt with, as if the visual impressions of objects do not attract attention the patient fails to notice landmarks by which he could later find his way, and by which he could construct a geographical picture

of his surroundings. In attempting to count objects, too, he is liable to miss out some owing to their images not exciting attention.

OCULAR MOVEMENTS.

There were also abnormalities of the eye movements in all my cases, though none of the ocular muscles were paralysed and the pupillary reflexes were preserved. The most prominent of these symptoms was a disturbance of fixation. When spoken to suddenly the patient first stared blankly in front of him, and then his eyes roamed round the room till they fell, as if by chance, on my face. Similarly it was only after some time and searching that he could bring his eyes directly to an object on one side of his visual axes at which he was asked to look. This difficulty in fixation was a natural consequence of defective spatial localization, for if the position of the object that threw its image on the periphery of the retinae could not be recognized the eyes could not be moved immediately to it. The fact that most of the patients could turn their eyes promptly to points that they could locate in space, as to parts of their own bodies that were touched or to objects held in their own hands, shows that in these cases this was the explanation of the symptom. But as in a few of my cases and in others that have been recorded the subjects were unable to deviate their eyes directly to points on their own bodies this symptom may be also due to disturbance of the central mechanism of the ocular movements, a disturbance on the effective side which is closely parallel to the perceptual affection on the sensory.

Accommodation was similarly affected; when an object at which they gazed was approached slowly towards their faces their eyes failed to converge, their pupils did not contract, and as accommodation did not occur the object became blurred or indistinct when nearer than eight inches or so. This was also mainly due to the spatial perceptual disturbances, but as some of the patients could not accommodate on their own fingers accurately an affection of the central mechanism that controls it must be also assumed.

The blinking reflex was also abolished. These patients never reacted by blinking or withdrawing their heads when anything was suddenly swung towards their faces, or to threatening gestures. In most of the cases this was probably secondary to the loss of spatial perception; some indeed explained that they did not recognize the nearness of the threatening object, but in others the cerebral centres which are concerned in this reflex were probably involved.

STEREOSCOPIC VISION.

Stereoscopic vision, or the power of recognizing thickness and depth in solid objects, was severely affected in only one of my patients. To this man everything appeared flat and bidimensional; he identified familiar things only by associating their areal shape with previously acquired experiences, just as the normal person interprets drawings and pictures as the objects they represent. He described a man who stood in front of him as flat, "I can only see the front of him, I do not notice that he is thick; I cannot tell the depth in anything." A box seemed to him a piece of flat cardboard, no matter at what angle he saw it, and when it was placed in his hands he was surprised to discover it was a box. And a glass tumbler looked like a bit of flat glass which changed in shape as it was moved about. When he was placed in front of a flight of steps he saw only a number of straight lines on the floor. Everything seen was flat, nothing had thickness or depth in it; stereoscopic vision was completely abolished and remained so till he passed from under our observation three months after the infliction of the wound.

POSITION OF THE ANATOMICAL LESIONS.

In all my eight cases the condition described above was associated with gunshot wounds of the head which involved the posterior and upper parts of both parietal lobes. *Post-mortem* examinations were obtained in two cases; in both the lateral surfaces were injured in the neighbourhood of the angular and supramarginal gyri, while the missiles passed through the mesial surfaces immediately dorsal or posterior to the splenium of the corpus callosum. Craniometric measurements in the remaining cases indicated that in them the same parts of the brain was damaged. As similar symptoms have been observed in cases in which there were vascular

lesions limited to the lateral surfaces of the hemispheres in the region of the angular gyri, we can probably attribute the disturbances of visual space perception to destruction of this portion of the parietal association area. It is interesting that certain observations made thirty years ago by Sir E. Sharpey-Schafer on monkeys from which he removed the angular gyri, can now be interpreted as the result of affection of space perception, similar to that with which my patients suffered.

NATURE OF THE SYMPTOMS.

In attempting to analyse these symptoms and interpret their nature and significance we must consider the physiological factors on which spatial localization by sight and tridimensional vision depend.

The simplest case is localization in a bidimensional plane represented by a hollow sphere, the centre of which would correspond to the pupil. When the eye is focussed on any point on this sphere the concave surface of the retina receives images of all objects that lie on the arc within its field of vision. Then we can recognize the relation in space of any one of these objects to that on which our eyes are directed, and the relation of any other two objects on this arc to one another. This we do by virtue of the local signs of the stimulated retinal points, just as by means of the cutaneous local signs we can localize any contact on the surface of our body.

But such local signs can serve us only in relative localization to some central point or to our visual axes; they cannot inform us of the absolute position in space of any object with reference to ourselves, as they take no account of the position of our eyes, of our heads, or even of our whole bodies. This additional information we must obtain from proprioceptive impressions from the ocular muscles, from our labyrinth, and from the muscles of our bodies; and when by virtue of these we can become aware of our position in space and the direction in which our eyes are looking, we can, by using the retinal local signs, determine the absolute position in space of the object we see in relation to ourselves. Even in this simple case the association of retinal and various proprioceptive afferents is necessary, and the loss of any of these factors may disturb this function. In the cases described here, the afferents from the labyrinths, and from the ocular and other muscles, were unimpaired, and the symptoms must be attributed either to a disturbance of the local sign functions of the retina, or to the failure of the brain to associate and integrate these with other afferent impressions. Many direct observations showed that the retinal local signs were affected.

We have to deal with a more complex condition in considering the perception of distance, as there are several other factors concerned in this. Binocular vision undoubtedly plays a part, and the proprioceptive impressions from the intrinsic and extrinsic ocular muscles that are excited by accommodation and convergence contribute to it when the object is near. The estimation of distance is also aided by the apparent size of known objects, by their distinctness and light intensity, and by the parallax that is obtained on movement of either our heads or of the objects. There is no evidence that any of these separate factors were disturbed in my cases. The inability to estimate distance must be ascribed to failure to correlate and associate the various afferent impressions on which perception of the third dimensions may be based, and to assimilate them with past experiences and thereby supply to consciousness the data on which a correct intellectual judgement can be made.

Loss of stereoscopic vision might be regarded as a natural consequence of inability to appreciate relative distances since, it might be argued, this would make it impossible to discriminate the depths of the different portions of a tridimensional figure. But stereoscopic vision was affected in only one of the eight cases in which the perception of distance was seriously disturbed. The physiological factors on which it depends have been the subject of much discussion; the appreciation of relative distance, difference in light and shade, the parallax and the sense of perspective, all undoubtedly play a part, but it is to the fusion of the non-corresponding images formed in the two eyes and their integration with these other sensory data into a single concept that we mainly owe the appreciation of depth in objects seen. There was no gross disturbance of any of these individual factors in my

cases except the appreciation of relative distance, which the intact faculty of stereoscopic vision in the other cases shows was not sufficient. An affection of the sense of perspective may have contributed, but as this faculty is of intellectual origin and acquired by training and experience, we are ultimately forced to regard loss of stereoscopic vision, too, as the result of a failure to combine and associate the different sensations on which the appropriate intellectual judgements can be made, rather than as due to the loss of any of the physiological factors on which it depends.

REFERENCE.

- ¹ Holmes: *Brit. Journ. of Ophthalmol.*, 1918, vol. ii, p. 449. Holmes and Horrax: *Archiv. of Neurol. and Psychiatr.*, 1919, vol. i, p. 385.

A CRITICISM OF CERTAIN RECENT CLAIMS TO HAVE DISCOVERED AND CULTIVATED THE FILTER-PASSING VIRUS OF TRENCH FEVER AND OF INFLUENZA.

BY

J. A. ARKWRIGHT, M.D.

(From the Lister Institute of Preventive Medicine.)

In recent papers by Bradford, Bashford and Wilson^{1 2 3 4 5 6}, it is claimed (1) that six diseases including trench fever and influenza, which have up to the last twelve months baffled investigators, have been shown conclusively to be caused by organisms which pass filters of such a quality that they hold back ordinary bacteria; (2) that in the case of seven other diseases (thirteen in all) the virus has been cultivated and can be recognized microscopically when stained by suitable methods.

Most of the work has been published only in the form of condensed epitomes, but rather fuller details on which these claims are based have been recorded for two diseases—namely, "epidemic polyneuritis" and influenza.

These papers have attracted considerable attention on account of the extent and importance of the results claimed.

OTHER RECENT ATTEMPTS TO CULTIVATE A FILTER-PASSING VIRUS OF TRENCH FEVER OR OF INFLUENZA.

A good deal of work in recent years has encouraged the view that the viruses of trench fever and influenza are of such a kind that their filtrability may be ultimately established, and has prepared the way for further researches on the cultivation of filtrable viruses.

1. The American Red Cross Committee on Trench Fever published evidence⁷ that the virus of trench fever would in some instances pass through a Chamberland filter "L" with a pressure of 760 mm. of mercury.

2. The War Office Trench Fever Committee in London (1918-19) has made five inoculations of filtrates of emulsions of infected louse excreta into volunteers. The filters used were in one case a Chamberland "F," in the others British "Berkefelds." Only one of these experiments was definitely successful, and in this case the filter used was not satisfactory. The results were as follows:

(a) *Experiment 153.*—20 c.cm. of a 1 per cent. emulsion filtered at a negative pressure of 350 to 400 mm. of mercury through a Chamberland "F" filter. Result, negative.

(b) *Experiment 187.*—10 c.cm. of a 1 per cent. emulsion filtered at a negative pressure of 200 to 300 mm. of mercury through a Berkefeld were injected intravenously. The man had a rise of temperature to 103° C. and abdominal pain on the eighth day from the inoculation, but no further symptoms suggestive of trench fever.

(c) *Experiment 190.*—10 c.cm. of a 1 per cent. emulsion filtered at a negative pressure of 300 to 350 mm. of mercury through a Berkefeld were injected intravenously. The result was negative.

The above filters kept back *B. prodigiosus* under conditions like those of the experiments.

(d) *Experiment 192.*—35 c.cm. of a Berkefeld filtrate of a 0.5 per cent. emulsion were inoculated subcutaneously. The filtration took place at a negative pressure of 600 to 740 mm. of mercury. The man developed trench fever on the sixth day and had several relapses.

(e) *Experiment 200.*—49 c.cm. of a Berkefeld filtrate of the same emulsion as that used in the last experiment was inoculated subcutaneously. The filtrate was obtained at a

negative pressure of between 600 and 720 mm. of mercury. The result was negative.

Neither of the filters used in Experiments (d) and (e) completely retained the *B. prodigiosus* of a test emulsion used under the same conditions as the experiments.

It seems, therefore, fair to assume that the virus of trench fever consists of particles of such a size that they are to a large extent, but not necessarily entirely, stopped by a filter which will let through a small proportion of the *B. prodigiosus* in an emulsion at the same pressure and within a period of one or two hours. That is, that probably the size of the individuals in the trench fever virus approximates to that of the smallest members of an emulsion of *B. prodigiosus*.

3. The work of Töpfer,⁸ Munk and Rocha Lima,⁹ Arkwright, Bacot and Duncan,¹⁰ and others has shown the close association of trench fever virus in the louse with minute bodies (rickettsia) about 0.3 to 0.5 micron in diameter.

4. Selter (1918),¹¹ Nicolle and Lebaillly (1918),¹² Gibson, Bowman and Connor (1918),¹³ 14 15 v. Angerer (1918),¹⁶ Binder and Prell (1918),¹⁷ and others have brought forward evidence that they have passed the virus of influenza through filters which kept back bacteria, and that they have reproduced the disease in animals, not only with the filtrate but with cultures made from the filtrate.

5. Again, the work of Flexner and Noguchi (1913)¹⁸ on a filter-passing organism of poliomyelitis initiated methods of the kind used by Bradford, Bashford and Wilson, and they produced strong evidence in favour of their so-called "globoid bodies" as a cause of this disease.

6. Other work—for example, that of G. B. Foster (1917)¹⁹ on the culture of the organism of "common colds," and of Noguchi (1913)²⁰ on the virus of rabies—has tended to support the conclusion that these "filter-passing" organisms can be cultured in artificial media and recognized microscopically in the cultures.

The work on poliomyelitis has not, however, met with universal acceptance as regards the morphology of the micro-organisms, and that on "common cold" is unconfirmed. Noguchi's work on rabies has been strongly contested by Kraus (1914),²¹ who claimed to have found identical bodies in uninoculated ascitic fluid.

As a member of the War Office Trench Fever Committee under the chairmanship of Major-General Sir David Bruce and in collaboration with Bacot and Duncan, the present writer has been working during the last eighteen months on the virus and the mode of transmission of trench fever, and has been engaged in various attempts to obtain cultures of this virus, and to determine the relation of rickettsia to the virus.

He has therefore been led to study in detail the method and results of Bradford, Bashford and Wilson, and to try to confirm their findings. This attempt was at the outset particularly interesting to him, since the forms described by Bradford and Wilson in trench fever were stated to be of approximately the same size as rickettsia bodies.

WRITER'S ATTEMPTS TO CULTURE THE VIRUSES OF TRENCH FEVER AND INFLUENZA.

Since early in 1918 the present writer has been making numerous attempts to cultivate the virus of trench fever from infected louse excreta and from patients' blood on a variety of media, including modifications of Noguchi's medium for spirochaetes and blood broth incubated aerobically and anaerobically. Since the publication of Bradford, Bashford and Wilson's papers on polyneuritis in the *Quarterly Journal of Medicine* (October, 1918, and January, 1919), he has also worked with the modification of Noguchi's medium used by Wilson.

Early in 1919 some attempts were made to grow the virus of influenza from filtered and from glycerinated sputum, on account of the publication of the experiments by Gibson, Bowman and Connor (X, 1918).¹³

Three samples of influenza sputum were used for the culture experiments. The writer has therefore become familiar practically with the macroscopical and microscopical changes in tubes of these media due to various forms of precipitated protein.

Since May, 1919, a considerable number of tubes of the modification of Noguchi's medium used by Wilson have been prepared and incubated at 37° C. Some of them have been inoculated with trench fever virus, and the remainder have not been inoculated, but have served as

controls. A few Noguchi's tubes without agar have also been prepared; horse serum has been used generally, but rabbit serum has also been tried. Four series of tubes have been inoculated with filtered louse excreta and one with glycerinated excreta.

All the tubes have been watched for the appearance of turbidity or the formation of deposit, and samples of the deposit have been removed with pipettes, stained and examined microscopically. Twenty-three such culture tubes were inoculated with an emulsion of louse excreta infected with trench fever virus after filtration through a Berkefeld filter; of these, three (13 per cent.) were contaminated with bacteria. Twenty-one were inoculated with the blood of a trench fever patient taken on the seventh day of disease counting from the onset of fever; of these, six were contaminated (28.5 per cent.). Of 46 control tubes, 10 proved to be contaminated (21.7 per cent.). Thus out of 90 tubes in all, 19, or about 21 per cent., proved to be contaminated by bacteria after two or three weeks' incubation at 37° C., or earlier.

Of the 19 tubes containing bacteria, 4 contained a diphtheroid bacillus, 2 streptococci, 3 cocci not in chains, 3 a gas-forming organism, and 7 other less well characterized bacteria.

Of the 10 contaminated control tubes 2 contained diphtheroids, 1 a coccus, 1 a gas-producing sporer, 1 another gas former, and 5 had kinds of bacteria which were not accurately defined.

Macroscopic Appearances of the Culture Tubes.

The results of observations on the above culture tubes may briefly be given as follows: The writer was unable to distinguish between the culture tubes which had been inoculated and those which had not been inoculated. Great differences existed between tubes of the same age, but, whenever a tube showed a high degree of turbidity or a large amount of deposit, corresponding to that called a free growth in tubes shown by Captain Wilson at the British Medical Association meeting in April, 1919, or figured in the paper on influenza virus by Bradford, Bashford and Wilson, in the *Quarterly Journal of Medicine*, vol. xii. No. 47, plate 16 (opposite p. 206), figure A (3), then the tube in question could be shown to contain bacteria, readily demonstrated in films stained by Giemsa or Gram and fuchsin, and by cultivation on agar and in broth.

Some turbidity of the serum-agar, and a change in the appearance and wooliness in outline of the piece of rabbit kidney and more or less granular deposit on the surface of the agar occurred in all tubes after five to ten days' incubation.

Microscopical Appearances.

Films of the deposit from the tubes were stained by carbol-methylene blue (Kühne's formula) for one or two hours or by Giemsa (1 drop to 1 c.cm.) for twelve to twenty hours, and examined with a No. 4 eyepiece and a 1/12 oil immersion objective.

The appearances were extremely varied as to the number, size, shape, and degree of staining of the granules seen in the films. They were so different in samples from different control tubes that a standard of what was to be expected in a "control" was very difficult to establish. In addition the temperature and the rate of drying, thickness of the film, and the method of fixing all made differences in the microscopical appearances. As a rule the films were dried in the incubator at 37° C., and latterly were fixed in the flame, as this method of fixing was that used by Captain Wilson; previously they had been fixed in alcohol. It is recognized, I suppose, by every one who has worked with stained films from broth cultures of bacteria that the irregular shape and staining of the micro-organisms and of the precipitated protein, etc., make very disconcerting and puzzling pictures. When the culture medium contains serum or blood also, and has been incubated for five days or more, and a deposit has formed, the difficulties are intensified, especially if a weak stain is used.

REMARKS ON THE METHODS USED BY BRADFORD, BASHFORD AND WILSON FOR INVESTIGATION OF THE FILTER-PASSING VIRUSES, AND THE RESULTS OF THEIR ATTEMPTS AT CULTURE.

In order to prove or adduce reasonably good evidence that a micro-organism is the cause of a given disease, it is not only necessary that the disease should be clinically

or pathologically clearly defined, but that the micro-organism should have such definite characters, cultural, microscopical, etc., that it can be recognized without doubt when met with. It is very necessary, therefore, in the present instance that the claim to be able to differentiate in cultures and films between the various filter-passing organisms described, and between them and bacteria of more usual size, should be very thoroughly established.

Animal Experiments reproducing the Disease and Recovery of the Virus in a Recognizable Form from the Infected Animals.

Indubitable results from these experiments are only claimed in six diseases, including influenza and trench fever. I have seen none of the animal experiments, and do not propose to discuss them. The War Office Trench Fever Committee has, however, attempted the production of disease in man by inoculating three volunteers with "cultures" obtained by inoculating media of the same kind as that used by Captain Wilson. The results were negative in two cases and not at all characteristic in the third; a rise of temperature to 100° F. on the nineteenth day being the only symptom produced. This result was, therefore, quite inconclusive.

It must be remembered, moreover, that evidence that the virus increases *in vitro*, as demonstrated by inoculation, is no proof that bodies seen in the cultures are identical with the virus or *materies morbi*.

1. *Filtration*.—Although it is stated that the different kinds of virus were filtered in some instances before or after culture through a Berkefeld N or V or a Massen filter, no observations are recorded on the pressure under which filtration took place nor the length of time which this operation took—indeed, owing to the exigencies of active service, observations on the pressure appear to have been impossible. It is, moreover, not stated what tests of individual filters were made to ensure that all bacteria of ordinary dimensions were held back; although some attempts to measure the particles which passed through are mentioned.

2. *Cultivation*.—The culture medium described by Captain Wilson is a modification of that used by Noguchi for the cultivation of spirochaetes and appears to have been identical for all the thirteen diseases investigated, though at times ascitic fluid was used instead of serum.

As has been pointed out above, the demonstration of successful cultures depends on (a) the macroscopical appearances of the culture tubes or flasks, and (b) microscopical examination of the cultures.

Through the courtesy of Captain Wilson the writer has been able to examine stained films from his cultures, and also some material from his culture tubes with which he has made subcultures and films. Captain Wilson has also spent a considerable time examining some of the writer's cultures and films made from them and in pointing out the objects in films which he regards as the micro-organisms of trench fever and influenza.

The Macroscopical Examination of Cultures.

The macroscopical changes described by Wilson as seen in cultures consist of turbidity of the culture media, especially of the serum agar in the immediate vicinity of the rabbit kidney, and the formation of powdery or coherent material on the surface of the serum agar and later turbidity in the liquid medium above the agar.

It is claimed that the degree of the turbidity and the date of its appearance, together with the colour, amount, cohesion, and adhesion to the agar of these deposits, enable the observers to distinguish the viruses of several different diseases from each other, and also from the appearances seen in the control tubes containing all the same ingredients except the inoculum of virus.

It is, however, admitted that turbidity in the serum agar and a slight deposit on its surface do occur in the control tubes, but they are said to appear later and to be much less in degree than in tubes with growth of the virus. The changes in the control tubes, as has been pointed out to me by Lieut.-Colonel C. J. Martin, are apparently due in whole or in part to the autolysis of the kidney and the precipitate of denaturated serum-protein resulting from the consequent change in reaction.*

* I am kindly permitted by Lieut.-Colonel O. J. Martin to state that he found the acid produced in ten days at 37° C. in a control (sterile) Noguchi tube due to autolysis of a piece of kidney about 0.3 c.c.m. in volume in 10 c.c.m. of serum broth, equivalent to 0.3 to 0.4 c.c.m. N/10 acid per 10 c.c.m. of broth, exclusive of CO₂.

Microscopic Examination of Cultures.

As regards proof of culture, the most important and the most difficult part of the research consists in the recognition of the micro-organisms in the deposit removed from culture tubes and stained as dry films and their differentiation from the appearances seen in similar films made from control tubes.

In order to establish the presence of one of the species of very small micro-organisms described by Bradford, Bashford and Wilson, satisfactorily in a film it must be distinguished not only from stained granules of protein, altered blood and kidney tissue, and from debris of cells which may be present in the serum or ascitic fluid, but also from other similar minute micro-organisms, of pathological importance or otherwise, which may be present in the inoculum or rabbit kidney, and especially from any of the other twelve viruses with which Bradford, Bashford and Wilson have worked. It is claimed by them that this differentiation can be made with so great accuracy that the tubes infected with these different kinds of virus can be used as controls against each other.

Besides these sources of fallacy the possibility of the presence of extraneous bacteria of ordinary dimensions, due to lapses in technique or infection of the rabbit kidney, etc., must be reckoned with.

Films from both Captain Wilson's and the present writer's culture tubes show variously shaped and stained bodies which have been pointed out by Captain Wilson as representing the different filterable viruses.

As far as the writer's observations go these bodies appear to belong to two different categories:

1. Bacteria which are only partially stained owing to the age of the culture, the irregular action of the stain, or subsequent differentiation by washing.

2. Granules of precipitated protein and perhaps other unorganized granules closely resembling them. These granules vary very much in size, shape, and staining, but are frequently round or diplococcal in form or resemble very small bipolar staining bacteria. They are chiefly distinguished by their minute size, often about 0.3 to 0.2 micron or less, and their feeble staining properties (pink or lilac by Giemsa), and, as a rule, ill-defined outline.

These forms, both bacteria and precipitated granules, were found in some both of the inoculated and of the uninoculated control tubes.

Trench Fever Films.

1. The writer has had the opportunity of examining three films made by Captain Wilson, and dated September and November, 1918, from cultures of trench fever virus, the original source of the inoculum being different in each case—two from patients' blood and one from infected louse-excreta. The films were stained by methylene blue. The bodies seen in each film were very definite and fairly similar in the three cases. Groups or clumps were seen in very many fields, and were chiefly composed of very small rounded bodies (about 0.5 micron in diameter), sometimes arranged in rows or pairs, and lying in a less well stained matrix. These appeared to resemble small diphtheroid bacilli, so stained as only to show the polar granules. On carefully examining two of the films, in some places similar sized groups of organisms were found with a similar arrangement of granules, but here the staining was deeper and the granules were clearly seen to be contained in long and curved or short bacilli, resembling diphtheroids and arranged in clumps. Further in support of this view is the fact that films made from some of the writer's control tubes, which contained a very moderate amount of deposit, showed clumps of small diphtheroid bacilli which when deeply stained by carbol-methylene blue or carbol-thionin, and differentiated with alcohol, gave a very similar though not quite identical picture. The slight dissimilarity in the two cases is readily accounted for, since it is very probable that the diphtheroid bacilli in the two instances were not the same species. Subculture of these contaminated control tubes gave many small colonies of a diphtheroid bacillus.

2. Other freshly made films from Noguchi tubes inoculated by Captain Wilson or the writer with trench fever virus in blood or excreta showed very much less distinct forms: the granules were smaller and did not appear in rows, they were less well defined, and stained less deeply. These films also, in the opinion of Captain Wilson, contained forms of the trench fever micro-organism, but the

present writer was unable to distinguish any appearances not found in control tubes. The granules in these films did not at all resemble, in his opinion, the organisms seen in Captain Wilson's other trench fever films and described in the last paragraph. These tubes gave no growth on subculture to agar and broth.

3. On June 23rd, 1919, a culture tube which had been inoculated by Captain Wilson some days before showed, in his opinion, macroscopically and microscopically, appearances characteristic of a trench fever culture. When a film was stained by carbol-methylene blue, large clumps containing blue dots were to be seen. A film stained by Gram's method and fuchsin showed only large Gram-positive staphylococci in clumps and masses, and these were seen in large numbers; no other forms resembling micro-organisms could be recognized by the writer in three films from this tube. Subcultures to an agar slope and broth gave a profuse growth of *Staphylococcus aureus*.

Influenza.

1. One sample of influenza sputum filtered and inoculated by the writer into Noguchi culture tubes gave no macroscopic or microscopic appearances which could be distinguished by the writer from those seen in control tubes. The films were stained by Giemsa.

2. On June 17th, 1919, Captain Wilson gave the writer some turbid blood-stained liquid, part of a culture which he had inoculated with the glycerinated blood of an influenza patient. He stated that this liquid contained abundant influenza micro-organisms. Films were prepared at once, and also subcultures were made on an agar slope and in broth. The films stained by carbol-methylene blue and by Gram showed very large numbers of a large Gram-positive coccus and no other organism. In a film stained by Captain Wilson with carbol-thionin and shown to the writer were seen large numbers of round organisms in groups which appeared to the writer to be the same coccus stained chiefly in the centre and under a lower magnification. This Captain Wilson regarded as the micro-organism of influenza. A staphylococcus grew readily in subculture on an agar slope and in broth.

In this communication no attempt has been made to criticize the work of Bradford, Bashford and Wilson on the experimental inoculation of cultures of these viruses into animals, but if the cultures used were contaminated with bacteria to the same extent as those from which films have been shown to the writer, then bacterial infection may be the explanation of certain of the symptoms and pathological changes produced.

CONCLUSIONS.

1. I have been quite unable to distinguish macroscopically or microscopically between tubes inoculated with trench fever or influenza virus (as far as the latter has been attempted) and control tubes at any period between their first inoculation and three weeks later, or over a longer period.

2. The culture tubes showing a considerable amount of deposit or turbidity of the serum broth have, when examined, always proved to be contaminated by bacteria as shown by subculture and microscopical examination.

3. Two tubes selected by Captain Wilson from his own cultures after macroscopical and microscopical examination as good examples of growth of (a) trench fever and (b) influenza virus proved to be grossly contaminated by large staphylococci and appeared to the writer to contain no other organisms.

4. Of three films shown as typical of the trench fever virus from different cases of trench fever and showing organisms of similar morphology, two appeared to be undoubtedly films of a diphtheroid bacillus irregularly stained, the third film also contained diphtheroid bacilli and in addition large numbers of a small bacillus of different appearance.

5. Other tubes regarded by Captain Wilson after macroscopical and microscopical examination as examples of cultures of trench fever which did not contain ordinary bacteria showed in the opinion of the writer only appearances which were also found in control tubes.

6. The forms claimed by Bradford, Bashford and Wilson as the micro-organisms of trench fever and influenza appear to the writer to be of two kinds:

(a) Bacteria of the size of a staphylococcus or a diphtheroid bacillus, but only partially stained (polar or central staining).

(b) Smaller or larger granules of precipitated protein which stain much more feebly than (a) and are also found in control tubes. Some of Captain Wilson's films appear to contain both and some only the latter forms.

In the opinion of the writer Captain Wilson has been misled by the appearances in films of bacteria feebly stained with methylene blue, in which only partial—for example, polar—staining is seen, and in the case of cultures from which bacteria have been absent he has been deceived by the diplococcus-like or dumb-bell shaped forms often seen in protein precipitates, and has regarded these granules as organisms.

That Bradford, Bashford and Wilson should have been so misled in their researches appears to be due to the following causes:

1. The conditions under which they worked—in isolation from other bacteriologists—conditions which would scarcely have obtained in times of peace.

2. A tendency to place undue reliance on the efficacy of filters and glycerin for removing or killing bacteria.

3. A misconception as to the size of the bodies seen in their films.

4. Inadequate staining.

5. Insufficient use of subculture on to ordinary media as a test for bacterial contamination.

In conclusion, I must express my appreciation of the readiness with which Captain Wilson has unreservedly placed certain of his films and cultures at my disposal, and my regret that I am unable to accept his conclusions.

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NOTES ON DR. ARKWRIGHT'S ARTICLE.

By SIR JOHN ROSE BRADFORD.

In view of the discrepancy in the results obtained by Dr. Arkwright and Captain Wilson respectively, it may be well for me to add a short statement with reference to Captain Wilson's work.

In the initial work on polyneuritis described in the *Quarterly Journal of Medicine*, Gram's method of staining was used as a routine, and it was also so used in the earlier work on certain other diseases, such as trench fever and influenza. It was subsequently discarded owing to the tendency to the deposit of stain with this method, and the non-use of this control has doubtless contributed in some instances to the failure to recognize the presence of contamination in certain cultures. The contaminations present in these contaminated cultures are to some extent peculiar, in that, as stated by Captain Wilson in his writings, full controls were always made both of the media used and of the inoculum. The methods of control employed were: first, the rabbit kidney and the inoculum were cultured by the ordinary bacteriological methods in common use; and, secondly, Noguchi control tubes were always put up, some with the inoculum but minus the kidney fragment, and others with the kidney fragment but without the inoculum.

All Noguchi tubes were rejected when, as sometimes happened, growth took place in any of such controls. It would seem, however, that some contaminations only grow in Noguchi culture tubes when both the inoculum and the kidney fragment are present.

As regards the interpretation to be attached to the minute Gram-positive bodies that were described as organisms, and are so regarded by Captain Wilson, and which Dr. Arkwright looks upon as mere deposits of protein, it is clear that no final conclusion can be reached as to their being organisms until they have been obtained abundantly in unquestionably pure cultures. Hence, at the present moment it cannot be claimed that this work has proved that filter-passing organisms in the diseases in question have been grown in pure culture.

Captain Wilson and I are indebted to the courtesy of Dr. Arkwright and of the Editor of the *BRITISH MEDICAL JOURNAL* for having the opportunity of appending these notes to Dr. Arkwright's paper.

August, 1919.

By CAPTAIN J. A. WILSON.

About the end of June a series of films were handed by me to Dr. Arkwright. These films were stained by me by Küline's methylene blue for a period of one hour, and were illustrative of the types of organisms isolated from the diseases mentioned in a preliminary note to this *JOURNAL*.¹ A few days later he was given subcultures of the organisms of trench fever and influenza. Inasmuch as his examination of these films and cultures is a direct negation of the published account of them, it is advisable that a statement should be made by me:

1. These films and cultures, when stained by Gram's method, showed cocci and diphtheroid bacilli.

2. It is also correct that microscopically the degenerated forms in these films were mistaken by me for filter-passing organisms.

3. The minute bodies which Dr. Arkwright suggests are but deposits of protein were the bodies originally described by me as filter-passing organisms. They are Gram-positive, they have not been found by me in controls, while they have been present in the Noguchi cultures and also in those in which the serum constituent was replaced by glycerin. During the past two months attempts have been made to obtain clean cultures of these bodies, but have been unsuccessful.

There is another point to which reference may be made, as it may be of use to others: Dr. Arkwright suggested that insufficient use had been made of the ordinary methods of cultivation; this is not correct. Adequate controls of the rabbit kidney and the inoculum were always made, and it was apparently only when the kidney and inoculum were associated anaerobically that growth took place.

In conclusion, it has to be stated that it has not been proved that a filter-passing organism has been grown in pure culture in any of the diseases for which the claim was made.

A THOMAS ARM SPLINT WITH A FLEXIBLE ELBOW.

By W. J. FOSTER, F.R.C.S.,

SURGEON, ROYAL BERKSHIRE HOSPITAL.

In the treatment of fractures of the elbow-joint there is need for an improvement in the existing type of splint. I have got Messrs. Mayer and Meltzer to make a splint which I am sure will be of great use in general practice. It can be used for either right or left arm, and, although specially useful in fractures of the elbow, is more useful than the ordinary fixed Thomas arm splint for fractures of the humerus, as it has a more rigid extension bar below the elbow, enabling traction to be applied by a scarf knotted after passing over the elbow-joint and below the bar. It is also of use in some cases of fracture of the forearm, enabling the position of supination to be maintained with at the same time a daily variation of the position of flexion and extension of the elbow, so preventing a stiff joint.

The splint is adjustable in length so that it can readily be made to fit an adult of any size. Using it as an emergency splint, it is quite possible to fix up a patient with a fracture of the upper limb in a safe position to be transported home without even taking his clothes off; or it can be used temporarily while obtaining any other splint.

The worst case of fracture of the elbow-joint I have seen was in a young lady; it was treated throughout with this splint and she recovered with almost a perfect range of movements; the shoulder could easily be touched with the elbow flexed; the range of extension was nearly full, and supination and pronation were perfect in the forearm. She was of course carefully massaged after the first week, and no doubt this was an important factor in producing so gratifying a result.

In compound fractures of the humerus, especially gunshot injuries, the advantage of recovery with an elbow-joint having a range of half or more instead of rigid adhesions is very great. This can invariably be obtained provided the joint itself is not wounded and septic. With this range of movement, after perhaps months of treatment for a septic compound fracture of the humerus, the masseur has a good start, and can soon get the full range of movement back. Often the patient is able to restore movement to the full himself in a few weeks.

The line of the humerus is maintained much better than might be expected. A few short lengths of stout bandage (flannelette) are attached as usual from wire to wire by safety pins or paper clips. The strips of bandage should extend from the axilla to just below the level of the elbow-joint behind the arm.

A bandage rolled round the wires and arm, with a few turns separately round the forearm, completes the bandaging. The strap from the shoulder ring is first passed round the chest and buckled. The smaller strap on the outer side of the ring is buckled on to the wrist end of the splint. This wrist-shoulder strap is the important one in treating fractures of the elbow-joint. When first put up, the fracture should be left at right angles, and day by day, as the swelling diminishes, the strap up is taken half to one inch at a time until the elbow is flexed as much as is safe, with due regard to the amount of swelling present. Having reached the limit of flexion in about a week, the strap is let out again inch by inch until the forearm is extended. Extension need not be carried to more than half the normal. It is now possible to increase the daily range without producing undue pain or reaction; movement of two or three inches a day is attempted and a more acute angle of flexion reached. It is easy to detach the bandages from the forearm daily without removing the splint entirely for massage.

I am confident that if the majority of cases of fractured elbow were treated throughout by a flexible splint of this type the results as regards stiffness would be much better. If the acute flexion is not attempted in the first few days, when the swelling is often very great, the danger of ischaemic paralysis of muscles is diminished, if not entirely avoided. I have seen such paralysis follow acute flexion in two cases of fracture of the lower end of the humerus close above the condyles although they were treated with special care; the lower end of the upper fragment protruded forwards combined with the swelling in acute flexion compressed the main vessels, and in a few hours caused irreparable damage to the muscles. With this splint, and care in not forcing acute flexion too early, this accident should not occur.

Traction can be applied to the lower fragment by the pull of a scarf over the front of the joint, the ends being taken down and knotted over the fixed extension bar; in this way the return of the lower fragment to its normal position is favoured, although in fractures close above the condyles this is often impossible, except by an operation, and even then difficult. It is not possible in many cases of fracture of the elbow-joint to get an ideal result from a radiographic point of view. This is of little importance, provided the joint is strong and if it has a wide range of movement.

In the event of the case requiring throughout, or temporarily, a fixed elbow, a stout cord from the wrist and below the forearm to the extension bar, with the wrist-shoulder strap combined, enables a fixed elbow at any angle to be produced.



¹ *BRITISH MEDICAL JOURNAL*, February 1st, 1919.

This is preferably an ambulatory splint. When used in bed the patient should be supported on a bed rest. No sling should be allowed.

In the treatment of fracture of the shaft of the humerus the extension pull by a scarf to the iron below the elbow is very good and firm. It does not pinch the arm as in the ordinary bent Thomas arm splint. The scarf should be adjusted daily for the first two weeks at least.

If a radiogram in the standing position shows any portion of the humerus to be out of line in an antero-posterior or side view, it is often possible to correct the deformity by arranging that a bandage or scarf should pull the displaced bone in the right direction, using one or both side wires as fixed points.

I should not use this splint for fractures of the surgical neck of the humerus, as I have found they do well by putting a pad in the axilla and bandaging the arm to the chest wall. Early massage and passive movement, of course, are essential.

It is important that the shoulder ring in this splint should be as nearly as possible the right size, as either extreme is very uncomfortable. In the splint, as now made, the ring is a fair average size, and will fit almost any adult. The smaller one for children is more difficult to average, and probably a third smaller size may be required.

It is possible to use this splint for fractures of the forearm in selected cases. It will maintain the desired supinated position, and the elbow-joint will not become stiff. By using the adjustment for length it is possible to get slight extension of the bones of the forearm. At any place required a small piece of Gooch splinting can be slipped in to assist in steadying or straightening the fracture.

It is for fractured elbows in particular that the splint will find its chief use. I do not accept a radiogram in one direction of any fracture. It may not show the fracture at all, or the fracture may look perfectly straight one way and be crooked in the other direction.

LEUCINE: ITS OCCURRENCE AND SIGNIFICANCE IN THE URINE.

BY

RICHARD W. ALLEN, M.D.LOND.,
LONDON.

Physiological and pathological chemists alike agree that leucine occurs very rarely in the urine of healthy people, and that its presence is indicative of serious disturbance in the digestive system, and especially in the performance of the liver functions. Leucine is found commonly in cases of acute yellow atrophy, less frequently in acute phosphorus poisoning, and in isolated cases only of icterus gravis, advanced cirrhosis, advanced heart disease with disorder of the liver, pernicious anaemia, leucocythaemia, and erysipelas. It has been reported in one case of severe diabetes and as associated with cystinuria.

The following case raises serious doubts in my mind as to whether it may not be a much more common phenomenon, and one at times devoid of such grave significance as one would gather from the literature.

A lady, aged 24, had lived most of her life in America, had not had malaria or indeed any severe illness at all till six weeks after her arrival in England in June, 1917, when she was confined to bed for over a month with well marked jaundice. The temperature was 101° F. during the first week, but subsequently subnormal. Recovery was apparently complete by the end of September, 1917. From Christmas, 1918, to April, 1919, she suffered from a very bad cold, of which she still has traces. For the past seven months she has had numerous severe headaches relieved by violent sickness, usually in the evening; the vomit appears never to have been bile-stained. For the past three weeks she has awakened daily with a headache more or less severe, and was sick daily for the first two weeks; this has been checked by a milk diet. Ten days ago the motions became clay-coloured, and remained so for two or three days, during which time she was slightly but definitely jaundiced. Her periods and bowels are, as a rule, free and regular.

When I saw her first she looked pale, thin, and anaemic, but showed no trace of jaundice. She complained of a feeling of weight and constriction in the epigastrium and of slight headache, but of no other pains. Physical examination revealed nothing abnormal in the chest or abdomen beyond slight tenderness to pressure over the gall bladder; the liver and

spleen appeared of normal size. A thorough blood examination was quite satisfactory, a Wassermann test and its more sensitive "Stern" modification were very definitely negative. The motions were very dark brown and no abnormal constituents were detected. A catheter specimen of the urine, examined within two hours of passage, was normal in colour and specific gravity, amphoteric to litmus, contained no sugar, albumin, blood, casts, bile salts or acids; a few *B. coli* and staphylococci were present. Crystals of phosphates, uric acid, or urates were absent, but well-defined crystals of leucine were present in great numbers, unaccompanied by any of tyrosin; that they were leucine was confirmed in the usual manner. (On re-examining the urine a few hours later, to my great surprise, I failed to find any crystals of leucine, and considerable concentration of the urine failed to effect their deposition. Repetition of these experiments on two other occasions has given the same result—namely, copious crystals within two hours of passage of the urine, complete disappearance a few hours later.)

The only explanation I could see of this phenomenon was that not only was the liver permitting the passage of leucine but also of the proteolytic ferment which normally splits up the leucine in the body. The correctness of this view I was able to confirm with a specimen of leucine kindly given me by the Medical Research Committee.

As there is no possible error in my observation of the facts, I am impelled to raise these two very important questions: (1) May not leucine be a very much more common constituent of the urine than it is commonly supposed to be, the failure to detect it being due to over-long keeping of the specimens before examination? (2) If this be so, is its presence of such serious import as all the textbooks would lead us to believe?

P.S.—Three weeks after the above was written several examinations failed to demonstrate even a trace of leucine in the urine, and the patient was enjoying normal health except for an occasional slight headache.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

GLIOMA OF CEREBELLUM.

WHILE the following case has some intrinsic interest, it might have had a still more interesting medico-legal aspect as a compensation case.

During the third wave of the influenza epidemic in February, 1919, I was called to see a man, A. B., aged 42, a white lead worker, and found him to be suffering from occipital headache, extending down the back of the neck, vomiting, and furred tongue; the temperature was 101°. It was also noticed that his speech was slurring, slow, and hesitant. After three weeks' rest in bed, under treatment with sodium salicylate, potassium iodide, and aspirin, he seemed to improve somewhat, and walked down to the surgery for his weekly certificate. It was then noticed that he had a staggering gait. There were marked tremors of hands and arms, but no intentional tremors and no nystagmus. The knee-jerks and pupil reflexes were active. He was sent home to bed. The headaches and vomiting became more severe, especially if any attempt was made to stand erect. The bowels were very constipated. The question of lead poisoning was raised by his wife. There was no blue line, no paralysis, and the symptoms were not typical of lead encephalopathy.

He was admitted to the Warrington Infirmary on April 17th. The fundus was examined but there was no optic neuritis. Treatment was of no avail, and he died on May 8th. Although it was thought that he was suffering from an intracranial tumour, no definite diagnosis was made, and, as there was a suspicion on the part of the patient's wife that he had lead poisoning, the case was reported to the coroner. The coroner refused an inquest, and gave a certificate that death was due to "natural causes."

The uncertainty of the cause of death and the possibility of legal action for compensation afforded strong motives for further investigation. The wife was pressed to give permission for a *post-mortem* examination. This was granted, and on May 12th the skull was opened and the following condition found:

Marked flattening of the cerebral convolutions; excess of cerebro-spinal fluid at base of brain. On the posterior aspect of the left hemisphere of the cerebellum was a mass of diffused material which was readily evacuated, leaving a smooth-lined cavity large enough to hold a walnut. The lateral ventricles were greatly dilated.

The opinion of the majority present at the necropsy was that the condition was one of cerebellar abscess, although no source of possible infection could be suggested. There was no sign or history of middle-ear disease.

The diffluent matter and the portion of the cerebellum affected was sent to the laboratory of the Royal College of Physicians, Edinburgh, and Dr. Dawson reported that the condition was one of glioma.

If this case had gone to court without *post-mortem* examination it would have been difficult to establish that there was no lead poisoning, and it is likely that the claimant would have received the benefit of the doubt. There were certainly classical symptoms of an intracranial growth—probably subtentorial—in the headache, vomiting, staggering gait and dysarthria, but there were also marked tremors of hands and arms, and there was no optic neuritis or nystagmus, which are so frequently found in subtentorial growths.

Warrington.

J. S. MANSON, M.D.

A CASE OF DOUBLE HALLUX.

ON June 26th, 1919, my partner, Dr. R. G. Nesbitt, asked me to see a case of double hallux. The patient, a little girl of 5½ years, had six fully developed toes, the sixth an additional hallux which projected at an angle of



Dorsal view of foot.

about 30 degrees from the inner border of the right foot and possessed a common metatarso-phalangeal articulation with that of the true great toe. The additional hallux was broader and longer than the true, the two being united by a web which extended to a point a little beyond the middle of the distal phalanx. The remaining toes were widely separated, the true second toe projecting beyond all the others, including the two great toes.

The web between the two great toes was severed and the bone of the additional toe freed from the surrounding tissue. With bone forceps the proximal phalanx was then cut through obliquely, as near to the metatarso-phalangeal joint as possible, without opening its capsule. Upon removing all superfluous tissue and closing the flaps the inner border of the foot presented a practically normal outline.

It may be of interest to note that the patient had also a congenital deformity of the left thumb, both phalanges being broadened and flattened and curved so that the thumb presented the appearance of the letter S.

St. Just, Cornwall.

BASIL BROWNING, M.B., Ch.B.

INFLAMED APPENDIX IN A HERNIAL SAC.

THE following experience seems worthy of record in connexion with Dr. Bennett's very interesting communication to the *BRITISH MEDICAL JOURNAL* of July 19th recording a case of appendicitis in a hernial sac.

On April 17th, 1918, I was asked by Dr. Donelan, R.M.O. Richmond District Asylum, to see a multipara, aged 42, who on the previous day had been suddenly seized with pain in the right groin; during the night vomiting set in, and was of progressive type. The bowels had acted in the morning. A small swelling—painful, tense, and very tender—presented in the upper and inner angle of Scarpa's triangle. The tongue was very foul. There was no tenderness nor rigidity above the Poupart line. The pulse was 88, and the temperature 100.2° F. Our pre-operative diagnosis was "strangulated femoral hernia, probably of the Richter type."

On opening the sac we were surprised to find lying within it a swollen appendix, distended with pus. The appendicular vessels were thrombosed. The appendix was clamped and removed. The neck of the sac was then divided, and Gimbernat's ligament cautiously cut; through the enlarged ring the caput caeci was gently coaxed down, and the stump inverted with the usual purse-string suture. The canal was closed by interrupted sutures running from Poupart's ligament to the pectineal fascia. No drainage was employed. The patient made an uneventful recovery.

Dublin.

WM. DOOLIN, M.B., F.R.C.S.I.

Reviews.

A TEXTBOOK OF GYNAECOLOGY.

Diseases of Women, by Ten Teachers,¹ is a companion volume to the textbook of *Midwifery* produced by the same authors nearly two years ago. The writers are all on the staffs of London teaching schools, and the production of the volume has been co-ordinated by Dr. COMYNS BERKELEY, with editorial assistance from Dr. RUSSELL ANDREWS and Dr. J. S. FAIRBAIRN.

While there is proverbial authority for placing but small expectations upon a broth that is the conjoint product of ten cooks, there is no reason why a ten-course dinner, each course cooked by a different cook, should not be a gastronomic triumph. This doctrine may be applied in the realm of scientific literature, and most editors of "team books" cautiously restrict their responsibility to arranging the menu and allocating the various subjects amongst the different collaborators. The editors of the volume under review have, however, again essayed the more difficult plan, and have taken elaborate pains to "overcome the disadvantages of collective authorship." Each author's manuscript has been manifolded and circulated among the other nine, and the whole ten have held frequent meetings to criticize and amend, so that the final result should represent, as far as possible, the considered and common views of all. Evidently some difficulty has been encountered in the attempt to achieve this desired unanimity, as the preface, after indicating that there is more room for divergence of opinion in gynaecology than in a textbook of midwifery, naively expresses the hope that "the student will find it possible to appreciate the reasons for divergence of views, and that he will have no cause for bewilderment or for a feeling of dissatisfaction." After reading this hopeful preliminary it is not surprising to find that this book differs in many respects from its elder sister. Our recollection of the latter is that the different titles had been so pressed into unanimity that they had been deprived of all the character and personality they must have originally possessed. In this volume the differences of authorship are clearly discernible; and while, as a result, the different sections vary in their lucidity and in their probable acceptability to the student, the work as a whole has more character than its predecessor.

The book is well illustrated and well produced, and is arranged on a scientific plan. After preliminary sections on anatomy, methods of examination, and symptomatology, the subjects of malformations and uterine displacements are discussed. A want of proportion, which is one of the disadvantages inherent in conglomerate authorship, is surely evident here in the devotion of ten pages and eight illustrations to the subject of inversion of the uterus.

The section on infection of the generative system is comprehensive, and includes a useful summary of the Report of the Royal Commission on Venereal Disease, which, the writers hope, may serve to introduce into the study of these diseases from the gynaecological point of view something of the element of preventive medicine. This hope will be universally shared, and the point is one that might advantageously be noted by all teachers of gynaecology. The section on lesions of the reproductive organs is largely concerned with the discussion of tumours. It is followed by sections on extrauterine pregnancy, on urinary disorders, and on the "acute abdomen." Then follows a section on "chronic ill health in women from the psychological aspect, and neurasthenia in relation to pelvic disorders." Finally, gynaecological operations are described with commendable brevity.

The section on chronic ill health in women from the psychological aspect is in large measure a novelty, and although it is far from suited to the palate or digestive powers of the ordinary undergraduate, it will be appreciated by practitioners and specialists. It is in some respects the most outstanding feature of the whole book. Its authorship is clearly stamped on many of its racy paragraphs, and the writer is to be congratulated on a valuable, if rather lengthy, contribution.

¹ *Diseases of Women*. By Ten Teachers; under the direction of Comyns Berkeley, M.A., M.D., M.O. Cantab., F.R.C.P. Lond. Edited by Comyns Berkeley, H. Russell Andrews, and J. S. Fairbairn. London: Edward Arnold. 1919. (Med. 8vo. pp. xii + 650; 238 figures, 8 plates. 30s. net.)

The teaching is sound throughout, as indeed it could hardly fail to be in view of the editorial constellation. But it is disappointing, if not surprising, to find London teachers adhering conservatively to some views which, in the opinion of most gynaecological pathologists, should be discarded or radically modified. The chapter on chronic corporeal endometritis is an example. The writer adheres to the view, that because the microscopical findings in scrapings from the uterus in cases of women suffering from menorrhagia, leucorrhoea, and backache, in whom no history of infection can be obtained, are similar to those found in cases with the same group of symptoms clearly dating from a puerperal or post-abortion infection, therefore the former must also be infective in origin. If the changes in the endometrium were susceptible of precise classification this argument might be admitted, but that is by no means the case. The very "similarity" consists mainly in the community of very protean appearances. The writer cannot brush aside as easily as he seeks to do the great mass of pathological observations beginning with the work of Hirschmann and Adler, or neglect the all-important fact that closely similar changes are normal at certain stages of the menstrual cycle. Many, indeed, would be disposed to go farther, and say that one point, which has been gradually emerging from the published observations of recent years, is that the histological condition of the endometrium has much less to do with the production of menorrhagia than has hitherto been thought. The organ which above all others controls uterine bleeding is the ovary, but it is more than likely that, there also, the changes in function which produce some of the most common symptoms, do not manifest themselves in recognizable anatomical changes. The work of Schickele and Keller is significant in this connexion. Unquestionably some of these cases of "endometritis" improve after the removal of the thickened endometrium by curettage, but the large number in whom the improvement is merely temporary strongly suggests that the root of the evil has not been dealt with.

This leads naturally to the observation that the interrelation of the endocrinous glands in connexion with gynaecological disease does not receive very adequate treatment. This is avowedly because so much of our knowledge of the subject is still hypothetical, and so little of it rests on a strictly scientific basis. The subject is, however, none the less inspiring and suggestive for that reason; indeed, it is all the more so. It might be argued that in a purely student's textbook the subject is too much in its infancy for useful discussion; but while the constituency for which the book is designed is nowhere specifically stated, there are numerous evidences that the authors had a wider field in view than the classroom.

The section on gynaecological operations is one of the best in the book. It is, as already stated, commendably brief, but at the same time it gives all that is necessary either for a student or for a practitioner who does not profess to be a specialist. The minor operations which any practitioner might be required to perform are sufficiently described and illustrated, but there are none of the usual elaborate and unnecessary illustrations of major operations which only the expert should think of attempting.

Taken as a whole, the volume is a reliable and lucid exposition of the science and art of modern gynaecology, and if any shadow of disappointment remains on the mind of the reader after its perusal, it is probably due to the high expectations not unnaturally raised by the imprimatur of "Ten Teachers."

FATS AND FATTY DEGENERATION.

The volume by Drs. FISCHER and HOOKER on *Fats and Fatty Degeneration*² is a most interesting contribution to experimental pathology. It is not primarily written from a pathological standpoint, rather from that of colloidal chemistry. It ranges over a very wide field in a stimulating style. It is not merely of interest to the medical man, but to all those who are concerned in the production

of emulsions. The authors frankly state that "to those biologists and physicians whose daily endeavours are not tinged with imagination or contaminated by philosophy, these pages may well be admitted to be of no practical worth whatsoever. To the others they have a limited value." They are modest, for the little book has much more than a limited value; it is suggestive from start to finish.

The main argument would seem to be that so long as the series of changes (called disease) from which the patient suffers is still of a reversible type the patient may recover. Only reversible changes are curable. The authors divide "disease"—the reaction of living matter to injury—into four definite phases. The first two phases—(1) the phase of swelling—increased hydration, and (2) clouding—dehydration (1 and 2=cloudy swelling)—are practically completely reversible. The next phase, (3) fatty degeneration—coarsening of the normal fat-in-protoplasm emulsion—marks the transition point to the fourth and irreversible stage of necrosis or coagulation. The third stage may be reversible under certain conditions, but not by the comparatively simple means which serve in the first two phases. Nature can, by splitting up the separated out fat into a fatty acid and glycerin and then depositing it again in the normal finely divided form, restore the cell to its original state. Once, however, the coalition of the fat droplets has gone to the "point of gross separation, the process is absolutely irreversible and the death of the part (necrosis) is at hand."

As already mentioned, the subject matter is most varied, ranging from full details for the production of artificial milk to suggestions as regards the formation of such varied material as Wharton's jelly, smegma, and the mimicry of some anatomical structures. There are few wasted words. Take, for example, the description of normal milk formation: "The originally cubical cells which make up the alveoli of an active mammary gland become richer in water and filled with granules (cloudy swelling), while the fat in the cells runs together into more readily visible droplets (fatty degeneration). When this process of cloudy swelling with fat coalescence becomes sufficiently great, the cell bursts and a fluid mixture of hydrated colloids containing fat globules results. This is milk."

The authors quite properly remark that it is function and not morphological pathology which is of real interest to the medical man. It is astonishing how often this is overlooked. They make a claim which will be denied by none when they say that the better understanding of our biological mechanism, "if it does not teach us how to repair trouble, it at least emphasizes the importance—if the owners will permit it—of advice destined to keep our biological mechanisms out of such trouble. And that seems to be the heart of what may be termed the new medicine." Really a most interesting and most suggestive book.

HISTORY OF THE STUDY OF DISORDERS OF THE HEART.

Heart: Past and Present,³ by the late Dr. EDGAR LEA, does not claim to be a textbook on diseases of the heart. It is, as the author states in his preface, of the nature of an inquiry, and aims at presenting a case for a more intensive clinical study of the heart. The first 85 of its 296 pages are devoted to a brief but discerning and interesting review of the history of cardiology from the time of Galen. Chapters are devoted to Corvisart, Laënnec and his critics, and Stokes, and then an attempt is made to estimate the debt that cardiac medicine has owed in the past to physiology, pathology, and the scientific method.

Three stages may be recognized in the history of the study of heart disease during the last hundred years. The first, embraced by Corvisart's work, represents the initial attempt to convert the crude empiricism of the past into something like a reasoned and orderly survey of clinical fact; the second stage, brilliantly opened by Laënnec's classical work and culminating in Stokes's writings, is the crowning era of clinical discovery; the last, covering nearly fifty years, may be termed the scientific age.

² *Fats and Fatty Degeneration*. A Physico-chemical Study of Emulsions and the Normal and Abnormal Distribution of Fat in Protoplasm. By Dr. Martin H. Fischer, Eichberg Professor of Physiology in the University of Cincinnati, and Dr. Marian O. Hooker, Instructor in Physiology in the University of Cincinnati. New York: J. Wiley and Sons, Inc. London: Chapman and Hall, Ltd. 1917. (Med. 8vo, pp. 155; 65 figures. 9s. 6d. net.)

³ *Heart: Past and Present*. By the late Edgar Lea, M.D. Vict., M.R.C.P. Lond. London: Baillière, Tindall, and Cox. 1919. (Cr. 8vo, pp. viii + 300. 7s. 6d. net.)

The influence which physiology has exerted has been essentially that of amplifying and rendering more accurate our methods of clinical investigation. It has contributed pre-eminently, as in the case of digitalis and the nitrites, to precision and method in treatment, but has added no new syndrome or new disease, nor has it helped us to a fuller understanding of the complex symptomatology of heart disease. Latterly the clinician has again resumed the lead. If the use of the scientific method has led to less marked advance in clinical cardiology than that which has characterized other branches of medicine, the cause must be sought, not in the futility of the scientific spirit of investigation, but rather in the manner of its practical application or in the inherent difficulties of the problems to be solved.

The present position with regard to the objective and subjective evidences of cardiac abnormality is discussed in general terms. The conclusion with regard to dyspnoea is that while it is always present in the conditions accepted as those "of the failing heart," we cannot say that it is a symptom of, and not an associated condition with, such instances of the cardiac abnormality, because both the dyspnoea and the evidence of cardiac failure may own a common cause. The author extends the term "cardiac failure" to a wider range of conditions than has hitherto been accepted, and admits any symptom complained of, and proved to be of cardiac origin, as indication of cardiac failure. He divides the cases of heart failure into two main groups: (1) Primary cardiac failure, meaning by this failure due to disordered action of the myocardium proper, or of the conductive system, and (2) secondary cardiac failure; by which is meant failure which may be expressed either by myocardial disorder, or by other means, but which is apparently directly and immediately induced by some known cause. The statement is made that there are four possible syndromes expressing myocardial distress, based upon the four myocardial functions, namely, disorders of irritability, disorders of tone, disorders of contractility, and disorders of conductivity. An endeavour is made to synthesize various definite syndromes; it must be left to the individual reader to determine the amount of success that has attended this endeavour. The therapeutic effects of rest and exercise are discussed; the conclusion drawn is that we cannot yet say how or why they act; with regard to rest, it is thought to be wiser to lay less stress upon its supposed direct myocardial benefit than upon its general influences, within which the myocardium may or may not be included. The book ends with a plea for organized treatment and investigation of cardiac cases, the foundation of heart clinics, the following up of cases, and medical examinations by whole-time men, appointed at and by the heart clinic. The book is of interest, and emphasizes the deficiencies of our knowledge.

NOTES ON BOOKS.

It is eight years since the last edition of HARMAN'S *Aids to Ophthalmology*⁴ was published in 1911. In this the sixth edition the general plan of the work is maintained; a new chapter on diseases of the vitreous has been included, while the space devoted to glaucoma, malingering, and squint has been enlarged and the chapters on muscle balance and ocular therapeutics amplified. It is no easy task to compress the subject of ophthalmology into 217 pages, yet Mr. Harman has done it, and done it well; this has only been made possible by a rigid exclusion of unnecessary detail, such as references to rare diseases, and by adopting a very dogmatic tone; but this, after all, is only to be expected in a work of this kind. We confess to not being very fond of student's "Aids" in general; but it is certain that in the present volume really sound doctrine is presented to the student, who, if he uses the book as a refresher, as it is meant to be used, will find it an exceedingly useful work. The fact that it has reached its sixth edition is a sufficient proof of its popularity.

*Dietaries Suitable for Secondary Schools*⁵ is an unpretentious but sound little book that should be useful to those who have to feed numbers of boys or girls cheaply.

⁴ *Aids to Ophthalmology*. By N. Bishop Harman, M.A., M.B., F.R.C.S. Sixth edition. London: Baillière, Tindall, and Cox. 1919. (Fcap. 8vo, pp. viii+226; 112 figs. 3s. 6d. net.)

⁵ *Dietaries Suitable for Secondary Schools, Colleges, Hostels, Clubs, etc.* By Dorothy C. Moore, L.C.A., and Charles E. Hecht, M.A., M.O.A. London: National Food Reform Association. 1919. (Cr. 8vo, pp. 54. 1s. 3d. net.)

but want to do it well. It is published by the National Food Reform Association, and points the way to intelligent economy in the kitchen and housekeeper's room on every page.

AGNES L. and E. STENHOUSE have produced *A Health Reader for Girls*,⁶ which should prove of use to teachers as a guide to the instruction on general hygiene that should be imparted to all girls before they leave school. The book aims at giving the reasons for the advice tendered and is fully illustrated.

*Massage as a Career for Women*⁷ gives details of the training required and the institutions where it may be obtained.

⁶ *A Health Reader for Girls*. By Agnes L. and E. Stenhouse. London: Macmillan and Co. Ltd. 1918. (Fcap. 8vo, pp. viii+130; 103 figures. 3s. net.)

⁷ *Massage as a Career for Women*. By Beatrice M. Goodall-Copstake. London: George Newnes, Ltd. 1919. (Cr. 8vo, pp. 28. 9s. net.)

PUBLIC VACCINATORS' FEES: CONTEMPORARY INCREASE.

EARLY in June last a deputation representing the Association of Public Vaccinators of England and Wales, and consisting of Dr. J. F. Palmer (President), Dr. A. E. Cope (Honorary Treasurer), and Mr. P. A. Briggs (Organizing Secretary), was received at the offices of the Local Government Board by Major the Hon. W. Astor, M.P., who was accompanied by the Permanent Under-Secretary Sir Horace C. Monro, K.C.B., and Dr. R. J. Reece, C.B., Assistant Medical Officer.

The deputation made representations, briefly summarized in favour of: (1) complete rescission of the Order of 1907; (2) fixity of tenure for public vaccinators; (3) superannuation in respect of their vaccination fees; (4) increased minimum fees.

Major Astor thanked the members of the deputation for the extremely clear manner in which they had put their points. To meet some of them he said an Act of Parliament would be required, whilst others could be adjusted by the Board. He could not deal with those requiring fresh legislation at present, beyond remarking that there were many questions of policy to be considered by the Ministry of Health, and there would probably be a revision of many public health methods, including, of course, methods of dealing with small-pox and vaccination. With regard to those matters which could be dealt with by the Board, he was not authorized to make any definite promises, but he assured the deputation that he would put all the points before the President, who would give them his careful consideration.

In July the Secretary of the Public Vaccinators' Association wrote to the Ministry of Health inquiring what action was being taken in the matter. The following letter from Sir Robert L. Morant was received in reply:

24th July, 1919.

Sir,—I am directed by the Minister of Health to refer to your letter of July 14th, in which you inquire whether steps will be taken to increase the fees payable to public vaccinators.

In reply, I am to state that the Minister has it in contemplation to modify the existing Order by raising to 5s. the present minimum fee of 2s. 6d. or 3s. 6d., as the case may be, for primary vaccination performed at the residence.

As regards the general question of making provisions for fixity of tenure of office and the improvement of status of public vaccinators, the Minister feels that he cannot advisably take up this matter at the present time in view of the changes contemplated in the constitution of the local bodies at present responsible for appointing and paying the public vaccinators, and as to public health administration generally. The same considerations deter him from entering for the present into the question of raising the rates of remuneration for portions of the public vaccinator's work other than that named.

Your association may, however, rest assured that the whole question of the position of public vaccinators and their remuneration will not be lost sight of in the consideration of the new organization of the health services generally of the community, in connexion with proposals for next year's legislation or otherwise.

I am, Sir, your obedient servant,

ROBERT L. MORANT.

The Secretary,
Association of Public Vaccinators of
England and Wales.

MOTOR NOTES FOR MEDICAL MEN.

BY H. MASSAC BUIST.

MORE CARS FROM AMERICA.

THE Government has just granted a concession whereby importers of American cars are allowed to bring into this country a total of 5,000 complete vehicles, or chassis, during the next few months. Despite the fact that some argue that this is a concession in name only in that shipping accommodation has to be discovered and that delays at our docks are great, therefore we are not to expect any of these cars in 1919, the Government's concession is calculated to interest the medical profession directly, for the simple reason that the traders concerned had made every arrangement for availing themselves of the concession before they received it. They are experiencing no difficulty in securing the tonnage. The American Government, keen on securing export trade, puts no difficulty in their way. Once the vehicles reach our ports, the importers can be trusted to get them landed and delivered in any circumstances short of a national hold-up at the docks, for they are picking their boats, otherwise their ports. Hence troubles or delays at Liverpool, for instance, mean only that they are not shipping to that port. The contention advanced in one quarter that America, herself experiencing a car shortage, would never tolerate the export market being served before the home, need dash no hopes, for the simple reason that, even before an armistice was asked for last November, the American industry had arranged that, no matter how short the home market went, the export market should have all the shipping the situation would permit of its receiving. The American principle of business is that there is only one great opportunity to be seized in securing the export markets, and that is immediately after the war, the firms that secure a hold then standing a good chance of retaining it permanently. For the rest, the American industry is confident that, when slackening business renders it possible to supply the entire home market as well as the export trade, on production costs alone it can out any European firms that shall have secured trade next year and in 1921 in the United States in face of the temporary car shortage.

Inasmuch as a number of American cars established on this market are suitable for doctors' service and will constitute the larger proportion of those about to be imported under the new concession, it is decidedly matter of interest to the medical profession. Indeed, the only comment is that in granting the concession the Board of Trade did not stipulate that a certain proportion of the cars brought in should be reserved for doctors.

THE RESCINDING OF WAR-TIME LIGHTING REGULATIONS.

The Home Office order rescinding the various regulations and restrictions in respect of vehicle lighting imposed under the Defence of the Realm Act is of considerable interest to doctors, because on the average they have to drive at night more than any other section of the passenger-car-using community. The result of rescinding these orders is that lights need no longer be carried when cattle are being moved along the highway; handcarts need not be lit, vehicles other than motors need have a light on one side only, pedal bicycles and horse-drawn vehicles can be inadequately illuminated, and motor-bicycle sidecars need carry no light to indicate the actual width of the outfit. On the other hand, the road-hog is free to use as excessively powerful and dazzling headlights as he chooses.

Doctors will fully appreciate the undesirability of a return to such a condition, which is worse than the lighting restrictions from which we have just been released, and which will renew the causes of a number of preventable classes of road accident. It may be a matter of departmental procedure that necessitates the rescinding of all lighting orders issued under the Defence of the Realm Act as a separate affair from imposing post-war lighting conditions devised as a result of the knowledge gained concerning public safety, and so on. Be that as it may, it is regrettable that post-war, as against pre-war, lighting regulations should not issue immediately, because an interval will lead both to confusion and complaint. Public as well as motoring opinion is ripe or such points as have been enumerated to be dealt with by the Home Office forthwith.

THE INCURABLE PATIENT.

BY HIMSELF.

How shall a doctor behave toward an incurable patient? Here I do not refer to the exhibition of palliative drugs, such as opium in cancer. What principles shall guide him in advising a marked man how to spend the limited remainder of his life?

First of all, what prognosis shall be expressed, and how? This depends on two things at least: it may depend on far more, but it certainly depends on the personalities of the doctor and the patient. There are some doctors who always give a cheery prognosis, and in a large number of instances—perhaps most—this is very acceptable, especially at first. On the side of the individual incurable patient the cheer given by bluff does not last long, and can only be given once; on the side of the doctor, the reputation for an invariably bright prognosis is, from the point of view of popularity and resulting emolument, a valuable one, but soon the prognosis itself will be valued in inverse ratio to the reputation. With some patients, and mostly with those sensitive patients who are most affected by prognosis, the bluffing manner defeats its own end; it is at once distrusted. The gloomy manner needs no condemnation, but has no worse result. From the effects of both there is a reaction, and there is this to be said in favour of the gloomy manner, that the reaction is in a better direction. But, after all, manner does not count for most, and any sincere manner is better than affectation. The main thing is that the prognosis given to an incurable patient should be honest.

As regards treatment, if the patient is incurable not much money or time should be spent in the pretext of attempting a cure. It is cruel to advise a man well gone in phthisis to spend his savings in treatment of his own condition. It were much better to spend it on or spare it for the hitherto unaffected members of his family. If without danger to others, he can carry on he is happier to work till he is 45 and die at 46 than to give in at 44 and decline till he is 60.

Then there is the matter of will making. It is not our business to pry into the legal affairs of our patients, but we are sometimes asked, "Do you think there is any danger? for if so I should like to see my lawyer at once." If the man is not too ill to see his lawyer there is no doubt what answer should be given; he should be advised in the affirmative, and it should be explained that this is no gauge of his condition. If we allow him to delay we may be asked the same question by another who has no time to put off, and the comparison of our answers, which takes place oftener than we know, is not cheering to the second man. If, on the other hand, the man is too ill to see his lawyer, then we cannot help it.

In religion we must guard against indifference to the patient's faith. However broad we ourselves may be, it may cause lifelong anxiety to a survivor to think that a friend has died without being duly prepared. It is unkind carelessly to allow that pain. We need not intrude our advice unasked, but when asked whether it is time to call in a priest or other spiritual adviser, if our answer err at all, it ought to err on the side of gravity. Shakespeare has poured bitter satire on the false optimist in his description of Falstaff's death (*King Henry V*, ii, 3).

The writer bears the burden of doctor and incurable patient both. He has found it cheering to look at the black side of things. Things turn out mostly lightish grey and sometimes white. He has seen his lawyer, made his will, and, on the assumption that he may die to-morrow, has kept his financial accounts well up to date. He does not shrink from looking forward, he can see no form through the mist, but he thinks there is a light; he thinks his hand is held. There are other doctor-patients like him, some of whom the Father honours as stronger children, not needing the hand-touch and the light. To all such he would shout "Cheerio!"

An organization with the title "Medical Veterans of the World War" has been formed in America. The president is Professor Victor C. Vaughan of Ann Arbor University, Michigan; the vice-president is Admiral E. R. Stitt.

In October, 1918, there were 6,440 hospitals in the United States with a total number of 758,442 beds. Of these hospitals, 4,927 had from 10 to 100 beds, 817 from 100 to 200, 447 from 200 to 500, while 277 had over 500 beds.

British Medical Journal.

SATURDAY, AUGUST 23RD, 1919.

THE OUTLOOK FOR EUROPE.

AT the time of writing our comment of last week on Professor Starling's report the text of Mr. Hoover's memorandum upon the economic situation in Europe was not available; it is printed in the *National Food Journal* of August 13th, and few documents, even of the last five years, have contained less agreeable matter for reflection. The population of Europe, it appears, is at least a hundred millions in excess of what can be supported without the introduction of commodities from outside, and European production is far below even the level to which it had fallen at the date of the armistice. "Unless productivity can be rapidly increased, there can be nothing but political, moral, and economic chaos, finally interpreting itself in loss of life on a scale hitherto undreamed of. . . . No economic policy will bring food to those stomachs or fuel to those hearths that does not secure the maximum production."

Five years ago the discussion of such topics as these would have been properly deemed unsuitable to the columns of a medical journal, as inappropriate as a pronouncement upon bimetalism or any other topic which concerns the medical man no more and no less than any other citizen; but we live in perilous times.

All Europe is now in the state envisaged by Malthus as normal, the population pressing up to the margin of subsistence, but under conditions more terrible than he described. Malthus supposed that in civilized societies the population became redundant gradually, and that the "positive checks" would likewise gradually operate. Now, a diminution of the means of living out of all proportion greater than the reduction in the numbers of those alive, must, if the next six months pass as have the previous six, lead to a development of the "positive checks," pestilence and violence, in comparison with which Malthus's most gloomy pages will seem the story of a golden age.

Mr. Hoover's remedy, production, should be deemed both positive and negative. With the positive aspect of production we are, as medical men, still no more concerned than other citizens. Like other citizens, we shall differ amongst ourselves as to whether Mr. Hoover is correct in holding that "productivity rests on the stimulus from all the immutable human qualities of selfishness, self interest, altruism, intelligence with education"; and that "there is no use of tears over rising prices; they are, to a great degree, a visualization of insufficient production." We shall also hold various opinions as to the equivalence of commodities, and whether the production of diamond rings, touring motor cars, and bonbons is production in Mr. Hoover's sense, and perhaps ask with Berkeley "Whether the vanity and luxury of a few ought to stand in competition with the interest of a nation? Whether national wants ought not to be the rule of trade? And whether the most pressing wants of the majority ought not to be first considered?" These topics are not peculiarly our own. The negative aspect, on the other hand, concerns us as the physiological advisers of the public. We mean by the negative aspect the securing that such foodstuffs as are produced or exchanged against

the commodities we can deliver shall render up the maximum amount of biotic energy.

Thanks to the efforts of British physiologists, very few calories were needlessly wasted during the last nine months of the war. We are afraid this is no longer true. Young and thoughtless persons who see the confectioners' shops filled with chocolates, pastries, and sweetmeats of all descriptions, their equally thoughtless elders who are encouraged to consume wines to the limit of their purses, are not to be blamed for supposing that the talk of impending famine is a mere stunt. It is the duty of medical men to preach once again the gospel of physiological economy, the more insistently because the Government has seen fit to abandon legislative aids to economy which were never more needed than at present. To waste food by consuming more than is needed to maintain life and meet the cost of external energy transformation is as great a crime against the state as when it was a legal offence. The amount measured in calories required in different occupations is known to vary within wide limits. A man of average size and well nourished requires about 2,000 calories a day to maintain his weight—that is to say, to keep the machine running while he is doing no work; a man with heavy work may require as much again, and the field ration of the British army is over 4,000 calories a day. A man in sedentary work may do with 400 calories over his weight-maintenance minimum—that is to say, 2,400 calories in all. A woman, it is said, may do with 400 calories less than a man; children require food yielding a large number of calories in proportion to their size; the estimate for children under 5 is 1,650; children over 13 years require as much as an adult.

This method of estimation by calories is a rather rough and ready method applicable in the bulk; it ignores the need for the adjustment of the diet to contain the proper proportion of protein, fat, and carbohydrates, and it has, of course, no regard to the importance of framing a diet so that it shall contain a sufficient proportion of the various accessory food factors. We have still a great deal to learn about diet and the adjustment of the amount and quality of food; to ascertain the real requirements of the different classes is as urgent a scientific duty as in 1917. With all these deductions, however, the method of calories is still the most appropriate for estimating the food needs of nations. In our judgement, the rationing of Europe, including the United Kingdom, should be carried out with the same stringency and follow the same lines as the English system of 1917-18.

THE PROTOZOA CARRIED BY LONDON RATS.

RESEARCHES since 1915 have shown that the rat is the enemy of man in a new direction—namely, as the carrier of the two protozoal parasites causing the diseases known as spirochaetosis icterohaemorrhagica and rat-bite fever. Both these infections were established by Japanese observers; infection with the *Spirochaeta icterohaemorrhagiae* was proved by Inada and his colleagues to be responsible for a form of infectious jaundice formerly included under the term Weil's disease; and in 1916-17 Futaki, Takaki, Taniguchi and Osumi described the *Spirochaeta morsus muris* as the cause of that widespread disease rat-bite fever. Cases of this disease have been recorded in England, especially by Sir Thomas Horder and Dr. A. G. Atkinson, and are fairly

common in Bombay, where Dr. R. Row described a causal spirochaete quite different from that of the Japanese pathologists. The rat has been found to be the natural reservoir of the spirochaete of infectious jaundice not only in Japan, Belgium, and France, but in countries such as America (Noguchi), Algeria and Tunis (Nicolle), where human spirochaetosis icterohaemorrhagica is not recognized. Last year Dr. A. C. Coles described in the blood films of 9 out of 100 rats at Bournemouth the *Spirochaeta icterohaemorrhagiae*, but its identity was not proved by inoculation into guinea-pigs.

In an interesting report submitted to the Sanitary Committee of the Public Health Department of the Corporation of London, which was ordered to be printed at "a common council holden in the chamber of the Guildhall of the City of London on Thursday, the 10th day of April, 1919," but has only this week become available, Brevet Major A. G. R. Foulerton describes his observations "on the protozoal parasites of the rat with special reference to the occurrence of spirochetal jaundice in man and to the London rat as a natural reservoir of *Spirochaeta icterohaemorrhagiae*," and gives a clear and valuable summary of recent work on the rat-borne spirochaetoses. Altogether 101 rats (*M. rattus* 3, *M. decumanus* 98), caught either within the City of London or in the metropolitan area north of the Thames, were specially examined for the *Spirochaeta icterohaemorrhagiae* by guinea-pig inoculation between July 12th and November 18th, 1918, a single guinea-pig being inoculated from each rat. No spirochaete carriers were detected among 82 rats caught between July 12th and October 24th, but 12 rats caught on November 5th included 3 carriers, and the last batch caught on November 15th one carrier. The four guinea-pigs inoculated all died on the twelfth day with the characteristic lesions of spirochaetosis icterohaemorrhagica, and all showed the organism on microscopical examination. The rat virus was transmitted in typical form to a second series of guinea-pigs in two instances, and through twenty-one series of guinea-pigs in a third. The strains of spirochaetes in the four original carrier rats seemed to be about equally virulent. The strain passed through twenty-one series of guinea-pigs apparently became more virulent as the result of the passage, and it was therefore decided to transfer the virus back to the wild rat in order to test the possibility of an acquired virulence for the natural host, but no positive results were obtained. Major Foulerton considers that his results, like those of Nicolle in Tunis, suggest some degree of seasonal prevalence in the spirochaetal infection of rats, as in rat trypanosomiasis. The channel of human infection by *Sp. icterohaemorrhagiae* is discussed, and the opinion expressed that contaminated food is a more important factor than passage through the undamaged skin. Six wild rats caught in January in London were allowed to bite six guinea-pigs to see if they carried the *Spirochaeta morsus muris*, but the results were negative. Among 123 London rats, 45, or 36.6 per cent., were found to contain *Trypanosoma lewisi*, but this organism is not known either as a parasite of man or as occurring naturally in any species other than its special host to which it is believed to be practically innocuous. The flea and louse play an important part in spreading the infection among rats, but it seems more probable that this is the result of the rat eating the flea or its excreta than of the flea biting the rat. The method of transmission of the trypanosome from rat to rat bears on the possible ways in which spirochaetal infection is spread under natural conditions.

INFECTIVE CATARRHS—SO-CALLED "COLDS."

Discussion of the etiology of what is commonly called a cold or a cold in the head—the older medical term, coryza, seems to be forgotten—must always be of interest in a country such as this, where few persons get through a winter without an attack; so that though the disease be mild the sum of the illness and incapacity it produces is considerable. As the recent correspondence in our columns has once more shown, opinions differ as to the importance, as a cause, of exposure to cold under conditions to which the term "a chill" is in common speech applied. There are those who, with Drs. Spriggs and Millard, seem to wish the public and the profession to believe that an acute attack is always due to infection from a preceding case, and those who hold that, in view of the frequency with which the attack is preceded by exposure, some relation must be assumed. Those who hold the first opinion do well to express it, for it cannot be doubted that if the public were to act on that conception, were to give more attention to the hygiene of the air, and were individually more careful not to disseminate infection, we should be less plagued with coryza. On the other hand, statements of this side of the case may be so sweeping as to defeat their object, since too many of the public have experience in their own persons of the sequence—chill, coryza. The observations Dr. Mackey recorded in the article published on August 9th (p. 159) go far to reconcile the two opinions by helping to an understanding of the element of truth in each.

Neither side will deny that acute nasopharyngeal catarrh is always due to an infective process. Both will admit that the infection is probably most often acquired in confined spaces—ill-ventilated rooms, railway carriages, or trams—from infectious persons, and that the risk of infection in a well ventilated room is small and in the open air negligible. Probably both also will accept Dr. Leonard Hill's doctrine that an open-air life, with the habitual breathing of cool or cold air, conduces to immunity. The town dweller, however, cannot easily live this life, and many become, as they say, "very liable to catch cold." The evidence Dr. Mackey offers is consonant with the opinion that such persons are never free from the infection, and are chronic carriers of some germ which, when conditions are favourable to it, can cause an acute attack of coryza in them. Thousands will recognize the truth of his picture of the unhappy person who, after an acute attack, has a few weeks' respite and then suffers another, the onset of which is determined not alone by a visit to a stuffy and crowded entertainment where fresh infection may operate, but also by a chill or a change of weather—a shift of the wind into the north-east, for instance. He seems to distinguish three classes of carriers—the person who may be quite free from catarrh between the acute attacks but is a continuous carrier, the patient with a constant snuffling catarrh, and the patient with continuous post-nasal catarrh who is not so much "liable to colds" as obnoxious to more serious and more general disorders.

Dr. Mackey is wisely cautious in the conclusions he draws from his experience of vaccines; but what he has to say is of great value, and goes far to explain the conflict of opinion as to the value of vaccine treatment. For the treatment of chronic nasal catarrh he uses only autogenous vaccines and is at pains to make them from the predominant germ or germs. He seems to have had occasion to use vaccines only in persistent chronic nasal and post-

nasal catarrh and the results he reports are remarkably good; half the cases were cured, and the remainder were improved, some being free for several years though the germ persisted in the nose.

The observations Dr. Mackey records do not, as he is careful to point out, throw any light on the bacteriology of epidemic coryza. He does not think the carrier state common, but until some better explanation is suggested it seems reasonable to suppose that the carrier, when suffering from a recurrence or acute exacerbation of his malady, may be the originator of the customary winter aggravations of the endemic prevalence. There is, indeed, a popular belief that some colds are infectious and "run through the house," and others not infectious, or much less so. The distinction, if it exists, may possibly be due to differences in the bacterial flora. The frequency with which Dr. Mackey found the pneumococcus, the influenza bacillus, and the catarrhal micrococcus—all germs which can produce an acute affection—in chronic nasal catarrh is noteworthy, as is also the frequency with which one or the other of them was present alone. It is tempting to speculate further on the relation these chronic conditions, associated with persistent microbial infection, bear to sporadic acute attacks—for in every carrier there must have been an acute initial attack—and to epidemics, but it is wiser to follow Dr. Mackey's example and refrain, for, as he says, much more research is needed. If, as we hope, it be undertaken, his paper will have done much to clear the way for a frontal attack.

THE PREPARATION OF ARTICLES FOR PRINTING.

INSERTED in the current number of the *Biochemical Journal* (July, 1919) is a slip containing the following statement: "In view of the increased cost of printing, contributors are urgently requested to write their papers as concisely as possible. Tabular matter must be curtailed as much as possible." There is a standing notice stating that "All communications intended for publication must be typewritten," and that "Illustrations and curves accompanying the papers must be carefully drawn, about twice the size of the finished block, on smooth white Bristol boards in Indian ink. Any lettering on these drawings should be lightly inserted in pencil. Further information can be obtained from the Editor." It is notified also that "Chemical formulae should be written as far as possible, in a single horizontal line." To these injunctions, with which we cordially agree, we would add a request that in writing decimal figures great care should be taken to insert the point clearly, and, in particular, never to write ".1" or ".2," but always "0.1" or "0.2." Unless the "0" is inserted mistakes are very apt to occur, and, as experience shows, to be overlooked by the author when revising the proof. We would point out with regard to photographs that only good photographs can be reproduced in a satisfactory manner, and that the reproduction of skiagrams is always difficult, and often impossible. Photographs of any kind intended for reproduction should be strong, over-printed, and rather undertoned; in reproduction at least 10 per cent. of contrast is lost, and often much more. The conditions governing the production of a periodical at the present time are far from normal; paper is more plentiful but still very dear, and the paper trade has by no means settled down so that quality is uncertain. Further, all the technical processes of printing are more difficult to carry out, and in particular we would reiterate the warning we have quoted from our contemporary with regard to tabular matter. It should be avoided not only because the long time necessary to put it into type is urgently needed for other work, but also because, in most instances, the facts can be presented in a much more intelligible form in

the text. The *Biochemical Journal* is edited for the Biochemical Society by Professors Bayliss and Harden, and we think contributors to the *BRITISH MEDICAL JOURNAL* may feel confident that the appeals from the society which we have quoted would not be made unless the grounds for them were very strong.

SCANDINAVIANS AND POST-GRADUATE STUDY IN GREAT BRITAIN.

DR. RASMUS HANSSON, Secretary of the Norwegian Medical Association and editor of *Tidsskrift for den Norske Lægeforening*, has given us some pertinent hints as to the opportunities for post-graduate study afforded in Great Britain to Scandinavian members of the medical profession. In passing, we would remark that we value his candour the more because it is shown by one who displayed most cordial feeling for this country on more than one occasion during the war. His suggestions may be summarized in two words: Hospitality; Organization. It would be invidious to labour the first point; superfluous, too, for those of us who have learnt, by visiting Scandinavian colleagues, what a high standard of hospitality towards professional brethren is maintained as a matter of course in the north. Dr. Hansson's personal experience of English hospitality has, to judge by his breezy account, been invariably most pleasant; but in his position as Secretary to the Norwegian Medical Association he has occasionally heard complaints of the indifferent, take-it-or-leave-it treatment his countrymen have received in Great Britain. But he criticizes us most for our lack of organization of post-graduate study. The Scandinavian medical visitor has, in most cases, limited time and means at his disposal. He wants to arrange his sojourn here beforehand, so as to get the maximum of knowledge in the minimum of time, with a fairly accurate estimate of the cost. In the past he has often been dependent on a few casual introductions, in the dark, more or less, as to the centres and teachers most worth visiting, and embarrassed as to remuneration, the very offer of which to a generous and sensitive host may be distasteful. So, if we are to compete successfully with another great Continental nation with an infinite capacity for organization, Dr. Hansson would have us provide a full and, above all, a well-arranged programme. A further attraction would, in his opinion, be the provision of special travelling facilities, as at one time arranged by the French for visitors to their health resorts. Above all, he would have us act quickly, lest this unique opportunity for promoting a medical entente between the Scandinavian and British nations pass, and the Scandinavian scientist again accustom himself to seek his inspiration from the turbid fountain head of "Kultur."

XEROPHTHALMIA AND NUTRITION.

XEROPHTHALMIA, or drying of the conjunctiva, is a disease not often seen in this country, but it is interesting as an indication of malnutrition. In the recent memorandum of the Medical Research Committee and the Lister Institute on the importance of accessory factors in the food it is written: "Evidence is accumulating that rickets is caused by a shortage, not of fat as such, but of the 'fat soluble growth factor' which is contained in certain fats. Xerophthalmia, a severe disease of the external eye, leading, if untreated, to blindness, has also been attributed to lack of this factor." The disease is essentially an atrophic change. The primary cause may be general alone or a local cause may be present also. The most striking example of a local cause is the keratomalacia which may follow severe ophthalmia neonatorum. The babies are small and ill fed, the conjunctivae dry and insensitive, the fornices filled with rolls of dry, curdy material, swarming with micro-organisms, consisting for the most part of the *Bacillus xerosis*. The cornea becomes white and opaque. In these infants the xerosis and keratomalacia will clear up when

the nutrition is promoted by the use of cod-liver oil by the mouth and by inunction, and by the application of drops of castor oil to the conjunctiva several times a day. There is another type of xerosis not very rare and causing little danger to the sight. It is most commonly found in school children and in the hot summer weather. The two triangular patches of the ocular conjunctiva commonly exposed to view between the lids are found to be covered with plaques of thick grease-like material. The plaques may be removed with the aid of an alkaline lotion. When examined under the microscope the material is found to be composed of the debris of epithelial cells swarming with *B. xerosis*. Sometimes in these children there is night blindness, and this association is highly suggestive of a nutritional defect. Experience shows that these cases also readily react to treatment with cod-liver oil internally and any oily drops to the conjunctiva; but occasionally the plaques have been known to persist for years, despite all treatment, in children who have remained well and happy and made a normal rate of growth. Anomalous cases of the persistence of these plaques have been observed in the subjects of optic neuritis, in a man with early tabes, and in a boy who was an inmate of a first-rate blind school where the dietary was exemplary. These cases indicate that there are exceptions to the general rule. The prime cause of xerophthalmia is the absence of an accessory food factor. The most severe may follow previous injury to the conjunctiva, and the least consequential may be an indicator of general lack of vitality owing to disease. A paper by E. C. Bulley in the *Biochemical Journal* (July, 1919) throws some valuable light on the causation of eye lesions occurring during a diet deficient in the fat-soluble growth factor. She found that while such lesions were very prone to occur in rats, they could be prevented by being very careful to keep the animal in clean and healthy conditions and promptly treating any slight soreness of the eyes with boracic lotion. This observation strengthens the opinion that the absence of the factor acts by diminishing the resistance of the tissues to infective microbes which gain admission to the conjunctival sac, and would, when nutrition was in a normal state, quickly be destroyed. This explanation would be on all fours with the results of McCarrison's observations on the intestine (*BRITISH MEDICAL JOURNAL*, July 12th, p. 36). Apparently the term xerophthalmia has been rather loosely applied. In some experiments by Hopkins the eye condition, which developed within a fortnight after the animal's had been put on a diet deficient in the fat-soluble factor, was conjunctivitis with ulceration of the cornea which might go on to rupture of the cornea and dissolution of the globe. Further, the term is applied clinically to a disastrous type of essential shrinkage of the conjunctiva, which leads to irretrievable blindness. This occurs in adults who have suffered from trachoma, pemphigus, burns, and such other serious injuries of the conjunctiva; shrinkage of the true substance of the conjunctiva occurs, the fornices are obliterated, the lids become adherent to the globe, and sight is gradually lost. Cases have been observed in all classes of patients, from the poor to the affluent. In these insufficient food or inefficient food could hardly be held to be the primary underlying cause; we must look for the explanation of these rarer cases in the loss of trophic nerve influence.

NERVOUS COMPLICATIONS OF MUMPS.

It has been known for over a century that fatal nervous complications may occur in the course of otherwise mild cases of mumps. Since the introduction of lumbar puncture the existence of a slight meningeal reaction in the spinal fluid has been shown to be very common. Roux¹ says that an attenuated meningeal syndrome is much commoner than typical meningitis. The symptoms are severe headache, vomiting, slight nuchal rigidity, and

pyrexia, with slow pulse and spinal lymphocytosis. "Meningism" or a true meningitis may occur two or three days before mumps is diagnosed, but generally during its course. A case of parameningococcal meningitis, with gradual recovery, is described by Ravaut and Krolowitzky. Especially important are the researches of Feiling, who examined the blood of forty cases of mumps and found a slight increase in the total number of leucocytes, and a relative and absolute lymphocytosis, present on the first day, which persists for a fortnight. While the majority of mumps-meningitis cases recover quickly, some have proved fatal. Feliciano, and also Vennat, found great benefit in the meningitic cases from several hot baths a day; the latter gave one every four hours. Lumbar puncture usually relieves the headache and favours recovery. Herpes has occurred just before mumps, as in Apert's case, or soon after mumps-meningitis, as in Dopfer's case. Encephalitis often occurs; indeed, Haden maintains that it is commoner than meningitis in mumps, for in most cases the cerebral symptoms are out of all proportion to the meningeal reaction shown by the spinal fluid. Mumps encephalitis may be fulminant, as in Bien's case of a previously healthy girl of eight years who died within twenty-four hours of a sudden convulsion with loss of consciousness; the condition was verified at necropsy. Collins and Armour recorded a case, fatal in forty-eight hours, of acute bulbar palsy in a boy of 11, ten days after the onset of mild mumps. A case of fatal pedunculo-pontine haemorrhage, verified *post mortem*, has been recorded by Chavigny and Schneider during an epidemic of mumps in which meningeal symptoms had been very frequent; meningeal symptoms appeared a few days before the man's death. Sicard has published a case of acquired hydrocephalus in a boy of 15, coming on a few weeks after mumps. A somewhat doubtful case is recorded by Sainton and Huriez—namely, a bilateral Erb's palsy of the brachial plexus (upper root type), in which gradual recovery took place. It began three weeks after the onset of mumps; syphilis and plumbism were excluded, and the only probable cause was the attack of mumps. Optic neuritis has been seen occasionally in mumps, and Jacqueau records optic atrophy, but it was a year before it appeared. Kaunitz, writing on mumps-meningitis, says that, as most cases recover quickly, it is probable that the meningeal condition is overlooked. Fatal purulent meningitis may occur, as in cases recorded by Perrin and Voisin. Diagnosis of mumps-meningitis is usually easy, but in one of Haden's cases tuberculous meningitis had to be considered because the meningeal symptoms appeared before mumps was evident. As a rule, the nervous complications of mumps are not accompanied by orchitis; they appear to be specially frequent in times of mumps epidemics. This has been notably the case during the recent war.

DEATHS FROM MALARIA IN ENGLAND.

SIR GEORGE NEWMAN, Chief Medical Officer to the Ministry of Health, informs us that the Ministry is frequently asked to assist in ascertaining the nature of obscure cases of illness in which a fatal issue has occurred. In two recent instances the *post-mortem* inquiries made for this purpose by medical officers of the Ministry has shown that the fatal issue was due to malaria. The Ministry is advised that in this country a death from acute malaria would be an exceedingly rare event if all medical practitioners adopted the diagnostic rule that in every case of obscure illness in a demobilized soldier or other person who has served overseas a blood film taken early in the illness should be examined. The Ministry has made arrangements by which such blood specimens sent to it for the diagnosis of malaria will be examined and reported on free of charge. The method of taking the specimen is described on page 11 of the Memorandum, "Suggestions for the care of malaria patients," of which a

¹ *Gaz. des hôpitaux*, 1914, lxxvii, p. 549.

copy has been supplied to all registered medical practitioners in England and Wales. The specimens should be addressed to the Ministry of Health, Whitehall, S.W.1, accompanied by the patient's name and the name and address of the sender. The cover should be marked "Malaria Specimen: Urgent." The Ministry takes this opportunity to add that during the present hot weather there is a possibility that, as regards cases of illness in demobilized soldiers, symptoms which appear to be due to "heatstroke" or other effects of the sun may in reality be due to malaria. Medical practitioners are reminded that in accordance with the provisions of the Public Health (Pneumonia, Malaria, Dysentery, etc.) Regulations, 1919, it is incumbent upon them to notify cases of malaria to the medical officer of health for the district.

MEDICAL ARRANGEMENTS IN THE AFGHAN CAMPAIGN.

THE White Paper containing telegraphic correspondence regarding the medical arrangements and comforts for the troops on the North-West Frontier of India is a curious document, inasmuch as it shows the extraordinary difficulty even a Secretary of State may have in extracting information from the Government of India. It does not, indeed, add much to the information we published last week. The general effect of the telegrams from the Viceroy of India is to show that the Government of India was surprised by "the suddenness with which Afghan situation developed into a crisis," and to support the allegation that preparations for the medical and surgical care and comfort of the troops were insufficient. The Viceroy states that the "Commander-in-Chief has informed us that his experience in the army has led him to the conclusion that a certain time must always elapse before the machinery to ensure smooth working of hospital and rearward services materializes, however elaborate be the pre-arranged schemes, and that the early days in France and Gallipoli will bear this out." This statement may be true of Gallipoli, but it is well to learn from experience, and these are exactly deficiencies which it is the duty of the officer in command of a force and of the Government which supplies it to strain every nerve to avoid. With regard to the water supply, the apology is that there were six separate lines of operations covering a front of approximately 500 miles, that the local water supply was often by means of open irrigation channels, that piped water supply for troops was installed in recognized camps, and that cholera is endemic amongst the civil population in the whole area. The number of cases of cholera reported to August 5th was 95 British and 1,374 Indian, mostly followers, 0.59 per cent. and 0.83 per cent. respectively of the total numbers employed. Cholera started at Kohat on June 5th, and ended about June 20th, the number of cases during that period being 400. Between June 5th and June 11th there were 202 cases and 24 deaths. The improvisation of cholera hospitals began on June 7th, and they were, it is stated, working satisfactorily on June 12th. At Ali Masjid the outbreak of cholera began on June 6th and terminated on June 18th; there were 15 British cases with 6 deaths, and 236 Indian cases with 73 deaths. A casualty clearing station arrived the day after the outbreak to reinforce a field ambulance already there, and the arrangements until its arrival were, it is admitted, not sufficient. The majority of the units in Ali Masjid, it is stated, had been submitted to anticholera inoculation previously to the outbreak. The necessary vaccine was available and the inoculation of the transport and labour corps was in process of being carried out when the outbreak occurred. On August 7th the Secretary of State telegraphed to the Viceroy asking whether it was true that representations had been made to the General Staff, Simla, in 1917 regarding the necessity for a pipe line for water to the camp site at Ali Masjid, and that nothing had been done until the outbreak of cholera recently. No answer was

received, and this reticence rather discounts the complaisant statement that the Government of India considered itself fortunate that the outbreaks have not been worse, "for the best of discipline is not proof against the pangs of thirst, and a thirsty man, especially a follower, in an Indian July, does not pause to consider source at which he quenches his thirst." The statement that there were only two medical officers available to attend the wounded is specifically denied; twelve were immediately available and more were close at hand with mobilized units. Between May 15th and 17th, when the most severe fighting took place, approximately 322 of all ranks, British and Indian, were wounded on the Khyber line. The D.M.S., Khyberfront, "reported to head quarters that the majority of the British wounded were in station hospital, Peshawar, within a few hours of the action, and some actually transferred by ambulance train to Rawal Pindi within the course of the day." We have no need of any assurance that the medical officers made the best use of the personnel, transport, and supplies available on the spot; the point is that the Government of India does not seem to have learnt from past experience, as is shown, among other circumstances, by the fact that the equipment of hospitals had to be hastily increased after hostilities had begun.

PORTRAITS OF WILLIAM HUNTER.

We have received a reprint from the *Glasgow Medical Journal* of a "Note on certain relics of William Hunter," by Dr. Alexander Napier, honorary librarian of the Royal Faculty of Physicians and Surgeons, Glasgow. One of the relics is an autograph letter by William Hunter addressed to Robert Barclay in 1782, that is, one year before the writer's death. As Dr. Napier observes, the letter is of considerable literary merit, and is a good example of William Hunter's style, which was polished, in contradistinction to the rugged and somewhat involved writing of his great brother John. The other relic is an engraved portrait in stipple of William Hunter by Thornthwaite, who is generally supposed to have painted the miniature from which the engraving was taken. The engraving is beautifully reproduced as a frontispiece to the article. Dr. Napier regards the engraving as rare, but in our experience it is often met with, and is perhaps the best executed engraving of William Hunter in existence. Engravers have not been particularly kind to the memory of William Hunter, and there is no great engraved portrait to enable us to carry his likeness in our minds. In the case of his brother John it is not so, for the magnificent engraving in line by William Sharp of Sir Joshua Reynolds's portrait of the great surgeon must remain as one of the finest engraved portraits ever executed. William Hunter's portrait was often painted, and for those who are interested in medical portraiture we may mention the more important paintings, with the engravings executed from them. Probably the best known portrait is that of Pine, which was engraved in stipple by J. Thomson, and appears in Pettigrew's *Medical Portrait Gallery*. Sir Joshua Reynolds also painted him, not a very successful portrait, and this was engraved in line by S. Freeman. Two portraits of William Hunter by Hans Zoffany are in the Royal College of Physicians, London. One is a portrait, and the other represents Hunter lecturing on anatomy before the Royal Academy, to which body he was appointed professor of anatomy in 1768. The portrait has been engraved in mezzotint by R. Earlam, in stipple by E. Hedges, and in line by J. Hinton; the last appeared in the *Universal Magazine*. Another portrait was painted by Mason Chamberlin, and this was twice engraved in stipple by J. Collyer and B. Smith. The stipple by B. Smith is excellent and appears as one of the series of portraits of celebrities published by Cadell in 1801. Lastly, Pingo painted William Hunter, and this was engraved in line by W. Angus. Of all the engraved portraits of William Hunter, those by B. Smith and Thornthwaite are by far

the best, and should be obtained by all those, and they are many, who are engaged in collecting engraved portraits of medical men.

PUBLIC VACCINATORS AND THE MINISTRY OF HEALTH.

PUBLIC vaccinators have smarted under certain grievances for a number of years. Time after time the Association of Public Vaccinators has pressed for redress only to meet with a rebuff. In another column we publish a report of fresh representations recently made, and the text of a letter from the Minister of Health addressed to the Association of Public Vaccinators. It will be seen that the redress of one grievance is already promised; it is in contemplation to revoke the Order of 1907 which reduced the fees for primary vaccination performed at the residence of the person. The new Order will reinstate the fee of 5s. for such vaccination; the minimum fixed by the Order of 1898. The reply goes on to give an assurance that the whole question of the position of public vaccinators and their remuneration will be the subject of consideration in connexion with contemplated proposals for legislation.

Medical Notes in Parliament.

R.A.M.C. Contracts.

MAJOR FARQUHARSON asked the Secretary of State for War, on August 14th, (1) if he was aware that the contract under which a number of medical practitioners held temporary commissions in the Royal Army Medical Corps would expire on the date on which the termination of the war was officially declared, and what arrangements had been made to enable those practitioners now serving in India and Mesopotamia to return to this country immediately on the termination of their contracts; (2) if he would state under what authority medical and other officers were being temporarily retained in India, and what steps were being taken to ensure the immediate release of those medical officers who were marked for early demobilization by the Ministry of National Service prior to April of this year.

Mr. Bennett asked the Secretary of State for War whether, in view of the fact that Royal Army Medical Corps officers in India serving under yearly contracts were to be demobilized previously to those who volunteered for the duration of the war, he would consider the claim to compensation of officers of the latter category whose practices, which they had built up by their exertions and for which they paid substantial sums, had been virtually ruined and absorbed by the large number of medical officers demobilized from France and other theatres of war; and whether he would state how many temporary medical officers, exclusive of sick, had been sent home from India since the armistice and how many remained in India.

Mr. Forster, in reply, said that temporary medical officers were being retained in India under the terms of their contracts, which rendered them liable for service for the duration of the present emergency. The only officers who were serving on yearly contracts were those who were not liable to the Military Service Act, and could not therefore be retained beyond the termination of their contracts. The contracts of temporary officers serving for the duration of the present emergency terminated on the statutory date for the end of the war, and everything possible would be done to enable them to be returned to the United Kingdom by that date. In the event of this being effected, the question of compensation did not arise. One hundred and forty-five temporary, Special Reserve, and Territorial Force officers (exclusive of sick), had been sent home since the armistice, and 335 remain, including 100 officers temporarily detained while en route from Mesopotamia, on account of the situation prevailing in India. He added that every available medical officer who was liable for further service was being placed under orders for India or Egypt in order to relieve those who had been asked for by the Ministry of National Service.

The Closing of Dublin Hospitals.

In the House of Lords, on August 13th, Lord Shandon called attention to the impending closing of the Houses of Industry Hospitals in Dublin, which hospitals, four in number, were, he said, essentially State hospitals, and at the present time were supposed to be supported by an imperial grant. In regard to the constitution of these hospitals, Lord Shandon said that in

the eighteenth century there were established by the Irish Government a series of hospitals to provide surgical and medical aid for the poorer classes in Dublin and in Ireland generally, and these hospitals for a time fulfilled the functions now undertaken by the Poor Law relief hospitals. Under the Act of Union this was one of the liabilities transferred to the Imperial Government. Difficulties, both practical and monetary, arose, and two inquiries were held—one by the House of Commons in 1854, the other by a Commission, which was generally referred to as the South Commission, in 1856. The last named reported that these hospitals were doing such good work that they should be maintained in their then state of efficiency. This report was followed by an Act of Parliament called the Hospitals Regulation Act, 1856, which constituted the hospitals in their present form. They consisted of a group: the Richmond, a surgical hospital; the Whitworth, a medical hospital; the Hardwicke, purely a fever hospital; and an auxiliary block for certain emergency services. Under the statute the Lord Lieutenant of Ireland—of course it was the Irish office under his name—exercised complete control over the management. The Lord Lieutenant appointed a number of governors, but not as governors, because that was so decided by the case which arose in Ireland, but merely as a committee of inspection and assistance. These governors could not appoint nor dismiss officers without the sanction of the Lord Lieutenant; and the hospitals were bound by the Superannuation Act of 1859, a position which was not thought to have arisen in regard to any other hospital. The buildings were vested in the Commissioners of Public Works in Ireland, and nothing could be done to mortgage or charge them except with the approval of these Commissioners. On the recommendation of the South Commission a sum of £7,600 originally—now £7,500—a year was provided as sufficient for upkeep of the hospitals. From 1856 to the beginning of the war this grant kept them going. The hospitals were regarded as fulfilling all the functions required for giving aid to the poor, so that the ordinary Poor Law hospital at the north side of the city was closed, and prior to the war these hospitals dealt with the ordinary Poor Law relief cases. The sum required per patient was then £4 12s. 11d.; in 1919 it was £119 1s. 10d. The Statute constituting these hospitals contemplated private subscriptions and donations, a provision being made whereby a certain number of governors might be appointed by those who gave donations, but these hospitals being regarded as a State institution, there had been no private donations and there was no prospect of getting money for them from private sources. These hospitals reckoned together were practically the largest institutions of the kind in Ireland. They had the largest nursing and training establishment, and one of the largest, if not the largest clinic in Ireland. The closing of them would not only affect the indigent poor, but seriously affect medical education and the training of nurses. The hospitals were practically closed and there was no chance of their being reopened unless some solution were found. Any additional income which they got came from patients who paid for services rendered. He suggested a business inquiry by the Treasury, the medical profession, the governors, and some of the business men in Dublin. The doctors said, he was informed, that suddenly to shut down one of these hospitals was practically impossible. If the fever hospital were shut down there would not be sufficient accommodation for fever patients in Dublin, as the only other hospital was an institution kept up by voluntary contributions. If they shut down the emergency block serious cases would have to be sent across the city, with great suffering to the patient.

The Earl of Mayo supported Lord Shandon, but thought the proper course was to increase the grant.

The Earl of Crawford (Chancellor of the Duchy of Lancaster), replying for the Government, said it was quite true that the hospital was established under statute of 1856, or rather that its direction was controlled by statute passed in 1856, but it could only be said to be a State hospital in the sense that in the last half-century it had relied on State funds. It differed in no degree from any other hospital in Ireland or in Britain, except that it had this good fortune for many years of having a special grant. It was an old-established hospital, and he believed received grants under the old Irish Parliament, but since the year 1856 it had received only a sum of £7,600 from the parliamentary vote. Its position, therefore, was unique. Apart from one or two smaller hospitals in Dublin, no other hospital in this country, so far as he knew, got a grant from the State, except in return for some specific services rendered. During the last two or three years the hospital had had a very considerable income from the War Office apart from the money voted by Parliament. Last year it was £7,000; the year before £6,500; in addition, it had an income, as appeared from what Lord Shandon said, from the fees that patients could pay. These fees amounted to upwards of £3,000 a year. He could not hold out hope that the Treasury would see its way to recommend Parliament to pay a larger sum than the annual grant. After all, the hospital had very great advantages. It received, in fact, the income from what would be an endowment of £150,000 or more. The Treasury, though prepared to continue the grant, as during the past half-century, could undertake no further responsibility. Everybody would share the regret of Lord Shandon that the institution was unable either to increase its fees, through enlisting the good offices of subscribers, or perhaps to get some help from the Dublin Corporation, and he would share in the regret if the hospital were closed; but he did not think it would be wise to press the Treasury to increase this grant. To do so might, of course, involve reconsideration of this and

analogous grants which existed in Dublin, and would clearly involve the equivalent demand from a hundred and one other hospitals, both here and in Ireland, which were in necessitous circumstances. Steps must be taken to rehabilitate the financial position of the hospital apart from those which might come from Government funds.

Lord Shandon expressed regret that the Government did not see its way to endeavour, by some process of inquiry, or by getting people to meet together, to put these hospitals in the position which they had previously occupied.

Winchmore Hill Hospital, London.—Major Astor, Parliamentary Secretary to the Ministry of Health, questioned on August 14th as to the varied uses of the Metropolitan Asylums Board's Northern Hospital, Winchmore Hill, said that some blocks were used for the treatment of tuberculous patients, and other blocks for convalescent cases of acute infectious disease, but no ward and no block was used for more than one disease. The tuberculous patients were classified in their respective wards according to the stages of the disease. A nurse engaged in nursing tuberculosis was not allowed to come in contact with cases of acute infectious disease. An entirely separate medical staff with special experience in tuberculosis, under the general supervision of the medical superintendent of the hospital, was in charge of blocks for the treatment of tuberculosis. Having regard to the class of cases admitted to these blocks, the space available for recreation was suitable and sufficient.

War Pensions Administration.—Two Government amendments which had been foreshadowed in the Commons were made in the Lords on August 13th in committee on the War Pensions (Administrative Provisions) Bill. The first qualifies Section 8, which sets forth the right of appeal to pensions appeal tribunals. It is now provided that no appeal shall lie on any claim already heard and rejected by a Ministry appeal tribunal. The new tribunals are not to give appeal from those already existing. Secondly, it is set forth that these new appeal tribunals shall operate from November 1st next, that being the earliest date upon which they can be started.

War Bonuses under National Insurance.—Major Astor, on August 14th, in reply to Mr. G. Locker-Lampson, stated that grants by way of war bonuses or allowances, as distinct from the regular payments for remuneration for insurance practice, had been made to insurance practitioners in respect of the year 1918 to the amount approximately of £30,000. Approval had been given by the Treasury for the grant of a war bonus to insurance practitioners in respect of the year 1919 on a basis corresponding broadly to that laid down by the Conciliation and Arbitration Board for Civil Servants. The cost of the grants for the year 1919 was estimated to be approximately £950,000 for Great Britain. As regards chemists, the increase of remuneration afforded them in respect of war conditions formed part of the general charge upon funds provided for defraying the cost of medical benefit, and could not be easily separated. On further questions as to the administrative allowances for officials of approved societies, Major Astor said that it rested solely with the approved society to determine the salaries of its officials, and the Ministry had no knowledge of the extent to which war bonuses had been granted. The audited accounts indicated that the great majority of societies still had a surplus on their administration account, though the necessity for increasing the maximum sum available for this purpose was being considered in connexion with the question of revising the rates of contributions and benefits. Sickness and unemployment benefits were, however, so closely associated, that the question of revising the sickness benefit scale could not be settled pending a decision as to the contemplated revision of unemployment benefit.

The late Colonel Harrison.—Replying to Colonel Page Croft, on August 18th, Mr. Fitzalan Hope stated that Colonel E. F. Harrison died in November, 1918, of pneumonia, death being accelerated by the effects of the gases to which he had been constantly exposing himself since July, 1915, in testing gas masks. He left a widow and one son. A pension at the "intermediate" rate of £135 per annum was awarded in the first place to Colonel Harrison's widow. This had recently been raised to £300 per annum to take effect from November 5th, 1918. The Minister added a warm acknowledgement of the distinguished and devoted services of this officer.

Treatment for Shell Shock in Ireland.—Asked on August 18th by Lieut.-Colonel Guinness what was being done in the South of Ireland for the treatment of discharged service men suffering from shell shock and neurasthenia, Sir L. Worthington Evans replied that he had no power to keep any man in an institution against his will unless he were certified under the lunacy laws. A man so certified and sent to an asylum in Ireland had hitherto been treated as an ordinary patient; but under a scheme which would come into force at an early date he would in future be treated as a service patient. Arrangements were being made to establish a neurological hospital in the south of Ireland for ex-service men at which scientific treatment for neurasthenia and shell shock would be provided.

Poison Gas Shells at Walthamstow.—Mr. Jesson asked Mr. Kellaway, on August 18th, whether poison gas shells and tear shells were stored in the vicinity of Edward Road and Harden Road, Walthamstow, and that the fumes escaping from them were causing illness amongst the inhabitants during the hot weather. Mr. Kellaway replied that the shells from this dump had now been cleared; the delay in clearing them was due to difficulty in getting the necessary transport. He much regretted the inconvenience, but, in the opinion of his advisers, the

fumes, in the diluted form in which they occasionally escaped in the atmosphere, were not injurious to health.

The Report on Tuberculous Ex-Service Men.—Lieut.-Colonel Raw addressed questions, on August 18th, both to the Minister of Pensions and to the Minister of Health as to the report of the Committee on Tuberculous Ex-Service Men. Sir L. Worthington Evans replied that he was considering the matter with the medical advisers to his department, and would also confer with the Minister of Health. Mr. Powyn Jones, for the Minister of Health, said that the report had been available for the Government only a very short time, and Dr. Addison was not yet able to say what action would be taken upon it.

Seale-Hayne Hospital, Devonshire.—In a written reply on August 18th to a question by Mr. Lambert, Mr. Churchill said the reinstatement of the Seale-Hayne Hospital, Newton Abbot, was proceeding as rapidly as possible, but he could not state when it would be completed. Three of the four blocks were ready to be handed over, but the owners preferred to await the recovery of the whole. At present the laboratory was being reinstated. The reinstatement of the technical and scientific apparatus necessary took time.

Queen Alexandra Nursing Service.—In the House of Lords on August 14th, in reply to Earl Stanhope, Viscount Peel said that the rates of retired pay for members of the Queen Alexandra Nursing Service were being considered by a committee, and he believed a decision would shortly be reached.

Restrictions upon Imported Chemicals.—In reply to Mr. Raffan, on August 14th, Mr. Bridgeman, Parliamentary Secretary to the Board of Trade, said that the duty of issuing licences for such intermediate coal-tar drug products as antipyrin, amidopyrin, and phenacetin had been transferred from the Licensing Subcommittee of the Dyes Department to the Department of Import Restrictions.

Medical Inspection of Aliens.—Mr. Towyn Jones, for Dr. Addison, on August 18th announced that an Order in Council containing further provisions with regard to the medical inspection of aliens would be issued at a very early date.

HONOURS.

CIVIL PRACTITIONERS' WAR SERVICES.

The names of the following civilian doctors have been brought to the notice of the Secretary of State for War for valuable medical services rendered in the United Kingdom in connexion with the war:

F. W. Abbott, P. H. Abercrombie, R. C. Ackland, W. G. P. Alpin (Lieut.-Colonel Indian Medical Service, R.F.), C. M. Anderson, Sir M. A. Anderson, M.V.O., G. J. M. Atkinson, J. H. Badcock, E. G. Barker, J. M. Barlet, Sir T. Barlow, Bt., K.C.V.O., LL.D., J. H. Barnard, F. S. Barnett, F. E. Batten, H. Beckett-Overy, Sir W. H. Bennett, K.C.V.O., G. Blacker, E. J. Blackett, J. Blomfield, J. S. Boden, C. Bolton, E. C. Bridges, J. M. Bruce, J. M. Brydson, C. H. Bubb, W. Bulloch, F.R.S., H. T. Campkin, C. E. Carpmel, A. A. Carr, J. W. Carr, A. J. Carter, J. W. Caton, E. Cautley, Miss H. Chambers, A. H. Cheate, J. Chute, H. N. Colbart, C. T. T. Comber, G. J. Conford, T. A. Coys, J. W. Cropper, J. Canning, E. G. C. Daniel, P. L. Daniel, Sir J. M. Davidson, G. F. Dickinson, T. V. Dickinson, L. C. T. Dobson, J. A. Drake, M. A. Dutch, A. M. Elliot, Sir T. C. English, C.M.G., H. L. Ewens, J. W. H. Eyre, F.R.S.E., E. H. Ezard, G. Faris, W. S. Fenwick, R. D. Ferrier, F.R.S., A. H. Foster, L. Fuller, E. P. Furber, P. Furnivall, J. Gay, Miss G. Gazdar, G. G. Genge, H. T. George, E. Gillespie, L. G. Glover, Sir K. W. Goadby, K.B.E., Sir R. J. Godlee, Bt., K.C.V.O., W. A. Gordon, H. T. Gray, E. C. Greenwood, A. J. Gregory, H. E. Griffiths, H. B. Grimsdale, C. N. Groves, L. G. Guthrie, C. F. Hadfield, Miss E. Haigh, J. Z. Hanay, T. E. Harwood, E. D. H. Hawke, K. R. Hay, H. Head, F.R.S., W. Hern, C. Higgins, C. Hodgson, D. W. C. Hood, C.V.O., G. H. J. Hooper, R. J. Howard, R. J. B. Howard, H. Huxley, T. B. Hyslop, F.R.S. Edin., Miss C. M. Ironside, W. W. James, T. H. Jamieson, W. H. Jewell, H. J. Johnson, R. G. Johnson, R. D. Kandin, B. S. Kanga, W. N. Kingsbury, M. D. B. Kusella, A. G. Lacey, F. C. Langford, J. B. Lawford, A. Lawson, K. A. Lees, H. Lett, W. J. Lindsay, T. D. Lister, E. M. Little, Miss A. Lloyd, J. P. Lockhart-Mummery, R. M. H. Low, K. F. Lund, E. Lynn, C. R. C. Lyster, Miss E. M. MacGill, C. F. Marshall, A. T. Marston, E. C. Masser, H. M. McCrea, N. McDonald, W. P. McEwen, L. H. McGavin, R. McKay, W. McLachlan, J. H. Menzies, J. Metcalfe, R. H. Miller, C. H. Mills, W. Mullings, J. F. Nall, J. Needham, E. M. Niall, G. P. Nicolet, F. Norman, G. Northcroft, W. J. C. Nourse, Sir W. Osler, Bt., F.R.S., C. D. Outred, A. W. Oxford, J. I. Palmer, J. G. Pardee, Sir T. W. Parkinson, H. J. Paterson, L. J. Paton, J. L. Payne, F. J. Pearce, E. T. Pinhey, W. J. Potts, H. J. Pulling, A. J. Rice-Oxley, Miss M. A. Richards, A. M. Robertson, Mrs. A. L. L. C. Robson, A. R. Roche, M.C., A. Royn-Jones, W. Roughton, S. H. Ronquette, R. A. Rowlands, N. Rushworth, H. Sainsbury, E. A. Saunders, R. E. Scholefield, W. Shears, O. B. Shelswell, Miss A. Sheppard, D. A. Shields, J. Sinclair, G. C. Sneyd, E. L. Sortain, Sir J. P. Stewart, K.C.M.G., C.B., T. G. Stewart, J. Stirling-Hamilton, Miss F. A. Stonoy, T. S. P. Strangeways, A. J. Swallow, R. J. Swan, Sir F. Taylor, Bt., J. Taylor, E. G. Thomas, G. C. Thomas, T. Thompson, J. D. Thomson, Miss M. Thorne, W. Thornely, R. Thorpe, S. A. Tidey, W. Trotter, J. Van den Broeck, J. W. T. Walker, R. M. Walker, A. J. Walton, A. H. Warde, S. J. Warham, C. J. F. Westman, C. P. White, E. F. White, Miss E. M. White, L. E. Wigram, J. C. Wilkinson, F. W. Wilson, E. C. Young, R. A. Young.

Scotland.

THE SCOTTISH OTOLOGICAL AND LARYNGOLOGICAL SOCIETY.

THE society met for the first time since June, 1914, in the Royal Infirmary, Edinburgh, on Saturday, June 14th. Dr. W. T. Gardiner was elected president, and Dr. W. S. Syme was re-elected secretary and treasurer. Dr. Peter McBride was elected the first honorary member. A short discussion on the prevention of chronic ear disease was opened by Dr. A. Logan Turner, who submitted statistics from civil and military hospital practice showing the prevalence of chronic middle-ear suppuration, and Dr. W. T. Gardiner, who supplied tables showing a death-rate from intracranial complications of middle-ear disease of 1.6 per cent. of all deaths occurring in the Edinburgh Royal Infirmary over a period of ten years. After other members had given their views, a committee was appointed to sift the facts as to the prevalence of the disease, to consider the best means for its prevention, and to lay the views of the society directly before the new Ministry of Health for Scotland. Dr. Gardiner reported two cases of epistaxis, which had come under his care in Palestine, due to the presence of a leech in the nasopharynx. Dr. Logan Turner showed one case and reported another of removal of malignant disease of the post-cricoid portion of the pharynx by Mr. Graham. Statistics of the sex and age incidence of squamous epithelioma of the fauces, tongue, pharynx, larynx, post-cricoid region, and oesophagus showed the great excess of females over males (5 to 1) in the cases of post-cricoid carcinoma, and the early age at which it shows itself. Dr. J. S. Fraser showed two patients, a female and a male, operated on, the former two years ago and the latter five months ago, by thyrotomy for intrinsic cancer of the larynx; also a woman whose larynx he removed three years ago. He also reported another case, a male, who died after laryngectomy performed for recurrence subsequent to thyrotomy. Dr. J. K. Milne Dickie demonstrated by means of a reconstruction model some points of interest in the minute anatomy of the membranous structures of the ear.

ANDREW CARNEGIE.

Andrew Carnegie, the Scotsman who, in a very real sense, made a success of giving, influenced the progress of medicine in the United Kingdom as much probably as any other man of his generation who was neither a physician nor a surgeon. He was, indeed, doctor, but it was the honorary degree in law that gave him that title. His benefactions were on so large a scale that all the usual adjectives of princely and munificent and the like had to be rejected as inadequate, and possibly in the future we shall speak of the really big givers as Carnegians. Born in 1837 in "a humble dwelling in a mean street" in Dunfermline, and going to the United States at an early age, Andrew Carnegie was able, chiefly by great advances in the production of steel, to retire from business with as many millions of pounds as the years of his life. He then began the distribution of his wealth, not on the ordinary scale of such and such a proportion of his income, but on the far more striking plan of giving capital, and usually with foresight and shrewd Scottish wisdom. His great gift of 10 million dollars to the Scottish universities has sometimes been criticized for its alleged pauperizing effects, and the fear has been expressed that it would have a lowering result upon the status of the undergraduates of these universities; but this is to look at only one of several purposes which the benefaction was intended to effect. The payment of fees was only one part of the donor's intention; other objects were the encouragement of scientific research by grants, scholarships, and the like, and the furnishing of endowments for new lectureships and chairs and laboratories. In all these departments medicine benefited along with the other subjects of university study. Even the much criticized payment of fees soon came to safer application by the raising of the standard of school efficiency necessary to obtain such monetary help, and by the clause which Mr. Carnegie himself inserted as a safeguard, making repayment in after-years by the recipient optional. Further, through the Carnegie United Kingdom Trust another department of medicine—

namely, prevention of disease in its relation to the welfare of expectant mothers and young children—has already been endowed by Mr. Carnegie's millions, and will advance to yet more useful results in the time to come. In still another way Mr. Carnegie came into touch with medicine in its most practical aspects when he made a gift of £100,000 to King Edward's Hospital Fund. It is for reasons such as these that it is becoming in the pages of a medical journal to make a respectful reference to the death of this great giver, which occurred on August 11th at Lenox in the New England State of Massachusetts.

New South Wales.

INFLUENZA EPIDEMIC.

IN spite of every precaution influenza gained an entrance into New South Wales early in 1919, and became fairly prevalent in Sydney. Restrictions were imposed, and after some weeks there was a marked diminution in the number of cases. But the disease spread to the country, and many deaths took place in the larger country towns. In consequence of the diminution in the number of cases and the mildness of the succeeding cases the restrictions were all removed except those imposed on travel between the different States of the Commonwealth, and between the metropolis and the country towns beyond a certain distance. In June, however, there was a recrudescence of the disease, and quite a widespread epidemic is now again in progress in the metropolis and in some of the larger country towns. Since the beginning of the epidemic in January last 9,711 cases have been reported to the Board of Health, and 1,320 deaths have taken place in the various hospitals. But it is well known that a very large number of cases have not been reported, especially in private practice—not from any desire to evade the regulations, but simply because the machinery for notification, and action thereon, broke down owing to the stress of work. The type of case most prevalent at the present time is a mild one, only a few showing definite pneumonic symptoms.

SCIENTIFIC RESEARCH.

Recently a number of medical men met at the offices of the Board of Health to discuss a proposal to establish an institution to be devoted to scientific medical research. The idea is embodied in a scheme for co-operation between the various hospitals and the Board of Health with a view to conducting independent investigations in pathology, bacteriology, and biochemistry in relation to the common diseases found among the patients of a general hospital. This idea seems to have originated with the consultative council of medical men which the Government called to its aid in its dealings with the influenza epidemic. From the first the Government consulted the Council of the New South Wales Branch of the British Medical Association, and as a result a consultative committee was formed, consisting of all the members of the Council of the Branch and one or two other medical men. This committee has met from time to time to review the whole situation, and has advised the Government as to the imposition or the relaxation of the restrictions. In this respect the present Government has set an example which it is hoped will be followed in the future.

AFTER-CARE OF DISCHARGED SOLDIERS.

Dr. J. F. Agnew, the Principal Medical Officer of the Commonwealth Repatriation Department, has just completed a tour of the Commonwealth, during which he has discussed the subject of the care of the discharged soldier with the committees and departmental officers in the capital cities. Special attention is being paid to the treatment of tuberculous soldiers. Those who are in a curable stage of the disease will be treated in sanatoriums, which are to be established in every State, while the incurable will be cared for in similar institutions. In connexion with the treatment of alcoholics the problem is not quite so straightforward. It is recognized that many of the men through war conditions have developed intemperate habits, while others who are suffering from various forms of nervous disease are more susceptible to the craving for, and less able to withstand the ill effects of,

alcoholic liquors. It is proposed to have in each capital city a home where men suffering from alcoholism will be put through a course of treatment, which will include useful tasks according to their individual ability and mental condition, so that they may be able to recover their physical health, and be fitted to take their places as useful citizens. On the other hand, those men who have been heavy drinkers before the war, during the war, and since the war, have become constitutionally diseased, and in many cases mentally affected. Cases of this sort can only be dealt with satisfactorily by temporarily depriving them of their liberty through the ordinary legal procedure of the respective States.

DRUNKENNESS IN NEW SOUTH WALES.

From some statistics prepared for the Chief Secretary, it appears that there were 493 more convictions for drunkenness in the metropolitan area during 1918 than in the previous year. The figures for the whole State, however, showed a decrease of 198 in 1917. Convictions on the double charge of "drunk and disorderly" during 1918 also decreased as compared with 1917. The increase in the convictions in the metropolitan area is attributed to three causes—namely, the operations of "sly grog sellers," the consumption of large quantities of liquor immediately prior to the 6 o'clock closing hour for all hotels, and the more efficient inspection of the haunts of drunken habitués rendered possible by the use of the police motor patrol.

Correspondence.

A POST-GRADUATE SCHOOL IN LONDON.

SIR,—I am leaving for Canada next week, on demobilization, after having had the pleasure and privilege of serving with the army in France for some years, and of working at the Canadian medical headquarters in London. During this time I have watched with the keenest appreciation and interest the inception of the Fellowship of Medicine. I trust I may be permitted to say that this body appears to me to be the one thing needful to maintain that excellent comradeship of all English-speaking medical men which has been begotten of the great war.

I venture, before leaving, to appeal to the profession in the motherland to carry on along two principal lines.

The first is that there should be no hiatus in the excellent work which the Fellowship has carried on from No. 1, Wimpole Street, since the beginning of this year. It would be lamentable if this were not continued.

The second is that there should be only one central and organizing body for all post-graduate teaching as well as for the reception, information, or entertainment of medical visitors from overseas. I happen to know that addresses given by Sir StClair Thomson before my own university (McGill), before the Medical Chirurgical Society of Montreal, and at Toronto, as well as in the leading eastern American cities, have aroused the greatest interest, sympathy, and expectation as to how London is making ready to replace Vienna and Berlin; and I also happen to know that even the title of "Fellowship of Medicine" has caught on in transatlantic circles.

I venture to think that only one co-ordinating body is necessary, and I fear that if there were alternative or rival schemes the enthusiasm and expectation of which I have spoken might be dissipated and wasted.

Speaking for the Canadian medical officers who have passed through the emergency post-graduate classes of the Fellowship of Medicine, and who have enjoyed its scientific hospitality, I would like to take this opportunity of assuring my British colleagues that our officers from the Dominions are full of appreciation and gratitude, and that they are returning home to spread the good news, and to stimulate a steady flow to No. 1, Wimpole Street.—I am, etc.,

London, W., Aug. 15th.

H. S. BUKETT.

SIR,—All are agreed that its wealth of clinical material and its large choice of capable teachers places London in a better position than any other centre for the purpose of post-graduate instruction. Most of us are also agreed that London has at the present moment a unique opportunity of attracting post-graduates who formerly went to other

centres, and that this opportunity will not recur unless some definite plan of organization is adopted by October 1st.

If we look facts in the face there is only one body which is able to do the necessary work—even as an emergency measure—within the limited time at our disposal. That body is the Fellowship of Medicine. It has already established post-graduate teaching in London on a successful basis, in spite of difficulties which are perhaps not thoroughly appreciated. Above all things, it has found the man who has the ability, the personality, and the energy which are so essential to the success of a new organization. I hope, therefore, that the Fellowship of Medicine will not fail us now but continue its post-graduate work and leave any possible difficulties with other organizations to be settled amicably, as they doubtless will be, in the future.

So far as I know—and I am a member of the executive of both bodies—there is no sort of antagonism between the Fellowship of Medicine and the Post-Graduate Association. Both bodies are single-minded in their desire to establish a sound scheme of post-graduate instruction. The Post-Graduate Association has already done good work, for it has brought about a greater measure of agreement between the London medical schools, the special hospitals, and the provincial schools than I have known in any other scheme in the past, and when it has the necessary machinery it will be able to offer greater facilities than any other body. At present it does not possess the necessary machinery, and so far as I can see has no chance of producing it for some months. We cannot afford to wait for this machinery and run grave risk of losing the great opportunity before us. Nor can we afford to wait, as "Sceptical" suggests, for the conversion of a good general hospital into a post-graduate hospital. In any scheme of post-graduate work a hospital devoted to post-graduates would be a great asset, but "Sceptical's" scheme is based on the ideal, and we are dealing with immediate practical necessities.

I have heard only one argument against the Fellowship of Medicine continuing its post-graduate scheme, and that is that by so doing there may be friction with the Post-Graduate Association. With such goodwill between the two bodies, composed largely of the same men, and such a genuine desire to establish post-graduate teaching on a proper basis in London, this argument has no weight, and I am confident that if the Fellowship of Medicine will carry on the work now, all difficulties can be arranged in the future, and the schemes of the two bodies successfully merged.—I am, etc.,

London, W., Aug. 19th.

ARTHUR LATHAM.

SIR,—There are many of us who are most anxious that post-graduate instruction in London should be the best in the world, and we know that we have unrivalled opportunities at the moment if we make use of them. If we miss the present opportunity it will probably never return, and in order that we should not do so, it is of vital importance that we should give every possible support to the present scheme of the Fellowship of Medicine. This body in the past months has shown us what it can do. From many conversations with visitors from the Dominions and the U.S.A., and from the experience gained in my own lectures on gynaecology in connexion with the Fellowship of Medicine, in which I had large and enthusiastic audiences, I am able to state that many of those who attended were delighted that at last they were able to obtain in London the post-graduate experience that had obviously always been possible, but which had never materialized before on anything like the present scale.

The Fellowship of Medicine is a going concern, but by the end of September, unless it is asked to go on with its work, which it is perfectly willing to do on condition that it develops into a permanent institution, its whole scheme lapses. This would be a very great misfortune, as it is already recognized throughout the world, and the body which is known as the Post Graduate Association apparently cannot begin at the very earliest till next year, and even that is doubtful.

What is to happen to the many men who want the benefit of immediate experience this year? They are to be disappointed; if the chain is broken, they will, of course, begin to look elsewhere; and why? Because

post-graduate instruction is to be handed over to a body which has already been in existence in name for a considerable time, and which has so far done nothing adequate to meet the demands, and, as far as I can see, is very unlikely to be a success.

Past experience demonstrates that little can be expected from bodies so large as to be unwieldy, and that the initiative must always come from a small group of enthusiastic individuals whose sole interest is the advancement of their scheme. This, I repeat, is being admirably effected by the present Fellowship of Medicine, with its excellent secretary, Mr. P. Franklin, who has already done so much to deserve the gratitude of the profession. At present the active members of the London hospitals are in the movement, and it only remains for all the hospitals to do their utmost to help the present body in every possible way. Then we shall have a post-graduate instruction second to none, and of the greatest benefit to the members of the profession.—I am, etc.,

London, W., Aug. 18th.

HAROLD CHAPPLE.

SIR,—The proposal advanced by "Sceptical" in your issue of August 16th (p. 221) will, I hope, engage the attention of all those who are endeavouring to organize in London an adequate scheme of study and teaching for medical practitioners. Like the writer of that letter, I am convinced that at the centre of such a scheme, if any abiding success is to be attained, there must be a general hospital of metropolitan rank and devoted solely to the needs of post-graduation teaching. Having had some considerable experience of the working of the earlier efforts to build up a successful plan I was driven, some years ago, to recognize that the weak spot in these enterprises was the absence of the continuous clinical service possible only in a general hospital devoted wholly to post-graduation work, and I emphasized this need in the address I was asked to give to the International Conference in 1913 (see *Lancet*, August 7th, 1913).

I further urged the association with the selected hospital of a "college" which would welcome all effective teachers, of a central bureau of information, and of those special hospitals where particularly valuable opportunities for clinical study are constantly to be found. I understand that the Fellowship of Medicine has in greater or less measure been able to meet these latter conditions and has so far made an encouraging start. But I agree with your correspondent that a sustained, authoritative, and widely attractive programme will hardly be realized so long as the scheme fails to include those practical opportunities for daily clinical study which, admittedly, are offered only by the clinical services of a general hospital. Such a hospital would necessarily develop a continued interest and effort, and the attitude of those immediately concerned would be quite different from that imposed on teachers who, mainly concerned with the teaching of students, have, at times, to push this teaching aside in order to accommodate themselves to the needs of an occasional group of qualified practitioners. The plan of dividing the clinical work among a number of hospitals has already been tried in London, and tried without success.—I am, etc.,

London, W., Aug. 17th.

C. O. HAWTHORNE.

SIR,—The recent correspondence appears to indicate that the London Post Graduate Committee is unable at the present moment to take up the work initiated by the Fellowship of Medicine in the emergency course.

To permit the failure of this movement would be, beyond question, a national calamity. It may not be generally known—but I am prepared to furnish you with evidence—that there are in London at the present moment close on two hundred medical officers awaiting this course. The policy of drift which is apparently being pursued may lead to their being faced with the alternative of getting stranded here with nothing to do, or seeking the teaching they need on the Continent. To us in London, with the greatest store of clinical material in the world and a staff of teachers eminently fitted and willing to teach, such contingencies are unthinkable.

Time presses, and it is evident that it is useless to waste any more in organizing meetings or in consulting governing bodies. The general opinion in the profession is, I know, that no effort should be spared to save the splendid

machinery now running so smoothly and efficiently at No. 1 Wimpole Street from going to the scrap-heap. I am sure that if Sir William Osler, President of the Fellowship of Medicine, were appealed to, he would be willing to appoint a subcommittee of the Fellowship with a mandate to carry on until such time as the Post-Graduate Committee finds itself equal to the task. If Mr. Franklin, the vertebral column of the emergency course, could be induced to act as chairman of this subcommittee, its success would be assured.

Increased production is now the cry—the panacea for all our national ills. But in the nature of things we are not producers in the ordinary sense of the word. Is it not the duty of our profession to grasp this opportunity and render a national service which yields to none in its importance?—I am, etc.,

London, N.W., Aug. 18th.

V. E. SORAPURE.

SYMMETRICAL GANGRENE.

SIR,—I venture to suggest that Dr. Goodall's case of symmetrical gangrene (*BRITISH MEDICAL JOURNAL*, August 16th, 1919) which had an acute onset, and was at its *debut* accompanied by acute catarrhal symptoms, really represents that type of symmetrical gangrene—probably dependent on local changes in the spinal cord—that was so repeatedly noticed in connexion with the influenzas of 1889-90.

Laurenti (*Riforma Medica*, 1894, i, 399) gave an excellent account of such a case, and put forward what is probably the correct explanation.

Such a case, accompanied like Dr. Goodall's by mental symptoms, occurred in London during the outbreak of "encephalitis lethargica" in 1918, and was at first thought to be due to "ergotism"; central cord changes were found *post mortem*.

It was probably the grouped occurrence of such cases in certain epidemic years that, in the sixteenth, seventeenth, and eighteenth centuries, led to the erroneous ideas that have ever since obscured the differentiation, history, and recognition of "influenzal" epidemic encephalo-mylitis on the one hand and "ergotism" on the other, leading to the attribution of the first named malady to "convulsive ergotism" (*Proc. Roy. Soc. Med.*, vol. xii, Section of History of Medicine).—I am, etc.,

London, W., Aug. 18th.

F. G. CROOKSHANK.

SUDDEN DEATH UNDER AN ANAESTHETIC.

SIR,—It is now twenty years since I nearly lost a case from chloroform, though administered by a man of very great experience. I brought the patient round by artificial respiration—not the Sylvester method, but the much older and in my opinion much better one of direct insufflation by applying the mouth to the nose. I then concluded that chloroform was dangerous in such cases, and since that date I have never permitted any anaesthetic to be used for ordinary cases except ether. I do not subscribe to the view that the choice of the anaesthetic is for the anaesthetist. I am thankful to say I have never lost a case, though I have operated on many thousands.

My experience would therefore go to show that status lymphaticus is only a euphemism for chloroform poisoning.

The matter is, in my judgement, too important to be allowed to drop until the practice of administering that dangerous if convenient drug has finally been abandoned by the profession.—I am, etc.,

Dublin, Aug. 16th.

ROBERT H. WOODS.

HOSPITALS FOR TUBERCULOSIS.

SIR,—The thanks of everybody interested in the problem of tuberculosis are due to Dr. H. Batty Shaw for his plain speaking, and in particular for emphasizing two clinical observations upon which agreement is daily becoming more general—namely, (1) that tuberculous infection in childhood is at present all but universal, and (2) that pulmonary tuberculosis manifesting itself in adult life is, in the majority of cases at present met with, not a re-infection but a recrudescence and an extension of the original disease.

It follows that, as far as the prevention of tuberculous infection is concerned, the battle has to be fought in the first two decades of life. Adult infection is, of course, possible, but it would appear to be a very minor factor.

The question which, in effect, Dr. Batty Shaw raises is this: If latent tuberculosis is almost universal, and unrecognized (and unrecognizable) infectivity common, are we, in directing our efforts mainly towards the early recognition and isolation of individual cases, tackling the problem in the best way; or should we not direct more of our effort towards altering the conditions in which our children are reared and educated, so as to minimize the amount of infection to which they are exposed and to raise their resistance to the highest possible degree?

In support of the latter alternative it may be pointed out that of all inhabited places one of the least infective, from the tuberculosis point of view, is a well designed and disciplined sanatorium for consumptives. May we not logically draw from this fact the conclusion that, were every home a sanatorium, there would be no tuberculosis?

Early recognition of the disease is, of course, most important from the point of view of treatment, and the isolation of cases in their terminal stages will always be desirable from the point of view of avoidance of mass infection. But we now know that the majority of the tuberculous do not die of the disease; although they pass the torch along to others, they are not themselves consumed.

Exception must be taken to Dr. Batty Shaw's strictures on sanatoriums. A sanatorium is, or should be, a highly specialized and equipped hospital, and sanatorium treatment is not "a holiday in the country," but demands much patience and strength of character, and not a little remuneration on the part of the individual concerned. These qualities are none too common, and consequently there are many failures. As was truly said by two great authorities some years ago, "It is impossible to cure a fool of pulmonary tuberculosis." Properly carried out, real sanatorium treatment has, long since, proved itself far and away the best means of restoring to health and working capacity individuals who would otherwise have perished. To be effective it must be prolonged. A three months' stay in a sanatorium can only have an educational value in the immense majority of cases, and statistics of institutions which receive patients for such a period only should not be quoted as statistics of true sanatorium treatment.—I am, etc.,

P. HEFFERNAN,

Derby, Aug. 11th.

Major I.M.S.(ret.).

SIR,—With Dr. Batty Shaw's conclusions as to the necessity for hospitals in accessible places I entirely agree; and there is little doubt that these are of much greater value to the community than sanatoriums. But their chief value is for the isolation of highly infective cases of tuberculosis.

So far our efforts to eliminate tuberculosis have been directed mainly to the treatment of individual cases, and no serious attempt has been made to deal with it as an infectious disease, although this is far the most profitable side from which to attack the problem.

I think Dr. Shaw much exaggerates the difficulties and hardships of prevention—one might almost say he is so logical that he loses sight of common sense. It is only the highly infective, advanced cases that need complete isolation, and for this, with compulsory powers, sixty beds (thirty for each sex) would suffice in South Devon. I see no reason why efforts to disinfect sputum and use pocket flasks should be discouraged, but the main point is to isolate the highly infective case.

Roughly speaking, I find 40 per cent. of cases of tuberculosis can be traced to recent personal infection; in 25 per cent. there is no traceable history of infection, in 23 per cent. there is a history of probable remote infection (childhood, and 12 per cent. I classify as doubtful. If tuberculosis pensioners were taken from these figures the percentage of recent infections would rise considerably.

A large percentage of cases of tuberculosis, then, are due to a recent infection, and the great majority of these again are due to infection from advanced cases. Surely this could be prevented.

A childhood infection these patients may also have had, but it is certainly not the important one. If we do all in our power to prevent mass infection in childhood or after (a germ or two will not matter), we shall certainly prevent a great deal of disease, and possibly childhood infections will become much less common. The large number of cases of adult tuberculosis due to the recrudescence of an early

infection cannot yet be prevented, but the 40 per cent. recent infections could be prevented.

I cannot speak for the rest of the country, but Devon, at any rate, is alive to the value of hospitals for tuberculosis in accessible places, and there is a reasonable prospect of my sixty beds (for observation and isolation) in the near future.—I am, etc.,

Faignton, Aug. 18th.

E. WARD.

EFFICIENT TREATMENT OF THE CHRONIC RUNNING EAR.

SIR,—The recent correspondence shows a very great divergence of opinion on this very important subject, and I therefore venture to give the results of my own experience.

For over two years, as Aural Specialist to Havre Base, B.E.F., I had the opportunity of treating a large number of cases of chronic suppurative otitis media under conditions analogous to those related by Dr. Wilson.

In France no aural consultant was appointed, each centre being left to evolve on its own lines—which, in my opinion, was a mistake, as much good would have resulted from the interchange of ideas and results which such a consultant would have brought about. The system I employed was, briefly, as follows:

1. All cases of aural suppuration were admitted in the first place to hospital, where routine treatment was commenced.
2. The cases after classification and a short period of treatment were, unless operative measures were found necessary, sent to a convalescent camp, where the treatment was continued under my personal supervision.
3. The treatment employed was a preliminary filling of the ear with hydrogen peroxide (10 vol.), followed, after an interval of five minutes, by syringing with boracic lotion. The meatus was then thoroughly dried, and either boracic powder insufflated or a few drops of rectified spirit dropped in. No wool was kept in the ear, and this I regard as an important detail.

The treatment was carried out twice daily.

During the two years I had an average of about 60 cases under treatment at any one time, the average duration of treatment being between two and three weeks. As a result of this experience I have come to the following conclusions:

1. That a very large proportion of cases can be cured by thorough non-operative treatment, the essential factor in such treatment being the prevention of the stagnation of discharge in the meatus and middle ear. I find that as a result of treatment in 100 consecutive cases in which the discharge had persisted for more than six months, healing of the perforation took place in 47, in 28 the discharge was scanty or absent, but with persistent perforation, while in 25 I could find no certain improvement. The most important factor is the thoroughness with which the treatment is performed, and this explains the relatively poor results obtained in civilian out-patient practice.
2. Mastoid operations, whether radical or not, do not in a large number of cases give permanent cessation of discharge.

The results are, I believe, much worse in this respect in the poorer classes owing to the neglect of the periodical cleansing of the cavity which is usually essential. Such operations should therefore be reserved for cases in which there are definite indications, other than a discharge which can be kept under control by less drastic measures.

Harty¹ and Wilson² have, as a result of similar military experience, come to the same favourable conclusion as to the results of systematic non-operative treatment, as has also Kerr Love³ in his experience with school children. On the other hand, Adair Dighton,⁴ in the treatment of 4,000 cases, had "no good results of any kind" by non-operative measures. I can only conclude that his treatment was half-hearted, and I hope that he will give such measures a further trial before submitting all his future cases to operation.—I am, etc.,

Bristol, July 23th.

A. J. WRIGHT, F.R.C.S.

SCRS.

¹ *Bristol Medical-Chirurgical Journal*, July 1916. ² *BRITISH MEDICAL JOURNAL*, May 24th, 1919. ³ *Diseases of the Ear in School Children* (John Wright, 1919). ⁴ *BRITISH MEDICAL JOURNAL*.

INFECTIVE CATARRHS—SO-CALLED "COLDS."

SIR,—Your correspondent Dr. Francis, in his interesting letter on the etiology of "colds," speaks of "the oft-repeated argument that patients in sanatoriums do not suffer from catarrhs." I have never heard the argument

put in this form by any one with sanatorium experience, and as a former sanatorium officer I should certainly not make any such unqualified statement. What I can state from my own five years' experience as medical superintendent of a sanatorium is that the patients never had colds that could not be clearly traced to importation of infection from outside. We would go for months without a cold in the place, and then some patient would receive a visit from a relative with a cold, he or she would succumb to the infection, and the thing would run like wildfire through the place, infecting both patients and members of the staff. I do not think there is any special insusceptibility to colds on the part of sanatorium patients. Colds are rare among them because the local conditions are unfavourable to the persistence of coryza germs, and infection from outside is not an everyday occurrence.—I am, etc.,

Berkhamsted, August 17th.

F. S. ARNOLD.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

SIR,—“In Arduis Fidelis (T.F.),” in his letter in the *BRITISH MEDICAL JOURNAL*, August 16th, p. 224, presupposes that the majority of the men on pensions boards are those who have seen no service; my experience is quite contrary to this.

I write especially to express a hope that the Association will take up vigorously the question of the pay for the members of these boards. We are still paid at the pre-war rate. The London County Council has realized the necessity of increased pay for part-time work, and is now paying members of school clinics and treatment centres at the rate of £1 11s. 6d. a session of two and a half hours.

Recently the board of which I am the chairman has been called on to do nine, ten, eleven cases a session so that the glut of pensioners should be disposed of. The clerical work has also increased enormously, and we are now asked to prepare, in duplicate, record cards for each patient in addition to other clerical work. These record cards will necessitate a close examination of the man's papers and an extract therefrom of any disabilities on entry into the army, etc., and a *précis* of all previous boards, and of his present condition. I understand that we are still supposed to examine the same number of pensioners.

I trust, therefore, that the British Medical Association will endeavour to bring to the notice of the Ministry of Pensions the resolution of the Representative Meeting.—I am, etc.,

August 16th.

CHAIRMAN OF PENSION BOARD.

SIR,—A man who does not receive all he asks for or expects becomes a man of biased judgement in so far as his own case is concerned. We all acknowledge that Sir Douglas Haig is a born leader of men, but the medical profession will not acknowledge him as an expert upon medical matters. The medical referee has to hold a just and logical balance between the interests of the State and the pensioner. Not a few cases of “shell shock” have occurred in men who have never left these shores, but who had the misfortune to experience air raid bombing. Doubtless your correspondent (*BRITISH MEDICAL JOURNAL*, August 16th, p. 224) has assimilated the views held by military authorities upon this subject. During the war the incessant night calls nullified the advantage of possessing a bed to lie upon and a roof to cover one. The serving men in this area explained that army service was a holiday compared with general practice and that a large proportion of their work might have been done by clerks! Does a man suffering from nerve paralysis due to injury require the experience of a military gentleman to determine whether such injury was due to military service and to assess the percentage of damage? Special pleading is a dangerous attitude to adopt.

My only regret is that the services of your correspondent were not available during the epidemic of influenza. The position of medical referee requires tact, forbearance, and practical experience.—I am, etc.,

Bedford, Aug. 17th.

S. J. ROSS.

SUPPLY OF SERUMS AND VACCINES FOR INSURANCE PATIENTS.

SIR,—It is surprising that there should still be any doubt as to whether under the National Insurance Act serums and vaccines are to be supplied by druggists on prescription in England. Certainly they must be supplied. The Regulations are quite definite. The case of *Dr. Fisher v. the Hertfordshire Insurance Committee* is confirmatory.

The letter in your issue of August 16th stating that the Northumberland Insurance Committee has resolved that serums should not be dispensed merely shows that the Committee does not “deliver the goods” for which insured persons in that area have paid. It would be interesting to know whether other Insurance Committees are making the same error.

May I remind those concerned that Local Medical Committees have a statutory right to be consulted in all matters relating to the administration of medical benefit, and that Local Panel Committees are the bodies chiefly interested in the administration of the drug fund.—I am, etc.,

J. H. FREDERICK WAY,

Honorary Secretary, Portsmouth Medical
and Panel Committees.

Southsea, Aug. 16th.

SIR,—Dr. Archd. Fairlie of Blyth, referring to my letter of July 26th, presumes that I have contracted to supply necessary remedies. This is not the case. Herein lies the difference between my case and that of Dr. Fisher.

I agree with Dr. Fairlie that the natural corollary of Dr. Smith Whitaker's decision is the supply of serums by druggists on prescription by a panel doctor who does not dispense. It does not follow as a corollary that vaccines should be so supplied. Some vaccines are not so well established in therapeutic record as antidiphtheritic and antitetanic serums. But it is reasonable that serums and vaccines should be classed together.

Dr. Fairlie and I practise not many miles apart. My lot seems to have fallen on the happier bank of the Tweed.—I am, etc.,

Duns, Aug. 16th.

A. J. CAMPBELL.

INCREASED GRANTS TO INSURANCE PRACTITIONERS.

SIR,—I raised the question of the increase in the cost of living at the Conference of Representatives of the Local Medical and Panel Committees in regard to the urgent necessity of the Insurance Acts Committee taking action when the question of remuneration comes up for consideration. Dr. Brackenbury said at the meeting that the temporary increase for 1919 was based on the increase awarded to the civil services, and that it would be impossible to get the Government to agree to any other basis. The Government has only just raised the scale of increase for pensions to a level of 60 per cent. above pre-war rates based on the cost of living, owing to the pressure of public opinion. I fail to see why our claim to an increase of payment should not be on the same basis at least. Why should we be awarded an increase comparable to that of civil servants, who have a pension to look forward to, which we have not? Our case is certainly not comparable to that of the civil servant, and one fails to see altogether how the Council can be said to have watched our interests properly in agreeing to any such premise. If the panel practitioner had any pension to look forward to one would say nothing much.

Now the basis on which I get my figures is that of the actuarial estimate of the average increase of wages for all classes of labour—in other words, our patients under the Insurance Acts. What is sauce for the goose is sauce for the gander! The average increase in wage on this estimate is 133 per cent. above the figures for 1914, and on that scale we are in no way unfair if we ask for a similar increase in insurance fees from the almoners of the Ministry of Health for this year. I personally feel the pinch quite considerably after my military service, and can get a fair estimate of the difference in the cost of living after service abroad. It was noticeable that, while on service, every other branch of the services than the R.A.M.C. got considerable increases in pay, but the Central Medical War Committee failed to secure any increase for our branch. Personally I should like to see, what probably

I shall see when I am an old, old man, a united medical union, banded together in their own interests, not in those of every Tom, Dick, and Harry of the public, who in my own experience are quite capable of looking after themselves. When the Conference comes to discuss remuneration I only hope we shall ask and demand a "living wage" for what we are to do. The insurance fees at present do not represent a living wage or anything like it, even with the gratuitous insult offered us by the Government. Dr. Brackenbury was altogether wrong in saying that the temporary increase offered by the Government was in any way adequate, and I think the deputation were slow in failing to point out that our position was in no way comparable to that of the civil service. If the Council must have deputations to the Government, why do not they get men on whom who are quick at repartee, or at any rate have a sense of humour, a thing they altogether seem to lack?

When we were originally fighting the question of a living wage—at the time of the introduction of the panel service—I, at Cambridge, pointed out that if we wanted £1, we ought to ask for £2, then we could always come down in our figures. It is no good going to the Government on the lines of a "Dutch auction"; we must at any rate set our services at a high value. If we set them at a low level, we shall only be laughed at for a set of fools or lunatics. If we are going to fight, then let us go into it as if we meant it—with the gloves off. What if we ask for much too much?—we can always come down. If we ask for too little, the Government will certainly not offer us more; but only think that we are not in earnest, or think us fools for asking so little. It is significant that after awarding everybody and anybody large increases in wages, Mr. Lloyd George is going to announce a great scheme of retrenchment, which looks as if he intends to retrench at our expense. If we, as usual, are to be made the butt of this retrenchment, I can see myself trying "fresh fields and pastures new" to pick up a more or less honest living. If I cannot make both ends meet at my own profession, it will not at any rate be my own fault, but that of a weak-kneed lot of my professional brethren, who, incapable of banding together to obtain proper terms for themselves, go gaily to perdition, or the bankruptcy court, rather than put up a proper fight for their livelihood.—I am, etc.,

P. A. HENDLEY,
Representative, Isle of Ely Local Medical
and Panel Committees.

Littleport, Isle of Ely,
Aug. 10th.

NATIONAL INSURANCE AND UNALLOCATED PERSONS.

SIR,—Dr. F. Porter, in a letter published in the BRITISH MEDICAL JOURNAL on August 16th, made the astonishing statement that there are approximately 20,000 insured persons in Edinburgh who receive professional attendance and treatment from non-panel practitioners, and that this number is increasing annually. On what basis this statement is made it is difficult to know; but I think it is only fair to the system and to those who assist in carrying it out that his approximate estimate should be corrected at once, and not be allowed to get too good a start.

For various reasons no scheme has yet been devised whereby the actual numbers of insured persons entitled to medical benefits can be accurately calculated. It would be futile to think of getting accurate figures; but anyone can, by a consideration of the facts so far obtainable, arrive at a fairly correct solution.

The number of persons supposed to be entitled to medical benefits in Edinburgh last quarter was 117,553. This number is subject to a deduction of 25 per cent. for inflation due to a constantly shifting population, duplicates, unsurrendered contribution cards, and other causes, equal to 29,388, leaving 88,165. By subtracting the 85,000 on doctors' lists last quarter the approximate number of unallocated people is 3,165.

A fairly large proportion of the 3,165 have not chosen doctors, partly owing to sheer carelessness and partly because they have never been ill. It is difficult to find out how many belong to this class—a third would be a moderate estimate—say 1,055. This would leave 2,110 really bona fide and conscientious objectors to the benefits of the Insurance Act in Edinburgh.

Somewhat similar results can be obtained by taking the

amount of money paid to the doctors for unallocated persons in 1916. After careful sifting, it was found that £1,950 in the Edinburgh area was due to the doctors. As 7s. 6d. a head was the remuneration paid in that year, it follows that the number of unallocated persons in 1916 was 5,200. It is apparent that the number, instead of increasing, is decreasing. These figures do not tally with the 20,000 given by Dr. Porter.

It is to be remembered that insurance practitioners are responsible for the attendance and treatment of unallocated persons at all times. Such persons are constantly, when ill, going to insurance doctors with their buff cards unsigned. This disposes of Dr. Porter's statement that a large sum of money is being distributed among the panel practitioners, who do not work, and never will have the opportunity of working for this money.

It will thus be seen that non-panel practitioners cannot by any possibility be giving attendance and treatment to more than a little over 2,000 persons in all, and that is a wide margin.—I am, etc.,

Edinburgh, Aug. 17th.

MICHAEL DEWAR.

THE TERRITORIAL FORCE MEDICAL SERVICE.

SIR,—In a letter on this subject in your issue of August 16th Colonel Broome-Giles states that: "During the war numerous consultants of the *à la suite* Territorial staff and Colonial M.O.'s have been temporary surgeon-generals (now major-generals); no Territorial medical officer, pure and simple, has been similarly honoured." Your correspondent seems to have forgotten Major General Sir R. H. Luce, K.C.M.G., C.B., V.D.—I am, etc.,

August 17th.

A PALESTINE M.O.

Obituary.

WILLIAM SMITH GREENFIELD, M.D. LOND.,

F.R.C.P. LOND. AND EDIN., LL.D. EDIN.

Emeritus Professor of Pathology and Clinical Medicine in the University of Edinburgh.

The death of William Smith Greenfield, at his home at Juniper Green, Midlothian, on August 12th, has removed another of the band of professors who, in the early eighties of the past century, did so much to make the medical faculty of the University of Edinburgh the powerful combination of teachers which it was. The death of Professor W. R. Sanders near the beginning of the winter session 1830–31, made a vacancy in the chair of pathology. During the following months the work of the chair was ably and well performed by the late Dr. D. J. Hamilton, and not a few expected to see him made professor in Sanders's room; but the curators, looking to London, made their choice of the young and brilliant professor in the Brown Institution there, and so it came about that Scotland was enabled to secure for the teaching of pathology both Greenfield and Hamilton (for the latter was soon afterwards elected to the professorship on that subject in Aberdeen). Between the spring of 1831, when Professor Greenfield began his work in Edinburgh, and 1912, when he resigned his chair, it is no exaggeration to say that the whole aspect of pathology was changed; in 1831 three or four micro-organisms alone were known, whilst in 1912 there was in being a huge new subject of bacteriology, so important that in the following year a separate professorship had to be established to cope with the teaching of it. The teaching of clinical medicine also was separated from pathology at this time, and so the task which Professor Greenfield took up and carried through with such fine ability and such persistent activity for thirty-one years is now performed by three teachers, all of professorial rank.

William Smith Greenfield was born in Salisbury in 1846, studied at University College and Hospital, London, obtained the diploma of M.R.C.S. Eng. in 1872, and graduated M.D. Lond. in 1874. For two years (1872–4) he acted as medical registrar to St. Thomas's Hospital. He then became demonstrator of morbid anatomy and pathology in the medical school, and from the abundance of material thus brought under his notice and investigation he was able to select groups of cases throwing new light upon pathological problems, as was at once recognized

when he published the results in the *Transactions of the Pathological Society of London*. This was not, however, his first contribution to medical literature, for he had already written a paper for *St. Thomas's Hospital Reports* in 1873. Dr. Greenfield at this time had begun to develop the teaching of his subject, and in his lectures on morbid anatomy and practical pathology he was one of the first to systematize practical instruction in pathological histology. During the following three or four years he held the appointments of physician to the Royal Infirmary for Women and Children, to the Royal Hospital for Diseases of the Chest, and, at St. Thomas's Hospital, of assistant physician and of physician to the department for diseases of the throat. He was thus preparing himself for that other part of his life-work which awaited him in Edinburgh—the teaching of clinical medicine.

In 1878 he was appointed professor of pathology in the Brown Institution, in succession to Burdon-Sanderson, and by his researches on anthrax and pyaemia and septicæmia he helped to lay firmly and well the foundations of bacteriology. His pen, too, was not idle while he was at the Brown Institution, for he contributed the section on "Renal pathology" to the New Sydenham Society's *Atlas of Pathology*; he wrote the articles on "Micrococci" and "Malignant pustule" for Quain's *Dictionary of Medicine*, and he translated Lancercaux's *Atlas of Pathological Anatomy* and Magnan's work *On Alcoholism*.

When in 1881 he was transferred to the Edinburgh Medical School, with its overflowing classrooms, the second professional examination consisted of anatomy, physiology, materia medica, and pathology, and of these four the last had been regarded by the student as the easiest, the subject which a few weeks' steady reading would overcome; but Greenfield changed all this, and at once pathology came alongside of the three others in its requirements, as candidates soon learned. At the same time the new professor expanded and popularized the teaching of the subject, with the aid of Dr. (now Sir) G. Sims Woodhead, and his admirable textbook of *Practical Pathology* soon put this department in the front rank. He also attracted younger men round him in the laboratory, foreseeing the immense possibilities of research. This development was made possible by the transference of the medical classes from their cramped position in the old university to the spacious new buildings in Teviot Place. There for some thirty years Professor Greenfield assiduously taught with a thoroughness in its minute details which became proverbial, and there also he had the assistance of a distinguished band of younger men, several of whom are now well known professors themselves. Some thought his lectures too heavily laden with facts and his statement of conflicting theories too full and too dispassionate; but that was the quality of the man, for he was precise and unprejudiced to a degree. Indeed, this desire to come within reach of perfection probably prevented the appearance of his work on the kidney, which those who had the best opportunities of judging all felt would have been of great value. It was currently reported that once his book was actually finished, and that a discovery on the Continent overturned the work of years, and made a full revision absolutely necessary in the eyes at any rate of its too conscientious author.

There was, however, another sphere of activity in which Professor Greenfield was thoroughly at home besides the pathology lecture room and laboratory: he was one of the professors of clinical medicine. In this department he soon made a lasting mark. He did not attract the mere pass men, anxious only to "get through," but he soon gathered round him a group of undergraduates keen to master clinical diagnosis in all its intricacies, and ready to suffer something in order to reach perfection, for Professor Greenfield's mode of teaching called for grit and endurance. It is not easy to make one's best effort towards percussing the spleen before one's fellows and then to be told by one's teacher that one has given a wonderfully good demonstration of how the spleen ought not to be percussed. It is not easy, but if accepted rightly it is the kind of teaching that makes the exact clinician. Then, too, Professor Greenfield was always on the outlook for the best students in his little band, and the men who when a patient died found their way to the *post-mortem* room to discover not only the cause of death but the explanation of the clinical phenomena during life were marked by their teacher, and were possibly a little

surprised some day to find in indirect ways how highly he thought of them. He was a master of the art of teaching clinical diagnosis by a mixture of banter, railery, and seriousness mixed with a tinge, and often more than a tinge, of sarcasm. When some of Greenfield's men get together now they are all enthusiastic about his power of drilling them into expert clinicians, although some of them have memories which bring rather a wry smile at the thought of some pungent phrase of irony which fell not undeserved upon them. This, however, is the way to the stars in medical diagnosis, and Greenfield was a painstaking guide along this mountain track. To the patients in his wards at the Royal Infirmary he showed the same close attention and care as to the students attending there, and midnight visits to serious cases were not uncommonly paid by him.

With so much of this kind of work to do, and doing it in the absorbing way which has just been described, it is hardly to be wondered at that Greenfield had not much time left for other things; but what time he had he gave to the best things in university life, and he was, for instance, a warm supporter of Professor Henry Drummond's remarkable work among undergraduates, which was one of the memorable things accomplished in Edinburgh in the eighties and nineties of the past century. He was always glad, too, to welcome former students at his home in Heriot Row; and a testimonial from Greenfield, if not easy to get, soon came to be recognized as having a force which yielded wonderful results all over the British empire. Behind the testimonial there was often the little sheaf of private letters to aid a candidature.

Professor Greenfield was happy in his marriage, he was happy above many in his home life, and his friendships, if not so many as others may claim, were among the best men of his time, and were faithful. With a few of his former assistants round him he was to be seen at his best; his inextinguishable spirit of railery and badinage was never long absent, and it played provokingly sometimes in impish fashion in his talk; but the man would have been a dolt who would have felt aggrieved at it.

Thirty-one years of so strenuous a life left their mark upon Professor Greenfield, and even his retirement in 1912 to his country house at Elie in Fife did not give him all the rest he needed. His health in the last few years of his life was but indifferent, and, as has been said, he passed away on August 12th. He is survived by his widow and by several members of his family. One son is in the medical profession in London, another is a minister of the United Free Church of Scotland, his eldest daughter is a lady doctor in charge of the Church of Scotland Hospital in Poona, another daughter is a missionary of the United Free Church of Scotland in Madras, and yet another is the wife of Dr. Carnegie Dickson, formerly Professor Greenfield's university assistant in Edinburgh.

APPRECIATIONS.

I.—By Sir G. SIMS WOODHEAD.

On my return from Vienna at the end of the winter 1880-81, I learnt that my old teacher, D. J. Hamilton, had been unsuccessful in his candidature for the chair of pathology, vacant through the death of Professor W. R. Sanders. I was disappointed at the result, and even harboured a feeling of resentment that one of whom we in the north had heard comparatively little had been elected; and when Professor T. R. Fraser sent for me and informed me that he wished to introduce me to Professor Greenfield, I little dreamt that within twenty-four hours I should be so impressed by the new professor that I should enter into an agreement with him to act as his senior assistant and demonstrator, a position I continued to hold for some six years. During that period I came—without abating one jot of my admiration for Hamilton—to appreciate the sterling qualities that had gained for Greenfield the good opinion of Burdon-Sanderson, Paget, Lister, and men of similar standing, and withal the appointment to the chair.

He had already proved his capacity as a teacher and as an investigator. His researches into the wool-sorters' disease and his intimation that the virulence of the anthrax bacillus could be modified by cultivating the organism through several successive generations in the

aqueous humour of the bovine had already been made to the Royal Society of London (June 17th, 1880). He had then pointed out that it was possible to obtain all degrees of attenuation of the *B. anthracis*, the twelfth generation culture in the aqueous humour medium giving rise to no symptoms of anthrax, earlier cultures setting up a modified form of anthrax. Here was laid the foundation of "vaccination" against anthrax. A month later Toussaint announced to the French Academy that by filtering defibrinated "anthrax blood" through many layers of filter paper, or heating it at a temperature of 55° C., he was able to bring about a similar modification, the filtration method, however, being somewhat unreliable. Within nine or ten months Pasteur's classic experiments were completed. This work, following on the systematic work on the pathology of the kidney published in the *Atlas* of the New Sydenham Society, had undoubtedly placed Greenfield in the front rank of British pathologists.

When Greenfield came to Edinburgh he was only 35 years of age, but his hair, though plentiful, was already silvery grey, and was thrown back from a broad, round forehead. His complexion was that of a boy; the eye keen and alert; the lips, though firm, had a slight twitch, as also the nostrils; shoulders broad and somewhat rounded surmounting a body and limbs sturdy and well set. His manner, though somewhat nervous and self-conscious, indicated power, determination, and mental acumen. I suppose he was making up his mind about me as I was studying him, for at the end of our interview he asked me to act as his assistant, inviting me to dine with him and Mrs. Greenfield and talk over matters in the evening. I look back on that evening with great pleasure, as it marked the beginning of two uninterrupted friendships, for much as I must have tried the patience of my chief, and many as were the opportunities for friction in a close association such as that existing between a professor and a young and inexperienced assistant, there never was a single day during the whole of my service when the professor allowed the sun to go down on his wrath; and whatever may have been his relations with those who did not know him so well, there are numbers of his old students, assistants, and friends whose experience of him is the same.

Greenfield prepared his lectures with great care, amassing detail, and bringing to bear a keen critical faculty in the detection of the weak links in chains of evidence. One now realizes, however, that sometimes there was some little lack of guidance extended to the junior student; the main issues at stake were not always indicated, nor the points to which special attention should be devoted insisted upon. To the senior student the wealth of knowledge and illustration spread before him was a constant joy, and it was flattering to his critical sense to be able to accept a hint that it was left to him to discriminate what was and what was not of importance. Reviewing the careers of Greenfield's pupils, one realizes that the contributions made by many of them to the science and practice of medicine and surgery are the outcome of this sense of intellectual independence inculcated by Greenfield at this formative period of their mental development. This fullness of knowledge and attention to detail made Greenfield a most successful teacher at the bedside, but one would say that it was rather in diagnosis and the thorough study of the case that he excelled than in the treatment of the disease diagnosed. The best students were always willing to face his nervous criticism, and to run against the shell of cynicism by which Greenfield surrounded himself and hid his feelings; if so, they might profit from the close and searching investigation that Greenfield insisted upon in clinical examination. No trouble was too great for him to take, but he expected those under him to be equally generous in giving of their time and energies. With the junior student, whether in the classroom or in the ward, he was scarcely so successful—at any rate, as regards immediate results, though possibly in later life the seeds of truth that he implanted might burst forth and flourish. For this junior student he was scarcely sufficiently didactic and dogmatic, but he made up for this to some degree, at any rate, by the excellence of the work he offered in the practical class and in the demonstration room. Here, again, he never spared himself, and his infinite capacity for taking pains which, though it sometimes provided too full a meal for the student, often succeeded in driving or, better still, leading him into fertile pastures, where he might browse at leisure. Students who did not understand Greenfield's idiosyncrasies were afraid of him,

and were repelled by his nervous self-centredness, but those who could harden themselves against it were always well repaid. In discussing with him the work of the practical class or of lectures I had to prepare I found it almost impossible to get him to lay down any lines on which to proceed: "What do you think?" "What is your experience?" "What evidence have you?" and the like. But when he had fathomed my ignorance he would throw questioning lights in many dark places, and having routed all my forces and indicated what I should not do, would leave me much chastened but with the ground cleared on which to build up my lecture or practical work on lines better than any I had marked out for myself. I believe that most of those who have been closely associated with him would record a similar experience.

For long the conditions for carrying on original investigations in Edinburgh could not be very satisfactory. The amount of routine work during the organization of a new department such as Greenfield had in hand, and even later, owing to the enormous number of students who had to be taught and the small staff of assistants, made it impossible for the professor to devote very much time and energy to systematized investigation. But after a time it became possible for him to direct clinical and pathological investigation and to carry out researches on his own behalf, and had not Greenfield's mind been such that demanded the most meticulous accuracy as to the most minute details, the number of important and original papers published after the first two or three years of his professorship would probably have been very great. When his published work on the thyroid gland is considered, it may be realized how great was the loss to the profession owing to his nervous, almost morbid, self-criticism. He had accumulated notes on observations, records of investigations, and manuscripts which, if edited, would even now form an important contribution to the literature of pathology and medicine. And one cannot but wish that it may be possible for some of his younger pupils to undertake the examination and publication, or perhaps even distribution for editing of his more important work. Greenfield was nervous about his health; he suffered from what he called a pseudo-Menièr's disease and from dyspepsia, which sometimes made him irritable, and naturally he was not popular with all his colleagues, especially with those who would not take the trouble to get to know him. Consequently there were periods when, especially as a new-comer, he was involved in keen controversies as to rights, hours, accommodation and the like, in which his rapier work—often very telling though not always decisive—was not appreciated by those who used the bludgeon.

Outside his professional work he was a man of broad and varied culture, and his addresses given at the Summer Medical Graduation ceremony were amongst the most cultured and spiritual delivered on such occasions. In vacation time he delighted in long country walks, in some of which I was privileged to be his companion. I then found how richly his mind was stored with the works of the best authors, and how his faculty of destructive criticism enabled him to cut out all that was weak in their writing or base in their thoughts. It was interesting to get him to discourse on the subject of "right and wrong" and personal morality. My love of "the play" I used to set against his distaste for tectotalism and so on. Music had little charm for him, and he was never so happy as when amongst his books and papers. A man of singularly reverent spirit, of high religious ideals, keenly self-critical, many of his most intimate friends were selected from men of like mind and thought, and he was greatly concerned for the success of the student movement initiated by C. T. Studd and Stanley Smith. He then came to know and become attached to Henry Drummond, whose close friendship he enjoyed and whom he attended with the most tender solicitude during his last illness, travelling week-end after week-end from Edinburgh to Trubridge Wells and back to do what he could to alleviate the terrible agony from which Drummond suffered towards the last.

Greenfield did much for the Edinburgh School of Medicine. He trained men to succeed him. His pupils and "grand pupils" occupy many chairs in medicine and pathology; and it is now acknowledged that pathology, both in London and in Edinburgh, would not have attained its present position had not Greenfield been recruited to the Edinburgh chair.

There may be divergences of opinion as to him as

a personality, but amongst those who knew him best—perhaps one should say who took the trouble to know him—there is no difference of opinion. He was a sound and extremely critical pathologist, a warm and loyal friend, a great clinical teacher, and a conscientious and deeply religious man, and withal one of the humblest.

II.—By Professor J. LORRAIN SMITH, F.R.S.

Professor Greenfield was appointed to the chair in Edinburgh at a time when pathology was making rapid advances; new methods of inquiry were being applied, and new problems were taking shape. He was one of the chief contributors in this country to the progress of the science, and he found in the Edinburgh school full opportunity for teaching and research. From his wide experience his pupils derived invaluable guidance, and the best evidence of the stimulus of his teaching is to be found in the number of his students who devoted themselves to pathology and bacteriology, and came to occupy important positions in hospitals and medical schools over the empire.

In the teaching of pathology he introduced practical courses in which the students had the opportunity of handling material which illustrated the systematic course of lectures. It was in this part of his work that the student came into most direct personal contact with the professor, and it was in this relationship that his pupils felt and realized his power. Professor Greenfield was an enthusiastic practical teacher. To train his pupils to observe was a joy to him. To note everything which had meaning in a case was the ideal of every inquiry; but on the other hand, the most exacting criticism was applied before any observation could be admitted to a place in the case record. The atmosphere of criticism in which the work was done was bracing and instructive, and, trying though it sometimes was, its thoroughness and singleness of purpose awakened lifelong gratitude in the pupils.

Professor Greenfield was a teacher of clinical medicine as well as of pathology, and it was in the wards of the infirmary that a great part of his teaching was given. His presentation of clinical problems to the students had the combined interest of pathological and clinical setting.

When he resigned his chair the clinical teaching was transferred to a newly established chair of clinical medicine, and the work of the department of pathology was also subdivided by the addition of a chair of bacteriology. From this alone may be seen the burden of work which Professor Greenfield carried. He has taught many to observe, to think, to investigate, and he hoped that when he resigned he would still have strength to come to the department and prepare for publication some of the material which he had accumulated in the form of clinical and pathological investigations. The opportunity for this last effort never came, for his health failed, and British medicine has therein suffered an inestimable loss.

ROBERT ESLER, M.D.

BY

SIR WILLIAM WHITLA, M.D., LL.D., M.P.

THERE passed away on July 23rd at Herne Bay, at the age of 83 years, a very remarkable personality in Dr. Robert Esler, late of Peckham, London. He was born in co. Antrim in 1836 of a good old Ulster stock and did not escape the "gold fever" which tempted so many adventurous young Irishmen to settle in Australia, as the thrilling stories of the discovery of the rich gold mines of that country penetrated into the quiet valleys of his native county. After a successful business career he returned to Ireland in 1870 and soon after entered upon the study of medicine in his 36th year at Queen's College, now Queen's University, Belfast.

To one who knew him intimately in those early days his progress seemed phenomenal; he soon outstripped his fellow students in the race for a university degree, and in 1875 graduated with credit in less than four years from the date at which he commenced the study of his matriculation subjects. Settling down to practice in Belfast, Dr. Esler joined the Ulster Medical Society, and for fifteen years identified himself with every professional movement in the city, and was a constant contributor to the *Transactions* of the Medical Society, his papers ranging over a wide field. He was especially happy in his portrayal of the old Belfast medical worthies of the time of Henry MacCormac, the pioneer of the open-air treatment of phthisis, and father of the late Sir William MacCormac of St. Thomas's

Hospital. He was thus the chronicler of the men who founded the Belfast Medical School—of Redfern, of Gordon, and of Andrews. Appointed to the visiting staff of the Ulster Hospital for Women and Children, he continued to do most excellent work in both of its departments, and published a report of a series of successful ovariectomies at a time when this operation ranked amongst the capital performances of that day. In the early days of antiseptic surgery he introduced oakum as a hospital dressing for routine surgical work. As an example of his manysidedness it may be mentioned that he published an admirable guide to Belfast and the North of Ireland in connexion with the first visit of the British Medical Association to the city in 1884.

Though enjoying a large general practice and the thorough love, esteem, and confidence of all his colleagues and patients, the spirit which in his very early days tempted him to the new world of Australasia lured him once again to seek new pastures, and he migrated, this time to London, in 1889, where he was soon appointed surgeon to the P Division of the Metropolitan Police Force, an office which he held till his death. The last two years of his life were marked by failing cardiac power, but to the end his mental faculties were vigorous, and he continued to take the deepest interest in everything connected with the progress of medicine and surgery, as evidenced by his chairmanship of the London (South) Police Surgeons' Association, and of the Local Panel Committee and other organizations.

The outstanding trait in Dr. Esler's character was one hard to define; it is perhaps best conveyed in the term "level-headedness." He had the faculty of looking not only at both sides of any professional question but all round it, hence his judgement rarely erred, and conviction once attained he invariably carried it into action with the most unswerving rectitude. This wide outlook on life saved him from all petty professional jealousies, and he was absolutely free from the weakness of "touchiness," hence he was a most loyal and trusted colleague, an unchanging friend, honourable and upright in all the relationships of life. He never took any part in politics, but he was by conviction a firm believer in the true policy of Empire, and a staunch supporter of the union between Great Britain and the land of his birth, revealing in this side of his character the typical features of the Ulster Scot, hence it was no surprise to his numerous old Belfast friends to see him travel from London to sign the Covenant. In 1883 he married the talented authoress, Miss E. Rentoul, who survives him. She is the daughter of the Rev. Alexander Rentoul, D.D., M.D., and sister of Judge Rentoul, whose death was announced a few days ago.

Dr. Esler leaves behind him three sons in the medical profession—Alfred Esler (by a former marriage) is now practising in Australia; Captain A. Rentoul Esler, R.A.M.C.; and ex-Captain Maberley S. Esler, who succeeds his father in his practice, and as surgeon to the London Metropolitan Police Force.

We regret to record the death of Dr. LOVELL DRAGE of Hatfield on August 14th. He was the son of Dr. Charles Drage of Hatfield, a very well known practitioner in his day. Lovell Drage was born at Hatfield in 1859. His school was Winchester; from there he went up to Christchurch, Oxford, and graduated M.A. with honours in the Natural Science School in 1881. He received his medical education at St. Bartholomew's Hospital, where he was house-surgeon to Sir Thomas Smith and midwifery assistant to Dr. Matthews Duncan. He took the diploma of M.R.C.S. in 1884, graduated M.B., B.Ch. Oxford in 1887, and M.D. in 1893. He joined his father in practice at Hatfield, and afterwards succeeded him, becoming medical officer of health for the Hatfield rural district. He was appointed coroner for St. Albans in 1897. Dr. Lovell Drage was a man of great energy and independence of mind. He attacked the problem of the treatment of cancer by drugs, and satisfied himself that he obtained beneficial results from the use of cinnamic acid and its salts. He frequently contributed papers on this subject to our columns, and was the author of the article on the chemical treatment of cancer in the *Practical Encyclopaedia of Medicine and Surgery*. Dr. Drage had many friends by whom his premature death, which was due to blood poisoning, will be deeply regretted. He leaves a widow, a son, and a daughter.

The Services.

TERRITORIAL DECORATION.

THE Territorial Decoration has been conferred upon the following officers:

R.A.M.C.(T.F.).—Colonel A. E. L. Wear, C.M.G.; Lieut.-Colonels E. B. Dowsett, D.S.O., A. C. Gullan, J. A. Masters, J. H. Stephen, D.S.O., C. R. Browne, A. R. Tweedie; Major (Brevet Lieut.-Colonel) R. Griffith; Major (acting Lieut.-Colonel) H. B. Roderick; Major (temporary Lieut.-Colonel) E. W. St. Vincent-Ryan; Majors S. W. Plummer, J. Bruce, C. R. White, A. Ehrmann, W. T. Blackledge, F. W. Johnson, F. Gracie, O.B.E., E. J. T. Cory, A. Price, A. Bird, F. W. Kende (attached to R.F.A.); Captain (acting Major) W. H. Brailley; Captain W. J. Rice.

Territorial Force Reserve.—Surgeon-Majors A. W. Cuff (attached to 3rd West Riding Brigade, R.F.A.), A. R. Stoddart (attached to 5th Battalion West Yorkshire Regiment); Majors R. Starkey-Smith and J. E. Molson, attached to R.A.M.C.

Universities and Colleges.

UNIVERSITY OF LONDON.

A MEETING of the Senate was held on July 23rd.

Recognized Teachers.—The following were recognized as teachers of the University in the subjects indicated:—King's College: Dr. C. D. Da Fano (Physiology-Histology). St. Thomas's Hospital Medical School: Dr. Henry P. Newsome (Hygiene). Westminster Hospital Medical School: Dr. Hildred Cartliff (Clinical Medicine). Mr. Rupert Farrant, M.C. (Clinical Surgery). Guy's Hospital Medical School: Mr. Harold W. Barber (Dermatology). Middlesex Hospital Medical School: Dr. Ernest L. Kennaway (Pathological Chemistry). Dr. Charles Porter (Hygiene). Dr. Sidney Russ (Physics). St. Mary's Hospital Medical School: Dr. A. William Bourne (Midwifery). Mr. John A. H. Brincker (Hygiene). Mr. John H. Chaldecott (Anaesthetics). London School of Tropical Medicine: Mr. John Gordon Thomson (Protozoology). Lister Institute of Preventive Medicine: Mr. Arthur W. Bacot (Medical Entomology). Hospital for Sick Children: Mr. H. Tyrrell Gray (Surgery). National Hospital for the Paralysed and Epileptic: Mr. Percy Sargent.

Professors.—The title of Professor of the University in the subjects indicated has been conferred upon the following teachers: Mr. Leonard Stanley Dudgeon, St. Thomas's Hospital Medical School (Pathology). Dr. Hubert Maitland Turnbull, London Hospital Medical College (Morbid Anatomy). Dr. C. H. Browning, Middlesex Hospital Medical School (Bacteriology). Dr. A. E. Boycott (Graham Professor), University College Hospital Medical School (Pathology). Dr. R. T. Leiper, London School of Tropical Medicine (Helminthology). The title of Assistant Professor of Physiology at King's College has been conferred upon Dr. Otto Rosenheim.

Examiners at the first and second examinations for medical degrees in the session 1919-20.—Anatomy: Professor J. E. S. Frazer, St. Mary's Hospital Medical School (Chairman), and Professor W. Wright, London Hospital Medical College, together with the external examiner, Mr. A. Macphail, and one vacancy. Pharmacology: Dr. E. Mellanby, King's College for Women, and Mr. P. P. Laidlaw, Guy's Hospital Medical School, together with the external examiners, Professor H. J. Campbell and Dr. F. Ransom. Physiology: Dr. J. Mellanby, St. Thomas's Hospital Medical School (Chairman), and Professor F. A. Bainbridge, St. Bartholomew's Hospital Medical School, together with the external examiners, Professor E. H. Starling and Professor J. S. Macdonald.

D.Sc.—The D.Sc. degree in physiology has been conferred upon Ernest W. H. Crickshank (University College) for a thesis entitled: (1) The production and utilization of glycogen in normal and diabetic animals, and (2) The digestion and absorption of protein and fat in normal and depancreatized animals.

The courses set forth will be recognized as advanced lectures which a candidate at the B.Sc. honours examination may name for part of his practical examination.

The M.S. Degree.—Branches for internal and external students have been instituted in (1) ophthalmology, and (2) laryngology, otology, and rhinology.

ST. THOMAS'S HOSPITAL.

The following scholarships have been awarded:

Laurance Research Scholarships 1919-20.—Ph.D. T. V. Moore, St. J. St. J. G. I. Watson, 2nd. A.D. 1919-20, and M. W. F. D. C. 1919-20. **Minor Research Scholarships.**—J. P. Hackett, 1st. 1919-20. **Tate Scholarships.**—J. G. Adams, 1st. 1919-20.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

AT an extraordinary meeting on August 8th, when the President, Sir Robert Philip, was in the chair, it was announced that H.R.H. the Prince of Wales had graciously signified his willingness to accept the Honorary Fellowship of the College. He was accordingly elected Honorary Fellow by acclamation.

AN association for the study and teaching of anthropological sciences has recently been established at Liège.

Medical News.

DR. SAMUEL OSBORN has been elected Master of the Society of Apothecaries.

DR. WILLIAM ALEXANDER, lecturer on clinical surgery in the University of Liverpool, left £59 37l.

IN the year 1918 there were 1,471 students in the University of Lima, of whom 567 belonged to the medical faculty.

COLONEL A. H. TUBBY, C.B., C.M.G., surgeon to Westminster Hospital, has been elected Prime Warden of the Blacksmiths' Company of the City of London.

A MEETING of representatives of organizations in Scandinavian countries to combat tuberculosis has been held at Stockholm to form a general union, to be called Nordisk Forening mod Tuberkulose, to undertake a systematic warfare against the disease. The Iceland Medical Society has been invited to join in the movement.

THE seventh Congress of the Spanish Association for the Advancement of the Sciences will be held at Bilbao in September (7th to 12th). There will be eight sections, one of which is assigned to medical science; the president of this section will be Professor Teófilo Hernando, of the University of Madrid. The French Association for the Advancement of Science and the Universities of Oporto and Coimbra will be represented. Corresponding bodies in Great Britain and Italy have been invited to send delegates.

DURING the war the Automobile Association, with a view to assisting discharged soldiers to obtain employment as motor drivers, invited such men to register at the association's offices particulars of their qualifications, etc. A large number of drivers have been found suitable employment, but many still remain on the books of the bureau. Applications should be addressed to the Drivers Department, A.A. and M.U., Farnham House, Whitcomb Street, W.C.2.

IN the *China Medical Journal* for May, 1919, Drs. Frank W. Schofield and H. C. Cynn of Seoul publish a brief report on the pandemic of influenza in Korea. The disease made its appearance in September, 1918, and is thought to have come from Europe by way of Siberia. The disease spread from north to south along the line of the Southern Manchurian Railway. The first cases seen by the authors in Seoul occurred in the later part of September; before the middle of October the epidemic was at its height. The insanitary conditions of life powerfully aided the spread of the infection. It is impossible as yet to estimate the number of cases or deaths, as accurate information has not been received from the Japanese authorities, but it is believed that between a quarter and a half of the population were affected. Most of the schools were closed owing to the high case rate among pupils and teachers.

FOUR of the leading physicians of Spain have recently shown their zeal for the sanitary betterment of their country in a highly practical manner. They are Dr. Cortezo, former minister and president of the Royal Academy of Medicine and editor of *El Siglo Médico*; Dr. P. Rodríguez, former minister and journalist; Dr. Recasens, one of the leading gynaecologists of Spain and obstetrician to the Queen, and Dr. Juarros, a distinguished specialist in mental disease. They undertook a missionary expedition through Spain, travelling from town to town wherever there was urgent need for hygienic reform, and preaching the gospel of sanitation in public places. Their success in arousing the interest of the people was great, and their example has since been followed by a number of other volunteer health missionaries.

THE New York Association for the Advancement of Medical Education and Medical Science is a new foundation of which Dr. Wendell Phillips, surgeon to the Bellevue Hospital, is president. Before the war Dr. Phillips had planned an institution that should rival the great post-graduate schools of Vienna and Berlin and make New York one of the leading centres of medical teaching in the world. The movement, which was interrupted by the war, is now in active progress. The special aims of the foundation are to improve methods of instruction, to utilize the large clinical material of New York, to bring about a working affiliation of the medical schools, hospitals, and laboratories for educational purposes, and to secure funds to meet the financial requirements of medical education and investigation. It is estimated that £10,000,000 will be required, and an organized effort to raise the money is being made throughout the United States.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

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1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology*, *Westrand*, London; telephone, 2651, Gerrard.
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3. MEDICAL SECRETARY, *Medisecra*, *Westrand*, London; telephone, 2654, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

INCOME TAX.

E. E. F. inquires as to the proper basis of assessment of a practitioner who is carrying on a practice formerly worked by himself and his father under a family arrangement.

*. The point to be settled first is whether or not the practice was carried on in the past (a) as a partnership, or (b) under the proprietorship of the father, with the son acting as his father's assistant. The liability for 1919-20 is determined by the average of the profits of the practice for 1916, 1917, and 1918, and the amount of those profits will apparently be affected by whether or not the son's remuneration was taken as partner or as assistant. The fact that there was no "purchase" is not material; there can be, and in this case appears to have been, a "succession," although no cash may have been paid as consideration, and the fact that the practice "lapsed" for four months would not necessarily be sufficient to negative the presumption of succession, which would have to be considered in the light of all the relevant facts—for example, whether circular letters were issued to clients, what arrangements were made for panel patients during the interval, etc. Assuming that the arrangement up to 1917 was in the nature of a partnership, "E. E. F." is liable for 1919-20 on the average of 1916 (profits of father and son), 1917 (profits of father only as from date of mobilization of son, if he took no civil profits thereafter), 1918 (profits of father).

RECURRENT HERPES.

DR. R. W. ALLEN (London) writes: If "L. H." will refer to page 93 of my book, *Practical Vaccine Treatment*, he will see that I have learnt that recurrent herpes of no matter what part of the body is nearly always a manifestation of chronic pneumococcal infection of the respiratory tract whether this be located in the lower lobes of the lungs or in the nasal and post-nasal spaces. The prevention of the recurrent herpes lies in the extermination of the pneumococcal infection, which is best brought about by means of vaccines. Other microbes such as the *Streptococcus*, *B. influenzae* or *M. catarrhalis* may be associated with the pneumococcus and will also require attention. The best treatment for the herpes itself consists in puncture of the vesicles as soon as they form, and repeated application of absolute alcohol followed by dusting with zinc oxide powder; during the night a dressing of zinc oxide ointment should be closely applied.

LETTERS, NOTES, ETC.

WAR MEDALS AND HOME SERVICE.

"FAIR PLAY" writes: Many doctors are now leaving the army, some of them after nearly five years' service, some after only one year. But (with probably a few exceptions) they are all being treated alike, "resigning their commissions with the rank of Captain." Is this fair? During the early months of the war a great many doctors threw up their practices, and risked everything to answer their country's call. A good many of these (especially the older ones) were denied the privilege of serving overseas, in spite of frequent application to be allowed to do so, and were consigned to the monotony and very strenuous work of the home hospitals.

Many of the older and senior temporary medical officers were amongst the first to be demobilized, and they are leaving the army to find no place left for them in civil life. Surely to these men, who sacrificed everything at the beginning of the war, some honour should be given?

Having obeyed orders to serve at home, they are denied the honour of the 1914-15 ribbon. Would it not seem proper that two things should be done? Doctors who joined as volunteers during the first year of the war should be promoted above the rank of Captain. Also they should be given, what they (and their children) would all most greatly prize—a ribbon to mark their years of service, and to distinguish them from the conscripts.

In the BRITISH MEDICAL JOURNAL of July 26th, p. 126, your correspondent "A. M." calls attention to several of the same points mentioned here, and it would indeed seem right that these injustices to the senior temporary officers of the R.A.M.C. should be laid before the proper authorities. The medical profession has played a prominent part throughout the war. Let justice be done.

STAFFS OF HOSPITAL SHIPS.

PER MARE PER TERRAM writes: In the issue of *The Times* of August 16th there is a list of civilian doctors mentioned for services rendered in the United Kingdom during the war. No one will question the justice of such recognition; but it is simply incredible that no honours or recognition have been awarded to the military medical officers of hospital ships. These men faced the risks and dangers both of submarines and mines, and the number of hospital ships sunk as well as the high mortality among the medical personnel proves that their risk was as great as the man in the trenches. In spite of this their services have been ignored, and one cannot help feeling that the British Medical Association should make it its duty to see that justice is done to a body who have reflected honour and credit to the medical profession.

THE CURE OF MULTIPLE WARTS ON THE FACE.

DR. CHRISTOPHER KEMPSTER (London, W.) writes: Dr. W. Longworth Wainwright draws attention to a very useful and important method of treatment of multiple warts upon the face in the application of the electrolytic needle.

Some cases of multiple warts are very resistant to treatment, and, as Dr. Wainwright truly says, the needling process is almost certain to effect cures. There is one point upon which I do not agree with him. He says: "This can be done with great rapidity and causes no discomfort, and with a current of 20 to 25 milliamperes no complaint is made of anything beyond a slight pricking sensation." I cannot imagine a patient submitting to multiple punctures with an electrolytic needle carrying 20 to 25 milliamperes without complaint; moreover, 2 or 2½ milliamperes is sufficient for the purpose.

As the result of experience of a large number of cases I have come to the conclusion that in those cases which do not respond rapidly to the x rays, or where for some other reason the x rays are not applicable, ionization with zinc salts is to be preferred to the magnesium salts, as being more rapid and certain. In those cases in which needling is necessary I do not follow Dr. Wainwright's method of first puncturing the warts and then applying magnesium sulphate by ionization, but use a zinc needle and ionize direct in the one operation. The needle should be inserted with the milliamperes index at zero. The current should be then gradually turned on, by which means there is no discomfort at all.

This method is excellent for a colony of warts numbering fifty or sixty, but when the colony numbers several hundreds, as is often the case in the beard area, I feel convinced that no treatment equals the exhibition of the x rays, under the influence of which the warts appear absolutely to melt away.

THE following appointments of certifying factory surgeons are vacant: Dunderum (Tipperary), Paisley (Renfrew), Port Glasgow (Renfrew), Wadebridge (Cornwall).

THE appointment of Medical Referee under the Workmen's Compensation Act, 1906, for County Court Circuit No. 28, to be attached more particularly to Aberystwyth, Dolgelly, Llandiloes, Machynlleth, and Newtown county courts, is vacant. Applications to the Private Secretary, Home Office, by September 11th.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 38, 42, 43, 44, 45, and 46 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 39, 40, and 41.

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NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.

THE EDUCATION OF GRADUATES.

BY

SIR ANDREW MACPAIL, Kt.,

B.A., M.D., C.M., M.R.C.S. ENG., L.R.C.P. LOND.,
F.R.S. CANADA.PROFESSOR OF THE HISTORY OF MEDICINE, MCGILL UNIVERSITY,
MONTREAL.

MEDICINE is the only profession which shows any concern for the further education of its graduates. Upon a given day the graduate may profess that he has acquired the mystery, but no one believes him. There is a great gulf fixed between knowing a thing and professing to know it, and a still wider gulf between the knowing and the doing of it. Study of medicine must continue so long as life endures.

Medicine is a profession with an immemorial tradition of service, to be rendered freely to humanity, with a single eye and a pure intention. The votary is set apart, empalmsed, or crucified to the world, as one might affirm with textual truth: He testifies not that he has all the knowledge of the masters, but that he has entered into their spirit, and has the beginning of wisdom.

The entrant upon this career also signifies that he brought with him to the schools a mind, and that something was done to that mind whilst he remained at school; that, in short, his mind was educated up to such a point as the original material would permit; but always remembering the dogma which underlies the fable of the silken purse and the sow's ear.

This process of education is carried on by the senses. Eyes are taught to see, ears to hear. Events are observed, and some effort is made to understand their sequence, connexion, and results. Medicine in the case of each student is thus freed from its old habiliments of witchcraft, magic, and sorcery; it is become scientific, and in his own time the student lives through the whole history of the art.

If every graduate brought such a trained mind to his advanced studies, the problem before the teacher of graduates would be easy. He would continue an education which had begun long years before, and raise it to a higher point. On the other hand, if the mind is not receptive, discriminating, able to assimilate or reject, it will not integrate the new learning into itself; and what should make for strength is become a useless burden. Graduate study may then be worse than useless if it clogs a dulled and uneducated intelligence.

It is quite true that these considerations apply with equal force to the undergraduate. He may have entered into the new world of medicine with a mind unaccustomed to intellectual processes, or brutalized by a long routine which goes by the name of secondary education. It must, however, be placed at the credit of any system of study that, whilst it allows many aspirants to proceed, it destroys the ambition of others, and directs them into more lowly paths. Even a bad system, if not too hardly pressed, is better than none at all.

And working still further back, we are bound to notice preliminary education, which is the first step towards entrance into any profession or any trade; and there we shall discover the source of all our evils, industrial as well as professional. These evils in turn have arisen out of a civilization which has become detached from the soil, and is now in all essentials a slave society in which any little Spartacus may seize control.

It is a condition of life that the experience of parents shall be transmitted to their young. The she-wolf teaches wolfing to her pups, and the bird flying to her fledglings. Domestic animals alone are allowed to grow up in ignorance. Without traditions, without arts or crafts, the yoke of servitude is the more securely fastened upon them.

Within the time of the present generation the young of the human species has fallen to the level of the domestic animals. They are taught nothing. They are segregated from older persons from whom they might learn. They are immured in a building. To quiet their minds and quell their spirit they are given a series of tasks which are all one task—namely, to regard certain emblems fixedly. In time these black emblems upon a white page combine themselves into categories which are known as

words; and these in turn are considered to be the same as things.

This task is performed under the eye of a master who has attained a certain mastery over words. He can read them and he can write them. If he can combine them into larger categories called sentences, he is then known as a professor; and if he contrives to convey any sense by this process of writing, he gives up the trade of teaching and takes to literature. It was not long before it was discovered that a grown man was wasting his time in such an occupation. Young women disclosed a special aptitude for the business, and they soon gained complete control over the minds of the young. A teacher is now usually described as "she."

There was a time when the young of the human species, especially the male, was of some value. From the age of three years he could do something. He could control domestic animals of the lesser breeds, since the opposing muscle in his thumb enabled him to hold a small stick. As he increased in stature he was assigned to more definite tasks. By doing them he learnt to do them, and when he had attained to the age of seven years he was more than self-supporting. In those days a child was an asset. He was easier to rear, and he was more valuable, than many other animals. Also he had a value of a much deeper kind, and account was made of his fitness for another world than this.

It was many years before the public mind became insensible to this new system of instruction. At first there was revolt on the part of all the young, and this revolt was shared by many of their parents. The most stringent laws were passed, and truancy, which was at first a struggle for freedom, came at length to be regarded as a crime, when the public conscience had been dulled by a generation of tyranny.

This system of immuring children in schools where they pass their time in learning to decipher symbols printed upon paper, is of very recent origin. Life had become intolerable as periods of peace increased in length; and hunting, no longer a necessity, ceased to be a sport. This activity of mind found an outlet in debauchery. The mind must be dulled. It was remembered that clerics, who were condemned to a sedentary life, dulled their minds to a point of endurance by the practice of reading books. Henceforth for all idle persons who were too feeble of physique or too sensitive in conscience to indulge in debauchery reading became the sovereign remedy against weariness of mind.

The ability to read soon became a sign to the world of ability to live in idleness. A class distinction was created; and all class distinctions are valid only in so far as they indicate the nicety of balance between idleness and a continued interest in life. Within our own time, when all class distinctions began to grow irksome, few could live without work: but all could learn to read and write. This was a proclamation of independence. It was observed that persons who were not in possession of these accomplishments must work with their hands. This discovery subdued the spirit. The desire to escape from manual labour then proved sufficiently strong to persuade the young to endure the misery of enslavement in a school.

Interested persons who lived by the system were found eager to ameliorate its hardships by persuading the victims that they were undergoing a process of "education." Under so honourable a cloak this mercenary system has worked havoc with the national life. It has seized upon young persons. It has retained them in its grasp for ten precious years. It has left them uneducated. It has prevented them from receiving any education whatever.

When the public conscience began to stir, the soothsayers declared that the system was not sufficiently rigid, that the years must be lengthened, and more money spent. We are now at such a climax, and the new "education" is the result. It is the outcome of minds dulled by living immured for fifty years within school walls.

Soldiers look upon civilians as creators of recruits; schoolmasters look upon the populace as propagators of pupils. Both should remember that there is a point beyond which they will not succeed. Men, and women too, have it in their power to decline. In the industrial community the production of children does not now offer many attractions. This is not the moment—in the waste of war—to make the burden intolerable. A labouring man

will hesitate long, especially in these days when his judgment is unclouded and his natural desire checked by strict sobriety, before he takes the chance of burdening his family with a girl who must be supported in the idleness of a school until her form is mature, or with a boy who is not permitted to earn for himself the necessary penny for shaving his beard. Nature is much more nicely balanced than those persons suspect who deal habitually with the children of other men.

These professors of education with their own eyes in their papers have failed to observe that the race has grown tired of reading and has reverted to the older practice of looking at pictures. Even the newspapers designed for a wide circulation consist almost entirely of "cuts" and diagrams. Whilst reading was a novel accomplishment it captivated the race; but now like an outworn idol it is cast aside with ignominy.

This scepticism has infected even the chief apostles of "education." They too have lost faith in the efficacy of books, and they are now amassing for their support the teaching of trades. This controversy is not new. It was old when Aristophanes directed his attention to it. It all turns on what we really mean by education. A blind insistence upon books and schools will destroy the evils it would create, since it will yield a generation without children to be destroyed by the system which it provides for their education. There is no evil without its own cure.

We have been astray in our education. We have been equally wrong in our science. We have mistaken facts for truth, and placed all truths in the same category, estimating the number of persons and things in a country as equal in importance to the truth, "that the kingdom is within you"—that, in short, physical facts are identical with moral truths, that research in a laboratory is the same as research in the mind. We are prone to think ourselves much wiser than our fathers, but the veracity of angles was known to Euclid, and the veracity of life to the Hebrew prophets.

Even in matters of pure fact the ancients were not so ignorant as we are fain to suppose. Most of our scientific discoveries are nothing more than explanations of world-old experience. The cave mother observed that her offspring must eat animal fats and raw vegetables if they were to have sound teeth and hardy bones. We have allowed teeth and bones to decay whilst we were inventing the term "vitamines." There are persons yet living who remember the days when the child of humble parents was at first suckled, and later allowed to gnaw a piece of carrot or turnip; to suck an apple, orange, or lemon; or even chew upon a piece of muslin containing a morsel of raw meat, and fastened to the waist by a string to prevent its being swallowed. The same child was permitted to come to table and complete its dietary by snatching a wholesome piece from its mother's plate; whilst the child of the rich was segregated in a nursery and starved upon a scientific food.

There is now some hope that we shall revert to the earlier practice, since the Royal Society has allotted a Royal Medal for the discovery—to employ the modern jargon—"that when, instead of the eighteen different amino-acids composing the protein, five only are administered, death rapidly ensues if those five be selected from the simpler aliphatic components—for example, leucine, valine, alanine, glycine, and glutamic acid; but that, on the other hand, nutrition and life are satisfactorily maintained, at least for a considerable period, if the five amino-acids given be chosen from the more complex types, such as tyrosine, tryptophane, histidine, lysine, and cystine, which experiment has shown to lie outside the range of the synthetic power of the animal body."

Astonished by the complexity of our discoveries, we are blind to the larger issues of life; but it is the fate of every art and of every school to think that it has attained to finality. Pneumonia was definitely mastered in 1805. In 1860 Erichsen asserted that surgery had attained its fulfilment; and no surgeons were ever so vociferous as those who declared in 1914 that they had arrived at a perfection of technique. When put to the test of war they discovered that they had merely attained to a mastery of wounds which they created with their own tools under conditions selected by themselves. It was more than two years before they had devised a surgery suitable for war.

It was thought that all the fields of medicine had been at least surveyed; and yet trench fever came upon us like a new calamity. As long ago as 1597 an epidemic fell upon the world. Calenus described it as *ob occulti coeli influenza*. We call it influenza, and are pleased with our perspicacity. We have isolated from children's diseases, and these diseases fall upon armies of adults with the force of a new plague.

If, now, I have left the subject no clearer than I found it, I have, I trust, shown how complicated it is—that all education is one, that a pernicious beginning works its evil through the secondary school, the university, the professional school, and the graduate course. But things are what they are, and those who have to do with advanced medical education must deal with conditions as they find them.

English medicine has always proceeded upon the assumption that new discoveries can only be made by following out old paths; and rarely has it entered upon those paths which lead nowhere but into the desert of barren speculation. Medicine is an art founded upon observation, with experience alone for its guide—observation, that is, with the human eye of the complete patient, and not of parts of him in the form of a slide under a microscope.

When medicine forsakes the patient it becomes futile. And this patient must be regarded as he is, in the circumstances in which he chooses, or is bound, to display himself. When medicine leaves the bedside it is lost. The *post-mortem* table also is a kind of bed, a *κλίνη*, and its teaching clinical. To the bedside the Father brought the medicine, and there he left it. With that cold Greek precision and serene impartiality, which the English have inherited, he recorded what he saw, and his case reports remained unmatched for lucidity until the time of our own Sydenham.

Medicine is a way of life, and the prospective practitioner is the best judge of how far and how fast he can go. He knows his own capacity and feels the bounds of his ambition. He has a safe instinct either for the village practice or the consultant's room. Breeding, training, position, all impose their limits. The doctrine that any man can do any thing is quite new and quite false. The first business of the teacher is to provide practitioners, not to create scientists, and the two are by no means identical. The truth is that the function of a medical school is not in itself intellectual nor scientific. Its final work is to create a reasonable nature and an honest mind.

No student can learn even a little of everything. A student who has not developed an instinct for following what is true and turning aside from what is false has learned nothing. Even scientific medicine has always been prone to lose itself by following after false gods. It has always found the true path by returning to the human body. Of all new schools anatomy has ever been the root, not the anatomy of the oyster or the frog, but the structure of the human frame. That is the one safe preliminary scientific study. Anatomy, like geometry, can be learned by sheer force of industry. Its truth is apparent in itself, and does not depend upon authority. Of students who in the beginning are systematically bewildered by biological subtleties few ever afterwards find their way.

English medicine has always proceeded upon the belief that every student could learn something, and it provided for every student as much as he could learn. It also recognized that for the average practice a definite degree of knowledge sufficed if only the mind were open and the spirit honest. A man must judge for himself how much he is able and willing to learn. Accordingly, certain standards were set, or, rather, one standard was set with successive marks upon it, against which a student was free to measure himself.

In the United Kingdom there were in my time, and I understand it is so yet, twenty-four of these marks, and a candidate might choose any one as his measure of growth. Having attained to one he might aspire to another until his full stature was attained. Up to a certain point the teaching was identical. It became more special as the student advanced from licentiate to member, from member to fellow, or doctor. In the clinics at least all candidates met together, and each took as much as he could master. The teacher soon distinguished between the receptacles, and the overflow from one was received by the others. All teaching then was graduate teaching.

The history of medicine did not end with the Renaissance. It has ever since been, and is now, in progress. It is governed by causes which are immutable. In medicine, as in all other arts, life and death go hand in hand. When it appears to flourish most it has already begun the slow gradation of decay. In the backward abyss of time one discerns certain glowing points: the approach and descent are lost in the void of history.

Up to the Renaissance the whole story can be told in one sentence. Hippocrates stood midway between that event and the earliest Egyptian, with a period of 1700 years behind and before him: from the twin roots of anatomy and physiology medicine arose in Alexandria; it divided into three branches—dogmatic, empiric, methodic, to which Galen, Sextus, and Soranus have affixed their respective names: it took refuge amongst the Saracens, and was next discovered in the school of Salerno, where it remained in Graeco-Arabic guise until it was united again with its great Greek original. In that long period medicine had wandered from Cos to Alexandria, to Rome, to Gondisapor, to Salerno, and only met with science, as now we know it, in the person of our own Harvey; and the two grew into one in the line of Bichat and Laënnec, as Dr. Whittington has so acutely observed.

The subsequent story is modern; but, ancient or modern, medicine has always been a part of life, no better, no worse, and not different. When deep darkness settled down upon humanity medicine was equally engulfed. We ourselves have lived through one of these periods of efflorescence, and did not know it. The signs now are that this time of flowering is at an end. None can say how long the seeds will lie dormant or what the resurgence will be.

When the medical history of our own time comes to be written the point most clearly observed will be the laboratory. Uniformity of teaching will be disclosed as the guiding principle of our education, based upon the predominance of the machine as the motive of industrial life.

Eight years ago a voluntary appraisal of medical institutions—as if they were iron mills—was undertaken by an American device, known as the Carnegie Foundation for the Advancement of Teaching. What turned out in effect to be a "black list" was prepared. This list in the hands of a powerful rival was a deadly weapon, and it was used with effect; but with the elimination of the feebler schools much sincere teaching also perished.

No one dissented from the accuracy of the verdict upon the principles formulated and the evidence adduced; but the principles themselves were challenged, and the evidence was impugned on the ground of inadequacy. The report dealt with externals, material equipment, and uniformity was glorified.

In these eight years, and especially in the last four, we have learned much, and there is at the moment a delicious irony in reading Mr. Flexner's report. We can now accept with some complacency his charge against the English consultant, that "scientific distinction is a becoming decoration; it is not the breath of his nostrils." We too, like Mr. Flexner, have been amazed at "the speed with which a novel standpoint travels over Germany"; but we are now less enamoured of travelling standpoints and more content with our own which remain fixed. "This quick apprehension and incorporation of 'demonstrated truth' is responsible," Mr. Flexner has "repeatedly pointed out," for "the uniformity of the scientific institutes in respect to type, organization, and ideal."

We may well be forgiven if we do not now share his ecstasy in contemplating a perfect uniformity. Diversity is the law at least of English life, and at its peril the whole earth becomes of one language and one speech. From this dead level men begin to erect anew a tower of bricks and slime, whose top is intended to reach unto heaven, so that nothing can be restrained which they imagined to do. His giantship of uniformity is going somewhat crestfallen in these days, walking with less unconscionable strides. English medicine and English life may now take leave to be less apologetic about its existence in the world.

There were physicians in the world before Hippocrates, and there were teachers of medicine in England before the scientist immured himself in his laboratory: no one but an ignorant and Chauvinistic fool will deery and deride what is done outside of his own borders, or fail to give credit where credit is due. There is a deeper folly in following false gods just because they are alien. Moloch and

Juggernaut we have seen face to face, and we have not knelt down or taken to flight. It is not by mere chance that Paracelsus, the master quack of history, had for proper name Von Hohenheim; but it was a strange accident by which his first name happened to be "Bombast."

English medicine in the last thirty years has lost its pre-eminence merely because it stood still, declining to follow in the false path which was marked out by an alien school. This path with its signs, "efficiency," "progress," "science," has demonstrated itself to have been false, and English medicine may now resume its march by way of observation and contact with the reality of disease.

The genius of English medicine has always lain in its power to observe cases. Disease is a thing in itself, and can be recognized as easily as flowers of the field or the faces of friends when these are seen often enough. London is the place of all the world where cases may be seen. No other can compete. Laboratories may exist in any corner, and research can be carried on in the dark. Provincial towns have their own sphere, as the German towns had. They may well continue to be the resort of specialists, but London will stand unrivalled as the centre where cases can be seen. From cases all practitioners can learn something, and the few can learn much.

But medicine is not all of medicine. Craft and art have their place: and of graduate medicine hand work leading to technical skill is the principal part. To observe is not everything; to do is its fellow and consequence. The graduate is not now content with looking over the shoulder of another: he must work with his own hands. Of all men who profess an art or craft the recent graduate is the most ignorant, however learned in science he may be—more untrained than a nurse, more incompetent than a medical orderly. In this chasm lies the main use and success of the modern graduate school.

Men are no longer content to "walk." They demand a place where they can stand still, or sit down, to work with their own hands. This was the valuable part of the German discovery. The Vienna clinic in laryngology owed its fame to that old woman, Frau Gaille, who upon her own person taught the graduate the use of his tools. The London teacher may teach with the tongue of an angel, and yet be ineffectual unless he provide means for acquiring a handicraft as the old practitioner provided for his apprentice.

English medicine lost its pre-eminence in medicine merely because it declined to follow the fashion of the day. That fashion has passed with the nation from which it sprang, and the laboratory is assuming its former place as the adjunct and not the master of the ward. English medicine will then come into its own, and the clinical teacher will once more be the thing. There are men yet living who remember the great days of Wilks (1911), Paget (1899), Jenner (1898), Bowman (1892), Gull (1890), Fagge (1883), Watson (1882), Murchison (1879), Hilton (1878); and the tradition is still alive of Brodie (1862), Addison (1860), and of Bright (1858). So modern seem Hutchinson, Pavy, Matthews Duncan, and Hughlings Jackson, that, though they be long dead, they yet speak to us.

The succession in English medicine has never failed, and will not fail even if at the moment it appears to be in abeyance. The history of physiology may be cited as proof. It is the simplest and most obvious. The first to give formal lectures on histology and physiology in England was William Sharpey at University College in 1836, and he continued to lecture until 1874. He begat Burdon-Sanderson, who succeeded him and then went to Oxford; Michael Foster who founded the Cambridge school; Gotch who succeeded Sanderson at Oxford; Schafer who succeeded Sanderson at University College and is now in Edinburgh. These men in turn begat the present school of English physiologists.

Sharpey taught physiology by exposition and discussion, by inciting men to observe the natural phenomena rather than by experiment, although he did not neglect it. To him physiology was one of the humanities. The modes in which life was manifested and maintained were, he taught, matters that should interest every intelligent man, and were of particular concern to those who aspired to be physicians. By him the best minds were directed to study disease as a derangement of function; and, directly or indirectly, all the English physicians in the mid-nineteenth century were influenced by his teaching.

At this time the biological sciences were concerned almost exclusively with observation. The names of Owen, Hooker, Lyell, and Darwin prove it. The physicians belonged to the time, and they too were observers. In teaching they used the method of exclusion. Their diagnosis in the ultimate resort rested on *post-mortem* observation, and when the case was fatal they were nearly always right, or right in part. As William Jenner once said, "I usually find what I expect, to find, but nearly always more than I expect."

In our own time this science of observation has fallen into decay, and physiology itself has been affected, due, as the Medical Research Committee as late as September 30th, 1918, reports, to a defect in the system of education, which has allowed the physiologist to remain too much in academic retreat and the clinician too far from the laboratory and its methods.

Scientific research in itself will not make a medical school, graduate or undergraduate; but a medical school without research is like a ship without a compass. Yet even with this useful instrument the course is never made in the direction to which the needle points. The course is shaped, and the compass keeps it true. A school without guidance of the scientific spirit towards the end that cannot yet be seen will quickly miss the things that should, and can, be seen. The lonely worker in the laboratory, who deals with truth in the abstract, is monitor of those who work publicly in the wards. He is looked upon with respect and fear. He is to the school what the eye of God is to the world.

Those who by taking thought would institute a formal system of graduate instruction in London would do well to remind themselves that such attempts in the past either ended in failure or had at most a partial success. The experience of the London Medical College and Polyclinic, of the London School of Clinical Medicine, of the North-West London Post-Graduate College, and of the London Post-Graduate Association will be remembered as proofs.

But if these experiments do not encourage, they need not deter. They had their uses. Down to the year 1884 the fortnightly meetings of the Pathological Society in the old hall in Berners Street were crowded with the keenest men in London, and drew an audience from the provinces; but when bacteriology, the infinitely little, and experimental medicine became dominant they faded away. Before the year 1852 there was a society which demonstrated What to Observe at the Bedside; but it dissolved when Argyll Robertson observed without its aid the somewhat obvious phenomenon which bears his name. Nothing is permanent.

Medicine being a part of life has been for the past four years a part of war, and it is as such that it is now known to several millions of men. Medicine has come out of the college and the consulting-room into the field, not with trailing robe but in soldier's garb, as a hardy, humble, and faithful servant. To these millions of men medicine is now identified with the medical corporal and the stretcher-bearer, from whom they never failed to receive quick and efficient aid.

These millions will in future look to medicine for service of the humbler kind, which will in turn remind medicine of the humble origin from which it is sprung. This should be a warning to those who would make of medical study an over elaborate procedure, a too scientific and dignified pursuit. It may even come about that perhaps after all Harley Street will not be considered the only delectable abode in the world, and that the dressing station of the field will take its place in civil life, where for a humble sixpence can be obtained relief which is now laboriously sought at an expense of two guineas and much time.

Medicine in London is at a standstill because men are waiting for the waters of the University to be troubled. They have been waiting for forty years, waiting for the machine, and neglecting the man. It is not without meaning that London has never been a medical school, but a congeries of schools, competitors for students, without any common meeting ground, or any common standard of teaching or attainment, except in so far as the Royal College of Physicians and the Royal College of Surgeons, which give diplomas, determine a standard by their requirements for examination. The physicians are not materially different, although the College of Physicians is governed by the whole body of Fellows meeting together; whereas the College of Surgeons is governed by a small council

elected by the Fellows of the College. Even when London was at its best there was no central body with authority and resource adequate to warrant the task of attempting to co-ordinate teaching and research. The University of London has long been a national or imperial university without a teaching staff; and although the medical schools are called schools of the university, they are yet independent bodies, and not one-fifth of the students are undergraduates of the university.

Some organization, of course, is necessary for graduate as well as for undergraduate teaching. The two are one. The Royal Commission on University Education in London in 1913 recommended as good a means as any—namely, that three hospitals with medical schools attached should be established as constituent colleges in medicine of the University of London as reorganized; that in each of these medical colleges there should be professorial chairs in the three main divisions of medicine, surgery, and gynaecology, with associate professors.

The kind of organization known as the "hospital unit" appeared to the Commission to be well fitted for attaining this end. In the words of their report, it consists of a professor with the control of wards; an out-patient department; assistants nominated by the professor with a view to completing his own knowledge and affording him the special assistance he requires to carry on research in the direction in which he is interested; and finally, laboratory accommodation in close proximity to the wards, not only for the service of the wards and the examinations and procedures connected with the diagnosis and treatment of the cases, but also for the purpose of research.

Nothing could be more simple or more complete. It is simply a question, in the words of the report, of appointing a university professor and arranging that his department shall be so organized that he will be able to do his work. A professor of literature or history must have his library; a professor of chemistry must have his laboratory and assistants. A professor of medicine requires the organization of the hospital unit, if he is to carry out his threefold duty of curing the sick, studying the problems of disease, and not only training his students in the technique of their art, but giving them university instruction in the science of their profession.

At a later date, after medical colleges of sufficient size and number to provide for all the university medical students in London had been established, there would, the Commission thought, be no objection to organizing a hospital of smaller size as a post-graduate school for the reception, partly of graduates from abroad, and partly of students from the other university hospitals who desired to pursue their studies.

This last is a disputable doctrine; for, let it be reiterated, graduate and undergraduate teaching are one. It has indeed already been disputed in the Memorandum on Medical Education in England, issued in the autumn of 1918 by the Board of Education. This Memorandum by Sir George Newman, the chief medical officer of the Board, tells impartially the good and the bad of the existing system, but for the present purpose it will be sufficient to notice that in it graduate instruction is reckoned as part of a complete medical curriculum. Some arrangement is demanded by which "all students shall receive special post-graduate training of one form or another before embarking on general practice, preferably in resident clinical appointments in general or special hospitals, Poor Law infirmaries, and dispensaries." This is the English ideal. With it is linked the injunction that some arrangement must be made by which "all practitioners shall find facilities available for periodically bringing their knowledge and practice up to date." Again we are told that post-graduate instruction must form an integral part of the curriculum of the ordinary medical school, with extension to special subjects in special schools. Finally we have a picture of an imperial graduate teaching scheme in England for graduates from the Dominions and foreign countries to serve as a teaching centre, to advise appropriate courses of study, and to facilitate their provision.

No institution ever reforms itself from within. Men are too loyal to each other, too closely bound by the bonds of interest and affection. If such a problem presented itself to the Army, it would be solved "from above" in four days. Sir John Goodwin. Sir Charles Burchaell, or Major-General Foster, according to the area involved,

would detail an officer for the task. He would assign to each hospital the course for which it was most suitable, and he would see that it was carried on with joy. In this there is a hint for the Minister of Education, and for the London medical schools as well. What they will not do for themselves another may be found to do for them.

But lest something should be left unsaid, let it be affirmed that even in the idea "university" there is nothing sacrosanct. A university will not save unless it has the spirit and a willing mind. The good it does is done mainly by the prevention of evil. In its own turn it may develop the sectarianism of the school, make of three schools one, and in the professor lose the teacher.

Up to thirty years ago London was the medical centre to which all the world had resort. It lost that pre-eminence when the passion for teaching was destroyed by the appeal to mechanical experiment and the desire for uniformity. For more than thirty years earnest men have tortured themselves in the vain discovery of an alien method for the English mind. But the English mind would have none of it. Attend to the education of students, and the education of graduates will take care of itself—that was the final dogma of the Royal Commission on University Education.

London lost its pre-eminence in medicine because the breed of teachers died out, and the breed died out because it was not diversified and enriched by an allied strain. A medical school and hospital became a closed corporation, and men were promoted to teach merely because they were the oldest survivors of a system. There are in the world at any given moment very few teachers; for a teacher is an artist who transmutes, or mints, and sets in circulation, the ore which the scientist discovers, although in the rarest instances he himself may be artist and scientist too.

Teaching is the most precious of all gifts, and medicine without that aid perishes in all its branches. There is nothing more pitiable than the performance of a teacher who lacks the spirit. The performance is impious; the man is a charlatan; and the school where it is permitted is a mercenary school.

Upon those in London who are waiting, and upon those who are planning, it may be urged again that the Kingdom of Medicine also is within you. A school grows directly out of the mind of a man. Many years ago—nearly a hundred—there was a small school in a mean building in an obscure street of a small town. The root was there, transplanted from overseas like the Vine of Sibraim. At times it was gnawed to the earth, but it always grew again.

In the fullness of time there came a man. A man always does come in the fullness of time. He nourished and tended. By the winsomeness of his nature he won colleagues and students. A great school—great even amongst the schools of the world—was developed, and it remained great so long as it was resolved to lead and not to follow. Now, alas! it is without a Principal, and even the chairs of anatomy and physiology are unfilled. This man was Sir William Osler, in whose honour I am privileged to make this piece of words. From McGill he went to Philadelphia; to Baltimore; to Oxford. Wherever he went he left behind the perfect work of his hands, his mind, his heart.

Within the past four years something has happened. Whatever it was it did not happen by chance. It was due to the inexorable progress of events towards their appointed end. God does not pay every week, but at least He pays in full measure.

We have not yet begun to realize that the whole fabric of life is shaken and must come down to make way for the things that cannot for the present at least be shaken. We are like other blind Samsons, supporting for a little time upon our poor shoulders a fabric that is doomed, and groping about for materials of repair.

Such catastrophes are not new. Humanity will not dwell in the mountains where it belongs. It is always making excursions into the easy plains, and will not return until it is destroyed, leaving only a remnant to escape out of the overthrow.

These are no times for the making of formulas even in medicine. The best we can do is trust to the genius of the race. It will carry us through, as it has borne us down the tide of history these thousand years. It may well be that the day of the scientist even in

medicine is over, seeing the calamity that science has brought upon us; and that men will forsake its pursuit, to frequent the shrine and consort with the saint; for magic, religion, and medicine have arisen out of the same protoplasm, as Sir William Osler himself has declared.

This essay was contributed to the volumes presented to Sir William Osler, Regius Professor of Medicine at Oxford, on July 11th, the eve of his seventieth birthday. The presentation was made by Sir Clifford Allbutt, Regius Professor of Physic at Cambridge and President of the British Medical Association, in the name of a large body of subscribers on both sides of the Atlantic.

RAPIDLY FATAL SPINAL CARIES.

BY

J. RUPERT COLLINS, M.A., M.D. DUBL.,
M.R.C.P. LOND.,

PHYSICIAN, CHELTENHAM GENERAL HOSPITAL; CONSULTING
PHYSICIAN, CHELTENHAM CHILDREN'S HOSPITAL.

I MET with the cases of rapidly fatal spinal caries here described during the three years in which I was officer in charge, medical division of 30th General Hospital, B.E.F. The condition is rare, and I have been unable to find a record of similar cases in the literature to which I have access.

In each case the anamnesis was taken with the greatest care, and there was no recollection of anything to point to old caries, or to warrant an opinion as to when the existing illness began.

CASE I.

Pte. J. W. M., aged 26, left Felixstowe, where he had been training for nine weeks, for France on April 23rd, 1917. He arrived in Calais three days later. On April 28th he felt some pains in his back, but carried on until April 30th, when he reported sick to his medical officer, and was given light duty and medicine. On the following day he again reported sick, as his legs had become weak. He was admitted to hospital on May 1st, 1917. The orderly officer found that he was unable to stand owing to paresis, but could feel pin-pricks in both legs. When I saw him at 6 p.m. there was complete flaccid paralysis of both legs. Knee and ankle jerks were absent, cremasteric and abdominal reflexes feeble, and the plantar reflexes flexor. There was loss of sensation to cotton-wool and pin-prick as high as the xiphisternum. There was absence of sensation to tuning-fork over both tibiae. The motor and sensory reflexes of both arms were normal. The pupils were equal, and reacted to light. By lumbar puncture a clear straw-coloured cerebro-spinal fluid was obtained which, when centrifugalized, yielded a deposit of erythrocytes and leucocytes in normal proportions.

On May 2nd the anaesthesia had extended up to within 2 in. of the umbilicus—that is, up to the area of the fifth thoracic nerve. The temperature ranged about 105° F. during the five days of his illness. Lumbar puncture was performed on four occasions, and each time the cerebro-spinal fluid was straw-coloured from blood haemolysis. In the later specimens polymorphonuclear leucocytes and a few micrococci were found.

The patient became delirious, unconscious, and died on May 5th.

Post-mortem Examination (by Major Anthonisz, R.A.M.C., Pathologist to the Hospital, Adviser in Pathology).

The body is of a powerful well-developed man showing no emaciation. The brain was examined and no evidence of disease was found.

On opening up the spinal canal a considerable amount of thick yellowish pus was found situated extradurally, extending up as far as the fourth dorsal and down as far as the tenth dorsal vertebra. On removal of the cord, blood-stained disintegrating material was found lying upon the posterior common ligament in the region of the ninth dorsal vertebra, and was proved to be connected with caries of this vertebra, the upper and lower parts of the bone being most affected. When examined from within the thorax the sides of the vertebra were also found to be eroded and carious, the right side being more affected than the left. The cord itself showed no evidence of disease macroscopically, and on opening the theca no pus was seen.

On opening the thorax both lungs were bound down by their bases to the diaphragm by old fibrous adhesions. The left lung was also adherent to the pericardium near its base, and to the chest wall over its apex and outer border. The latter adhesions were easily broken down and were apparently of recent origin. There was no effusion into the pleural cavity. Miliary tubercles were present in the upper and lower lobes of both lungs. These tubercles were grey in colour, and some of them much larger than a pin's head. They were situated under the pleura and scattered through the substance of the lung. The lungs were congested in parts, but there was no consolidation, cavitation, caseation, or other evidence of old tubercle.

No evidence of tubercle was found in the abdomen. The spleen was large but otherwise healthy. In smears and cultures from the pus Gram-positive staphylococci were seen.

CASE II.

P. A., air mechanic R.A.F., aged 28, was admitted to hospital on April 19th, 1918, complaining of pain in the left side of his chest and in his back. He stated that he had felt quite well up to two days before admission. Some impairment of resonance was found over the base of the left lung, and small crepitations were audible over the lower lobes of both lungs. It was noted that the physical signs in the lungs varied considerably from day to day. On April 25th at 11 a.m. he, for the first time, complained of stiffness in his legs. He had walked into the ward, and nothing had previously occurred to draw attention to his limbs. It was now found that there was great loss of power in both legs, the patient was delirious at times, and the skin over the lower limbs was insensitive to cotton-wool touch and pin-prick.

At 7.30 p.m. he was more sensible. Both lower limbs were now completely paralysed, and there was absence of sensation to cotton-wool and pin-prick up to the level of the ninth thoracic nerve. Tendon reflexes and abdominal reflex were absent. By lumbar puncture clear cerebro-spinal fluid was obtained, which was found to contain no cells when centrifugalized, except an occasional epithelial element. There was now retention of urine, and the bladder had to be emptied twice a day by catheter. The sputum was examined for tubercle bacilli, with negative result. The paralysis spread, and on April 29th the level of anaesthesia had reached the level of the sixth dorsal nerve area, and on May 1st to the area of the fourth dorsal. Lumbar puncture now yielded thick grumous pus, which passed with difficulty through the needle. A definite bulging, due apparently to a collection of pus, had appeared over the left side of the back. On May 3rd he was quite conscious, but the anaesthesia had extended up to the level of the third thoracic nerve, the abdomen was distended from flatus, and there was paralysis of the abdominal muscles. He became weaker and died on May 4th at 11 p.m., in the act of taking a drink.

Post-mortem Examination (by Captain Horsburgh, R.A.M.C., Pathologist to the Hospital).

The body is of a well-developed man. On incising the muscles of the back large quantities of thick pus escaped from the substance of the muscles. The spinal cord was exposed throughout its length, and was found to be in a bath of the same type of pus. When the theca was opened only a little pus was found round the cord itself. The consistence of the cord was soft and flabby, suggesting to the naked eye considerable degeneration. The brain was removed and the meninges carefully examined, but no sign of meningitis was found.

When the thorax was opened considerable adhesions were present on both sides of the chest, between the lungs and the chest wall. The left lung showed a tuberculous cavity about the size of a walnut, situated in the apex of the upper lobe, and a few smaller and more superficial caseous nodules. On the left side, where the lung was in relation to the fourth dorsal vertebra, it was covered with a thick layer of lymph. Underneath the lymph the lung showed no disease. The body of the fourth dorsal vertebra was stripped of its covering, and advanced caries of the body was revealed. Rarefaction and destruction of bone had taken place, and apparently the meningitis had resulted from the caries of the vertebra. In the abdomen a large calcareous tuberculous gland was present in the mesentery, otherwise nothing abnormal was found.

CASE III.

Spr. G. S., aged 38, was admitted to hospital on September 7th, 1918, complaining of pain in his back. He stated that he had suffered with pains in his back for several years, on account of which he had been in the habit of wearing a body belt. He was in the inland water transport, and gave a history of having received a blow on the back six months previously during a collision between two barges, but the injury was not severe enough to make him report sick. When admitted, he walked into the ward and made no complaint of any loss of power in his legs.

On September 10th, when asked to sit up in bed, he complained that his legs were weak, and he was unable to get up without assistance. Both legs were now completely paralysed. The knee jerks and ankle jerks and the abdominal reflexes were absent, the plantar reflexes flexor. There was loss of sensation to cotton-wool and pin-prick and to heat and cold to half way between the umbilicus and ensiform (eighth thoracic nerve area). There was also absence of bone vibration sense in both legs. There was retention of urine. Lumbar puncture yielded a cerebro-spinal fluid clear but tinged a straw colour. When it was centrifugalized no cells were found in the deposit. Rachicentesis was repeated on September 13th, and the same straw-coloured fluid was obtained, in which no cellular elements were found; but, on standing, it became solid from coagulation of the contained protein. The patient was quite clear mentally, and discussed intelligently whether his wife would be able to get out to France to see him before he died. In this he was unfortunately disappointed. On September 14th the zone of anaesthesia had ascended as high as the nipples, and his arms were becoming paretic. He died the following morning at 5 o'clock.

Post-mortem Examination (by Captain Horsburgh, Pathologist to the Hospital).

The body is of a well developed man, exhibiting no sign of injury or of emaciation. The brain was examined, and general

congestion over both hemispheres was noted. The vessels entering the main fissures showed a series of small lymphoid nodules suggestive of tubercle. No tubercles were detected in the interpeduncular space.

When the spinal canal was opened a considerable quantity of purulent material was present along the whole length of the cord. The pus lay outside the dura, and when the theca was opened the cord itself appeared healthy. When the cord was removed it was seen that the seventh, eighth, and ninth dorsal vertebrae were in a state of carious necrosis with rarefaction. There was no spinal curvature.

When the thorax was opened a diffuse miliary tuberculosis was found in the lower lobe of the left lung. Old healed calcareous foci were present in the apices of the upper lobes of both lungs.

Each of these three men appeared robust and gave a good previous health report, with the exception that the second gave a history of pains in his back. The first patient was of quite exceptionally fine physique, and said he had always enjoyed excellent health.

The illness of the first lasted six days, that of the second fifteen days, that of the third nine days. The onset in each case was swift and without warning. The first case, to his surprise, found himself unable to walk to the medical hut, the other two found one day when in hospital that they had become powerless in their legs. The first case had six months' service, the second one year and five months', and the third two years and three months'. Cases of this description might become of considerable medico-legal importance in civil life, as had there been a history of a blow or a strain, it would be difficult to prove to the satisfaction of a jury that the acute disease of the spine was not due to the injury.

THE COMPARATIVE VALUE OF NOVARSENOBILLON BY THE INTRAVENOUS AND INTRAMUSCULAR METHODS;

WITH SOME NOTES ON THE TREATMENT AND PREVENTION OF SYPHILIS.

By L. G. LEONARD, M.R.C.S., L.R.C.P.,

LATE CAPTAIN R.A.M.C.,

MEDICAL OFFICER AND DERMATOLOGIST ATTACHED NEW BRIDGE STREET MILITARY HOSPITAL, MANCHESTER; RELIEF MEDICAL OFFICER, MANCHESTER LOCK HOSPITAL.

The following is a short account of cases of syphilis treated at New Bridge Street Military Hospital (V.D. Section), 2nd Western General Hospital, Manchester, during 1918 with novarsenobillon (novarsenobenzol) given intravenously and intramuscularly, with a comparison between the results and some conclusions which may be drawn therefrom with regard to the treatment and prevention of syphilis.

The course of novarsenobillon given in all cases was the same, pressure of work not allowing any discrimination, the course being the prescribed army course, namely:

Day of Treatment.	N.A.B. Intravenously.	or N.A.B. Intramuscularly.	with Hg Intramuscularly.
1st	0.45 gram	0.45 gram	gr. i
8th	0.45 ..	0.45 ..	gr. i
15th	0.45 ..	0.6 ..	gr. i
22nd	—	—	—
29th	0.6 gram	0.6 gram	gr. i
36th	0.6 ..	0.6 ..	gr. i
43rd	—	—	—
50th	0.6 gram	0.6 gram	gr. i
57th	0.75 ..	0.6 ..	gr. i

N.A.B. = Novarsenobillon.

If the "Wassermann" reaction was still positive, potassium iodide mixture (gr. xv ad 1 oz.) was given for a fortnight, followed by a course of two or three injections, 0.45, 0.6, 0.75 gram, at weekly intervals according to the strength of the reaction. One grain of Hg was given with each injection if well tolerated.

INTRAVENOUS OR INTRAMUSCULAR.

The intravenous injections were given direct from a 5 c.cm. Record syringe in concentrated form—namely, 0.45 gram in 5 c.cm. sterile distilled water; the same amount of water was used for 0.6 and 0.75 gram. The appearance of blood or a single air bubble (pressure of the venous blood forcing the air in the needle back into the syringe) was sufficient indication that the needle was in the vein. A hint to watch the site of injection and not, as is the natural tendency, the syringe whilst giving the injection may, perhaps, save trouble from a painful arm if the needle be not exactly in the vein or by some means moved out of it. No local trouble due to the concentration of the injection ever occurred.

The doses for intramuscular injection were first dissolved in 10 to 15 minims of sterile distilled water and then thoroughly shaken with creo-camph. cream (B. W. and Co.) melted at 15°C. and made up to 2 c.cm. Vigorous shaking is required, or a perfect emulsion will not be obtained, and a badly mixed emulsion will be more painful. The mixing was done directly in the sterile syringe. The injections were made:

1. *Subcutaneous*—into the loose tissue overlying the gluteus medius at a point three fingerbreadths from the crest of the ilium on a line drawn from the tuber ischii to a point on the crest of the ilium which is vertically above the trochanter.

2. *Intramuscular*—directly into the substance of the gluteus medius, lower down, but of course avoiding the middle line. I discarded the first method, after a thorough trial, as being more painful than the second.

Just previous to the injection morphine gr. $\frac{1}{2}$ was given hypodermically in the back, the most convenient place.

The cases are arranged according to Harrison's classification:

1. Early Primary: *Spirochaeta pallida* found. "Wassermann" reaction negative before and after the first injection.

2. Medium Primary: *S. pallida* found. "Wassermann" reaction negative before but positive after first or second injection.

3. Late Primary: "Wassermann" reaction positive, but no secondary lesions.

4. Early Secondary. "Wassermann" reaction positive and commencing secondary lesions.

5. Later Secondary. "Wassermann" reaction positive or double positive with well marked secondary lesions.

6. Tertiary.

Of the 428 primary and secondary cases taken together, 260 were given intravenous injections and 168 were given intramuscular injections. Of the 83 tertiary cases, 66 were given intravenous injections and 17 were given intramuscular injections; 511 cases in all stages were treated. Other cases admitted to hospital—about an equal number—were given kharsivan intravenously.

Result of the "Wassermann" Test after Treatment.

Stago of Disease.	Method.	No. of Cases.	Actuals.	Percent-ages.
(1) Early and (2) medium primary	Intramuscular	26	+ 0 - 26	+ 0 - 100
	Intravenous	53	0 53	0 100
(3) Late primary ...	Intramuscular	37	2 35	5.5 94.6
	Intravenous	51	5 46	9.9 90.2
(4) Early secondary ...	Intramuscular	30	0 30	0 100
	Intravenous	42	4 38	9.6 90.5
(5) Later secondary ...	Intramuscular	75	7 68	9.4 90.7
	Intravenous	114	21 93	18.5 81.6
Summary ...	Intramuscular	168	9 159	5.35 95
	Intravenous	260	30 230	12.0 88.5
Combined total		428	39 389	9.2 90.9

Of the later secondary cases, 65 per cent. gave a strong positive "Wassermann" reaction; thus both methods had a severe test, for, as is well known, such cases are more difficult to influence from the point of view of the reaction than the earlier ones.

The above figures and percentages warrant three conclusions:

1. Good Results with Both Methods.

The good results of both methods; 389 negative "Wassermann" reactions in 428 cases treated thus give a percentage of 90.9 negative results.

2. Better Results with the Intramuscular Method.

The better results of the intramuscular treatment, due no doubt to its slower and more certain absorption with consequent slower excretion. The intramuscular cases had 95 per cent. negative reactions and the intravenous 88.5 per cent.

In the 9 intramuscular cases with positive reaction after treatment, 5 had histories of old sores, and it was probable that they were very late secondary or early tertiary cases. If these 5 "borderland" cases were left out and only the 4 remaining cases known to be true secondaries reckoned, the percentage of negative results in the intramuscular cases would be 97.6—very striking evidence of the efficiency of this method. In these last 4 cases an interval of four to six months elapsed between the development of the sore and the commencement of treatment.

The great objection to this method is the pain and stiffness complained of after the injection, and I am convinced that unless some device can be found to counteract these, it is a method that is impracticable for routine work in private practice or even in clinics. Patients will prefer the least pain possible; if they know, as they now do, that they can have treatment painlessly into the vein, they will have it, so that it is useless to advocate a method which, although giving better results, yet gives some inconvenience.

In no single case was it impossible to carry out the full course, but persuasion was needed in some cases. The men seemed quite tolerant to doses of 0.3 or 0.45 gram, complaints starting about the fifth injection. Some would go through a whole course with no swelling or pain, others would have a little swelling and some pain; others again would have marked pain, or swelling, or both. The reason for this is hard to find, as all injections were given with the same technique. Of course some men can stand pain better than others, and this may to a certain extent explain it, but as one cannot tell beforehand which cases are likely to have discomfort, the patient might not see you again after the first two or three injections—unless to revile you. Plenty of exercise and efficient daily massage have proved to be the best antidotes to severe local reaction. Latterly I have been using alternate intramuscular and intravenous injections; this method is much better tolerated, but is open to the objection that before the last intramuscular injection is absorbed the next intravenous may have to be given, and so toxic symptoms produced from overdose. I have never had any toxic results yet, but this must be considered a defect.

3. Treatment should be Started at the Earliest Moment.

With both methods, each one of the 79 early primary cases obtained a negative result (100 per cent.). In the 88 late primary, 81 obtained a negative result (92 per cent.). In the early secondary 68 out of 72 became negative (95 per cent.). These figures speak for themselves. It is in the late secondaries where the percentage of positive reactions becomes higher—161 negatives out of 189 cases (86 per cent.), as against 96 per cent. in the earlier classes. The difference, 10 per cent., is large.

The 100 per cent. negative results obtained condemn the practice, which I believe holds in some clinics and private work, of not examining for *S. pallida* in the sore, but waiting for a positive "Wassermann" reaction or the appearance of secondary lesions. At this hospital the sore was examined as soon as possible for the *S. pallida* with the dark ground. If not found, saline or sulphur dressings were applied, and the examination repeated in two days. If for any reason, such as non-retractable prepuce, a sore healed or had been treated with antiseptics, serum obtained by gland puncture was examined, or the prepuce slit (dorsal), and the sore exposed and examined. Blood tests were done at once, and if the case was at all suspicious, a provocative dose—0.45 gram—of novarsenobillon was given, and the "Wassermann" test four days later to obtain the Jarisch-Herxheimer reaction if possible.

Unfortunately, a large proportion of the men arrived too late to be treated as primary cases, many having been treated or supplied with ointment or lotions by chemists, herbalists, well meaning but misguided dressing orderlies, and a few, I regret to say, by their regimental medical officers contrary to Army Orders. Others concealed their disease until compelled by secondaries to report sick.

Tertiary or Congenital Cases.

In these cases the intravenous method gave somewhat better results, but as men had to be discharged as fit for duty as soon as possible, the course could not be prolonged sufficiently to try to obtain negative results. The reaction changed from strongly positive to either positive or negative after this single course in 36 out of 66, or over 50 per cent. The symptoms presented by these cases consisted of glossitis (many), leucoplakia, gummata of various regions, iritis, cutaneous syphilides (ulcerating, nodular, and rupial), laryngitis, myositis, periostitis, jaundice, and nerve syphilis. In all without exception lesions healed rapidly, and all symptoms disappeared or improved considerably. It was quite common for a tertiary case, after the third or fourth injection, voluntarily to declare how much better his health was since starting treatment. Potassium iodide was not given in conjunction with the novarsnobillon, but mercury intramuscularly was.

Tertiary or Congenital Cases.

Strength of "Wassermann."	Method.	No. of Cases.	Reaction Result after Treatment.
Strongly positive Wassermann	Intramuscular	11	6 strongly positive; 5 positive.
Positive Wassermann	Intramuscular	6	6 positive.
Strongly positive Wassermann	Intravenous	41	22 strongly positive; 19 positive.
Positive Wassermann	Intravenous	25	19 positive; 6 negative.

The great majority of these men had been given a course of mercury when the disease was contracted and some had been given isolated doses of "606."

Comparing the reactions after the two methods it appears that, excepting a case of severe dermatitis and another of jaundice, the intramuscular method appeared to have the greater number of side-effects, especially headache and vomiting. But I feel that these symptoms were produced by the hypodermic injection of morphine. Lieut.-Colonel Wilson, after one of his daily ward inspections, remarked to me it was curious the intramuscular cases were lying about on their beds and seemed drowsy, and suggested that it was probably due to the morphine. This was confirmed by after-experience—injections with and without the hypodermic. One man developed an abscess, which cleared up after several aspirations and did not need incision. Herpes occurred in one case on the lips and ears and was moderately severe; it was, no doubt, due to the injections. It may be of interest to note that when stationed at Rochester Row I gave two intramuscular injections of 0.45 gram of novarsnobillon to one man, and on each occasion within a few hours a crop of very severe herpes developed at the site of injection and rapidly spread over both buttocks. There was one case of severe dermatitis of the exfoliative type; it developed after the fifth injection suddenly without any warning. It cleared up completely with lead and calamine lotions, and later, soothing ointments. The one case of jaundice was treated on general principles and made a good recovery.

Chancroids.

Contrary to the experience of Mr. Mills of Rochester Row, sublimed sulphur has given disappointing results. This is not because it has not been applied properly, as I have taken care that it has been well applied. Of course *S. pallida* examinations can be done if this powder is used, and this is an advantage; but I have not found healing to be so quick as under eusol, black wash, iodoform, or mercury perchloride. In several very indolent chancroids which obstinately resisted all kinds of treatment I tried intramine intramuscularly, 2.5 c.cm. once a week; the sores improved greatly and finally healed. In the treatment of buboes I have found, as recommended by Colonel Harrison, early aspiration and the injection of tincture of iodine (1 in 20) much quicker than incision. This is true of a bubo which is actually pointing and over which the skin is red and shiny.

CAUSES OF DISSEMINATION OF SYPHILIS.

1. *Syphilis Contracted Abroad.*

Statistics of New Bridge Street Military Hospital show that the first great increase of this disease since the war

broke out occurred at the end of 1915 and the early part of 1916. A consideration of the following facts will prove this and also that it was due in a large measure to infection brought into this country by troops from overseas.

For the first year of the war, 1914 to late 1915, a large camp near this hospital was used solely as a training centre for men who had not yet "gone out." During this period cases of primary and secondary syphilis were comparatively rare, only isolated cases occurring.

At the end of 1915 part of this camp was made into a dépôt for troops on leave or invalided home—from the East, Egypt and the Dardanelles principally. At this time and early in 1916 large drafts of men from these theatres of war arrived, and it was found that many were suffering from syphilis in various stages contracted abroad. Some still had a primary sore which was being or had been treated casually with caustics, etc., others had well-developed secondary lesions; both classes of cases were at the height of infection. For example, of 75 cases admitted to this hospital during one week early in 1916 at least 72 proved to be syphilis.

It was unavoidable in many cases that delay occurred—some few days at least—between their arrival in England and their admission to hospital, and the men on leave were of course at large. This was the time when the harm was done, for when admitted to hospital and questioned as to whether or not they had had sexual intercourse with girls in this interval of time the answer was almost invariably "Yes," and not with only one girl but several. Thus numbers of girls previously healthy may have become infected with syphilis. At the same time, early in 1916, large drafts were coming home on leave or invalided from France. These men and also those in training at home went with these infected girls only to become infected themselves. In this way a vicious circle was established terrible in its effects, for in those pre-conscription days, when patriotism ran high, promiscuous intercourse was rampant, girls influenced by patriotic motives indiscriminately giving their "all" to men in khaki. Unfortunately the men had no scruples in taking what was too freely given. It is reasonable to assume that what took place in this command in all probability occurred in others also.

To sum up: The fact that before the influx of infected troops from the East only a few cases of early syphilis occurred at this dépôt, and that immediately after this influx syphilis increased enormously—this, coupled with a knowledge of the type of case, must be considered a significant factor. The vicious circle is easily understood after inquiry into the source of infection and a little thought.

2. *Alcohol.*

Alcohol is undoubtedly a powerful cause of the spread of venereal disease, in that it is stimulating to the sexual organs, and has weakening effects on the inhibitory influences which ordinarily help to keep people under control. I have personally inquired into the history of these cases, and times without number the reply has been: "Oh, we got drinking together at a public-house and I got too much beer." A few "port wines" soon have effect on girls—too often the desired effect. "Treating" is undoubtedly a great evil, many more drinks being taken in consequence of this practice.

3. *Unskilled Treatment of Venereal Sores, Discharges, Sore Throats, etc.*

Unqualified persons look at a throat over the counter, having no idea whether it is simple tonsillitis, diphtheria, scarlet fever, or secondary syphilis, and treat it, thus enabling infection to be spread wholesale. Rashes are diagnosed as "the blood out of order," etc., and so it goes on. These people look very wise but unfortunately they are not so wise as they look.

4. *Amateur Prostitution.*

The large number of girls and young women, mostly of the ages 16 to 20, who swarm the streets of any large town at night. These are not professionals in the strict sense of the word, but "for the price of a drink," for which they ask from 2s. 6d. to 10s., will go with almost any man, especially if he is in khaki. I have asked many soldiers whether they paid anything or not, and a very usual fee was 2s. to 10s. These are very prolific carriers. The real professional who takes care of herself is comparatively innocuous.

PREVENTION.

Alcohol cannot be adequately dealt with, for total prohibition would never be tolerated by the British public, especially the working classes.

Much severer measures could and ought to be taken (nothing short of imprisonment will stop them) with druggists and herbalists who treat venereal disease. The recent Act making it illegal to treat venereal disease certainly had a steadying effect, but it is wearing off to some extent. In 1917 a soldier told me of one druggist with a business near a large camp who treated *hundreds* of cases of gonorrhoea a day. He paraded a microscope, down which he looked, and then sold his capsules at a preposterous price. All this should be stopped. Compulsory notification would only lead to concealment with spread of quackery and would be a failure.

Army statistics show that prophylactic treatment has decreased venereal disease in the army. Especially is this true of the American army, because if a man contracts venereal disease, beyond losing his pay during disablement, he is not punished if he has used the treatment provided after exposure. If he gets venereal disease and has not used preventive treatment according to regulations he is court-martialled and punished if convicted. This might do good in the British army. On the other hand, prophylactic treatment is by no means infallible and gives a false sense of security. Many men, and youths especially, are kept from indulging in promiscuous intercourse by one thing only—namely, the fear of catching venereal disease. Remove this fear and immorality will increase.

CONCLUSIONS.

The conclusions reached from the facts set out in this article are:

1. The excellent result of intramuscular novarsenobillon clinically; there is, therefore, scope for the discovery of a combination which will render it painless.
2. The best means for preventing the spread of venereal disease at the present time lies in early diagnosis and early treatment, and, as regards the army, periodical "short arm" inspections of troops, as at present carried out. This, of course, cannot be applied to the civil population.
3. Quackery—advertised "remedies" and counter prescribing—should be more rigorously dealt with in order to prevent serious delay in commencing proper treatment.

All the "Wassermann" tests for these cases were done by Major Dean, R.A.M.C.(T.F.), at the Manchester University Laboratory—a sufficient guarantee of their accuracy.

I beg to thank Lieut.-Colonel Wilson, Officer Commanding 2nd Western General Hospital, for kindly giving permission for the publication of this paper; to his energy and zeal, working under great disadvantages, is due in a great measure the success attained at New Bridge Street Military Hospital.

SOME EXPERIENCES OF DISORDERED ACTION OF THE HEART WITH THE MESOPOTAMIAN FORCE.

BY

A. H. GOSSE, M.D.CANTAB., M.R.C.P.LOND.,

ASSISTANT PHYSICIAN, BROMPTON HOSPITAL FOR CONSUMPTION
AND DISEASES OF THE CHEST.

The following experiences of the various types of cases which have passed under my own care, previously diagnosed as disordered action of the heart (D.A.H.), may not be without interest to many who have had charge of similar cases. The diagnosis—for so it is used—of "disordered action of the heart" includes anything from auricular fibrillation to isolated extrasystoles, and is no more final than such a term as "disease of the arteries," which includes anything from aneurysm or atheroma to malformations.

A clinical analysis of the observed cases of disordered action leads immediately to their division into (a) those with symptoms, (b) those without symptoms.

D.A.H. with Symptoms.

In the first group come the large number of cases with tachycardia. The rhythm is nearly always regular, and

the condition frequently follows an acute illness, or there is a rheumatic history, but there may be no obvious association with any acute infection. The symptoms are mainly shortness of breath and palpitation or pain, and are the result of an approach to the exhaustion of the reserve force of the heart in response to effort. Men on field service suffering from this disability are able to do light camp duties, but are unfit for full military duties. A severe case, with a regular pulse rate of over 120 on frequent examinations, remained continuously on light camp duties for a period of six months, with the exception of three days. When, however, he was subsequently put on sentry duty he had to be readmitted to hospital and invalided, as the reserve force of his heart had been temporarily overtaxed. Drugs are of little avail, and, if the case is unaccompanied by other physical signs, rest in bed is unnecessary, and may even be harmful. Milder cases may be given three parades daily, not exceeding half an hour each, and when on examination once a week the pulse rate is under 100 after lying down for five minutes they may be advanced to a higher category involving parades of three-quarters of an hour each. An examination each week will decide on those fit for duty.

Though cases suspected of malingering are so rare as to be negligible, yet the symptoms present may be exaggerated by one man, whereas the next will lay very little stress on them. When, as on service, the soldier thinks his disposal depends much on his replies, it would be more than human nature to expect him to detail them without bias. These are the difficulties which many others must have experienced, but by fair treatment and careful examination, which are appreciated, a fairly accurate judgement may be made. By such methods many cases of tachycardia will be returned to their units without being invalided, and afterwards carry out full duties, even with a pulse rate above the normal.

The treatment of these cases lies in the removal of any infection, and later graduated work, keeping the symptoms from response to effort within the bounds of those experienced by a healthy man during heavy exertion, for then the reserve force will not be exceeded.

A rarer type of tachycardia giving rise to symptoms has a continuously irregular rhythm and is due to auricular fibrillation. The condition may be transient and determined by an acute infection. A case of bacillary dysentery came under my care with slight fever. On the third day of treatment in hospital the heart changed from a regular to a continuously irregular rhythm at 120. A few hours later it was still irregular and had risen to 160, as counted by the stethoscope, though the temperature had fallen to normal. He was given tincture of digitalis *mxv* every six hours, and after forty-eight hours his pulse dropped to 70 and became regular. After prolonged convalescence from the dysentery, he returned to his former duties and was still carrying them out twelve months later. The auricular fibrillation was due to old myocardial disease (as a child he had chorea for six months), but was determined probably by the absorption of toxins from the intestinal infection. The association of regular tachycardia with amoebic dysentery is not uncommon, and by some clinicians the emetine is stopped, as it is held that the emetine gives rise to the tachycardia. In my own cases the emetine was never withheld for this reason, and I have never regretted carrying out the full course—that is, 1 grain hypodermically daily for twelve days (repeated if necessary)—as the increased pulse rate is believed to be due to the absorption of toxins and drops as a result of the elimination of the infection and not as a result of the cessation of the administration of emetine. Emetine, moreover, is frequently administered without any effect on the pulse rate. Another man with auricular fibrillation, but without tachycardia, is known to have carried out his duties for eighteen months after he first came under my notice, and without any treatment, but the pulse rate, as shown by polygraphic records, always remained between 70 and 80. It is mentioned as being a rare type of auricular fibrillation, for almost all cases have a rapid rhythm unless controlled by digitalis. From his history it appeared that he had had this condition for over twenty years and yet was still leading a moderately active life.

Paroxysmal tachycardia, auricular flutter, and even heart-block, except in *inducenza*, are rare in soldiers.

D.A.H. without Symptoms.

Patients diagnosed D.A.H. unaccompanied by symptoms are quite frequent, but may nearly always be discharged to full duty after a short period of training. The most common is the "youthful type of arrhythmia." In many cases these patients are admitted to hospital with a febrile illness, and during convalescence the heart is found to be irregular and the diagnosis is then changed to D.A.H. "by new disease supervening." The cases which exhibit this physiological irregularity most markedly have slower pulse rates than the normal 72. They are rapidly advanced to full duties and remain free from symptoms. The importance of an accurate diagnosis in these cases cannot be over-emphasized. With a diagnosis of D.A.H. they are regarded as "heart" cases, and I have received them after being evacuated through several hospitals and all the time as stretcher cases.

In addition to these cases, there is a further group which is diagnosed D.A.H., and is comprised of patients with extrasystoles. One of these patients gave a history of having been in a stationary hospital for a mild attack of dysentery. After treatment he was discharged to duty, where he was examined by his medical officer, who found an irregular rhythm, diagnosed D.A.H., and sent him back into hospital. He was evacuated down river some five hundred miles as a stretcher case. On examination, his pulse rate was 82, with frequent irregularities occurring in an otherwise regular rhythm. A polygraphic record showed these irregularities to be due to extrasystoles. When questioned as to symptoms, he maintained somewhat indignantly that he felt quite fit. He was allowed to get up at once, and on the second day after getting up, though he had been a bed patient for three weeks, he was sent for a five mile walk, and came back fresh and none the worse. In a few days he returned to his regiment and remained on duty for at least eight months.

Patients with extrasystoles are usually free from symptoms, and, when there are no other physical signs, may be allowed to lead a normal life. Occasionally the patient seeks advice when he discovers this irregularity by accident. He may be reassured and carry on without any break in his work.

Textbook descriptions of beri-beri frequently speak of the irregular pulse. Graphic records were taken at different periods of the earlier stages of this disease in twenty-five cases, and in no case was any arrhythmia found apart from the "youthful type." This was disappointing, as the investigation was undertaken at a time when the shade temperature varied on the different days between 110° and 122°, and assistance was required to divert the streams of perspiration trickling down the face.

Conclusion.

While these experiences relate only to military cases attention is drawn to the fact that the only respect in which they differ from cases seen in civil practice is in the proportion falling under each group. There is an increase in the tachycardias with regular rhythm, whereas the severer forms of disordered action indicating serious disease are comparatively rare, and there is no group peculiar to the soldier's heart as a separate clinical entity.

PERITHELIOMA SIMULATING PANCREATIC CYST.

By R. ECCLES SMITH, M.B., F.R.C.S. EDIN.,
LATE TEMPORARY SURGEON LIEUTENANT R.N.,
SURGEON TO THE SURGICAL HOSPITAL, BARRY, WALES.

THE following interesting condition is recorded to add one further type of pseudo-cyst of the pancreas, so closely simulating a true cyst of that organ that it was only at the necropsy and by tissue section that the true pathological condition was determined.

For a month before admission to hospital the patient, a man aged 29, complained of discomfort after food, with recurring bilious attacks. He noticed a tumour in the upper part of the abdomen in the middle line, which increased in size, gradually at first but more rapidly in the last fortnight. He lost weight steadily and his general condition began to fall off.

He came to hospital on August 6th, 1918, as a walking case; shortly after admission he vomited about two pints of stomach

contents, suggesting gastric stasis, rather than intestinal obstruction. The vomiting persisted in spite of lavage and rest.

A large, rounded, semi-solid mass, easily movable laterally, but less so in the vertical direction, filled the whole of the epigastric and part of each hypochondriac region.

There was dullness over the mass, tympanicity above and below, and slight dullness in the flanks. No definite thrill was elicited. The liver dullness was normal. The stool after an enema did not suggest chronic parenchymatous pancreatitis. Cammidge's test was not carried out.

The diagnosis was made of a pancreatic cyst between the stomach and colon, causing stomach stasis, and probably intestinal stasis, by kinking one or other viscus. As the patient's condition was fair, operative measures were immediately resorted to.

Operation.

A paramedian incision was made on the right side over the mass, through the thinned abdominal wall. The mass was packed off and a little free fluid cleared from the abdomen.

A large semi-cystic tumour was exposed with the layers of the gastro-colic omentum stretched over it. The stomach was pushed high up with the pylorus kinked, and the colon was thrust down by the neoplasm.

The layers of the gastro-colic omentum were divided, and the cyst proper brought into view. Free blood in the interior aroused the suspicion of retroperitoneal sarcoma, and this was made certain on opening the mass and evacuating the contents, which consisted of about two pints of semi-solid "brain-like" tissue freely mixed with organized blood clot. The lesser sac was not involved, the foramen of Winslow was patent, and the pancreas apparently normal. Ablation of the mass was impossible, and as shock was very marked, rapid marsupialization was completed and the sac drained and packed. The abdomen was closed in the usual manner.

The patient's general condition improved for forty-eight hours, during which time large quantities of sero-sanguineous fluid was discharged from the remains of the growth. This oozing continued, and the general condition gradually failed. During the last six hours vomiting of a toxæmic rather than an obstructive type was a marked feature. He died six days after operation.

Post-mortem examination of the abdominal organs only was permitted. The liver, spleen, and kidneys were normal. The suprarenals, carefully examined in section and by the naked eye, were normal, as were the stomach and intestines. The pancreas was normal macroscopically and microscopically. Metastasis was noted at one point in the mesentery.

The remains of the growth consisted of a small solid mass in the retroperitoneal connective tissue, but attached to no organ, lying across the spine and above the pancreas. The rest was a mere shell, having been depleted of its contents at operation.

The growth had no definite capsule, except some feeble granulation tissue. The mass and its contents showed numerous blood spaces lined by large malignant cells radially arranged and spreading in solid masses from the blood spaces. There was much degeneration at the points distant from the spaces. The malignant cells are large with deeply staining cytoplasm; nuclei large, pale, and showing an active mitosis.

The growth is a perithelioma or an encephaloid carcinoma with degeneration at the points remote from the blood spaces.

AVOIDANCE OF RELAPSE IN GONORRHOEA.

BY

CHARLES RUSS, M.B. LOND., M.R.C.S.,

THE ELECTRICAL DEPARTMENT, MALE LOCK HOSPITAL, LONDON.

THERE have long been signs of medical dissatisfaction with the older methods of dealing with gonorrhoea. I believe the dominant weakness of nearly all existing methods of treatment is the long time required before the last gonococcus is overcome. In spite of careful and conscientious irrigations or injections relapses are common, and the disappointed patient often realizes that the discharge has returned within a few days (and usually less than fourteen days) after cessation of such treatment. At the present time the methods of irrigation or injection are the most widely used for obvious reasons. Taking irrigation first, its operation suggests the ability to wash out from a tube the morbid material it contains. No doubt some of the gonococci, and their enemies the pus cells, are removed at each irrigation in this way. But it is clear that it is only slightly effective. If it were possible for the incoming stream of the liquid used in lavage to enter the very numerous mucous crypts and recesses of the urethra, and if this liquid, having entered, were able to balloon these recesses and to wash out their contained gonococci, then the disease would obviously be overcome by one or two irrigations. If repeated often enough each day recovery must be ascribed to an overtaking of the gonococcal populations faster than they can multiply. It is difficult to recognize a germicidal effect in the process, or to see a compensation in the method for the dilution and loss of the invaluable

antibodies to gonococci which nature provides and distributes by the blood and lymph to the infected areas. Injections are less dramatic in appearance, but do not seem to remove the antibodies to the same degree as irrigations. By either method, however, when the visible discharge has become quite small or non-existent, the operator usually and naturally has little confidence that discharge will not reappear as soon as the treatment is withheld. This being so, these processes of lavage or injection are continued for a relatively long time, apparently in the hope of wearing down the vitality of the gonococcus. This continued washing and stretching of the main urethral channel often induces weakness of its vitality. Presently, though the gonococcus may have disappeared, the secondary bacteria of various kinds (which were acquired either at the contraction of the disease as a mixed infection, or in the subsequent operations of treatment) are able to maintain a suppuration of a less acute form than the gonococci, but of a chronic type, constituting a true gleet.

In acute gonorrhoea which recovers promptly there is no gleet stage, and its occurrence must be viewed as evidence of weakening or over-irritation of the delicate urethral membrane during treatment. So that we are in the presence of certain facts—namely, that a percentage of cases of acute gonorrhoea recover after treatment by irrigations or injections continued for a period which varies from one to three or more months. That relapse is undesirably common, and gleet is a frequent sequel after the gonococci have been overcome. This gleet is never a trifling matter, and sometimes causes the victim chronic misery. Yet what treatment can be given in place of these methods? If we had a process which could empty these gonococcal-laden mucous crypts by the gentlest squeezing from their blind ends and so express their contents into the urethral lumen (as by indenting the fingers of a glove), it would be almost ideal. For then one or two streams coming down the urethra, as by the natural lavage of voiding urine, would wash out in the best possible manner the virulent gonococcal populations, and the disease would be rapidly overcome.

No such method is available, but in electrolysis we have a fairly near imitation of such an effect. The only lavage I have ever employed is the patient's own urinary voidance, which visibly removes all mucus and gonococci removable at that moment by the natural act of micturition. By insertion of a perforated catheter and a suitably directed electric current mucous tides are set up within the gland spaces, in which gonococci and leucocytes migrate towards the catheter and seek the anode. These masses aggregate at the instrument's apertures and are visible on its withdrawal. There is nothing so striking in this treatment of acute gonorrhoea as the harvest of gonococci and pus plugs containing gonococci which one removes on withdrawing the electric catheter. Still more is obtained in the subsequent urinary voidance which removes similar material drawn into the urethra, but which did not adhere to the catheter or was detached during its withdrawal. After six years' experience of this method I am satisfied that it attacks gonorrhoea and produces a cure with the minimum of urethral irritation, and that the process does constitute a true assistance to the patient's resistance to the disease. I have already called attention to the remarkable fact of patients' immunity from rheumatism and joint troubles, a fact which I cannot yet explain theoretically.

Coming now to relapse, the main subject of this article, I have been gradually impressed with the confidence gained that the discharge will not return after ceasing the treatment. This, of course, means that the patient's resistance has not been lowered by the method of treatment, and the ultimate victory over the last gonococcus is of course due to the vitality of his leucocytes and the gonococcus antitoxin elaborated for the purpose. As these antibodies have not been irrigated away, and no chemical or other irritation has been induced, electrolysis can only have assisted recovery by a timely removal of the gonococcal populations, associated with a subtle influence on the gonococcus toxin. This latter is, I think, to be inferred as helping to explain the immunity from rheumatism. Nevertheless the process is of course not yet perfect. Although an average of three and a half weeks' treatment is required for an acute case, yet I believe that we should be able presently to overcome the disease in

half or even one-third of that time. When acute gonorrhoea can be cured within seven days of its onset I think medical practitioners will seek the possession of facilities for electrolysis, and will discard older and less efficient methods for a system which is more physiological. Since publication of the process and subsequent monographs on the subject I have realized that numerous colleagues expected something as easy and simple as tipping a tabloid into a tumbler and turning on a switch. Instead of something simpler and quicker than injections or irrigations, electrolysis involves much more work and time and trouble for the operator, who naturally obtains much better results. Like others who have endeavoured to leave the common rut of treatment, I have been amused and grieved at the fearful things done to patients with gonorrhoea in the name of electrolysis both in France and this country. Yet it is inevitable that the old and less efficient eventually gives place to the new, but not until the full realization of benefits which make the extra work well worth while.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

THE DOSE OF COLCHICUM IN GOUT.

Most authorities agree that colchicum is a specific in gout. Dr. Sidney Martin, F.R.S., I think, teaches that "the only drug of any use in gout is colchicum, and the only preparation of colchicum of any use is the wine." My experience leads me to suggest that the tincture is also useful if given in suitable doses. But the most effective preparation of colchicum is the acetic extract.

I suggest that the B.P. dose of the extract—namely, $\frac{1}{4}$ to 1 grain—is altogether too small to be of any use, and that, since the acetic extract (B.P. 1885) is no longer official, the value of the extract has been lost sight of. The average effective dose of the acetic extract is not $\frac{1}{4}$ to 1 grain, but 2 to 6 grains. This, so far as I am aware, has proved a perfectly safe dose in the following prescription:

R. P. opii	...	...	...	gr. j
P. ipecac.	...	...	...	gr. j
P. cambog.	...	...	...	gr. ij
P. aloes	...	...	...	gr. iv
Ext. colch. acet.	...	...	...	gr. viij

Misce; fiat pil., div. in 4. Mitte 12 or 24.

Dose: One pill three times a day, or two at night and one in the morning.

I have known many instances in which three pills (and by persons accustomed to take them even four) have been taken for a dose (= 6 and 8 grains of the extract) without any noticeable result other than that desired. But the average dose above mentioned rarely, if ever, fails to relieve rapidly and completely all the symptoms, especially in acute cases.

J. SYDNEY MATTHEWS, M.R.C.S., L.R.C.P.

London, S.W.

"BRACHIAL" NEURITIS AND ITS TREATMENT.

The able and interesting article by Dr. R. T. Williamson in the *BRITISH MEDICAL JOURNAL* of June 7th, 1919, p. 699, leads me to say that, judging by my own experience, the term "neuritis" has been eagerly seized on by the general public, and the idea seems widespread that neuritis is very difficult to cure. During the past twenty years I have seen many cases of neuritis, and found the majority of them curable, at any rate for a time, many for years. In a very large percentage I have found more or less arthritis. Three cases of primary brachial neuritis with very similar symptoms have recently come under my notice:

1. A woman, aged 41, who for over a year had assisted in nursing a rheumatoid patient, and had worked hard in other ways.
2. Housewife, aged 43, who for a long time has done all the work of a small house, including washing and ironing. This latter form of work is very trying to the right arm, and has been a considerable factor in producing neuritis in other cases.

3. Charwoman, aged 56, emaciated and in poor general health; nothing definite was found to account for the neuritis beyond the strain of her work.

In treating these cases I used the galvano-cautery, commencing with six or eight "dots," close to the vertebrae (upper dorsal), and repeating the applications every other day, increasing the number at each sitting until from twenty to thirty were given at a time.

In all three cases great relief was experienced after four treatments. Patients (1) and (2) went on with their work and did not use a sling; patient (3) gave up work. (1) and (3) took a few doses of an opium and hyoscyamus mixture at first. All three cases are now free from pain and much improved in health.

The following brief notes of cases not primary may be of interest:

(a) Man. Two falls on to left shoulder, from a bicycle, within a fortnight. Very severe neuritis followed. No treatment relieved the pain during the first three months. I then applied a large blister near the lower cervical and upper dorsal vertebrae keeping the raw surface open for ten days with savin ointment. Great relief was experienced within a few days. Investigation showed sarcoma of the head of the humerus.

(b) Man. Sent for treatment as an obstinate case of sciatica resisting ordinary treatment. Rectal examination revealed carcinoma.

(c) Man. Brachial neuritis. Arm useless for seven months. Investigation showed arthritis of the shoulder and also of other joints. Pain relieved and arm restored to usefulness in ten weeks by means of minute multiple acupuncture and counter-irritants designed to produce small pustules.

I have used the remedies mentioned for many years, and as the result of careful observation I have come to the conclusion they are both diagnostic and curative. I claim to be able to produce valuable evidence in this way in cases of suspected malingering.

Bournemouth.

W. J. MIDELTON.

ADRENALIN IN BLACKWATER FEVER.

THE use of adrenalin chloride in blackwater fever was first suggested, I believe, by Dr. W. S. Barnes, retired Government medical officer of British Guiana. The drug is given in the dose of 20 minims every four hours. After the first three or four doses the urine clears up remarkably. No quinine is given. Iron tonics without quinine are prescribed during convalescence. The action of adrenalin in this instance cannot be explained as due to vasomotor constriction. In my opinion the explanation is probably the balancing of a suprarenal insufficiency, which insufficiency is perhaps the cause of haemoglobinuria in some cases of malarial infection.

J. A. ROBERTSON, L.R.C.P. and S.Ed.,
Government Medical Officer.

Plantation "Mara," Berbice River, British Guiana.

MOTHER'S EYESIGHT *v.* CHILD'S LIFE.

THE following may interest more from the benefit derived from the rapidity of action than from any rarity in the case, which is obviously a common one.

On July 12th, 1919, Mrs. —, aged 35, one child aged 11 and one subsequent miscarriage, who had engaged me for her confinement in September, sent for me. She complained of dimness of vision. There was considerable oedema of the legs and vulva and difficulty in walking. There was no external inflammation of the eyes. She saw with right eye barely $\frac{1}{2}$; with left, fingers only. There was albumin in the urine. On ophthalmoscopic examination I found flame-shaped haemorrhages.

On July 16th I motored the patient into Newcastle to see the consulting oculist (Mr. J. D. Wardale), who diagnosed albuminuric retinitis, with considerable oedema of the maculae, especially the left. On July 18th, with the consent of the patient and husband, I induced premature labour by means of inserting a bougie between the uterus and membranes and leaving it *in situ*. At 10 a.m. on July 19th, after slight pains during the night, the os was patulous. At 6 p.m. on the same day I was able to introduce two fingers, and at 8 p.m. I judged there was sufficient dilatation to allow of forceps; chloroform was given, and at 9 p.m. a 7-months child was delivered (which lived four hours). The mother made a good recovery, and her sight is improving.

The mother of the patient told me the following: A pregnant woman in her neighbourhood began to lose

her sight. The doctor told her that she might get it back when the child was born. She was allowed to go on to full term, at which time she was totally blind, and has remained so for the last five years. The child is living.

Shotley Bridge.

A. G. C. POCOCK, M.B.Durh.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

AT the meeting of the Oxford and Reading Branch of the British Medical Association held at the Radcliffe Infirmary, Oxford, on July 1st, the following cases were demonstrated in the out-patient department: Two cases of erythraemia (polycythaemia), by Sir WILLIAM OSLER; one was a woman of about 50, with dyspnoea and enlarged spleen and red count 6 to 7 millions; the splenic notch could be both felt and seen. Dr. COLLIER showed a case of severe puerperal septicaemia (now convalescent). Mr. ANGLIN WHITELOCKE showed (1) epithelioma of tongue which had survived partial excision five years ago, but showed glandular recurrence; (2) a woman recovering from severe haemorrhage into the peritoneum from ectopic gestation. Dr. MALLAM showed (1) severe Hebra's prurigo in a male aged 30, and (2) Von Recklinghausen's disease in a man who was developing (? propter hoc) spastic paraplegia; this man gave a positive Wassermann reaction. A large fluctuating abdominal tumour which had puzzled many was then shown. Sir WILLIAM OSLER suggested a catheter, and the tumour of several months' duration was promptly cured. The President's comments on the cases were highly instructive; his wit and geniality were keenly appreciated, and helped to quicken the feeling of brotherhood between the members. Papers were then delivered as follows in the Board Room: The Radcliffe Infirmary extension at Headington, by the Rev. G. P. CRONSHAW. The principles of treatment of the psycho-neuroses, by Dr. McDOUGALL. Some points on closing traumatic openings in the intestine, by Colonel A. P. DODDS-PARKER. Two rare forms of cancer, by Mr. HASTINGS GILFORD. Some notes on the operative treatment of fractures, by Mr. W. B. SECRETAN. The function of a venereal clinic, with illustrative cases, by Major A. G. GIBSON. All were well illustrated and extremely interesting. A paper by Colonel Collier on systolic murmurs in young adults was held over until the next meeting.

Rebielus.

THE RELIGION OF A DOCTOR.

A PHILOSOPHIC writer of forty years ago observes, in one of his paradoxical dissections of human frailty, that an honest God is the noblest work of Man.

To the medical man more than to any other the difficulty of honest achievement is very great. With his earliest professional training he is brought face to face with the mysteries of life and death, and all through his professional career they meet him at every turn. As the natural end of his own life approaches, his thoughts will of necessity turn from the known to the unknown. He has learnt that many of the higher qualities of mind and thought may be brought to degradation by physical changes in the brain. He has seen many a "noble mind o'erthrown," many a promising career ruined, and many a valuable life cut short by forces quite uncontrollable by human agency. At one period his religious views may, indeed, tend to be materialistic, but at another he will have to admit the existence of some moving power, the force of which becomes more and more fully recognized as years advance.

As a writer on the subject of healthy old age Dr. BODLEY SCOTT has already given to the profession a charming account of the physical means by which that desirable goal may be reached. He has now put forward a small work dealing with *The Religion of a Doctor*,¹ in which he discusses the relation of the medical man to the mysteries of human life and to his conception of the possible future. Three hundred years ago the author of the first *Religio Medici* was "content to understand a mystery without a rigid definition." The writer of to-day deprecates anything savouring of positive assertion. "The old conception of the Jewish god—an anthropomorphic deity, full of human moods, of anger and jealousies—is no longer possible to the reverent mind. The God of absolute

¹ *The Religion of a Doctor*. By T. Bodley Scott. London: T. Fisher Unwin, Ltd. 1919. (Cr. 8vo, pp. 98. 5s. net.)

knowledge, of absolute power and righteousness, of an infinite unchanging purpose, working through aeons of steady evolution, can alone satisfy the thinking soul." In the course of the main chapter of his book Dr. Scott traces the evolution of Christianity, showing how much of it is founded on unstable bases, and in the concluding section he puts forward a strong plea for the reorganization of religious beliefs in a spirit of unity. The little book may be commended to the thoughtful attention, not only of medical but of clerical and lay readers alike.

PSYCHO-ANALYSIS.

In her book on *Psycho-Analysis and its Place in Life*,² Miss M. K. BRADBY does not approach the subject from a therapeutic or medical standpoint. She is not a doctor; educational and social work are her particular interests, and she is probably correct in holding that the results of psycho-analytic researches will ultimately find their most important applications in the sphere of education. It must be recognized that modern investigations into the underlying motives of human conduct which have been stimulated by the writings of Freud are not only concerned with the treatment of the neuroses, but serve also to furnish a much wider understanding of the many problems of life, both social and individual. This is shown in the contents of this volume, in which art, religion, ethics, biography, as well as individual psychology, are studied from a psycho-analytic point of view.

The subject is not approached from the conventional standpoint. Miss Bradby gives no rigid adherence to any particular school of thought. The book is in no sense a mere exposition of current psycho-analytic teaching or theories; it is, on the contrary, a frank expression of her own individual views, and it might perhaps almost be said to be an assimilation of psycho-analytic principles into her own philosophy of life. She states in the preface her opinion that psycho-analysts have overlooked important factors in the unconscious.

They are too much inclined to interpret the higher in terms of the lower, to explain the advanced by a reference to the rudimentary. They have found man's repressed appetites and the conflict between conventional morality and sexual desire, but they have not yet devoted equal attention to his higher interests which are also to be found in the unconscious mind—interests which man does not share with the animals—to the longing after knowledge and beauty and power for their own sakes, and the desire for moral goodness apart from any particular system of morality. Since man became aware of his own aims these things have been recognized as amongst the ruling passions of humanity, and they are not sexuality, important though sexuality may be.

This view is developed throughout the book. Miss Bradby would seem to suggest the existence of a fundamental, innate moral impulse in man which may be subject to imperfect development or repression, after the same manner as the sexual impulse, and she finds evidence of this in analyses of dreams and in other directions. This instinct is distinguished from that morality which varies according to the standards of the social group. Such an opinion, of course, conflicts with the most generally accepted psychological view; moreover, it would hardly find acceptance amongst psycho-analysts, at any rate, amongst the Freudian school. The theme is suggestive and full of interest, but it would seem that Miss Bradby in much of her treatment of the subject tends to overstep the scientific boundaries of psycho-analysis as such, and to introduce ethical and moral considerations and views as to human progress which, valuable and important as they may be, are not the actual concern of psychological investigation. As a science, psychology is not concerned with the goodness or badness of impulses, beliefs, and opinions; such ethical terms imply a subjective criticism on the part of the observer according to his particular philosophy in life; psychology is the purely objective study of such phenomena in the same way as the physical sciences are concerned with observations upon other series of phenomena without reference to their ethical value. We find such statements as:

In the unconscious are spiritual values . . . each has God in him as well as Devil.

The distinctly animal gives way in order to express the distinctly human, the wicked or diabolical goes in order to express the divine.

² *Psycho-Analysis and its Place in Life*. By M. K. Bradby. London: Henry Frowde, and Hodder and Stoughton. 1919. (Demy 8vo, pp. xi + 266; illustrated. 8s. 6d. net.)

. . . regard the supreme purpose of the universe as the creation and development of moral goodness. Man is by nature moral.

By introducing terms and conceptions which, however true they may be, belong to another "subject of discourse," she detracts somewhat from the purely scientific value of her book. This much must be said, however: Miss Bradby in her analyses is impressed with the necessity and value of the subjective or synthetic method of interpretation (Jung) as opposed to the causal, objective method of Freud. The latter is concerned with the origin of the dream, the former with its aim, meaning, or function. Jung's method is avowedly not strictly scientific, and the difference between the two methods of investigation is apparently fundamental. Which school of thought leads to the greater understanding of the conflicts, strivings, and struggles of human beings it is hardly the province of the reviewer to suggest. Perhaps, however, it would be more correct to confine the term psycho-analysis to the Freudian school.

Apart from such criticism, however, the book is of interest and value. Possibly, as Dr. Constance Long states in her preface, "the author's very individual outlook on life" does "enhance the stimulating qualities of the work." Miss Bradby furnishes some excellent descriptions of psycho-analytic theories, she approaches the whole subject with much breadth of mind, she introduces helpful material from modern anthropological researches, and she is thoroughly enthusiastic as to the value of psycho-analytic research in the development of the individual and of humanity. Incidentally her work should do much to dispel prejudices with regard to the subject which some of its advocates have aroused.

CONSTIPATION.

THE second edition of Dr. A. F. HURST's work on *Constipation and Allied Intestinal Disorders*,³ was almost completed in 1914, when the war began, but it has received some additions since then, such as a special chapter on constipation in soldiers. It is a new book rather than a second edition of the original issue in 1909, as it has been largely rewritten, contains 80 more pages, 22 more illustrations, and costs half as much again. It is divided into seven parts, dealing with the physiology of the intestinal movements and defaecation, methods of examination, the causes, symptoms, treatment of constipation, and constipation in infants and in soldiers. The most important sections of the volume are those on the causes, symptoms, and treatment, each of them occupying more than a hundred pages. The physiological chapter is largely based on x-ray examination of the alimentary canal, and contains evidence of much personal research.

Constipation is defined as a condition in which none of the residue of a meal, taken eight hours after defaecation, is excreted within forty hours, and is divided into three main forms: (a) Colic, due to delay in the passage of food through this part of the intestinal tract; (b) in which the final evacuation from the pelvic colon is not adequately performed though there is no delay in the remainder of the large bowel—the word "dyschezia," employed by the late Robert Barnes for painful defaecation, is regarded as preferable to Strauss's term "proctogenic constipation"; (c) due to deficiency in the quantity of faeces caused either by insufficient food residues or by excessive digestion of food by the "greedy" colon, a condition either congenital or acquired. Few diseases have not at one time or another been ascribed to constipation, and though constipation may directly cause numerous symptoms the mechanism of their production is in many instances still uncertain. The popular theory of intestinal intoxication, so forcibly advocated by Sir Arbuthnot Lane, is submitted to critical analysis. Dr. Hurst considers that some symptoms are due to mechanical pressure exerted on various structures by faecal accumulations, that others are purely reflex, and that it is impossible to separate the nervous symptoms of constipation that result from intestinal intoxication from those that are reflex in origin. The relation between intestinal adhesions and constipation is also carefully discussed, and the evidence that any

³ *Constipation and Allied Intestinal Disorders*. By A. F. Hurst, M.A., M.D. Oxon., F.R.C.P. Second edition. London: H. Frowde, and Hodder and Stoughton. 1919. (Med. 8vo, pp. xx + 440; 56 figures, 1s. net.)

connexion exists between Lane's ileal kink and constipation is regarded as inconclusive. Further, the author argues that duodenal ulcer is never secondary to intestinal stasis, the radiographic evidence supporting Lane's view being due to misinterpretation of the observed phenomena; in more than 60 cases of uncomplicated duodenal ulcer Dr. Hurst has only once seen a dilated duodenum and a duodenal kink, but he admits that in rare instances of visceroptosis true duodenal stasis, attended by dilatation and writhing movements, is due to compression exerted by the superior mesenteric artery, owing to traction from the dropped small intestine.

Mutch's contention that diabetes is due to an ascending pancreatic infection from the duodenum, which in its turn depends on intestinal stasis, does not meet with any support from Dr. Hurst, and though a high or a low blood pressure may in different circumstances probably result from constipation, doubt is thrown on the view that the low blood pressure is due to beta-aminazolethylamine produced from histidin by bacteria in the ileum.

The operative treatment of constipation is discussed with a very open mind; of Lane's implantation of the ileum into the pelvic colon it is said that many cases have done very well, others have shown little or no improvement, and a few have succumbed to the operation. Indications for the various forms of operative interference are stated and the drawbacks explained. The condition for which colectomy is most definitely indicated is said to be the dilated colon due to pelvi-rectal achalasia (Hirschsprung's disease) or congenital dilatation of the colon and some of the rare cases in which this condition is acquired in later life. The reader of this thoughtful and valuable work will find that he is naturally drawn to compare it with Sir Arbuthnot Lane's *Operative Treatment of Chronic Intestinal Stasis*, published last year, so as to see both sides of the shield.

The ordinary lines of treatment are fully described in a thoroughly practical fashion; the sections on diet and drugs, which many may regard as well worn and familiar subjects, should not therefore be skipped, for they contain many new hints and some interesting gleanings from the past. Speaking of intestinal lavage, he points out that in the days when three, four, or more pints of water were injected at a very high pressure membranous colitis was produced almost as often as it was cured by the treatment, and he then details the method which he finds empties the colon most efficiently without causing spasm or increasing the secretion of mucus. Dr. Hurst's volume recalls the broad-minded wisdom of the late Sir James Goodhart, to whom it was intended to be dedicated as a token of gratitude and admiration. It can be confidently recommended as a storehouse of both scientific and practical information on perhaps the commonest disorder that flesh is heir to.

PRACTICAL PHYSIOLOGICAL CHEMISTRY.

MR. SYDNEY COLE'S *Practical Physiological Chemistry*⁴ has been much enlarged and greatly improved in its fifth edition. It gives a most excellent account of the various tests, and may be accepted as a reliable guide. The book has one outstanding merit: it is that Mr. Cole has not assumed that his students had a sound knowledge of chemistry, particularly of physical chemistry. His general explanations are clear and to the point. He has divided the book into fourteen chapters, dealing with the properties of solutions, proteins, carbohydrates, fats, digestion, blood, urine, etc., in turn. As a chapter his first, on the properties of solutions, in which he deals with physical chemistry, is particularly good. He devotes a special chapter to the preparation and properties of certain amino acids, and gives very clear and explicit instructions. The book is well illustrated and its get-up good.

There are, however, several points which may be criticized. Professor Hopkins, in his introduction, draws attention to the fact that the teaching of practical biochemistry is beset with many difficulties, not the least being the lack of the stimulus of the actual experiment on animals. He therefore justifies the inclusion in a practical book of "some judicious reference to theory and to the actual significance of results." But is there

any justification for the blending of theoretical and practical work? No doubt such a procedure could be defended in dealing with a cut-and-dry subject; but with a living and actively progressive subject like biochemistry the inclusion of brief theoretical considerations is of doubtful advantage, and not, perhaps, altogether in accord with the broad principles of science. No doubt an annotated work would be of considerable value to teachers possessing a knowledge of the field covered and capable of assessing the value of statements, but unless the writer of the book be a person of the most judicial and neutral mind short statements of theory are apt to be not sufficiently impartial. Many of the problems dealt with are not quite so clear cut and finished as the author's statements might lead one to suppose. *Obiter dicta* endorsed by Professor Hopkins run the risk of being passed on as considered judgements.

Further, Mr. Cole does not seem to appreciate the nature of professional medical life, and in this he errs with many other "scientific" writers holding medical qualifications who ought to know better. Mr. Cole, in his introduction, says "Progress in medical science is largely dependent on the statistical method. I am convinced that a considerable body of trained medical men making accurate analyses of the abundant clinical material that must inevitably come their way will advance our knowledge much more rapidly than a few isolated specialists." This may be true, but how is the average medical man to find the facilities and the time? Some practitioners have practices which would permit of it without doubt, but the great body of the profession are literally overworked. That scientific research is possible is shown by the magnificent work of general practitioners like Dobie, McMunn, and Mackenzie, but scientific research which involves a great deal of highly skilled continuous work like observations on metabolism could only be carried out under the most exceptional circumstances. It is the fashion these days to express the hope that the work will be of value to medical practitioners, forgetting the fact that the writer has been living in an atmosphere of scientific thought, whereas the practitioner equipped with the medical scientific education of his first two or three student years, has not dwelt in a scientific atmosphere, and is not familiar with the vocabulary—we had almost written the slang—of modern research. The medical practitioner whose duty it is to treat patients cannot be so much interested in the steps by which scientific research is achieved as in the practical outcome; this is inevitable.

NOTES ON BOOKS.

PROFESSOR RICCA'S essay on inhibitory war lesions and hysteria⁵ gives a fairly brief account of his views on an obscure area in the neurology of functional and psychogenic lesions due to trauma in the recent war. His "inhibitory war lesions" are approximately identical with Babinski's "reflex or physiopathic syndromes"; in some of them he distinguishes a psychogenic rather than a hysterical basis, as though they were utilitarian rather than involuntary in origin, while others he sets down as automatic. The subject is treated throughout on what may be termed psychological lines; the last chapter links up the inhibitory theory with hysteria and Brissaud's sinistrosis. The book is one for psychologists.

Physical Education in Relation to School Life,⁶ by REGINALD E. ROPER, is a short volume of ideals as to what constitutes physical education from more than one point of view. Mr. Roper is insistent that the minimum time needed each week for Swedish gymnastics is three lessons each of half an hour's clear work, and insists on the improvement in general health, in discipline, and in the general outlook on life gained by properly organized, co-ordinated, and intelligent use of the muscles. Like teachers in other branches of education, Mr. Roper deprecates the large classes with which masters and mistresses have to cope, and strongly deprecates the general acceptance of the common statement that girls are necessarily less muscularly strong than boys; girls are handicapped not only by dress and convention, but by not being taught the exercises which have been found by experience to be

⁴ *Practical Physiological Chemistry*. By Sydney W. Cole, M.A. Fifth edition. Cambridge: Heffer and Sons, Ltd. 1919. (Demy 8vo, pp. xvi + 401; 55 figures. 15s. net.)

⁵ *Forme Inibitorie di Guerra e Isterismo*. By Professor Dott. Silvio Ricca. Milano: Società Editrice Libreria. 1919. (Post 8vo, pp. 174; 33 figures. L. 8.)

⁶ *Physical Education in Relation to School Life*. By R. E. Roper, M.A. Edin. London: George Allen and Unwin, Ltd. (Cr. 8vo, pp. 116; 12 plates. 2s. 6d. net.)

of the most use to boys. Mr. Roper is certainly an enthusiast in his teaching, and his book gives many hints to those concerned in the education and development of growing girls and boys.

LUCAS and STEVENS'S *First Lines in Dispensing*,⁷ now in its second edition, is an excellent little work for the use of students, pharmacists, and other people who have to learn how to compound medicine of all sorts. It gives a clear account of the first principles of the dispenser's art, authoritative and well written, and the text is well illustrated.

Professor HAWK'S textbook of *Practical Physiological Chemistry*,⁸ first published in 1907, has now reached its sixth edition; it gives a very thorough account of the subject, suited in every way to the advanced student of physiology. It is clearly written, well illustrated, and packed with facts and directions for tests and analyses of every kind of physiological product. The magnification of the pictures of microscopic crystals should be stated under each. The book has clearly been a great success in America, and may be recommended to the attention of physiologists in this country.

⁷ *First Lines in Dispensing*. By E. W. Lucas, C.B.E., F.I.C., F.C.S., and H. B. Stevens, F.I.C., F.C.S. Second edition. London: J. and A. Churchill. 1919. (Cr. 8vo, pp. 182; 97 figures. 6s. net.)

⁸ *Practical Physiological Chemistry*. By Philip B. Hawk, M.S., Ph.D., Professor of Physiological Chemistry and Toxicology in the Jefferson Medical College of Philadelphia. Sixth edition, revised and enlarged. London: J. and A. Churchill. 1919. (Med. 8vo, pp. xiv + 661; 185 figures, 6 coloured plates. 21s. net.)

APPLIANCES AND PREPARATIONS.

Radiography of the Teeth.

THE British Thomson-Houston Company, 77, Upper Thames Street, E.C.4, is now able to supply, in addition to the other types, a new special dental type of Coolidge radiator x-ray tube. The chief features of this tube are: (1) Its size, the bulb is $3\frac{1}{2}$ inches in diameter; (2) the cathode arm is at right angles to the anode arm; (3) the cathode circuit is grounded, and so there is only one high tension wire; (4) it can be used at a very short distance from the patient without risk of shock; (5) it is designed to operate at a fixed voltage and current, this means that the factor of time is the only variable in making radiographs of the teeth; (6) it can be supplied with a special lead-glass shield, which fits closely to the walls of the tube and gives adequate protection; (7) it can be used with either an induction coil or a high tension transformer. This tube is made for the purpose of making radiographs of the teeth and jaw, and is not intended for general radiographic work. With a little practice good radiographs of the teeth should be produced almost automatically.

An Indestructible Element for the Galvanoset.

The Medical Supply Association, Limited, has made an improvement in the conducting elements of the Galvanoset water resistance apparatus. The four conducting elements were made of carbon, but the positive element was liable to disintegration, causing discoloration of the water, and necessitating frequent change of the water and replacing of the element. This is now entirely overcome by using an element for the positive pole made of platinum, which does not disintegrate when conveying the current through water.

A Suture Holder.

Mr. C. Hamilton Whiteford (Plymouth) has designed, and Messrs. Allen and Hanburys have made, a simple suture holder. In preparing for operation, the sutures are threaded loosely in the long axis of a piece of bandage, preferably flannel, which is two inches longer than the instrument tray. The bandage is weighted at each end by a spring clip. The clips, bandage, and sutures are rolled up and boiled. At the operation the bandage is unrolled and placed across the instrument tray, with the clips hanging over the ends of the tray. The bandage, being stretched by the weight of the clips, forms a taut strap, from which each suture can be drawn with ease. Each clip weighs about four ounces, and will fit any bandage whose width does not exceed four inches. By varying the length of the bandage the suture holder can be used with trays of any dimension. The holder can also be used for needles.

Talcum Powder.

We have received from Messrs. Robartes Ltd., Dyer's Buildings, Holborn Bars, E.C.1, a sample of "diadem talcum powder," a dusting powder which is claimed to be especially suitable for nursery use and for application after shaving, the bath, etc. Our examination shows it to contain a large proportion of talc, together with smaller amounts of lycopodium and boric acid. The preparation is agreeably perfumed, and in our opinion is well adapted to the purposes mentioned.

THE TUBERCULOUS EX-SERVICE MAN.

PROVISION OF RESIDENTIAL TREATMENT.

THE report recently issued of the Interdepartmental Committee on Tuberculosis appointed to consider the immediate practical steps which should be taken for the provision of residential treatment for the discharged soldier and sailor suffering from pulmonary tuberculosis and for their reintroduction into employment, especially on the land,^{*} has, we are glad to note, received a good deal of attention from the daily press.

The Deputy Chairman, Sir Montague Barlow, M.P., presided over all the meetings after the first, and among the original members were Dr. F. J. H. Coutts, Lieut.-Colonel Nathan Raw, C.M.G., M.D., M.P., Sir Leslie Mackenzie, M.D., and Dr. J. Fletcher Porter; Dr. E. Coey Bigger, Dr. J. Smith Whitaker and Dr. W. J. Maguire were added after the Committee had commenced its work. The report is signed by all the members except Dr. Maguire. The Committee heard twenty-four witnesses and considered a number of documents. The evidence is not published in full by way of question and answer, but in minutes appended to the report, a commendable innovation.

The whole subject is covered from many points of view, and it cannot fail to be noted that substantial results have been already achieved in Scotland, Wales, and Ireland in response to local effort. But the number of beds available for all cases of tuberculosis is very far short of the requirement, and at the present time only about 4,000 ex-service men are receiving residential treatment out of an estimated total of 35,000. This disproportion is not due to financial causes, adequate provision being now made for treatment for so long as may be found necessary. In the Astor report of 1912 it was laid down that there should be one sanatorium bed and one hospital bed for every 5,000 inhabitants, but this proportion is now recognized as insufficient, especially in industrial areas. In Liverpool, for instance, the city council aims at the provision of one bed for every 700 of the population. It has occurred to many people that the now unoccupied army hutments might be at once utilized for the benefit of tuberculous soldiers, situated, as so many of them are, in carefully selected sites as regards sanitation, supplies, and communications. Local authorities are advised in the report to adapt such hutments, wherever possible, as a temporary measure, pending the provision of more permanent quarters. They should be able to secure them from the Government without charge.

Great Britain.

When provision of beds for treatment has been made the need for after-care falls to be considered, and the consensus of opinion has fixed upon the training colony as the most effective means of completing the restoration of convalescent cases, to be followed in due course by the establishment of permanent village settlements.

The success achieved at Papworth, Hairyres, Wokington, and elsewhere has already stimulated similar schemes to establish colonies for limited periods of training, the colonists submitting themselves to medical control, and consenting to separation from home life. It is now proposed that village settlements should be encouraged in which the tuberculous ex-service man should be able to continue the trade that he has learnt in the colony, with good cottage accommodation for wife and family, amid sanitary surroundings. The scheme thus outlined is warmly advocated by the Committee, and supported by a recommendation for an Exchequer grant for the provision of sanatoriums, which shall be at least double the amount hitherto allotted; financial provision for training colonies to the amount of £250,000, and £1,000,000 for permanent village settlements is also recommended. By these means it is hoped that the case of the ex-soldier will be adequately met. To what extent, it has to be asked, will the man himself be willing to adopt a system which, while not compulsory, must to some extent be disciplinary? This difficulty has frequently been encountered. Much money has already been expended in the endeavour to deal satisfactorily with the impatient patient, who enters with enthusiasm upon the new line of treatment only to tire of it if immediate results are not forthcoming. He returns home and is a risk to others until he succumbs to the disease himself. The problem of the adequate segregation of the actively

* H.M. Stationery Office. [Cmd. 317.] (Fcap., pp. 45. Price 61J.)

infective case is still unsolved, and it would appear that nothing short of punitive legislation will suffice to check the free distribution of bacilli to the community. In some States in America punitive measures are actually in force, and the neglect of precautions by the consumptive may be met by fine or detention in special institutions. The Committee does not propose any such repressive measures, but hopes that some good may be done by means of small homes, as at present provided in Norway, or in enlarged sanatoriums.

The question of reinstating tuberculous men in employment, especially on the land, is left for local authorities to deal with, and lines for their guidance have not been laid down. It will be seen that the Committee has generously interpreted the call for prompt and adequate assistance for ex-service men suffering from tuberculosis, and its recommendations, if loyally carried out, may be expected to react in time to come for the benefit of civilian sufferers also and for the community at large.

Ireland.

Dr. Maguire, who presents a minority report, states that while he does not doubt that the recommendations are the most suitable possible for the circumstances of Great Britain, and might perhaps with advantage be applied to Ireland, the conditions in that country are radically different. The Irish population is mainly rural, and the death rate from tuberculosis in Ireland (2.23 per 1,000) much higher than in England and Wales (1.62 per 1,000). In Ireland there are no county medical officers of health, and the housing conditions in many parts of urban and rural areas are most unsatisfactory. In Ireland 13 sanatoriums containing 1,282 beds have been approved for the purposes of the National Insurance Acts. Owing to the lack of suitable residential accommodation for advanced cases many are treated in sanatoriums for early cases. The governing bodies of sanatoriums have given the greatest assistance in providing for ex-service men, even in some instances at the expense of ordinary civilian applicants. At the same time Dr. Maguire considers that the existing accommodation in sanatoriums may, at the present rate of admission, be considered sufficient for the needs of persons suffering from tuberculosis in its early stages. No difficulty has been experienced in obtaining accommodation for surgical cases, the number of institutions approved being 60, containing 4,041 beds. For advanced cases 17 institutions—consisting of 1 sanatorium, 2 tuberculosis dispensaries, 1 tuberculosis hospital, 5 homes, and 8 general hospitals—have been approved; the accommodation is insufficient.

Poor Law institutions cannot be used under the Insurance Acts, and ex-service patients should not be treated in such institutions, but in view of the present urgent need of economy and the high cost of building Dr. Maguire considers that the Public Health Council to be constituted in Ireland under the Ministry of Health Act should immediately consider whether Poor Law hospitals could be brought into line with modern ideas, bearing in mind that the care of the ex-service men is only part of a much larger problem. It would, he thinks, be possible immediately to afford accommodation to ex-service men in the advanced stage without much additional expense at existing approved institutions if Exchequer grants were made available. Every possible facility should be given to local authorities for the immediate completion of arrangements for increased accommodation suspended in consequence of the war. The provision of additional accommodation for advanced cases of tuberculosis among ex-service men, thus setting free the entire accommodation of sanatoriums for the treatment of early cases, is in his opinion the most urgent phase of the problem in Ireland.

The circumstances attending an outbreak of plague on the P. and O. liner *Nankin* are remarkable. The ship left London with a clean bill of health on June 26th, but arrived at Alexandria with seven cases of plague on board, as would appear, among the crew. The most probable explanation seems to be that infected rats got aboard either in the port of London or that of Marseilles. The decline in the mortality from plague in India has recently been very great; in the year ended June it was only 0.28 per 1,000 as compared with 4.51 in 1904-5. It has not been so low since 1898-99, when it was 0.42, and 1908-9, when it was 0.43.

THE *Nordiskt Medicinskt Arkiv*, founded in 1869 by Axel Key, are henceforth to be known by the titles *Acta Medica Scandinavica* and *Acta Chirurgica Scandinavica*. To give these periodicals an international character it is proposed to publish communications in any of the principal European languages.

THE TEACHING OF OBSTETRICS AND GYNAECOLOGY.

LAST March the Council of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine appointed a committee "to inquire into the teaching of obstetrics and gynaecology to medical students and graduates in London." The Committee consisted of Drs. T. W. Eden (Chairman), Henry Russell Andrews, G. Blacker, John S. Fairbairn, F. J. McCann, and Gordon Ley (Secretary). A report signed by all the members of the Committee has now been issued; it is as follows:

REPORT.

Under their terms of reference the work of the Committee falls into two parts: (1) The present methods of teaching midwifery and gynaecology to medical students and graduates in London; (2) the changes which are required to make it more efficient.

The Committee desire to point out the great importance of the subjects they were called upon to examine, not only to the medical profession, but through it to the women of the country and to the community in general. The provision of doctors more highly trained in practical midwifery work, and the provision of adequate hospital facilities for dealing with serious complications of pregnancy, labour, and the lying-in period, are matters which are intimately related to one another, and are of equal importance to the public health. A large increase in the present hospital accommodation for midwifery cases in London is as urgently needed as an improvement in the training of medical students. And, further, if by suitable arrangements better training in the management of infants could be associated with midwifery training, a great advance would be made in dealing with the difficult problem presented by the high rate of infant mortality.

Four medical schools were directly represented on the Committee, and in order to obtain the necessary information from all the teaching hospitals, a series of questions covering all branches of teaching were drafted and sent to each hospital. The answers were kindly supplied by the obstetric physicians, and formed the groundwork upon which the following account of the present methods is based. [A list of the hospitals in alphabetical order, and an epitome of the answers obtained under each inquiry is given in appendices.]

A.—THE PRESENT SYSTEM: MIDWIFERY. *Systematic Teaching.*

Systematic lectures are given in all the hospitals by the obstetric physicians, usually in the summer term—that is, once a year only; the number of lectures varies from twenty to forty. A "practical midwifery" course, which includes operative demonstrations on the dummy, is also given either by the obstetric physician or by the tutor. In the latter case it is combined with the tutorial class. In most hospitals the regulations provide that students attend the systematic lectures and the practical midwifery course before being allowed to attend cases of labour. The Dean of the school may, and sometimes does, suspend this rule.

The tutorial or revision classes are held each term by the tutor, and are attended mainly by the students then preparing for the examination in midwifery and gynaecology. Attendance at the systematic and practical midwifery courses is compulsory under the regulations of the examining bodies. Attendance at the tutorial classes is optional, but in practice all students do attend.

Clinical Instruction in Normal and Abnormal Pregnancy.

Systematic instruction is given in the gynaecological wards and out-patients' departments of all hospitals on the diagnosis and management of pregnancy, the clinical material consisting of such women as present themselves from one reason or another during pregnancy. Pregnant women who desire to be attended at their own homes are usually required to present themselves at the hospital for examination beforehand. They are seen, usually, by an obstetric physician or by the tutor, and any students who care to attend are present and are allowed to examine the patients; the attendance of students is, however, not, as a rule, compulsory, and in practice sufficient use is not made of this department for purposes of teaching. Except in the case of hospitals with a midwifery ward, this is all

the provision which is made for instruction in normal and abnormal pregnancy.

Clinical Instruction in the Conduct of Labour.

In four hospitals—namely, Royal Free, St. Bartholomew's, St. Thomas's, and University College—midwifery wards are established for the instruction of medical students; others—namely, Guy's, London, and Middlesex—have a midwifery ward which is used chiefly for training midwives; for the purposes of this report these are of no value. The remaining hospitals have no midwifery wards at all at the present time. In every hospital serious complications of labour can be admitted to the gynaecological beds, where they come under the charge of the obstetric physicians; in many cases, however, the registrar actually deals with them.

In the case of hospitals with no midwifery ward, the training of students in the actual conduct of labour, normal and abnormal, is practically non-existent. In order to attend the twenty cases required by the regulations of the examining bodies the student is attached to the maternity district of his hospital; previous to this he has attended the lectures mentioned above, and in addition in some hospitals—for example, London, St. Bartholomew's, and St. George's—special demonstrations are given by the tutor or the resident obstetric officer to each batch of students before going on the district. As a rule, however, the students of hospitals with no midwifery ward have never seen women in labour before going on the district to attend them.

Every hospital has a regulation that the student is to be accompanied to the first case or the first two cases by the resident obstetric officer, but this regulation cannot in all instances be carried out, and the student not infrequently goes to his first case alone. It is assumed that he needs no assistance after the first two cases in conducting a normal labour, but he is under instructions to report at once to the resident obstetric officer any abnormal conditions he may discover. His ability to detect abnormal conditions is, however, very small from lack of training. At one hospital (Charing Cross) a trained midwife in the service of the hospital is also present at every labour, and gives the student assistance; as a rule the student conducts normal cases without any assistance, even in respect of the toilet of the infant. Abnormal conditions are frequently dealt with by the resident obstetric officer in the patient's home; practically all hospitals have a rule that serious complications, such as *ante-partum* haemorrhage or eclampsia, should be at once transferred to the hospital, where they are admitted under the supervision, usually indirect, however, of the obstetric physicians. There the student is able to take part in their management, and to see any obstetric operations which are required.

The student continues to attend his district cases during the first seven to ten days of the puerperium, under the same instructions to report any abnormal conditions which may arise regarding either the mother or the child. It must be recollected that unless he has previously attended the midwifery ward, the student has received no practical instruction whatever in the management of infants; as a rule, his work is done without any systematic supervision during the puerperium.

In some hospitals the number of cases available in the district is insufficient to allow twenty for each student; a certain number of students from these hospitals are sent to the lying-in hospitals, where they can be "signed up" for twenty cases in fourteen days (Queen Charlotte's), twenty-one days (York Road), or fourteen days (City of London). In some instances the student goes for a fortnight to the Lying-in Hospital, and then serves for a fortnight on the district of his own hospital.

The character of the training given in the lying-in hospitals is as follows: These institutions in London are primarily concerned with the training of midwives; the fees of the pupil midwives form an important source of income to the hospital, and their presence enables the trained nursing staff to be reduced to a minimum, which forms an important economy in expenditure. The regulations of the Central Midwives Board require that the cases they attend as pupils shall not be shared with others; consequently the lying-in hospitals must reserve for the training of their midwives an adequate number of deliveries per annum. Only the surplus is available for training medical students and graduates. From these conditions it

results that very few deliveries in these hospitals are actually conducted by medical students, at the most four or five each; they are, however, allowed to be present at all, which, in the case of Queen Charlotte's Hospital, may be as many as eighty a month, but they are present as spectators only. The great majority of their twenty cases are "attended" in this way. The students are in residence in the hospital, but they do not go to cases in the district at all. Where the student, after a short time at the lying-in hospital, proceeds to the district of his own hospital, he has had the advantage of frequently observing the process of labour conducted by others, and has gleaned some experience of its management. There is no provision for the instruction of medical students in normal labour at the lying-in hospitals, practically all normal labours being supervised by the resident midwives. A certain amount of instruction in abnormal labour and in the puerperium is given them by the visiting physicians. The students see a certain number of forceps deliveries, and any major obstetric operations that may take place during their attendance.

In the case of the hospitals having a midwifery ward for students the conditions require separate notice. The number of beds in these midwifery wards varies from 8 at University College Hospital to 24 in the Royal Free Hospital; the number of cases admitted per annum varies from 180 in University College Hospital to 550 to 600 in St. Thomas's; the number of cases admitted per student trained varies from 3 in St. Bartholomew's to 11 to 12 in St. Thomas's. The number of cases actually delivered by medical students in the ward is limited, in all but St. Thomas's, by the fact that, not being in residence in or near the hospital, they only attend the deliveries which occur in the daytime, except that, at St. Bartholomew's, one student is always in residence and can attend night deliveries. There is a small number of pupil midwives at these hospitals (eight to ten per annum). In the midwifery ward the students are given practical clinical demonstrations on any cases of normal or abnormal pregnancy which may be available, on the course and management of normal labour and the puerperium, on the management of infants, and on any cases of complex labour which occur during the hours of their attendance. The instruction is given in part by the visiting physicians, but mainly by the registrar or the resident officers. The period of attendance in the midwifery ward is four weeks, and the student is not permitted to begin attending cases in the district until he has conducted a certain number of deliveries in the ward and received a certain amount of practical instruction. After this he attends his district cases alone, as do the students of the other hospitals.

Maternity and Infant Welfare Centres.

These centres, where they exist, provide opportunities for instruction in the care of the nursing mother, in infant feeding, and in the general management of the infant during the first year of life. The midwifery department of a hospital ceases to be concerned with the average normal case in ten to fourteen days after delivery; the work of these centres is a continuation of the work of the obstetrician, and its utility from the point of view of preventive medicine is generally recognized as being very great. It is of the first importance that these centres should be made use of in training students in continuation of their midwifery work, yet only five hospitals—namely, Charing Cross, Royal Free, St. Mary's, St. Thomas's, and University College—have a Maternity and Infant Welfare Centre in connexion with them. Others are soon to be started.

B.—THE DEFECTS OF THE PRESENT METHODS OF TEACHING MIDWIFERY.

The systematic instruction given is, generally speaking, satisfactory, and is in the hands of the obstetric physicians. The practical instruction leaves very much to be desired, and in some respects merits emphatic condemnation. We desire, however, to acknowledge the great improvement which has followed the establishment of midwifery wards for the instruction of medical students. This change is of recent date and is at present operating in only four hospitals; but its great usefulness is apparent and will receive general acknowledgement. The case of the hospital having no midwifery ward for students is the least satisfactory;

the additional experience which may be obtained when the student also goes to a lying-in hospital for a short time is most unsatisfactory. The following considerations must be borne in mind:

1. *The Hospital without a Students' Midwifery Ward.*

The grave defects of this system may be set out as follows:

(a) Students learn to deliver women only under conditions in which surgical cleanliness is extremely difficult to secure. Under a satisfactory system the same principle should be followed as obtains in general surgery—namely, they should be taught upon the highest plane of efficiency which it is possible to attain, not upon the lowest which can be reached without unjustifiable risk to life. A not unfair analogy would be for surgeons to teach students the technique of abdominal operations under conditions where they would be deprived of adequate light, ventilation, and the means of cleanliness. Unless difficult cases occur requiring transfer to hospital, the student has no opportunity whatever of seeing women delivered under hospital conditions.

(b) Students who are taught thus, under makeshift conditions, will absorb the impression that careful and exact precautionary measures are unnecessary. The effect of such an impression upon their future work in private practice can only be disastrous, and may be related directly to the incidence of puerperal fever in the country as a whole.

(c) The practical clinical instruction which students receive in the diagnosis and conduct of normal labour is of so perfunctory a character that it may not unfairly be said that they are left to pick it up for themselves, with the sole aid of the lectures they have attended beforehand and the books they may have read. In a considerable proportion of cases the child is born before or immediately after the student's arrival, as the women like to delay sending for the "doctor" until the last moment.

(d) Unless complications occur in his district cases, he will never see the obstetric physicians dealing with labour at all; and even when patients are transferred to the hospital, the control of the obstetric physician is often indirect, and is exerted through the registrar or resident obstetric officer, who actually deal with the cases themselves after asking his advice. The student, therefore, learns extremely little of abnormal labour; he may not see a forceps delivery during his month, and in occasional instances may go up for his final examination without having seen this procedure except upon the dummy.

(e) It follows from (d) that the student learning clinical midwifery is completely out of touch with his senior teachers; he does not see them actually engaged in the work he is trying to learn, and never has the advantage of their supervision and guidance.

(f) That a student should conduct deliveries in the district is undoubtedly useful, for the single-handed conduct of cases of labour may be assumed to develop his sense of responsibility—a valuable aspect of his training as a doctor. But this should come *after* and not *before* he has been made acquainted with the nature of his task. In the case of the student of average ability, to thrust responsibility upon him before he has been taught his work will be more likely to hinder than to help him in learning.

(g) Attendance upon twenty to thirty cases of midwifery ought to afford invaluable opportunities of instruction and experience in the management of the normal puerperium, of minor disorders of the puerperium, and of infant feeding. Under the district system these opportunities are completely wasted, owing to the total lack of systematic supervision of the students when at work.

2. *The Lying-in Hospitals.*

The great defect here is that no direct provision is made for the instruction of medical students at these hospitals. They attend the practice of the hospital in order to be "signed up," but no one is responsible for teaching them. The visiting physicians pay regular visits to the lying-in wards, where they are followed by a mixed class of graduates, students, and pupil midwives, to whom they give what instruction is possible in the circumstances, upon the puerperium and the management of infants. They rarely, if ever, conduct a case of normal labour, and are seldom in the labour wards except for difficult cases which require their presence. "Waiting cases" which

present abnormal conditions are usually seen by the visiting physicians, who may demonstrate them to the students; but under the rules of the hospital the visiting physicians do not undertake any responsibility for the instruction of medical students. It has been already stated that the student does not actually deliver all the patients he is certified to have "attended." The number he actually delivers is variable and depends upon the goodwill of the resident obstetric officer and the resident midwives, either of whom may supervise his work. Instruction of students is, however, no part of their duty to the hospital, and they are under no obligation to take pains in giving it. Some students may be allowed by the resident obstetric officer to conduct a forceps delivery under supervision; but this depends entirely upon the goodwill of the resident obstetric officer himself.

3. *The Hospital with a Students' Midwifery Ward.*

This system undoubtedly marks a great advance in the training of students, but certain defects are inherent in it. Only four hospitals have such a ward in actual working; its size varies from eight to twenty-four beds. The greater number of cases admitted are normal cases. Students are attached to the ward, in all cases exclusively, for a period of four weeks. They come into close touch with the obstetric physicians, who demonstrate cases to them and give general clinical instruction on their regular visiting days. The women are delivered by the resident obstetric officer or the resident sister midwife, under both of whom the students work, and by whom they are personally instructed in the conduct of normal labour. The students are not in residence except in the case of St. Thomas's, and, as a rule, only the day-time labours are seen by them. It must be pointed out, however, that the visiting physicians take little or no part in teaching the conduct of normal labour, that the more serious cases of abnormal labour are not all seen by them, and even when conducted under their supervision they are not necessarily delivered by them.

The small size of the midwifery ward is one of its chief defects. It suffices to allow each student to conduct a small number of normal deliveries before commencing his work on the district; this number could with advantage be much increased. The more serious abnormal cases from the hospital district are sent in to the midwifery ward, so that Royal Free has a total of 530 cases, St. Bartholomew's a total of 1,500 cases, St. Thomas's a total of 1,500 to 1,600 cases, and University College a total of 1,700 to 1,800 cases per annum, from which abnormal cases are drawn. In this respect they all fall behind the largest lying-in hospital, Queen Charlotte's, which has an annual total of 3,500 to 4,000 cases delivered in the wards and on the district. It is impossible for these wards to deal with large numbers of abnormal cases, and there is no doubt that the students' opportunities of seeing difficult labour dealt with are inadequate.

The non-continuous character of the student's attendance, in all but one hospital, is a grave disadvantage. A large proportion of all deliveries occur at night, when the student is not there to see them. Complicated cases may occur at any time, and from their nature the great majority must be dealt with promptly. As a rule they cannot be left over until the hours of the student's attendance come round, and thus invaluable opportunities of instruction are lost. To tell the student all about a difficult case the day after it has been dealt with is not a satisfactory method of clinical instruction. The time the student devotes to the midwifery ward (four weeks) is quite inadequate, if his attendance is only in the day-time, and even that may be broken up by other duties.

The bulk of the practical teaching in the midwifery wards is given by the registrar and the resident obstetric officer, particularly in regard to the conduct of normal labour; whereas the student ought to be taught both normal and abnormal conditions by senior obstetric officers of greater experience and higher standing than the average registrar. The major part of the student's clinical teaching in surgery is given him by surgeons and assistant surgeons, and this is universally regarded as being necessary. It is equally necessary that he should be taught his clinical midwifery by men of similar standing. In the nature of midwifery work this would involve the presence in resident control of the midwifery ward of senior officers, who would be always available, would

personally supervise the work of the labour wards, and would themselves deal with abnormal cases at whatever hour they might arise.

C.—THE PRESENT SYSTEM: GYNAECOLOGY.

A certain small number of systematic lectures in gynaecology are given by the obstetric physicians either as a part of the course of midwifery or separately. As a rule, the student clerks for one to two months in the gynaecological department; although the regulations of the majority of the examining bodies require him to spend three months at clinical gynaecology the hospitals do not all enforce it. In some instances his gynaecological clerking is done in the same month as he attends his midwifery cases on the district. The number of gynaecological beds in the various hospitals varies from eleven at Westminster to thirty-four at London, the average being about twenty. In the wards the clerk is taught by the registrar or the resident obstetric officer to take the history of a gynaecological case, and is usually taken over the physical examination by the same officer. He follows the obstetric physician in his rounds, and is present at the operations which take place during his clerkship. His attendance in the wards may be much restricted if he is at the same time doing his midwifery cases on the district. In the wards he gets certain opportunities of making pelvic examinations under anaesthesia and of personally assisting at operations. The operations and the operation specimens are demonstrated more or less fully, according to the custom of each operator and the amount of work he may have to get through. In the case of hospitals with only ten to twenty gynaecological beds the number and variety of cases seen in a month is necessarily very limited, and is, in fact, quite inadequate as a course of clinical training.

Among gynaecological out-patients the student usually sees a large number of minor cases, and is allowed to examine a fair proportion of them. He needs close supervision and a good deal of assistance in learning to make the bi-manual examination, and in the case of a large out-patient clinic the number of cases which have to be seen precludes the out-patient physician from devoting close attention to the student. In a small clinic the number and variety of the cases seen by the student in one month is quite inadequate. As a rule the out-patient physician is assisted by the resident obstetric officer, but it is rare to find any system operating for the sifting of cases, so that those most suitable for teaching may be passed at once to the out-patient physician. Usually the resident obstetric officer sees all the old cases and the out-patient physician all the new ones irrespective of their clinical importance.

Deficiencies in Gynaecological Training.

It is in the clinical training of the students that defects are most apparent. These deficiencies can be traced mainly to two causes: (1) The very inadequate number of gynaecological beds in all the hospitals; (2) the very inadequate amount of time which the student devotes to the subject. With regard to the number of beds, it must be recollected that midwifery and gynaecology together form one-third part of the final examination, and are associated on equal terms with medicine and with surgery. The combined number of gynaecological and midwifery beds available for teaching is less than one-third of the number allotted either to medicine or to surgery. This policy of cramping the work of the obstetric physician is due partly to the failure of colleagues to realize the importance of these subjects to the medical practitioner and to the community, partly to the relatively low level of the requirements of most of the examining bodies. In both medicine and surgery the student is obliged to clerk for six months, while to clinical midwifery and gynaecology combined he does not devote more than three months at most hospitals.

D.—THE CONSEQUENCES OF DEFECTIVE TRAINING IN MIDWIFERY AND GYNAECOLOGY.

(a) The training of medical students is a matter of the first importance to the State, for efficient doctors are necessary to the maintenance of the public health. In the early years of his private practice midwifery and the minor ailments of women and infants form a large proportion of the young doctor's work, and yet these are probably the subjects in which his practical training has been most deficient.

(b) Since the great majority of students learn to conduct labour only under conditions in which surgical cleanliness cannot be enforced, they carry with them into practice the impression (perhaps subconsciously) that surgical cleanliness is not of the same importance in midwifery as in surgery. The makeshift methods with which they begin their experience tend to become stereotyped in their minds, and the effect of this upon their work in private practice must be very bad.

(c) The bearing of this point upon the incidence of death from child-bearing in the country cannot be overlooked. During the period 1891 to 1914 this death rate of childbirth for Great Britain and Ireland was almost stationary, the fall being only from 5.8 to 5.08 per 1,000 births. This can only be regarded as extremely unsatisfactory, for it shows that during a period in which surgical training made such rapid advances midwifery training made none. Indeed, in all divisions of the country except Ireland the death-rate actually rose in the quadrennium 1911-1914. The conclusion cannot be avoided that both medical students and midwives are being imperfectly trained.

(d) The student has been accustomed to pay only perfunctory attention to the puerperium, for he has been left largely to himself at this period while attending his cases on the district; he therefore cannot be expected to realize its importance from the point of view of the health and working efficiency of the mother.

(e) The average newly qualified doctor has had little or no clinical training in the management of the infant and usually leaves it entirely to the nurse. Even in the case of the well-to-do, the nurse often regards the infant as her patient, and feeds it or doses it without reference to the medical attendant. Mothers also come to think that this is the proper arrangement and to prefer the advice of the nurse. There is no doubt that many infant lives are lost owing to the fact that medical students receive insufficient clinical training in this subject.

(f) It is the personal experience of all the members of your Committee that medical practitioners do not consider it necessary to obtain the services of a specialist or of a hospital in the emergencies of midwifery to the same extent as they undoubtedly do in the case of general surgery. This is largely due to the fact that they have not, during their training, seen such cases dealt with by the senior obstetric officers in the way that they have seen serious surgical cases dealt with by surgeons. Their custom is to call in a neighbouring practitioner and to do the best they can.

(g) The lack of hospital accommodation for women in labour, and the lack of public means of transporting patients to hospital, tend to confirm the practitioner in this attitude.

(h) The close relation which subsists between bad midwifery and pelvic disease in women is well recognized. A sound practical training in the recognition and treatment of pelvic disease is as important as the midwifery training itself. Young medical practitioners are probably less able to recognize common forms of gynaecological disease than they are common forms of medical or surgical disease. The results are very serious in regard not only to the life but also to the health, working efficiency and subsequent capacity for child-bearing, of the women of the country.

(To be continued.)

THE frequent association of biliary and pancreatic lesions led Brocq and Morel (*C. R. de la Soc. de Biol.*, April 12th, 1919) to test the effect of bile and pancreatic secretion in dogs. Neither ligature nor section of the pancreatic duct produced lesions at all comparable to haemorrhagic pancreatitis. But if 2 to 5 c.cm. of bile were injected into the previously ligatured duct, positive results were obtained if the animal had fed shortly before, and negative results if the animal were in the fasting condition. Thus acute forms were produced in six cases, the animals dying within forty-eight hours, and subacute forms in eight cases in which the animals survived. The first class showed large pancreatic haematomata and numerous patches of fat necrosis, and the second sclerotic induration of the head of the pancreas, with all intermediate stages between these two extremes. The intensity of the process seemed to vary with the quantity of the bile injected, and more especially with the intensity of the stage of digestion. If in place of this good secretory activity of the pancreas secretin were injected intravenously, the same results were obtained.

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SATURDAY, AUGUST 30TH, 1919.

THE WORK OF THE PARLIAMENTARY SESSION.

THOUGH much of the work planned for the parliamentary session has gone over to the autumn, the new Parliament has already a big record of service to show. This has been made possible by the extension of the use of Grand Committee. Practically all the measures introduced in the House of Commons, with the exception of the Profiteering Bill, were referred to "a committee upstairs," and the meetings of these bodies were held not only in the morning but also in the afternoon—that is, simultaneously with the debates in the House itself. The grave drawback to the arrangement has been that it has taken interest from the main proceedings, by reducing attendance in the Chamber, and lessening representative strength. The feeling is that the change is undesirable, but that it was justified by the imperative necessity of setting the machinery of reconstruction to work.

The session stands out for the passage of six Acts of particular importance. The Ministry of Health Bill, the bill to constitute a Ministry of Transport, the Housing Bill, the Acquisition of Lands Bill, the Police Force Bill, and the Profiteering Bill all had to be taken as quickly as possible in order to meet the new conditions. In addition, the shadow of financial difficulties has loomed ominously over everything. The Budget called for much more than ordinary attention, both on account of the tremendous burden of obligations, and also because it marked, as Mr. Chamberlain said, a transition policy towards imperial preference, on lines to which the Premier committed himself in his letter to Mr. Bonar Law just before the General Election.

Everyone who has had experience of parliamentary procedure will appreciate that the need for rapid progress greatly assisted in smoothing the way of the Health Ministry Bills. Dr. Addison and Major Astor, with some aid from Sir Kingsley Wood and the law officers of the three kingdoms, dealt with the Grand Committee in a happy spirit of reasonableness and compromise, while giving no opportunity for waste of time. On report in the Commons, the same care for celerity was observed, and in the House of Lords no serious obstacle in the shape of cardinal amendments was put in the way of the scheme. Indeed, the only matter of real doubt was as to the length of the interval that must elapse before the Poor Law Administration can be detached from the Ministry of Health, and on this point Dr. Addison renewed the assurance that the Government intended to rearrange matters so soon as the departmental machinery can be adjusted. There was some concern as to the use to which the powers for action by draft order might be put, especially in reference to the creation of consultative councils, but the qualification whereby these draft orders must lie on the table of each House for thirty days, was considered to meet the case. It will be recalled, too, that the Grand Committee insisted on the immediate transfer to the Ministry of Health of those provisions for the medical treatment of school children which then rested with the Board of Education. Dr. Addison, while expressing himself as

thoroughly in sympathy with the desire to transfer these powers, pleaded that there were practical difficulties against taking this course at once; ultimately on report in the House of Commons, a satisfactory qualification was made whereby while the Ministry of Health will under the Act be made responsible, it can delegate its authority to the Board of Education.

For a time it seemed as if the Government would have a much more troublesome experience over the Ways and Communications Bill, which creates a Ministry of Transport with more or less control over railways, waterways, and roads. All sorts of local interests—some because their management was good and they feared bureaucratic mismanagement, and some for quite other reasons—were aroused, but eventually they were smoothed, and it was made clear that however directly Sir Eric Geddes, as the new Transport Minister, may exercise his individuality in the unification of railways, the principle of nationalization is not involved; that question will remain for separate decision hereafter.

The Housing Bill excited comparatively slight notice, the reason being that it was recognized to be a matter depending very largely upon administrative arrangements and local patriotism, which did not raise any great questions of principle or new policy. The local authorities are to submit schemes to the Ministry of Health, and in default the Ministry of Health can act for itself. In order to carry through what is needed, the Treasury may give a subsidy which will not exceed the amount produced by a rate of 1d. in the £ for a period of years. The town planning clauses, which give some power of control to the Ministry of Health, also met with general approval. A kindred measure that stirred more discussion was the Acquisition of Lands Bill. The trouble was in regard to the terms of purchase. On the one hand it is laid down that no compensation shall be given for compulsory acquirement, but, on the other, that the value of the land shall be reckoned on what it might be expected to realize in the open market. The Opposition urged that the value should be judged by the assessment of the property, but the Government held to the view that this would not meet the circumstances.

The problems of labour have greatly occupied Ministers, having been raised in all sorts of forms and phases, but the principal legislation in this regard has gone over to the autumn. Following on the establishment of an Industrial Council a bill has been introduced to make forty-eight hours the limit for a working week in industrial trades, excluding agriculture and a few other occupations. A bill to embody a number of the recommendations of the Sankey Commission on Coal Mines is to be brought forward in the autumn. It will be on the lines of the Duckham minority report. Nationalization will not be adopted, but there will be proposals for amalgamated working of mines by areas under Government supervision, to secure economy and efficiency in management, and the miners are to be represented on the directorates and local managing bodies. Two matters of transitional importance, indirectly affecting labour, and in a less degree other classes, were dealt with in a couple of small bills—the Aliens Restrictions Bill and the Rents Restrictions Bill—both of which with some variations, carry on war legislation for a limited period. The Aerial Navigation Bill with its regulations for aviation marks the application of a new science as part of our ordinary life.

The Pensions Bill had for its object to complete the authority of the Pensions Minister for large develop-

ments of the scheme for dealing with the casualties of war, as they will remain with us for this generation. The original estimate for pensions for the current year was for seventy-three millions sterling; supplementary estimates for eleven millions sterling brought up the total to eighty-four millions, and Mr. Lloyd George told the House of Commons the other day that we may have to reckon the cost of pensions broadly at a hundred millions a year when the maximum charges are reached. Sir L. Worthington Evans, who became Pensions Minister soon after the last general election, has done very much to give confidence in that department. He has shown real power in gearing up the stupendous new organization necessary, and while doing so much to improve its efficiency has recognized the human elements in its working, taking care to make the system capable of accommodation and adaptation. He has manifested himself anxious to meet the urgent need for treatment, either surgical or medical, while the conditions remain most favourable for such attention—appreciating the danger of delay. His attitude towards medical questions and the medical profession has been sympathetic, and he has shown an encouraging degree of appreciation of the difficulties the medical boards encounter in deciding the complicated problems presented by individual cases.

The subject upon which the Government has been and is subject to the sharpest criticism is finance, and the Government in turn has addressed the gravest possible words to the nation. A fortnight ago the Chancellor of the Exchequer told the country that we were heading straight for bankruptcy; and Mr. Lloyd George, in his speech just before Parliament rose, said that as things were going we should have an excess of eight hundred millions in imports over exports—which, of course, would represent a hopeless situation. The call for increased production to correct our position was made still more pressing by the loss to the country which this state of things produced on the exchange with the United States, where we now get in value of goods only 17s. or less for £1. The Chancellor of the Exchequer disclosed that the Government is still spending at the rate of four and a half millions a day, and the fact that the expenditure by several departments is swelled by war commitments which can only gradually be stopped does not, of course, relieve the existing situation. Drastic revision of the service estimates was promised to modify expenditure in the second half of the financial year, and Sir Auckland Geddes has since stated that at the suggestion of the Chancellor of the Exchequer a financial committee has been formed, that its chairman, the Prime Minister, is throwing himself with all his wonderful energy into the work of cutting down expenditure, and that in consequence enormous results are being achieved. An immediate action of the committee has been the reorganization of the Treasury, with the appointment of a new permanent secretary and three controllers—of establishment, of supply services, and of finance—with authority for exercising these responsible functions.

Few personal reputations have been made or materially strengthened during the session. Sir Auckland Geddes has been the resource of the Government for tackling many difficult and complex questions, and owing to the pressure of his diverse tasks, has not had a fair chance of showing to his best in the House of Commons. Sir Robert Horne, the Labour Minister, is the discovery of the session. His imperturbability has gained him the sobriquet "Hail smiling Horne." Mr. Bonar Law has done much to moderate the embarrassments of the Government by

his skill as leader of the House, and still more by the regard he has won from men of all parts for his honesty and altruism. Lord Robert Cecil in the few weeks since his return from France has won commanding attention by his statesmanlike criticisms and expositions as a private member. He holds the House whenever he rises. Sir Donald Maclean, as leader of the Independent Liberals, has won respect, and Mr. Clynes, amongst the Labour members, has shown wide vision and a great sense of responsibility; his speeches are marked by the quality of their matter as well as by their courage in dealing with the extremists of his own party.

The medical group in the House has used its opportunities well. Sir Watson Cheyne, with the help of Dr. Farquharson and others, succeeded in defeating the Dogs Bill, a measure which, under cover of a simple title, would have had a dire effect on the progress of scientific medicine. Dr. Nathan Raw did useful work on the Interdepartmental Committee on the treatment of tuberculous ex-service men. Sir William Whitla, Dr. Murray, Major Farquharson, Captain Elliott, and others also have frequently made useful contributions to the debates, quickening attention to health affairs. A special tribute is due to Dr. Addison, who had the task of getting the Ministry of Health Bill on to the statute book, and at the same time of instituting a host of administrative schemes, including those for housing, while applying himself to the regular burden of departmental work. He has, nevertheless, preserved an unruffled composure, and in passing from task to task has even suggested the Man of Leisure!

COUNTY COLONIES.

THE British race has often been credited with a special aptitude for colonization in foreign parts. It is now being called upon to exercise that faculty at home. Expert opinion as to the value of the tuberculosis colony has, during the past few years, been put to the practical test and has not been found wanting. At Springfield near Edinburgh, at Papworth in Cambridgeshire, and at Walkington near Beverley in Yorkshire, such colonies have been established, and already bid fair to be self-supporting in practice. They are peopled by colonists in the earliest and most manageable stages of tuberculosis, who are enabled to live the ideally hygienic life while occupied in remunerative work suitable for each individual case, in the midst of congenial social surroundings. The Cumberland County Council, as we announced recently, is establishing a colony on the same lines, on an estate of thirty-two acres about seven miles from Carlisle.

The Interdepartmental Committee on the provision of residential treatment for tuberculous ex-service men, as will be seen from the notice of its report published at page 275, has advised that the sanatorium, training colony, and village settlement should form one organization, or at least be closely linked together, under the control of the Ministry of Health. The Committee takes the Papworth institution under Dr. Varrier Jones as a model. There is an estate of 350 acres with a sanatorium and hospital in which men are placed on admission; the more advanced cases remain there, but a man who becomes fit to work is sent to the training colony section, where accommodation is provided in shelters in the grounds. The men are trained in carpentering, cabinet making, boot repairing, gardening, and pig and poultry keeping. After six months at the colony the men are offered

permanent employment, with housing accommodation in the village settlement. If they work at trades they are employed in the colony workshops, and receive the standard rate of wages of the district; but they may also become employed in dairy work, poultry keeping, and farm work, and work in the village shop managed by an ex-patient.

In a report by the executive of the Hull After-Care Committee the various steps by which success in the establishment of its colony at Walkington has been reached are recorded. This account of its experience may be commended to the notice of other after-care committees, who may be called upon in the near future to face and to overcome similar experiences and difficulties. Much depends upon the tact and persuasive powers of the members of these committees. A large sum of money has to be raised in the first instance, and this can be achieved only by persistent effort in representing to public bodies and private benefactors the need for combined action in the interests of the community.

By slow degrees the economic value of early treatment is becoming realized by tuberculous wage-earners, but the persuasive powers of the health visitor are often required to induce the patient to take advantage of it. The authorities of the Yorkshire colony have resolutely declined to admit or retain any but curable cases. At Papworth, where the scheme is well established, provision is made for the separate treatment of medium and even of advanced cases in closed or open-air wards. It is a healthy feature of these new colonies that inspection is freely invited. It has to be noted that in each instance, with the exception of the Cumberland Colony, it has been the munificence of individual donors that has enabled a good start to be made, but the cost of maintenance is partly covered by payments for patients sent by public bodies such as the County Councils, Pensions Boards, Insurance Committees, and others. A very large number of industries can be carried on in the colonies, often under the superintendence of ex-patients. The work might be extended indefinitely so long as funds were available to provide the necessary workshops and machinery. Little by little it is intended that these colonies shall be surrounded by villages in which the colonists may find permanent homes, there to carry on the trades they have learnt. They may thus be able to earn an independent living.

The difficult question of complete segregation during the degenerative stages of the disease has yet to be faced. There can be little hope of checking the incidence of tuberculosis so long as the distributor of bacilli is permitted to associate in family life with children and young persons. The use of the spitting-cup and the special handkerchief is no real safeguard. The patient with definite or advanced tuberculosis of the lungs ought not to be permitted to associate with young children. This, and many other important lessons with respect to the disease, are slowly but surely being instilled into the public mind by the efforts of after-care committees, and it is to be hoped that the success achieved in the instances to which we have referred may stimulate corresponding action in all the counties where the disease is prevalent.

A memorandum¹ on the whole subject was presented some time ago to the Local Government Board by Dr. J. E. Chapman, one of its medical inspectors, in which he points out that the title of "farm colony" is misleading. Only a small proportion of the patients are able to profit by agricultural training as a means

of future livelihood. Most of them revert to their former employment. Experience has shown that the chief function of farm or colony life is to guard against relapse, while the healing process is gradually arresting the disease. The few months' treatment hitherto allotted to insured and other patients has proved to be utterly inadequate to prevent relapse, except in the earliest cases. Hence it has to be recognized that nothing short of prolonged residential treatment will suffice. Dr. Chapman's memorandum contains a very full discussion of the various problems which will have to be solved, and its suggestions for building plans, with illustrations of main types, are specially worthy of note.

POST-GRADUATE TEACHING IN LONDON.

We are glad to be able to announce that the result of the vivid correspondence in our columns during the last few weeks is that the Fellowship of Medicine has resolved to continue the emergency course it instituted in London last spring. This wise decision will give time for the discussion of the more ambitious schemes for a permanent organization with a house, and perhaps a hospital, of its own, which some of our correspondents have been anxious to see set going at once. By all means let this be done if and when the means and money can be found, but let not the thing under our hand to-day be left undone. There is testimony on all sides to the success of the emergency course. It has met the needs not only of medical officers of the Dominions and of the United States of America who had time to spend in this country before going home, but also those of many medical officers holding Territorial, Special Reserve, or temporary commissions who wished to refresh their knowledge after four or five years' work in the army. We have before us the *Bulletin* of the Fellowship, giving a long list of lectures, demonstrations, and opportunities for clinical practice afforded during this week. It is intended to continue the course without interruption, and dates and details will be published in the *Bulletin* from week to week.¹ The special lectures which have been given during the course, at the house of the Royal Society of Medicine, will be resumed on September 15th. It is a good thing sometimes to hear how things strike a member of a family who has been at the other side of the world for a score of years and is paying us a visit. The essay by Sir Andrew Macphail, of Montreal, taken out of the Osler presentation volumes, and published in the first pages of this number, gives us some of the impressions of a very shrewd, very competent, and very friendly observer. He is not disposed to speak of British medicine with bated breath and whispering humbleness; its success, he says, has never failed and will not fail, even though at the moment it appears to be in abeyance because it has declined slavishly to follow some foreign fashions of the day. But like other observers from overseas, and like, indeed, ourselves—a healthy sign—he perceives the need of better provision for the education of graduates. He asserts that graduate and undergraduate teaching are one, not in their place or details, but in the conception of what medicine is and how it is to be learnt. As he says, men are no longer content to walk the hospitals; they demand a place where they can stand still or sit down to work with their own hands, and the demand does not cease because the man has become a graduate. "The graduate may profess that he has acquired the mystery, but no one believes him." We believe that Sir Andrew Macphail, had we been fortunate enough to keep him with us, would have praised the plans of the Fellowship of Medicine for its emergency course this summer, would have rejoiced at its success, and have approved its continuance. Apart from any present applications the essay

¹ Memorandum on the Share of "Colonies" (Institutions for Training and for Employment) in the Treatment of Tuberculosis. By J. E. Chapman, M.R.C.S., L.R.C.P. Reports to the Local Government Board on Public Health and Medical Subjects (New Series, No. 122). H.M. Stationery Office. 1918. Price 2s. net.

¹ Full particulars can be obtained on application to the Secretary of the Fellowship, 1, Wimpole Street, W.

may be read with enjoyment for its style, its epigrams, and its paradoxes. It has many passages of characteristic raciness, as, for instance, where of our way in science it is said, "we have mistaken facts for truth"; and again, "medicine is an art founded upon observation . . . with the human eye of the complete patient, and not of parts of him in the form of a slide under a microscope." Or again, "a medical school without research is like a ship without a compass." The lonely worker in the laboratory, who deals with truth in the abstract, is monitor of those who work publicly in the wards. The course is not in the direction to which the needle points: "the course is shaped and the compass keeps it true."

FURTHER RESEARCHES ON THE ETIOLOGY OF YELLOW FEVER.

NOGUCHI continues the account of his researches on the probable virus of yellow fever, *Leptospira icteroides*, an organism allied to the *Spirochaeta icterohaemorrhagiae*, or as he prefers to call it, *Leptospira icterohaemorrhagiae*, of infectious jaundice. In a previous series of papers, a note on which was published on July 12th, p. 48, he showed that intraperitoneal injection of blood from a yellow fever patient produced in eight out of seventy-four guinea-pigs symptoms and morbid changes resembling those of yellow fever in man; and that the blood, liver, and kidneys of these guinea-pigs yielded the *Leptospira icteroides*. In some further papers¹ he shows that in a number of guinea-pigs that did not manifest the symptoms and lesions of yellow fever after injection with blood from a yellow fever patient there was a temporary febrile reaction on the fourth or fifth day, followed in some cases by slight jaundice, but with a rapid return to the normal. Most, but not all, of these guinea-pigs, when later inoculated with an organ emulsion of a passage strain of *Leptospira icteroides*, were found to be resistant to infection, whereas control guinea-pigs inoculated with blood from malarial patients or from normal guinea-pigs died when subsequently injected with the emulsion. It therefore appears that the first series of guinea-pigs had passed through a mild or abortive infection, and had thus been immunized. Investigation of the effect of the blood serum of convalescent yellow fever patients upon *Leptospira icteroides* gave positive immunity reactions, thus rendering it highly probable that the organism is etiologically related to yellow fever. Cultures made from eleven cases of yellow fever gave *Leptospira icteroides* in three only; positive results were obtained from the heart's blood of experimentally infected animals, and these cultures also proved to be virulent to susceptible animals. The organism does not multiply in a medium in which there is no access to oxygen, and grows best in a dense solid medium when the supply of oxygen is not excessive. It multiplies by transverse fission, is 4 μ to 9 μ long and 0.2 μ wide, and is extremely delicate, unrecognizable by translucent light, though quite visible under a properly adjusted dark-field illumination. Ordinary aniline dyes stain it with difficulty, but after fixation with osmic acid the Romanowsky stains (Giemsa, Wright, Leishman) give positive results, though the beauty of the organism in dark-field illumination is never well retained even in the best stained specimens. It is a non-sporing organism with little resistance to heat, drying, putrefaction or disinfectants, and is soon destroyed in the presence of various organisms. It passes through Berkefeld filters V and N, and Noguchi's observations strongly suggest that it has a granular phase under certain conditions. Cultivations on sheep or horse serum media rapidly lose their virulence, whereas those on rabbit serum media preserve their pathogenicity. The convincing proof of the causal relation of *Leptospira icteroides* to yellow fever presents some difficulties. As already mentioned, this organism has been obtained in

blood cultures in only three cases of yellow fever, and out of more than twenty-seven cases in only three has the organism been demonstrated in the blood under the dark-field microscope, the number of organisms in these being very scanty; but some specimens of blood, although not showing any visible organisms, infected guinea-pigs. Examination of the viscera from human cases gave positive results in one only, and of the urine in none. On the other hand, demonstration of *Leptospira icteroides* in the blood and various organs of experimentally infected animals was much more satisfactorily accomplished. Another point investigated was the presence of a leptospira in wild animals in Guayaquil and its relation to *Leptospira icterohaemorrhagiae* and *Leptospira icteroides*. It was found that 67 per cent. of wild rats harboured in their kidneys a leptospira which produces in guinea-pigs symptoms and lesions identical with those due to *Leptospira icterohaemorrhagiae*. Immunity reactions showed that this leptospira isolated from the kidneys of wild rats and mice belongs to the group of *Leptospira icterohaemorrhagiae*, and not of *Leptospira icteroides*.

BACILLARY DYSENTERY.

THE Medical Research Committee has recently issued two reports on dysentery.¹ In the one on chronicity in dysentery carriers some interesting details are given. The work was carried out by Captain William Fletcher, R.A.M.C., and Miss Doris L. Mackinnon, D.Sc., at the University War Hospital, Southampton, between May, 1917, and May, 1918. One of the chief characters of persistent infections with Flexner's bacillus, they state, is intermission. The organisms are found in the stools for one or two days in succession; then there is frequently an intermission of four or five weeks, during which all the examinations are negative, but at the end of that time the bacilli appear again. This renders the detection of a Flexner carrier a matter of difficulty, and makes it almost impossible to say when a patient has ceased to be a carrier. Men who are still carriers of Flexner's bacillus more than three months after the commencement of an attack of dysentery should, they think, be employed in England for a period of six months, and at the end of that time should be sent to hospital for two weeks, where their stools should be examined at least six times. Men who have been carriers of Shiga's bacillus for more than three months are not likely to be of further use as soldiers; if they work they generally break down in a short time. It is better that they should be discharged and placed under the civil health authority. All the Shiga carriers examined by the authors suffered from chronic dysentery and mental depression, and were unfit for work. The authors point out the importance of making the examinations of dysentery convalescents in laboratories attached to the hospitals where they have been treated. They believe that it is of the greatest assistance to the laboratory worker to be able to deal directly with the patient. The other report gives an account of an investigation by the late Dr. Gettings on the dissemination of the Flexner-Y group of dysentery bacilli. Unfortunately Dr. Gettings died during the progress of the investigation. Captain S. R. Douglas undertook the task of arranging his notes and papers for publication, and has accomplished the task in a very satisfactory manner. The chief conclusions are that although the biochemical reactions with a certain small selected number of carbohydrates are, as is usually recognized, extremely useful in affording a rough means of identification of members of the coliform group of bacilli, it is futile to attempt to classify a group of very nearly related bacilli, such as the Flexner-Y group of dysentery bacilli, into definite subgroups by using an extended series of these carbohydrates such as the "secondary series" introduced by Lewis. Even the use

¹ H. Noguchi, *Journ. Exper. Med.*, Baltimore, 1919, xxx, 1-30; 87-107.

¹ Medical Research Committee Special Reports. H.M. Office, No. 29, Fletcher and Mackinnon, price 9d. net; No. 5, price 1s. net.

of maltose as a means of distinguishing the Y type of dysentery bacilli from the typical Flexner type was found to give fallacious results. It is also not feasible to divide the Flexner-Y group of dysentery bacilli by agglutination tests into a number of sharply defined subgroups, the results obtained being neither sufficiently sharp nor constant. By means of the absorption of the agglutinins from specific serums sharp and constant results were obtained, and it became possible to place strains of the Flexner-Y group in four definite subgroups. Some evidence, though it was not conclusive, was obtained that subgroup 3 was identical with that usually called the Y group of dysentery bacilli.

A PREVENTIVE THERAPY FOR CERTAIN MIGRAINES.

A PREVENTIVE therapeutic measure for certain cases of migraine has recently been described by Pagniez, Valléry-Radot, and Nast.¹ Three years ago they recorded a case of recurring giant urticaria, of alimentary origin, which they cured by advising the patient to eat a small quantity of the particular noxious article of diet an hour before a meal. They applied this principle to migraines which have for years resisted other forms of treatment. Five cases are described. One, a man aged 34, had had migrainous attacks since 10 years of age, usually twice a week. He had always had great difficulty in digesting meat and eggs. A cachet of half a gram of peptone, half an hour, or one hour, before the two chief meals every day for a fortnight was taken. He had no attacks during this period nor for six days afterwards. Then a return to the treatment controlled the attacks. They reappeared some months after cessation of peptone treatment, and were then rapidly controlled by it again. There was in this case, and also in the others, a great coincident improvement in digestive power. Two of the patients took cachets containing peptone half a gram, calcined magnesia a quarter of a gram, and powdered liquorice q.s. The writers find that in some cases of migraine the method fails entirely. At present it is unknown what are the special indications for or against it.

THE ROCKEFELLER FOUNDATION.

A REVIEW of the work of the Rockefeller Foundation in various countries during 1918 by the President, Mr. George E. Vincent, shows that its activities extended literally from China to Peru. The foundation has shown practical interest in advanced medical education in hygiene in two ways. In the first place it has by gifts for building, equipment, and maintenance, rendered possible the opening last October of the School of Hygiene and Public Health at Johns Hopkins University in Baltimore. In the second place it has, since 1915, followed the policy of granting a number of international fellowships and scholarships to students from foreign countries and American missionaries at home on leave. In 1918 there were 68 fellowships and scholarships distributed as follows: Brazilian physicians 3, Chinese graduate physicians 11, Chinese undergraduate medical students (formerly students of the Harvard Medical School of China) 10, Chinese pharmacists 3, Chinese nurses 6, medical missionaries on furlough 26, candidates under consideration for the new schools at Peking and Shanghai 9. The International Health Board has adopted a system of "study leave," by which members of its staff of medical officers, now nearly 60 in number, may, under favourable conditions of salary, pursue at the expense of the Board special courses in public health at leading American or foreign institutions. In this way the equivalent of additional graduate fellowships has been created. Provision was also made for bringing to the United States French medical men for special training in antituberculosis measures, but no appointments were

actually made in 1918. A commission for the prevention of tuberculosis, at the head of which was Dr. Livingston Farrand, opened a campaign in France in July, 1917. Although there were in existence examples of every agency effective in combating tuberculosis, they were few in number and there was no centralized organization for a combined attack on the disease. The commission, in co-operation with the Tuberculosis Bureau of the American Red Cross, set about demonstrating the value of "team play" by organizing and co-ordinating the essential agencies. In 1918 four central dispensaries and six secondary centres were opened. Nurses attached to these centres visited patients at their homes; the Red Cross provided hospital accommodation, opened sanatoriums, and supplied food and clothing. Efforts were made to establish local committees in the leading towns. At the time of the first visit twenty-one dispensaries were in existence in twenty-seven departments. By the end of the year fifty-seven new dispensaries had been opened, twenty others were in process of installation, and plans had been agreed upon for forty-nine more. Besides these dispensaries, fifteen laboratories were in course of establishment and forty new committees organized. An active propaganda was carried on throughout the country by means of "tanks," posters, lectures, demonstrations, pamphlets, postcards, exhibits, and games. The services of the press and of art were enlisted as agents in the education of the people. The Foundation has also made experiments in the control of malaria. In four towns in Arkansas measures for the extermination of anopheline mosquitos were carried out with marked success. By draining and filling pools, ditching sluggish streams, and oiling surface water the breeding of the insect was almost entirely prevented. The results were striking. In Hamburg, Arkansas, the number of visits paid by doctors to patients suffering from malaria fell from 2,312 in 1916 to 259 in 1917 and to 59 in 1918, a reduction for the period of 97.4 per cent. In four other communities the percentage of reduction varied from 95.4 to 80 per cent. In Sunflower County, Mississippi, it was believed that a malaria control of 80 per cent. was achieved. In regions where surface water cannot be dealt with "carriers" are looked for and treated. In Guatemala an epidemic of yellow fever was checked. Work for the relief and control of hookworm disease was carried out in co-operation with twelve States of the Union and with twenty-one foreign countries. In China the construction of the fifteen buildings of the Peking Union Medical College was steadily proceeded with in 1918. An account of this institution was given in the BRITISH MEDICAL JOURNAL of August 2nd, 1919. On account of the glazed green tiles used to cover the roofs the College is called by the Chinese "the Green City."

EXPERIMENTS ON ANIMALS.

In a return showing the number of experiments on living animals in England and Scotland during the year 1918, recently issued,¹ Sir George D. Thane, Chief Inspector, states that twenty-three new places, mostly laboratories connected with military hospitals or municipal establishments, were registered for experiments. Eight places were removed from the register. The total number of licensees was 701; of these 401 performed no experiments. The names of those who did and the number of experiments performed by each one are given in a table. The table is divided into two parts—(A) and (B)—for the purpose of separating experiments in which anaesthetics were used from those performed without them. The total number of experiments in (A)—without anaesthetics—is 1,557. Of these 804 were performed under licence alone; the rest were done under certificate—147 under C., 457 under B., 149 under B.+EE. Table (B) is devoted entirely to inoculations, hypodermic injections, and some few other pro-

¹ *Presse médicale*, 1919, xxvii, April 3rd, p. 172.

* H.M. Stationery Office; to be purchased through any bookseller. Price 2d. net.

ceedings without anaesthetics. It includes 76,053 experiments, of which 73,923 were performed under Certificate A., 2,117 under A.+E., 13 under A.+F. In no case was a certificate dispensing wholly with anaesthesia allowed for operative procedures more severe than subcutaneous venesection. The total number of experiments was 77,610, being 22,068 more than in 1917. The number included in Table (A) shows an increase of 223 and that in Table (B) an increase of 21,845. During the year 6,027 experiments, 137 in Table (A) and 5,890 in Table (B), were performed in the course of investigations on cancer, nearly 29,000 for Government departments and public health authorities, and over 37,000 in the preparation, testing, and standardizing of serums, vaccines, and drugs. Frequent visits, for the most part without previous notice, were paid by the inspectors to the several registered places, and a large number of experiments were witnessed. The animals were suitably lodged and well cared for, and the licensees generally were attentive to the requirements of the Act and the conditions attached to their licences. The irregularities reported were few and not serious; all occurred unknowingly, and were generally due to misunderstanding. In each case a suitable caution was given. Mr. R. F. Tobin states that in Ireland the number of licensees at the end of 1918 was 22; of these 6 performed no experiments. One new licence was issued. The number of experiments performed by 16 licensees was 313; of these, 54 were under licence alone and 259 under certificate, 232 being simple inoculations under Certificate A. In 81 cases the aim of the research was physiological, in 92 pathological and in 140 therapeutic. The inspector expresses the belief that the holders of licences obeyed the spirit as well as the letter of the Act, and that experiments have not been unnecessarily multiplied.

PLAGUE IN BANGKOK.

In the *Medical Journal of the Siamese Red Cross* for April, 1919, Dr. H. Campbell Highet, Principal Medical Officer of Health, states that the first authentic case of plague in Bangkok was discovered on December 20th, 1904. The infection was in all probability conveyed by Indian traders from Bombay. Since its introduction the disease has persisted in Bangkok. No estimate of the death rate can be made, because the majority of cases were reported only after death. Of the patients taken to hospital many were already moribund, while of those in private houses who recovered the medical officer was never informed owing to the fear of the householder that he would be prosecuted for concealment. At the hospital for infectious diseases the death rate varied from 47.3 to 83 per cent., the difference depending on the promptness with which the case was brought for treatment. Siamese and Chinese were equally affected, but no resident European has suffered from the disease. On February 15th, 1905, a public notification setting forth in detail the preventive measures required was issued by the Minister of Local Government, H.R.H. Kvon Phra Nares Voradridhi; this was urgently called for, as the populace was obstructing the medical officers, and rumours were freely spread that the doctors took people to hospital, whether sick or not, put ice on them till they died, and made medicine from their bodies. A hospital for infectious diseases was opened by the late King on December 4th, 1905. The city was divided into three districts, to each of which inspectors were appointed, who examine all suspicious cases, report to the registrar, instruct the police to see that the body is forthwith cremated, and telephone to the chief sanitary inspector, who arranges for the inoculation of contacts and the disinfection of the house. The system, though not perfect, has been the means of bringing to light a very large proportion of cases. During the year 1909-10 inoculation with Haffkine's anti-plague vaccine was introduced. All members of the medical and sanitary staff were treated, and in the following year several

hundred private persons submitted voluntarily to the procedure. Since then several thousand inoculations have been performed every year. By a further notification issued on February 16th, 1918, inoculations were made compulsory when thought necessary by the medical officer, and penalties were imposed for non-compliance. Opposition to preventive measures has not been confined to the poor and ignorant; the medical officers have repeatedly been obstructed in their work by well educated persons of high rank. Dr. Highet urges diffusion of knowledge by popular lectures and by teaching in schools, but is of opinion that this must be reinforced by prosecution of all offenders. Much difficulty is encountered from magistrates who dismiss charges on the pretext that the people are not doctors, and therefore cannot recognize plague when they see it.

MEDICAL ARRANGEMENTS IN THE AFGHAN CAMPAIGN.

A REUTER's telegram from Simla, dated August 19th, shows that, as we surmised, the medical services in India had done all that was possible with the means at disposal on the North-West Frontier. Lieutenant-General Sir Charles Burtchell, Director of Medical Services in India, who has been visiting the frontier, stated that the difficulties and consequent discomforts of rapidly improvised hospitals in the early days were great, but they were soon remedied owing to the way everyone worked; all the hospitals are now in excellent order. He placed certain statistics at the disposal of the agency which, it is said, show that the loss from sickness was unusually low considering the exceedingly trying climatic conditions. The total admissions from May 15th to August 9th were 10,882 British, and 45,774 Indian troops and followers, giving a daily admission rate on 1,000 strength of 4.98 British and 20.97 Indian. The actual number of sick on August 19th is stated to have been 2,172 British, and 7,956 Indians (10,128) out of a total of about 268,000. In view of impediments the manner in which cholera was suppressed is declared to be a triumph for medical skill and devotion to duty; 100,000 men were inoculated within a fortnight. It is further stated that the deaths from heatstroke numbered 26 British and 140 Indians; the number who died from wounds was 18 British and 44 Indians. The telegrams from the Viceroy to the Secretary of State, noted last week, showed that the impediments against which the medical services had to work might in many cases have been foreseen and prevented had the Government of India showed proper foresight.

FRENCH PENSION REGULATIONS.

CERTAIN changes have been introduced into the French war pensions system. A new decree directs that claims in respect of wounds or of disease contracted or aggravated on service shall be made to the Director of the Public Health Service of the army corps of the region. The applicant is entitled to produce medical certificates and to have the help of a doctor chosen by him. The documents which must be taken into consideration by a pensions commission include certificates from medical experts and the statement of the applicant's own doctor. The commission has the power to require the applicant to submit to a new medical examination. It determines the character of the disability, whether temporary or permanent, and makes its final decision after taking into consideration all the circumstances.

THE Kensington War Hospital Supply Dépôt did most excellent work for the military hospitals in supplying splints and other surgical and hospital requisites. They were well made, and great pains were taken to carry out the instructions of surgeons. Mr. Edward F. Slade, the honorary secretary, informs us that it is intended to continue the work of making orthopaedic and surgical appliances for the benefit of the civil hospitals. The address of the dépôt is 11, Kensington Square, W. 8.

HONOURS.

THE sixth Supplement to the *London Gazette*, dated August 22nd, contains the following list of honours and mentions of medical officers of the Royal Navy and Royal Naval Volunteer Reserve in recognition of services rendered on ships and other places in connexion with the war:

To be C.M.G.

Surgeon Commanders: John Falconer Hall, Thomas Tendron Jeans, Francis Bolster.

To be C.B.E. (Military Division).

Surgeon Captain Charles Sharman Woodwright.

To be O.B.E. (Military Division).

Surgeon Commanders: John Alexander L. Campbell, Hugh Clift, Thomas Dufour Halahan, Cecil Hugh Myddleton Hughes, William Ludgate Martin, Claude Woodham Morris, William Edwin Ormsby, Montague Louis B. Rodd, Herbert Wells B. Shewell, Paul H. Mills Star, Robert William G. Stewart, Percy Temple Sutcliffe, Arthur Richard Thomas.

Surgeon Lieutenant Commanders (acting Surgeon Commanders): William Edmund Harker, Edward John Steegmann, Robert Joseph Willan, M.V.O., Walter Kenneth Wills.

Surgeon Lieutenant Commanders: Francis Cooke Alton, James Campbell Bringan, Henry Burns, Sheldon Francis Dudley, Sidney Wilfred Grimwade, Thomas Walter Jeffery, Gerald Roche McCowen, Gerald Nunn, Horace Elliot Rose Stephens, George Gordon Vickery, Leonard Warren, David Percival D. Wilkie.

Surgeon Lieutenant (acting Surgeon Lieutenant Commander) Gordon Ernest D. Ellis.

Surgeon Lieutenants: Charles Henry F. Atkinson, Samuel Saxton Barton, Thomas Beaton, Kennett Bonson Bellwood, Owen Deane Brownfield, Roger Buddie, Philip Norman Button, Richard Stocker Carey, Walter Ernest Dixon, William A. Scholefield Duck, Frederick Bentley Eykyn, John Gerald A. Fairbank, Marmaduke Fawkes, Edward Ernest Fletcher, Thomas Evan Francis, Walton Leigh Mackinnon Goldie, Leslie Stewart Goss, Ashley Ernest Herman, Ernest Charles Holtom, John Lambert, Duncan Lorimer, Gerald Roche Lynch, Ronald Guy Lyster, Harold Corry Mann, Horace Palmer Margetts, Cyril Frederick Mayne, Albert Clifford Morson, John Ramsey Palmer, Oscar Parkes, Harold Fey Percival, Alan Harvey Richardson, Edward G. Slesinger, Reginald Eccles Smith, Edwin Lawrence Sturdee, Frederick Thompson, Llewellyn Rhys Warburton, Alfred Gregson Williams, George Edmund Wood.

Mentioned for Valuable Services.

Surgeon Lieutenant Commanders: Arthur Douglas Cowburn, Herbert Leith Murray, Charles Francis Alexander Hereford. Surgeon Lieutenants: John Campbell Hill Allan, Robert Townly Bailey, Frederick James F. Barrington, Ivor Hamilton Beattie, Thomas Charles Blackwell, Ralph St. Leger Brockman, Charles Milwyn Burrell, Hildred Carlill, Norman Clifton Carver, Hubert Chitty, Edward Alfred Cockayne, Bertram Cohen, Arthur Henry Crook, M.C., Frederick Charles Endean, Edward Fow Fisher, Edward Garlick Fisher, William Innes Gerrard, Edwin Augustus Green, Alfred Ernest W. Hird, David Andrew Imrie, John Richard Kay-Mouat, Andrew Lawrey, James Lorimer, Douglas McAlpine, Alexander James MacDiarmid, William Alexander McKerrow, Arthur Craigie McVittie, Thomas Robert Grey Melrose, Alexander Craigie Mooney, Ernest Farquhar Murray, Frank Chafen Newman, Robert Henry H. Newton, Thomas Norman, Wilfred Stephen Ollis, Edward Philip Punch, William Graeme Robertson, William Wilson Rooke, Alexander Elder Sanderson, William Octavius Sankey, Alan Lee Sutcliffe, John Cuthbertson Walker, George Edger Septimus Ward, Edward Joseph Winstanley.

FOREIGN DECORATIONS.

The following decorations have been conferred by the Allied Powers for distinguished services rendered during the course of the campaign:

Conferred by the King of the Belgians.

Ordre de la Couronne—Chevalier: Temporary Captain John R. Rees, R.A.M.C.

Conferred by the President of the French Republic.

Légion d'Honneur—Chevalier: Major George W. W. Ware, D.S.O., R.A.M.C.

Croix de Guerre avec Etoile (en Argent): Captains Robert Burgess, D.S.O., M.C., R.A.M.C.(T.F.), Peter J. Ryan, M.C., 24th Field Ambulance, R.A.M.C. Temporary Captain (acting Major) Trevor Abbott Lawder, 24th Field Ambulance, R.A.M.C.

Croix de Guerre.—Captain Joseph A. A. Pare, M.C., 11th Canadian Field Ambulance, C.A.M.C. Temporary Captain Frank P. Montgomery, M.C., R.A.M.C. Temporary Captain (acting Major) Frederick B. Winfield, R.A.M.C.

Médaille d'Honneur avec Glaives (en Vermeil).—Majors William D. O. Kelly, D.S.O., R.A.M.C., Thomas C. Ritchie, R.A.M.C. Temporary Captain Herbert T. Retallack-Moloney, R.A.M.C.

Médaille des Epidémies (d'Or).—Major-General Sir Hayward R. Whitehead, K.C.B. Lieut.-Colonel Arthur R. Aldridge, C.B., C.S.I., C.M.G., R.A.M.C. (Reserve of Officers). (*En Argent*): Temporary Captains George D. Eccles, M.C., R.A.M.C.(T.F.), David Llewellyn Williams, M.C., R.A.M.C.

Conferred by the King of the Hellenes.

Order of the Redeemer.—Officer: Colonel Edwin T. F. Birrell, C.B., C.M.G., A.M.S.

Military Cross.—2nd Class: Temporary Captain William K. McIntyre, M.C., R.A.M.C. 3rd Class: Captain Bernard E. Potter, R.A.M.C.(T.F.). Temporary Captain George P. B. Huddy, R.A.M.C.

Medal for Military Merit.—3rd Class: Colonel Edwin T. F. Birrell, C.B., C.M.G., A.M.S.

Conferred by the King of Italy.

Croce di Guerra.—Captain (acting Major) Myer Coplans, D.S.O., O.B.E., R.A.M.C.(T.F.).

Conferred by the President of the Portuguese Republic.

Military Order of Avis.—Grand Officer: Major-Generals Sir William W. Pike, K.C.M.G., D.S.O., Henry Neville Thompson, K.C.M.G., C.B., D.S.O. Commander: Major and Brevet Lieut.-Colonel Percival Davidson, C.M.G., D.S.O., R.A.M.C. Temporary Major (acting Lieut.-Colonel) Thomas B. Unwin, O.B.E., R.A.M.C. Chevalier: Captain (acting Lieut.-Colonel) George S. Parkinson, D.S.O., R.A.M.C.

Conferred by the King of Serbia.

Order of St. Sava.—3rd Class: Major Joseph Ward, C.M.G., D.S.O., R.A.M.C.(T.F.). 4th Class: Temporary Captain Richard A. Wilson, R.A.M.C.

India.

PAY OF THE TEMPORARY OFFICERS OF THE R.A.M.C.

CONSIDERABLE discontent exists among the temporary officers in the Royal Army Medical Corps in regard to pay and allowances while serving in India, and if the statement of a correspondent is correct—we have every reason to believe it is—their discontent appears to be justifiable. Temporary officers of the R.A.M.C. are now offered Rs. 550 a month, but no gratuity, if they sign on for twelve months. This sum, a correspondent points out, is Rs. 75 less than a temporary I.M.S. officer holding Indian qualifications is offered. The absurdity of such a condition of affairs is heightened when it is remembered that the average temporary R.A.M.C. officer has already served several, it may be four or five, years at considerable loss to himself and family. Many of them hold the highest qualifications obtainable in the British universities, while several are Fellows of the Royal College of Surgeons (England). No complaint is made that temporary officers in the R.A.M.C. are classed for duty with youngsters fresh from the medical schools of India, but it is manifestly unfair that the latter should be paid more for their services than the British officers who have not only served their country well for several years, but whose qualifications equal those of the topmost men in the medical profession at home.

EMPLOYMENT OF CIVILIAN MEDICAL PRACTITIONERS IN INDIA.

Fresh efforts are being made to increase the medical personnel at the disposal of the military authorities in India. An Indian Army Instruction announces that sanction is accorded to the employment of private medical practitioners who may volunteer for service. The agreement which the medical practitioner volunteering will be required to sign provides that he shall receive a temporary commission as a lieutenant in the Indian Medical Service without any claim to permanent appointment. The pay for those employed for general service is to be Rs. 550 per mensem, with free rations or money allowance in lieu. There will be a gratuity at the rate of Rs. 75 per mensem at the end of the term of employment.

THE HOUSING PROBLEM IN BOMBAY.

At a recent meeting of the Bombay Municipal Corporation a resolution was passed representing to Government the importance of dealing at a very early date with the question of housing in all its bearings and devising practical measures for increasing accommodation for the poor and middle classes in the city, including the opening up of new areas for building and of providing speedy transport. The resolution assured Government of the corporation's readiness to co-operate.

DR. GIOVANNI RIZZI, emeritus physician to the Ospedale Maggiore, Milan, in addition to £11,640 already contributed to the clinical institutes, has recently given £20,000 to the hospital.

Correspondence.

A POST-GRADUATE SCHOOL FOR LONDON.

SIR,—Not only in London, but throughout the medical schools of the British Islands, there is, I am sure, a general hope that London will rise to the present exceptional opportunity, and establish a post-graduate school worthy of itself and the empire. It will be a calamity if she does not. At the risk of appearing presumptuous, and because I have several times discussed the matter as it would affect the specialty in which I am engaged, I would suggest that not only should all the hospitals and schools in London be utilized, but that an arrangement should be made whereby those outside might also co-operate. Distances in these islands, as our Colonial and American candid friends so often remind us, are small, and the extended opportunities for experience and study would, I feel sure, add to the attractiveness of the scheme.—I am, etc.,

Glasgow, Aug. 25th.

W. S. SYME.

SIR,—It has required a great war to reveal to the profession the wealth of clinical material available for post-graduate work in London, and to show the eagerness of workers in all departments of medicine and surgery to utilize this material for the benefit of those desirous of doing post-graduate work. Now that this lesson has been learnt it is inconceivable that its import will be forgotten, and that in the future, as in the past, visitors from overseas will be allowed to "muddle through" on their own.

Organized and systematized post-graduate work has come to stay, and there are a sufficient number of enthusiasts in London to make it certain that post-graduate work in London will "carry on" whatever happens. As our transatlantic friends express it, the Fellowship of Medicine has "delivered the goods," and has undoubtedly caught on in the United States; as one of those who has been closely associated with him from the commencement, I should like to add that this gratifying result is due largely to the enthusiasm of Mr. P. Franklin.

With such an undoubted demand the work of the Fellowship of Medicine must be continued, and our great hope and expectation is that the Post-Graduate Association, by amalgamation with the Fellowship, will strengthen our hands, so as to enable London to present a united front and make the post-graduate school in London the foremost in the world.—I am, etc.,

London, W., Aug. 25th.

HERBERT J. PATERSON.

LOCAL CLINICAL LABORATORIES.

SIR,—Dr. Hugh Miller has voiced a crying need; his letter is sound and sane. During over two years' work in charge of a military laboratory in a southern county I have been asked by country general practitioners to see patients with them (in my spare time) when they have been completely puzzled. Three children (described by the doctor as almost moribund) have been saved in the past few months, my commanding officer allowing me to supply pooled serum when diagnosing cerebro-spinal fever, and type serum after differentiating the type of meningococcus. Other obscure cases have been elucidated by blood culture, blood counts, and other methods. A most interesting case was that of a little girl of 3 who had been ill for a fortnight. A blood film—the temperature, roughly recorded, guided me—showed *Plasmodium vivax*, a case of indigenous malaria.

Curiously enough, it is the country doctors who ask for my help; the town doctors—and it is a big town—seem to rely on the London commercial laboratories for a report on a specimen, an unsatisfactory proceeding and often a fatal waste of time for the patient.

Since the armistice I have tried in every possible way to get a civilian post. I have twenty years' experience as a pathologist and bacteriologist, and have been compelled to remain in the army (after four years and five months' service) under the new agreement, through fear of unemployment. A friend and sometime laboratory fellow worker, a doctor of science, was demobilized last February, and it took him four months to obtain employment, and then it was the uncongenial work of coaching D.P.H. candidates in bacteriology!

Dr. Miller suggests training clinical pathologists. For Heaven's sake give the old experienced workers, who have hopelessly lost their specialist practices through army service, a chance first!

The whole thing could be done so easily. Divide the country into areas according to population and the proportion of panel patients. Two army huts, one for the laboratory and the other adapted for living in, could be handed over by the army to the Ministry of Health; a specimen "dwelling" hut, after its show purposes elapsed, would make an excellent home for an ex-army man. The necessary supply of gas, water, electricity (if possible), and sanitary fittings would be included. The site would not matter; it should be more or less central to the area, but not necessarily near a big town. A telephone is essential, and also a small two-seated run-about car. The specialist director in charge, especially if he has been a tetanus inspector, could easily organize the rest, both laboratory and living place, from his knowledge of surplus army stores of technical and domestic appliances and materials, if he were given a free hand.

When "fixed up" he would, with the authority of the Ministry of Health, circularize the medical practitioners in his area, offering service free to panel patients at the discretion of the doctor, and to private patients at a fee to be determined (without discussion or appeal) by the doctor in attendance; the "G.P." is a good fellow and has not yet come into his own.

The specialist director's salary should be a decent living wage paid monthly to his bankers (income-tax deducted just like army pay) by the Ministry of Health, no question of "pools" being involved. The car should be supplied by the Ministry of Health (from surplus army stores) and run at the specialist's own charges. He should receive monthly the running costs based on a mileage record for visits to panel patients, any costs over that he should bear himself. Stationery, postage expenses, the assistance of one helper (for washing-up, cleaning car, etc.) not necessarily trained to begin with, should be supplied, and also a supply of prophylactic, agglutinating, and curative serums should be given. All vaccines (except prophylactic T.A.B., etc.) should be autogenous and made in the laboratory.

The appointment of specialist directors should be in the joint hands of the Ministry of Health and the Army Medical Department. Some time ago I suggested, through the "proper channels," that a liaison officer, connecting the Ministry of Health with the Army Medical Department, is desirable. My suggestion was "turned down" by command head quarters, and permission was given me to communicate direct with the Minister of Health. Dr. Miller's letter has induced me to take this method of doing so; my correspondence was also partly an appeal against the conditions of the new R.A.M.C. contract, and is open for the perusal of any one interested.

My own experience proves that only by the personal association of general practitioner, laboratory specialist, and patient can any real help be given to the one most concerned—the patient.

I have discussed this question with general practitioners, real good conscientious men, who have told me how sorry they are that they cannot, as a routine right, get the help of men like myself for their panel patients. They want it; they cannot get it.

Wassermann tests could also be done; it is only a matter of organization and proper record keeping. Record of all laboratory work and visits could easily be kept and rendered in a quarterly report to the Ministry of Health. All "red tape" should be eliminated; it is a deadly strangle-hold!

A technical paper on "Standardization of a base culture medium" is at present "hold up" because an old A.C.I. orders its submission in duplicate to the Press Bureau, defunct April 30th last! It appears that its publication will have to wait until the Army Council sees fit to amend its instruction!

We must be allowed to do our work for suffering humanity without these childish restrictions.—I am, etc.,

August 18th.

BACTERIOLOGIST.

SIR,—May I be allowed a little space in order to endorse the very excellent suggestions expressed under this head by Dr. Hugh Miller in your issue of August 16th? Much the same views were expressed in the *Lancet* of June 21st

under the heading "Clinical pathology *en détail*," and their substance consists in a plea for local clinical laboratories where the pathologist is in close co-operation with the practitioner, as opposed to the scheme outlined in the M. 25 report, where large central laboratories are to be established at teaching centres which are to cater for regions of some size and of greater remoteness.

Speaking from the standpoint of the pathologist, it is clear that the general practitioner neither pretends, nor is competent, save in rare instances, fully to draw upon the resources of clinical pathology when tackling an obscure case, for the simple reason that he cannot know either the relative or applied values of many of the various examinations—as, for example, the Wassermann test or a blood count; and again, if the pathologist is to ascertain, for example, the significance of the presence of phosphates, free renal cells, or uric acid crystals in the urine, or why in some cases of tubercle of the kidney one does not find tubercle bacilli in the urine, how is he to co-ordinate his findings with clinical data if he has none?

The "penny-in-the-slot" system of clinical pathology to which Dr. Miller refers, as, for instance, when a specimen from an obscure case is sent to a central laboratory and is examined at best by someone who knows nothing of the case, or worse, by a laboratory assistant who may be good, bad, or indifferent, is obviously imperfect however simple in conception; commercialized pathology is worst of all. It is a healthy sign that the authors of M. 25 propose to discourage this practice.

What is wanted is good local laboratories in every town of over 50,000 inhabitants, with full autonomy, but subject to Government inspection by really competent and interested inspectors, who must have a profound knowledge of modern clinical pathology and all it connotes. Some such scheme as Dr. Miller outlines would provide an outlet for the energies of the most devoted pathologist, who would be thereby permitted to abandon the conventional hermit-like existence and refresh his knowledge of clinical medicine.

On the other hand, a local laboratory wherefrom the best work is abstracted—say stool examinations and Wassermann tests—will attract no pathologist who has a vestige of self-respect, and will merely produce a myopic race of beings skilled in piece-work, such as urine testing alone. Such a prospect is too horrible to contemplate.—I am, etc.,

Eastbourne, Aug. 19th.

A. G. SHERA.

INFECTIVE CATARRHS.

SIR,—In connexion with your leading article on infective catarrhs (August 23rd, p. 244) may I be allowed to make one correction?

We never said, and do not believe, that "an acute attack is always due to infection from a preceding case," though it is obvious that there must have been infection from some one else originally. We also agree that there are many chronic carriers abroad.

But we do strongly hold that there is little or no evidence to show that the periodical exacerbations of catarrh to which such people are liable (denoting, as is generally agreed, lowered resistance) are due to cold or exposure. In any chronic infection such exacerbations, in surgical cases called "flares," are common, and cold is only one of a large number of factors influencing immunity. Dr. Millard is away, but I believe these to be his views.—I am, etc.,

Leicester, Aug. 26th.

N. I. SPRIGGS.

ETIOLOGICAL FACTORS OF TUBERCULOSIS.

SIR,—I have great sympathy with Dr. Muthu in his efforts to make as little as possible of the importance of infection in tuberculosis; nevertheless, this is an aspect of the case which must be faced. It is quite certain that, if not exposed to infection, no one would develop tuberculosis. Unfortunately, at the present time, owing to the fear of being regarded as a leper, a large number of persons suffering from infectious tubercle are constantly mixing with the rest of the community, and as they deny that they have "consumption" it is quite impossible for them to take the simple precautions which would render them harmless; and, worse still, are unable to take advantage of the only treatment which will do them good. Some of

these cases doubtless ultimately are treated as advanced cases, but by that time the damage will be done.

A few years ago I treated a man who had got into one of the London chest hospitals after suffering from severe hæmorrhage, this latter having been preceded by some years by a pleurisy. No tubercle bacilli were ever found in his sputum; during his residence in the hospital one or two of his children had died of tuberculous meningitis; the authorities of this institution were so afraid of this man being unable to find work that he was given a certificate pronouncing him free of infection. A few weeks after he left the hospital he was admitted into the Ayrshire Sanatorium with only a few pieces of sputum, but they might have been taken almost for pure cultures of the tubercle bacillus, he had also evidently suffered from tuberculous peritonitis; this man did fairly well, and was able to work hard all the time he was in the sanatorium, and when I last heard of him he was earning his living as a gardener, and finding some difficulty in keeping out of the army. He had bacilli in his sputum on discharge. I made no trouble about explaining to him that he was very infectious, but was quite harmless so long as he had a bed to himself, carried a bottle, and did not cough in people's faces, and kept his windows open.

Now it may be all very well to assume that this man had no resistance to the disease—a condition inherited by his children who died of meningitis—but the facts are against this supposition; this man must have had a good resistance or he would have long since been dead, and the more reasonable view is to suppose that he infected his children. I have known a good many persons who were well able to go on with their work who have been discovered to be tuberculous owing to their young children developing tuberculous meningitis.

I think very little good is done by disputing as to the relative importance of the seed and the soil; this will vary in every case, and it will usually be impossible to differentiate. There is no reason to suppose that tuberculosis differs from other infections as to liability to infection; there are, of course, differences of susceptibility which are inherent; there are also many causes of acquired susceptibility which are often temporary, as, for instance, the weakening of resistance following upon an attack of measles, exhibited by the frequent commencement of tuberculosis at that time and the absence of reaction to the von Pirquet test during an attack. The most potent agent in producing a suitable soil for the spread of tuberculosis is the presence of an active tuberculous focus; if this activity is allowed to continue unchecked, resistance becomes more and more reduced. As this activity can always in the first place be checked by appropriate treatment, which consists in rest, I do not think we need look further for a reason for so many patients showing a slight resistance, as this is the last thing early cases are allowed to do at the present time. Of course the so-called pre-tuberculous stage is always due to the tubercle bacillus having become active, and it really represents the stage where there are symptoms but no physical signs. In estimating resistance we must take into account the magnitude of the attacking force.

Let us hope that in the future no more victims will be sacrificed upon either the altar of infection or that of heredity; then, by preventing infection at an early date and in a reasonable way, we may, perhaps, discover how far we have erred in looking upon this as a family disease.—I am, etc.,

New Cumnock, Aug. 22nd.

EDWARD E. PREST.

NEW NAVAL RATES OF PAY.

SIR,—I have examined the JOURNAL with some interest for an expression of opinion on the new rate of naval pay, but have failed to find any.

The pay is, as a whole, a distinct improvement on past rates, but there are one or two points that seem to have been overlooked.

In the first place, there is the abolition of the right to retire at the end of four, eight, or sixteen years with a gratuity. A medical officer must now remain until the compulsory age of 50.

The foundation of specialist pay is a step in the right direction; but why abolish the charge pay for large sea-going ships? The idea of this pay was to attract men to serve in the ships at sea; the present specialist pay simply accentuates the desirability of shore employment.

The new retiring allowances need urgent consideration. At present the retiring pay of a surgeon commander is, roughly, £550 a year; the new maximum rate is £600 a

year, no matter how long the medical officer has served. Medical officers, as a rule, join the service at or about the age of 25, so that in all cases they will have to serve twenty-five years before they will be allowed to retire, a period of service which the new scale only contemplates for a captain retiring on the maximum of £900 a year. The medical officer will thus in all cases have to serve an additional five years which will not count towards his pension.

But a greater injustice is done in the case of all the present surgeon commanders who are over the age of 50. These officers have in some cases already put in thirty years' service—a period of service only contemplated for the retiring allowance of an admiral at £1,275 a year, as contrasted with a possible £600 for the medical officer.

I would suggest that in dealing with the present list of officers, the words "maximum retired pay £600" be removed from the Admiralty Order, and that the retired pay of medical officers depend on age and length of service alone. I understand that the scheme was to raise retiring allowances by 50 per cent. The medical officer at 55 should under any equitable scheme get, roughly, £775 a year, and it is a hardship that his pension is only to be increased by £50, that is, to £600 a year, at a time when the £1 is worth only 7s.—I am, etc.,

August 5th.

M.O.

RETENTION OF MEDICAL OFFICERS IN EGYPT AND THE EAST.

SIR,—I do not think the position of the medical officers in Egypt is appreciated at home. Except for one or two cases of extreme urgency and compassion, no medical officers have been demobilized from the E.E.F. since May. It is now August, and we are informed that nothing can be done for us until reliefs arrive from England. In the *BRITISH MEDICAL JOURNAL* we read that recruiting under the new scheme has been a complete failure, so the prospect of our being demobilized is apparently as far off as it was in May. In the meantime newly qualified men, many of them sent from the combatant ranks to qualify, and protected from being used in the army, are now getting posts and starting practices at home. Surely it would be equitable for these to serve for one year, at any rate, and relieve the men who are far away from homes, families, and practices out here.

Many out here have had three or four years', and even more, service; many are between 40 and 50 years of age, with responsibilities weighing heavily on them. Whether there are men on the other fronts in a similar plight I do not know. What I do know is that combatant officers of some very few months' service have been able to get home easily. I myself have had over three years' service, nearly all of which has been with a battalion at the front. I have been applied for six months ago by my local Medical Committee (now, I believe, extinct). I was sent for by name early in May by the War Office for immediate release. This is impossible, as it is with others in a similar position, because there are no reliefs available. In a circular memorandum from the D.M.S. we are informed that none of us can be sent home until reliefs arrive, and also that there is no news of reliefs at present. As far as one can see, this position can remain unaltered for an indefinite period.

There are also out here young men who qualified early in the war who are anxious, after three or four years of army work, to return in order to do a little post-graduate study before starting in life. They will already be left behind by those who were students and were recalled to qualify. This seems entirely unsatisfactory, and I think should be brought to the notice of not only the profession, but those responsible for the present situation.—I am, etc.,

August 11th.

PERMANENT TEMPORARY.

SIR,—I beg to draw attention to the position of R.A.M.C. officers serving in the East, and under contract to serve until the termination of the present emergency.

The majority of these officers now come under two headings: First, those who have been called for by the War Office, but not released owing to the present shortage of medical officers; the greater number of these are men who were in practice before the war, and are eagerly waiting release to gather together again their lost practices. The second lot are the men who qualified early in the war, young men admittedly, but who have served mainly with

front line units (divisions) where clinical work is at its minimum. These men, after release, will require to take post-graduate classes for eighteen months at least, to bring their knowledge up to the present standard demanded of doctors in practice.

The statement by the D.G.M.S. in your *JOURNAL* of July 12th, 1919, that officers under the above-mentioned contract "*will be eligible for demobilization on the statutory date of the end of the war*" (the italics are mine), does not brighten our horizon—first, because in the *JOURNAL* of July 26th you state that the response to the new voluntary scheme to serve for one year at £550 has not proved satisfactory. The lack of response is on the part of those newly qualified, as the officers in the army who are willing to remain have already signed on for the Army of Occupation. Secondly, if the response has still proved inadequate by the date of the official termination of the war, the "emergency men" can be retained under the Naval, Military, and Air Force Service Act of 1919 until April 30th, 1920, at which date demobilization of the Army of Occupation commences, and which will take another three months. Meanwhile, with the spirit of unrest prevailing in the world at large, a further emergency, such as the late Egyptian trouble, may spring up, the result being that we shall be retained. I would like you to note that, by the time you receive this, all 1914 and 1915 combatant officers and men will have been demobilized; therefore, why should the medical officers, who have gone through almost as much hardship, be retained and have to wait and see the Derby men go before them? Meanwhile, from correspondence in the *JOURNAL* lately, there seems to be a surplus of doctors at home.

At the beginning of the year you gave in the *BRITISH MEDICAL JOURNAL* the number of men in their final year as nine hundred odd. These men were protected from conscription and enabled to qualify, so that there would always be a supply of doctors mainly for military needs; therefore, why should they not be roped in now? They are required in the army now as much as when hostilities were on—namely, to release those who have served their king and country for years, and who will have to devote another one or two years of their life before they are able to launch out on their own.

For the present I sign myself,

August 12th.

PRESENT EMERGENCY.

THE POSITION OF T.F., S.R., AND TEMPORARY OFFICERS R.A.M.C. COMPARED.

SIR,—I wish to set out some points of comparison between the pay of those who joined the T.F. and S.R., R.A.M.C., after the outbreak of the war and those who joined the R.A.M.C. with temporary commissions. In paragraph 496 (a) of Royal Pay Warrant it is laid down that—

(a) Retired officers compulsorily recalled and (b) other officers specially taken into employment by reason of a national emergency shall receive while so employed the same rates of pay and allowance as officers of corresponding army rank in the same area or branch of the service.

It goes on to specify that under (b) the following may be included:

Officers of the Special Reserve of Officers and Territorial Force employed with our regular army. Ex-officers or civilians appointed military positions in the Imperial Forces.

In face of the above, during the recent national emergency civilians were appointed to the R.A.M.C. at increased rates of pay as compared with Regular, Special Reserve, and Territorial Force.

The consolidated pay of a temporary officer R.A.M.C. was 24s., the pay of a captain R.A.M.C. (T.F. or S.R.) was 15s. 6d. a day, and he received fuel allowance of 3s. 6d., making 19s.; with the British Expeditionary Force he received lodging allowance 3s. and fuel and light allowance 1s., making a total of 23s. He thus at home received 5s. a day less than the temporary officer, and with the British Expeditionary Force 1s. a day less. If evacuated to England wounded or sick, or on leave, he loses his lodging and fuel and light allowances, amounting to 4s. a day, and so thus serves while at home through wounds or sickness at 5s. a day less than a temporary officer. If in hospital he would be provided with fuel and light.

A temporary officer receives a bonus of £60 at the end of each year; the Territorial or S.R. officer receives a bonus of £96 for the first year and £48 the second year, making an average of £60 a year on four years' service—the same as a temporary officer. The Territorial or S.R. officer loses the interest on the bonus over a period of four years; if he serves for more than four years his gratuity becomes less than an average of £60 a year.

A temporary officer could at first sign on for a year conditionally, a Territorial or S.R. had from the first to sign on unconditionally. A temporary officer gets contract leave of fourteen days. The only advantage of a Territorial officer was that his income tax was assessed on his pay of 15s. 6d. (as captain), whereas a temporary officer was assessed on his consolidated pay of 24s. a day.

The pay and allowances of the Regular, Territorial Force, and Special Reserve, R.A.M.C., are the same, but the Regular is working for a pension or gratuity in addition; this works out at £125 a year or 7s. a day. He can draw it after eight years' service in the form of a gratuity (£1,000).

In the navy the same amount per annum is set aside, but in that case a surgeon can draw it after eight years or after four years—that is, he can withdraw with a gratuity of £500 after four years. If this rate—£500 after four years' full-time embodied service for each period of four years that he has served—is considered right in peace time (for either regular service), is it unreasonable to ask at least the same after four years of war time for the Territorial Force? This the Territorial Force and Special Reserve do not get, though pay of Territorial Force and Special Reserve is no more than Regulars. The temporary R.A.M.C. may be considered to get it in the form of 7s. a day extra pay (24s. instead of 17s. a day on joining), in addition to which he gets a war bonus of £60 a year.

A Territorial Force or Special Reserve officer, R.A.M.C., gets the same pay and allowances as the Regular, but no reserve pay nor increased pay in lieu thereof that the R.A.M.C.(T.C.) officer gets. His average gratuity over a period of four years is the same (£60), no increased gratuity being given him to compensate him for his smaller pay and allowances.

Junior Territorial officers who had joined before the war were in a still worse position. The above refers chiefly to those men who joined the T.F. or S.R. after the outbreak of war.—I am, etc.,

August 23rd.

CAPTAIN R.A.M.C.T.

SUPPLY OF SERUMS AND VACCINES FOR INSURANCE PATIENTS.

SIR,—Dr. Fairlie of Blyth, in his letter in your issue of August 16th, again raises the question which affects the rural dispensing panel practitioner most vitally, as to what are drugs and what are not.

How does it happen that a rural practitioner in Scotland is "warranted" by the Scottish Insurance Commission a supply of serum, and Dr. Fisher is told he must supply and pay for it like an ordinary drug? How does Dr. Smith Whitaker reconcile these two cases? The money we rural dispensing men get does not in many cases cover the actual cost of drugs, and for all our time taken up dispensing, packing and dispatching our medicines to distant country patients by all modes of conveyance, and paying for the carriage, dispensing as we do early and late (we have no regular hours like the chemist). For all this extra work and worry we get nothing; apparently our time is considered of less value than that of the chemist!

On the top of all this, we have all along it seems been expected to supply vaccines and serums. Until the case of Dr. Fisher and the Commissioners' ruling none of us dreamt of such a thing.

As things stand, does it mean that every servant girl with acne, every insured person with recurrent "colds" or chronic bronchial catarrh, or with asthma, is to have a special vaccine at our expense? Are we to take swabs of the nares and throat, collect pus, send it to the bacteriologist, and have this vaccine or serum prepared according to the result of his examination, and make the injections at set times, and pay for all out of our own pockets? If so, then the sooner every dispensing rural doctor gives notice he will no longer dispense for insured persons the better—otherwise he will become bankrupt. We are now

being asked for vaccines by servants whose mistresses have either heard of or been under this form of treatment themselves.

I trust this important matter will not be forgotten in framing new regulations, and that there will be a revision altogether of Dr. Smith Whitaker's ruling.

If serums and vaccines, according to the commissioner, are to be considered ordinary drugs, how does it come that there is no mention of them in the monthly table of drug prices issued by Insurance Committees to practitioners on the panel?—I am, etc.,

Felton, Aug. 18th.

ROBERT A. WELSH.

MEDICAL REMUNERATION.

SIR,—Will you allow me to express shortly some reasons for the undoubted dissatisfaction which at present exists in our ranks, and especially, perhaps, in our rural ranks, as to the monetary rewards of medical services?

1. A "living wage" can only be obtained by working continual overtime.
2. This continuous work, without any sure holiday, day or night, summer or winter, prevents a medical man from enjoying the amenities of life and tries his health; and
3. The work of the profession being arduous and most responsible, since it deals with the very lives of men, should be at least as well rewarded as that of any other profession, while at present, if the hours worked be compared, it is probably by far the worst.

I would suggest, then—

1. That the overtime that is necessary should be definitely allowed for in the increase of the capitation fee for National Health Insurance work which is now being sought.
2. That private fees be raised to an amount that will enable a medical man to earn a fair living, calculated on a week's work of, say, forty-four hours.
3. That all medical reports be charged at the rate usually paid for professional reports and not as mere clerical work.
4. That the shabby fees paid by all Government departments be refused, and the corresponding fees that are paid, for example, to the legal profession be demanded.

I believe that the people of this country, with their sense of justice, will support such claims if they are placed before them clearly.—I am, etc.,

August 25th.

RURAL SCOT.

NATIONAL INSURANCE AND UNALLOCATED PERSONS.

SIR,—Dr. Dewar, in his letter in your issue of August 23rd, appears to ignore the fact of the existence of a large body of the public who have had their insurance cards signed by a doctor on the panel, and after a few attendances have decided for the future to pay a doctor who is not on the panel.

A considerable proportion of my practice is made up of such patients, who do not remove their names from their panel doctor's list. Surely this is well known.—I am, etc.,

London, Aug. 23rd.

A. F. SHOYER.

SIR,—Dr. Dewar attempts to disprove the statement in my letter of July 18th, "that there are approximately 20,000 insured persons in Edinburgh who receive professional attendance and treatment from non-panel practitioners, and that this number is increasing annually," and to prove that the number is no "more than a little over 2,000 persons in all, and that is a wide margin."

In the first place, Dr. Dewar starts from a wrong assumption, and in the second from a false premiss. The assumption that the figures submitted by me were based on the number of unallocated persons is wrong. The false premiss arises when Dr. Dewar assumes that all insured persons on "doctors' lists" receive medical attendance and treatment from those doctors, and that this assumption should be accepted as a definite fact. Dr. Dewar must know that the number of insured persons on the lists of panel practitioners is no evidence of the number of those persons who receive medical treatment and attendance from non-panel practitioners, and also that the number of unallocated persons can offer no estimate.

It is well known that a large number of insured persons have been allocated to the list of panel practitioners who never desired to be so allocated, as they never intended to

apply for medical benefit, and this accounts for the decreasing number of the unallocated to which Dr. Dewar refers. It is also known that a large number placed their names on the lists of panel practitioners in ignorance, many believing that they were compelled by law to do so, while others believed they must to receive their sickness benefit.

Much more could be written on this issue, but it may suffice to state that the figures in my letter were estimated from the number of insured persons on the day-books of non-panel practitioners, and are now believed to be a conservative estimate. These numbers are represented by a percentage of the unallocated, but the greater part by those insured persons who appear on the lists of panel practitioners.—I am, etc.,

Edinburgh, July 23rd.

FREDERICK PORTER.

RECORD CARDS.

SIR,—In the event of a decision to keep records being agreed when the next general bargaining takes place between the Government and the profession, I now desire to make the following observations.

The Insurance Acts relate to workers only, and those workers may be divided into two classes, as follows: (a) Those who keep on working, but occasionally visit the practitioners' surgeries and chemists' shops; (b) those who are not working, and who are drawing upon the funds of their societies.

It is in reference to class (b) only that records should in any way be considered. The class (a) is entirely out of court with regard to records, for records of these people are not only absolutely valueless in themselves, but actually destroy the value of the class (b) records if mixed up with them.

The State can only be concerned with the causes which keep the workers from their work, and cannot in any way be concerned as to the reasons for visiting the practitioners' surgeries and chemists' shops.

In my opinion the record cards and record slips formerly in use would do very well for the purpose. I am not in any way disposed to advocate a new form of record card, which could only lead to the waste of large quantities already in stock and would cause unnecessary extravagance in paper and printing which the occasion does not in any way whatever warrant.

It is up to every man in every walk of life who has the well-being of his country at heart to do his best to put down the waste and extravagance which goes on in Government departments, examples of which are furnished to us in the newspapers every day.—I am, etc.,

ADAM FOX, L.R.C.P. and L.R.C.S. Edin.

Stalybridge, Aug. 24th.

REMUNERATION FOR 1920.

SIR,—Judging from what I have read in reports of Panel Committees, it is extraordinary to me how little they, let alone individuals, realize the seriousness of our position. With the exception of civil and municipal and other salaried servants and ourselves, all classes are getting at least 100 per cent. increases in their incomes. Why? Because money has decreased in value at least 100 per cent.? Why should there be any exceptions made to bear an unfair share of war taxation? Ask anybody—ask Mr. Bonar Law—what is the value of money to-day. The Leader of the House is reported to have said that £2,000 to-day was nothing like the equivalent of the same salary before the war. I think he said *the increase should be 250 per cent.* Therefore that panel practitioner who is looking after 8,000 (?) insured persons is not earning anything like the equivalent of what he earned before the war.

Let us drop the words "increased cost of living" (who shall define "living"?) and adopt "decreased value of money," and it will be an easier task to decide what remuneration to ask for 1920.—I am, etc.,

C. E. EVANS,

Member of London Panel Committee.

London, N., Aug. 26th.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

SIR,—It is not easy to reply to a letter such as Dr. S. J. Ross's in your issue of August 23rd, p. 254. In common

with many others, I in 1915 left wife and family and practice gladly and willingly to do my bit, and for four years in the East, in France, and at home did my best. I have been shelled, bombed, nearly torpedoed, have been dysentery-sick and louse-bitten, and I feel still that I asked for it when I volunteered, and do not grouse.

But having joined the army and held a commission—active and in the field—with pride, I do feel that I and my comrades have a right to claim such posts as medical officers to pension boards as ours.

Truly, I do now sit on one perhaps twice a month, but I find my civilian friends get their full share also.

There are two aspects of the case I would specially plead. There are men in the army who "swung the lead"—they were far rarer than the regular army would have us believe—and surely who is better suited to judge these on a board than an ex-regimental medical officer, who not only has experience of such, but also is so honestly proud of the British infantryman that he would not do him an injustice?

Again, how can a doctor judge a post-malarial or dysenteric condition who has never seen one in his life in the acute state?

Those who remained in practice during the war worked hard—though incidentally the influenza epidemic did occur in the army also—but they literally coined money. We did not.—I am, etc.,

August 24th.

1915.

MATERNITY AND INFANT WELFARE WORK.

SIR,—On returning to England, after an absence of nearly three years, like many others I see many changes. We have established a Ministry of Health to ensure and supervise the health of the people, and to organize attempts to secure it. Prevention is better—and far cheaper—than cure, and to prevent disease the Ministry is devoting much attention to maternity and infant welfare work. This is work started some years ago and carried on, under very difficult conditions, by a mere handful of devoted men and women, but it has always remained more or less influenced and even thwarted by the goodwill or otherwise of the local health authority.

At one bound it has now become a great and vital national question. Money is freely poured out to satisfy the needs of mother and child in their helplessness. The wish and the enthusiasm to help is great, but this growing popularity of the work and the ease with which we can now get money to carry it on is rapidly becoming a danger.

By education we can arrive at a clear understanding of the importance of good health; but education, as ordinarily interpreted, cannot alone build character. The spirit of self-reliance and independence, which has once again, as so often before, shown itself so strong a national characteristic in this war, is our priceless asset. At the present moment, in our zeal to do and our manifold talk of doing all that is necessary to produce health and healthy conditions, there is a great danger that by injudicious giving we may in some way destroy that vital spark, and by so doing weaken the backbone of the nation.

Let us realize this danger, and as thoughtful and earnest men and women get to understand and appreciate the tremendous scope and possibilities of the work we are at this moment furthering. For it means nothing less than the making or the marring of our nation. Let us be very sure we build on sound foundations which can carry the edifice we propose to erect. Let us, by careful thought and wisdom, so devise our scheme that it will really further the true welfare of the people, yet in no way lessen their self-reliance and independence; for these beyond all are essential; losing these we lose all. By all means let money be spent generously and ungrudgingly on this work, for wise expenditure is profoundest wisdom, and it ought to bring return even in added national income, as well as in those far more valuable "imponderables" beyond price, without which all income is Dead Sea fruit. But let us beware lest we destroy that invaluable spirit, which has not only saved us so often in history but on which literally all hope for the future depends. In casting our bread upon the waters, method and motive make all the difference whether there is ample return after many days or merely a sodden mass of waste. Let us by every means try to build up character that our children may

grow up healthier and purer men and women, and citizens who know and understand their duty and have the will to do it. It is a slow and not a showy performance; but it is sure, and nothing else is one-half so certain to repay all our labour. It is, too, of the very highest national importance.—I am, etc.,

London, S.W., Aug. 13th.

EFFIE M. D. CRAIG.

THE ASYLUM MEDICAL SERVICE.

SIR,—I am always amused when that hardy annual, "The Grievances of the Asylum A.M.O.," makes its appearance. In 1916 I accepted the post of temporary assistant medical officer in a large county asylum. I went there with the expectation of staying about a month. But as I found that the asylum estate afforded fair rough shooting, and was bordered by a small trout stream, I remained nearly three years. I therefore consider that I am in a position to give an unbiassed opinion of the advantages and disadvantages of the Asylum Assistant Medical Service. The advantages are:

An easy life.
No night work.
A month's holiday.
First-rate quarters and attendance.
Good pay and low expenses.
Plenty of spare time for the pursuit of sports or other amusements.
The impossibility of marriage.

The great disadvantage is:

That the professional work is not merely uninteresting, it is positively disgusting.

To the earnest youth who starts upon his professional career with the laudable ambition of becoming a successful physician or surgeon my advice would be, "Don't." But to the "man of forty" who has taken Cardinal Wolsey's excellent advice the life is not altogether unattractive.—I am, etc.,

August 11th.

12 BORE.

THE PASTEUR INSTITUTE OF ASSAM.

SIR,—May I ask permission to correct in your columns two slight misinterpretations with regard to work done at this Institute which have recently appeared in your columns?

I. Mixed Vaccines in Influenza.

The first is in connexion with the issue of a mixed catarrhal vaccine in influenza. In your editorial on "Influenza in India," April 5th, 1919, p. 418, the following passage occurs:

A mixed vaccine was prepared and issued from the Assam Pasteur Institute, but Major White justly observes, "it must be realized, however, that in the event of a recrudescence of the epidemic, in a form in any way comparable to the last, inoculation would be little likely to confer any appreciable benefit on India as a whole . . . the epidemic would run its course before we should have time to reach a tithe of the population."

This passage might be held to imply that the Institute had attempted wholesale immunization against influenza, which is not the case. The attempt made was to immunize the labour force of the tea industry in Assam against the secondary and fatal complications associated with the disease. This labour force is under full control, with an efficient staff of medical officers, and amenable to inoculation. The facts are as follows:

In October, 1918, the tea industry of Assam was very seriously threatened by the prevailing pandemic. The labour force on the gardens was being decimated by the disease. There was a constant and vigorous demand for radical measures. The Institute obtained daily supplies of freshly collected sputa from severe and fatal cases which occurred locally, and commenced the output of a mixed catarrhal vaccine. This vaccine contained Pfeiffer's organism, pneumococcus, *Micrococcus catarrhalis*, streptococcus and staphylococcus in primary subculture from such sputa. It was standardized by counting to a strength of 1 c.cm., equals 500 million mixed organisms. In November a first issue of 3,000 c.cm. was made with a view to an experimental test in the hands of three careful medical observers.

It was suggested that, immediately a case of influenza occurred on a garden, all contacts should receive a dose of half a cubic centimeter, not with a view to try and prevent their developing influenza, but in the hope of warding off

secondary complications—in brief, in the hope of rendering influenza in the inoculated a relatively harmless and innocuous disease, since the death-rate is essentially due to secondary complications, and not to the primary infection.

The subsequent demands for the vaccine have been very large. To date the amount issued is 239 litres, or approximately half a million doses. The practice of inoculating the whole labour force of the garden the moment that influenza appears or recrudesces in the neighbourhood is now in force in practically every tea estate in the province.

As to results, it is as yet entirely premature to speak. The use of vaccines in respiratory affections is very experimental. The use of stock vaccines is admittedly very empirical. A printed circular has been sent out asking for detailed figures, and the large numbers inoculated may afford a sufficiently large statistical basis for deductions. Of over 500 circulars sent out only 54 have so far been replied to. Later it may be possible to form some estimate as to the usefulness or otherwise of the vaccine, and to compare figures on inoculated gardens with figures for the uninoculated in the same districts at the same periods. The general tenor of the reports hitherto received goes to show that such a mixed vaccine produces a definite, but transitory, immunity to the secondary complications, and helps materially to reduce the mortality in an influenza epidemic. Some workers, unexpectedly enough, are strongly in favour of the use of such a vaccine in the actual treatment of cases.

II. Antimony in Kala-azar.

The second reference occurs in a paper in your issue of June 7th, 1919, p. 703, by Major G. C. Low, M.D., C.M., M.R.C.P., on the intravenous injection of tartar emetic in kala-azar. He quotes Archibald and Innes as follows:

In discussing the question of poisonous effects of antimony the authors cite Knowles as recording five deaths out of twenty cases of kala-azar treated by this method. No details are given as to whether these deaths were due to the antimony or not.

The details are given in my paper in the *Indian Journal of Medical Research*, 1918 (vol. v, No. 4, p. 548). Four of the deaths were in no way due to the antimony treatment. In one instance—a patient who developed oedema, dyspnoea, and cardiac failure within forty-eight hours of the fifth consecutive injection of 10 c.cm. of a 2 per cent. solution—the question was discussed as to whether death might or might not have been due to cumulative antimony poisoning, and notes were given as to the procedure of administration regarded as safe and satisfactory. The subsequent experience (fortunately of other workers, however) shows that this death also was not due to tartar emetic. Toxic symptoms due to antimony poisoning come on almost immediately after the last dose, are very marked, and usually are either recovered from or prove fatal within twenty-four hours. The case referred to was not a death from antimony poisoning.

I should, indeed, be very sorry to be cited as opposed to the treatment of kala-azar by intravenous injections of tartar emetic. I regard it as the sheet anchor of treatment of the disease. In the last two and a half years 46 cases of kala-azar have been treated at the Institute by intravenous injections of tartar emetic, supplemented in six instances by a few injections of colloid antimony. The results are as follows: Cured, 33; died, 11 (from bronchopneumonia 1, from dysentery 4, from asthenia and cardiac failure 2, from influenzal pneumonia when they were apparently recovering from kala-azar 4); absconded before completing treatment, 2. Four further cases remain under treatment and are doing well. The test for cure has been, wherever possible (26 cases), spleen puncture after treatment with negative findings and negative results on culture of the spleen juice on N.N.N. medium.

On the other hand, the administration of tartar emetic is not without risk, since there is little, if any, evidence that the body acquires tolerance to the drug; and the results and experiences of the two years have led to formulating the following rules for treatment:

1. The solution used is a 1 per cent. solution in normal saline, autoclaved for ten minutes at 110° C., and kept in a rubber-capped flask. If there be any trace of opalescence or deposit in the solution, it must not be used.
2. For an adult the initial dose is 4 c.cm. every alternate day. Cure is usually complete when 2 grams have been given in

all over a course of two and a half to three months' treatment. The maximum dose used is 11 or 12 c.cm. Early in the course of treatment the injections are given on alternate days. Later, as the patient becomes free from parasites, the tissues seem to become more susceptible to the drug; and the intervals between doses are increased. No attempt should be made to push the drug at any stage.

5. Neither albuminuria, bronchopneumonia, cancrum oris, a slight cardiac lesion, nor dysentery, are contraindications to tartar emetic treatment. But in the presence of any complication the greatest care must be exercised in dosage and watching results. In a recent case a child of 12 was in *extramis* with what was apparently the terminal dysentery of the disease for eight days. Death was expected at any moment. The tartar emetic injections were continued, however, and the patient made an unexpected and complete recovery. He has put on 12 lb. in a month, and is now the picture of health. The condition of the heart and the degree of albuminuria need constant attention.

4. Subsidiary treatment is also essential. Any helminthic infection must be cleared. Iron and ammonium citrate and tincture of nux vomica are given as a general tonic throughout. Any attack of malaria is met by the intravenous injection of quinine acid hydrobromide.

The best testimony to the efficacy of the treatment of kala-azar by intravenous injections of tartar emetic is the present state of the disease in the province. Until recently it has always been an easy matter to obtain patients for treatment and experimental observation; one had only to ask one of several medical officers of different tea estates to send cases. Now the cases on the tea gardens are almost all under treatment by intravenous tartar emetic; medical officers are unable to find untreated cases to send to Shillong; villagers from villages outside the tea gardens are unwilling to come to hospital; and the greatest difficulty is being experienced in getting cases to Shillong for the study of the etiology and mode of spread of the disease.—I am, etc.,

R. KNOWLES,

Captain I.M.S., Director.

King Edward VII Memorial Pasteur Institute,
Shillong, Assam, July 7th.

Obituary.

PROFESSOR A. G. VERNON HARCOURT, F.R.S., died on August 23rd, in his 85th year. For the greater part of his life he was identified with Oxford, and early gave himself up to chemistry, being still an undergraduate when demonstrator to Brodie, the first professor of chemistry in Oxford. Vernon Harcourt was particularly concerned with the physical side of chemistry, a department in which at that time many incompatible opinions were held. He had a considerable share in establishing knowledge in it on a sound basis, particularly by showing, when working with William Esson, that the rate of chemical change is strictly proportional to the mass of the reacting substances. Of the applications to technical matters of his wide knowledge of chemistry and great dexterity in manipulations, the two which will be most remembered are his work with regard to the testing of gas while he was one of the three metropolitan gas referees, and the assistance he gave to the special Chloroform Committee of the British Medical Association. In conjunction with Professor Dunstan and Professor A. D. Waller he undertook certain physico-chemical researches, and in the report of the Committee described methods for testing the total amount of chloroform from any source not yielding other volatile compounds of chlorine, and for the estimation of chloroform in air and in blood. He devised a chloroform regulator, and also an inhaler for practical use, which in some one or other of its modifications has been very largely employed. He also wrote an article in the same report on the proportion of the chloroform administered which is retained by the patient; he concluded that the operative part of the chloroform retained seemed to be small since only a small fraction has been breathed out when consciousness returned; he suggested that it was possible that the greater part of the chloroform retained and passing for a short time into the blood is distributed throughout the body without contributing to the anaesthetic effect, and that though chloroform is accumulating in the body, only the small part, which may not increase, held in solution at any time in the blood acts upon the brain and other nerve centres.

THOMAS TORKINGTON BLEASE, who died on June 2nd, was born at Altrincham, Cheshire, on October 4th, 1835. He was the son of Thomas Blease, L.S.A., who was born in Altrincham in 1804, and practised there until his death in 1883. Father and son were together in practice for twenty-seven years, then Dr. T. T. Blease carried on the practice for twenty-one years, when he in his turn was joined by his only son, who survives him. Thomas Torkington Blease took the diplomas of M.R.C.S. and L.S.A. in 1856, after studying at the Manchester Royal Infirmary and the Pine Street School of Medicine, and in London. He at once commenced practice in Altrincham, and in 1858 founded the Altrincham Provident Dispensary, now the Provident Dispensary and Hospital. To this institution, of the success of which he was justly proud, he gave devoted service for more than forty years, after which he was appointed to the consulting staff. He was for over forty years medical officer to the Altrincham District of the Bucklow Union and to the Great Central Railway Mutual Provident Society; on his retirement in 1903 he was the recipient of an illuminated address from the members. He also held numerous appointments with other friendly societies. He most thoroughly approved of the principle of these efforts of the working classes to help themselves, and won the esteem of the members by the way in which he never spared himself in connexion with such work. He continued to hold these appointments until the commencement of the working of the Insurance Act, of which interference with the liberty of medical men he was a strong opponent; he fortunately lived to see the success which rewarded his own and his son's determination to have nothing to do with the panel system. Until comparatively recently he enjoyed extraordinarily good health; when over 70 no amount of night work seemed to make any difference to his ability to carry on during the day, and he was able—first in association with his father, then single handed, and later in association with his son—to conduct an extensive private practice. He was a Burgess of the Altrincham Court Leet (founded in 1290), and declined the office of mayor, and also was a member of the council of the Conservative Association, and a vice-president of the Conservative Working Men's Club.

WE regret to record the death of Dr. PATRICK SHEEHAN of Carlisle on July 23rd, in his sixty-first year. He settled in Carlisle about twenty-three years ago, and rapidly obtained a large working-class practice. When the Insurance Act came into operation he went on the panel, and had the largest panel in the city of Carlisle, amounting to over 4,000. He worked hard, never spared himself, but had an unfortunate breakdown about fifteen months ago, which completely incapacitated him. A fresh seizure occurred on July 21st, and ended fatally two days later. He left a widow and twelve children, with whom much sympathy is felt in their bereavement.

DR. FREDERICK KNIGHT, who died at his residence in Swansea on August 7th, received his medical education at University College, London. He took the diploma of M.R.C.S. in 1882, and graduated M.D. Lond. in 1885. He held the posts of resident obstetric officer at University College Hospital and resident medical officer at the General Lying-in Hospital, London. After settling at Swansea he became physician-accoucheur to the Swansea Hospital, as well as lecturer on midwifery under the Swansea Supervising Authority. Dr. Knight was a member of the Swansea Division of the British Medical Association. He married in 1890, and is survived by his widow and four children.

DR. GEORGE OSBORNE HUGHES, M.R.C.S., L.R.C.P., who had been in practice at Winnipeg since 1904, died on May 11th, at the age of 49, from typhoid fever. He was the son of the Rev. William Hughes, a well known Welsh scholar; Dr. G. O. Hughes was president of the Canadian St. David's Welsh Society. He was physician to the Children's Hospital, Winnipeg, and one of the founders of the *Western Canada Medical Journal*.

MAJOR NORMAN WALTER STEVENS, R.A.M.C., died of enteric fever in the Colaba Military Hospital, Bombay, on July 27th, aged 31. He was the second son of Mr. W. G. Stevens, solicitor, of Norwich, and was educated at

Edinburgh University, where he graduated M.B. and Ch.B. in 1910. He entered the R.A.M.C. as lieutenant on July 26th, 1912, was promoted captain on March 30th, 1915, and brevet major on June 3rd, 1917.

MAJOR HERBERT LONGMORE GRANT CHEVERS, R.A.M.C. (ret.), died at the Military Hospital, Southmead, Bristol, on August 10th, aged 59. He was the third son of the late Deputy Surgeon-General Norman Chevers, I.M.S., and was born on March 16th, 1860. He was educated at St. Thomas's Hospital, took the Edinburgh double qualification in 1884, and entered the R.A.M.C. as surgeon on August 1st, 1885, retiring with a gratuity on May 26th, 1897. He rejoined for duty in the South African war, and was promoted to major on October 18th, 1902, and again rejoined for duty in the late war on August 9th, 1914.

CAPTAIN JAMES CHRISTIAN SIMPSON, R.A.M.C.(T.F.), died at Cambridge on June 27th. He was the son of the late Rev. James Simpson, LL.D., of Dysart, Fife, and of Edinburgh, and was educated at Edinburgh University, where he graduated M.B. and C.M. in 1887, and M.D., with honours, in 1895, and also took the M.A. at Cambridge (Caius College) in 1905. After filling the post of senior resident surgeon and assistant to the professor of clinical surgery in the Royal Infirmary, Edinburgh, of extra assistant physician to the Royal Asylum, Edinburgh, and of medical officer of health of Fettercairn, he settled at Cambridge. He held a commission in the R.A.M.C.(T.F.) as captain in the 1st Eastern General Hospital (Cambridge), dated March 22nd, 1915.

CAPTAIN JAMES WILSON BURTON, R.A.M.C., died of gastritis at Rawal Pindi on July 5th, aged 28. He was educated at Glasgow University, where he graduated M.B. and Ch.B. in 1912. He took a commission as lieutenant in the Territorials, in the 2nd Lowland Field Ambulance, on October 12th, 1914, and subsequently transferred to the regular army, becoming captain on April 12th, 1918.

SURGEON COMMANDER SAMUEL HENRY VICKERY, R.N., died of pneumonia at the Royal Naval Hospital, Invergordon, on July 25th. He was the eldest son of Dr. G. Vickery, of Kinsale, County Cork, and was educated at Trinity College, Dublin, where he graduated M.B., B.Ch., and B.A.O. in 1903. He afterwards entered the navy as surgeon, was promoted to staff surgeon on November 21st, 1912, and recently to surgeon commander. He was borne on the books of H.M.S. *Thalia*, storage hulk in Cromarty Firth, for medical charge of Dunskeith Naval Dépôt and of the Royal Marine garrison at Cromarty.

LIEUTENANT GORDON ALLISON, 3rd King George's Own Gurkha Rifles, elder son of Dr. T. M. Allison, of New-castle-on-Tyne, was killed in action at Fort Sandeman, Indian Frontier, on June 8th, aged 20.

LIEUTENANT DONALD ALEXANDER FOWLER, R.A.F., son of the late Lieut.-Colonel B. W. Fowler, R.A.M.C., was accidentally killed flying at Winchester, June 26th, aged 24.

THE LATE PROFESSOR GREENFIELD.

J. H. F. writes: I remember very vividly Professor Greenfield's first visit to Edinburgh Royal Infirmary to assume duty as one of the professors of clinical medicine. It fell to my lot as the resident in charge of his wards to introduce him to his patients. It was an ordeal which has left an indelible impression on my memory. Every patient was examined with care and thoroughness, but there was one case in particular which engaged his attention and aroused his enthusiasm. His colleagues had failed to diagnose it correctly. The moment he came up to the bedside he exclaimed, "Here is a case of myxoedema," and forthwith proceeded to give me a clinical lecture on the case which lasted fully three-quarters of an hour!

He took more than ordinary interest in his hospital patients. He had only been a few weeks in Edinburgh when he astonished me by appearing in his female ward at two o'clock in the morning. He had been anxious on the previous evening about a young girl, aged 15 years, who was suffering from cerebral rheumatism with hyperpyrexia, and had left instructions that he was to be kept informed of her progress during the night. Her temperature had risen to 108° F. at midnight, and, as all our other resources had been tried, I decided to put her at once into a cold bath. The result was satisfactory. The patient's life was saved, and her recovery was rapid and complete. I shall never forget the professor's joy over her recovery.

Universities and Colleges.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE following candidates have been approved at the examination indicated:

FINAL FELLOWSHIP.—Captain W. H. W. C. Carden, Captain J. V. Cope, Captain J. A. Fretton.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examinations indicated:

FINAL PROFESSIONAL.—M. Barden, B. A. Cowan, J. Cockburn, T. Coffey, R. S. Conyngham, J. F. Gallagher, D. Hegarty, A. F. Mallon, J. P. Morgan, B. T. McMahon, J. McAleer, M. J. O'Connor, F. G. Phillips, J. Power, J. Pousner, A. T. Rhatigan, T. K. Reddin, W. E. Shipsey.
D.P.H.—Captain P. Ashe, Captain G. Collins, Mr. I. B. Culbane, Captain E. W. Lynch, Captain J. D. MacCormack, M.C., Captain S. D. G. McEntire, Captain C. C. McCreedy, Captain L. M. Rowlette, D.S.O., M.C., Major J. R. Bibby.

SOCIETY OF APOTHECARIES OF LONDON.

THE following candidates have been approved in the subjects indicated:

SURGERY.—*J. F. E. Burns, *†D. G. Cossham, †W. D. McRae, *†H. H. Selim.
MEDICINE.—*E. V. Briscoe, †O. H. Brown, †J. F. E. Burns, *†D. G. Cossham, *†F. I. G. Edwards, *†C. W. Lakin, H. M. Partridge.
FORENSIC MEDICINE.—D. G. Cossham, J. H. C. Eglinton, G. ap V. Jones, W. D. McRae, H. M. Partridge, G. K. Reeves.
MIDWIFERY.—C. C. Bennett, E. V. Briscoe, D. G. Cossham, F. C. M. Gabites, H. M. Partridge.

* Section I. † Section II.

The diploma of the Society has been granted to Messrs. J. F. E. Burns, D. G. Cossham, F. C. M. Gabites, C. W. Lakin, W. D. McRae, and H. H. Selim.

The Services.

WAR EMERGENCY FUND OF THE ROYAL MEDICAL BENEVOLENT FUND.

AT the last meeting of the committee of this fund, when Sir Alfred Pearce Gould, K.C.V.O., was in the chair, applications for assistance were received, and grants amounting to £1,250 were made to seven applicants. The committee are prepared to receive applications for assistance from demobilized officers of the R.A.M.C.(T.) and Special Reserve. All communications should be addressed to the Honorary Secretary, 11, Chandos Street, Cavendish Square, W.1.

Medical News.

MME. CURIE has returned to her native city of Warsaw to become Professor of Radiology in its university.

DR. ANTHONY RICHARD NELIGAN, physician to the British Legation at Teheran, has been appointed to the Persian Government Hospital, with instructions to re-organize it on modern lines. Till lately the hospital was under German management.

DR. JOHN GRAHAM, who graduated M.B., B.Ch. Glasg. in 1904, has been appointed professor of anatomy in the Anderson College of Medicine, Glasgow, in succession to the late Dr. A. M. Buchanan.

SIR HAROLD STILES has been appointed consulting surgeon to the Chalmers Hospital, Edinburgh, and Mr. Lewis Beesley, assistant surgeon, has succeeded to the post of acting surgeon. Dr. F. W. N. Haultain has been appointed gynaecologist to the hospital.

DR. EVAN JONES (Llanbyther) and Dr. J. H. WILLIAMS (Burry Port) have been appointed to the Commission of the Peace for Carmarthenshire. Dr. Williams is a county councillor and has contested the seat for East Carmarthen as a labour candidate at two parliamentary elections.

THE Board of Trade notifies that in accordance with the provisions of Article 295 of the Peace Treaty, which requires all the parties to the Treaty to adopt the International Opium Convention, the importation of opium and cocaine, except under Home Office licence, remains prohibited.

A THREE months' course of lectures and demonstrations in hospital administration will be given by the medical superintendent, Dr. R. M. Bruce, at the Western Hospital, Seagrave Road, Fulham, on Tuesdays and Fridays at 5 p.m., beginning on September 30th. The fee for the course is £3 3s. Further particulars can be obtained on application to the Clerk, Metropolitan Asylums Board, Embankment, E.C.4.

THE Cream Order, 1918, which was suspended on April 12th, will come into force again on September 1st. Applications for cream for children under 5, and for invalids, accompanied by a doctor's certificate, can be made to the local Food Committee.

WE have received from Messrs. Oliver and Boyd, Tweeddale Court, Edinburgh, a copy of a new edition of their tabular view of income tax provisions, revised to include the changes made in the 1919 Budget. It is a brief but very comprehensive statement, and embodies particulars and tables which will greatly help the inexperienced in calculating the rates. The price is 1s. net and 1s. 2d. post free.

THE Society for the Study of Inebriety will hold a conference at the house of the Medical Society of London on October 14th. A breakfast will be given by the National Temperance League, and at 10.30 a.m. the President of the Society, Sir Alfred Pearce Gould, K.C.V.O., will deliver an introductory address. A discussion will then be opened by Lord D'Abernon on the scientific basis of drink control. In the afternoon Sir Thomas Whittaker, M.P., will open a discussion on alcohol in relation to recreation and refreshment and the public house. The Norman Kerr Lecture will be delivered at 5.30 p.m., in the Robert Barnes Hall of the Royal Society of Medicine, by Mrs. Mary Scharlieb, C.B.E., M.D., on the relation of alcohol and alcoholism to maternity and child welfare. Members and associates can introduce visitors on forwarding their names to the honorary secretary, Dr. T. N. Kelynack, 139, Harley Street, W. 1.

THE twelfth annual report of the Midhurst Sanatorium contains some interesting information with respect to some of the special work that has been done. Much benefit has resulted from regular dental inspection and treatment; only a comparatively small percentage of the cases of disorder of the throat were found to present evidence of tuberculous disease. In the course of his report upon statistical research, Dr. Noel Bardswell records the institution of a satisfactory card-index system and calls attention to the success already achieved in tracing the after-history of discharged patients. The number lost sight of does not quite amount to 2 per cent. Many former patients of the sanatorium were able to take their part in the war, serving in all the different campaigns. Distinction is made in classifying patients between those with bacilli in the sputum and those without. The steady disappearance of the bacillus in any given case would seem to justify a hopeful prognosis. When definite improvement is taking place, the microbe is generally absent after the first twelve weeks. If still present, a second period of three months is usually needed. Tuberculin was not used for two years, and a comparison of results is therefore possible between this period and the preceding years in which it was employed in treatment. The general outcome of the comparison is negative, as the returns show no marked difference in the average of success and failure.

THE report of Dr. F. S. D. Hogg, Medical Superintendent of the Dalrymple House, maintained by the Homes for Inebriates Association, at Rickmansworth, contains a summary of 1,331 cases discharged since the institution was opened in 1883. The average length of the period under treatment was five and a half months, and 156 patients were readmitted. The results in cases discharged during the last sixteen years expressed in percentages are as follows: 41.4 per cent. were doing well; 7.5 per cent. were improved; 10.8 per cent. were not improved; and 32.6 per cent. were dead, or could not be traced. Speaking from experience of a thousand consecutive discharges, he states that, as a rule, the longer the residence in the retreat the better the average of good results. He strongly advises that a patient who makes up his mind to enter a home at all should enter under the Inebriates Act. The request for admission, which may extend to any period not to exceed two years, may be made in the presence of a stipendiary magistrate or before a justice of the peace. A statutory declaration must be made before a justice of the peace or a commissioner of oaths by two persons of either sex. All this can be done at the time of admission if desired. The majority of persons, however, prefer to enter as private patients. Thus last year of thirty-eight admitted only five entered under the Inebriates Act. Private patients can leave at any time, but they are apt to be too optimistic about their recovery. In treatment the chief aim is to restore the patient to a sound physical condition, to cultivate his self-control, to strengthen his will, and to make him realize that part of his cure lies in his own hands, total abstinence from alcohol, or from drugs if he is a drug taker, being absolutely essential. The ages of the majority of cases admitted since the home was opened was 30 to 50.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL and unless the contrary be stated.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology*, Westrand, London; telephone, 2631, Gerrard.

2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate*, Westrand, London; telephone, 2630, Gerrard.

3. MEDICAL SECRETARY, *Medisecra*, Westrand, London; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

GOLF IN PREGNANCY.

"L. G." asks: Is golf playing, with regard especially to the club swinging movements, injurious to a pregnant woman at any stage of the pregnancy?

TENNIS ELBOW.

"S."—The case described appears to be an instance of "tennis elbow," a not uncommon condition. Long-continued abstention from the movement which started the trouble and massage (not movement) with iodox and methyl salicylate and the wearing of a restraining crêpe bandage offer the best hope of cure.

INCOME TAX.

"F. S. K." is a medical woman attached to the R.A.M.C. Is she entitled to pay income tax at the special "service" rate?

* * We fear it is not possible to give a definite answer without further particulars as to the nature of the work performed, the precise appointment, to what extent our correspondent is subject to military discipline, and the fund from which her remuneration is paid.

ESTIMATION OF HYDROGEN-ION CONCENTRATION.

"C. J. Y." asks for references to recent methods of estimating hydrogen-ion concentration of the blood and other biochemical methods.

* * We referred this question to Dr. J. S. Haldane, F.R.S., who has been good enough to reply as follows: "Unfortunately there is no existing textbook giving up-to-date information as to methods of determining hydrogen ion concentration in the blood, and as I am away from home I cannot give exact references to recent papers. The most important are those of Hasselbalch of Copenhagen in the *Biochemische Zeitschrift* from 1912 onwards. A very important one is in vol. xlv, p. 416 (containing references to previous work). The papers of Peters and of Parsons in the *Journal of Physiology*, from about 1914 onwards, are also very important as regards methods. A paper by Kellas, Kennaway, and myself in the forthcoming number of the *Journal of Physiology* deals with some general aspects of hydrogen-ion regulation. Unfortunately the methods for hydrogen-ion concentration in blood are still in certain respects a subject of acute controversy." In Cole's *Practical Physiological Chemistry* (Cambridge: W. Heffer and Sons, 1919, price 15s.) there is a general discussion of the subject of the concentration of hydrogen-ions, and a method is given for its determination in the urine. A review of the book is published at page 274.

LETTERS, NOTES, ETC.

THE WAR—PARTNERSHIP ADJUSTMENTS.

WE have on several occasions been consulted with regard to an equitable adjustment between two partners when one has been absent on military service. The basis of adjustment which seems to be fair, and is known to have been put into operation with success, is to treat the army pay, etc., as a profit of the practice. The chief difficulties of this method are (1) to decide whether the gratuity should be included (it is believed that the tendency in general is to exclude it), and (2) to make a reasonable adjustment for the fact that the absent partner ceases to incur car expenses for the purpose of the practice. Probably the best method of getting round the last mentioned difficulty is to treat the acting partner's car expenses as expenses of the practice during the absence of the other partner. The following calculation, based on

hypothetical figures has been made, and may serve to make the suggested arrangement clear. Two partners are assumed, of whom A. is entitled to three-fifths and B. to two-fifths.

Practice profits...	...	...	£1,500	
Less A.'s car expenses ...	...	...	400	= £1,100
B.'s military pay ...	...	...	500	
Total ...	...	...	£1,600	

In the following the gratuity is taken at £60, the actual annual amount for a temporary officer R.A.M.C., and the average received by a Territorial M.O. who served four years. If the period served by a Territorial M.O. is longer or shorter a correction must be made, as the gratuity in the first year is £96 2s., and in later years half that amount.

Division of Total.	Excluding Gratuity.	Including Gratuity.
Total profits ...	£1,600	£1,660
of which three-fifths = ...	960	996
two-fifths = ...	640	664
B. already had ...	500	560
He should take from civil profits ...	140	104
And A. should take from civil profits ...	960	996

Each partner would pay income tax on the basis of the final allocation. B. has, of course, already paid on his military emoluments.

THE LATE PROFESSOR HAECKEL.

DR. W. W. HARDWICKE (London) writes: In the obituary of the late Professor Haeckel, in the *BRITISH MEDICAL JOURNAL* of August 16th, the writer says: "His teaching reached the extreme of materialism." But Haeckel was not a materialist and did not teach materialism; on the contrary, he was opposed to it. Because he upheld a belief in the monistic theory of the universe, and declared the existence of a dualistic, immaterial, or spiritual world, outside and apart from the cosmos, unproven and superstitious, does not make him a materialistic teacher. He was careful to demonstrate the folly of holding such a belief, as will be seen on reference to his *Riddle of the Universe*. On page 21 is the following:

The different ideas of monism and materialism . . . are still very frequently confused. (1) Pure monism is identified neither with the theoretical materialism that denies the existence of spirit, and dissolves the world into a heap of dead atoms, nor with the theoretical spiritualism which rejects the notion of matter, and considers the world to be a specially arranged group of energies, or immaterial natural forces. (2) On the contrary, we hold with Goethe that matter cannot exist and be operative without spirit, nor spirit without matter. We adhere firmly to the pure, unequivocal monism of Spinoza: Matter, or infinitely extended substance, and spirit (or energy), or sensitive and thinking substance, are the two fundamental attributes or principal properties of the all-embracing divine essence of the world, the universal substance.

A materialist does not believe in a soul, but at page 139 Haeckel says:

"In the act of procreation a portion is detached from both the (immaterial) souls of the parents; the maternal contribution passes in the ovum, the paternal in the sperm; when these two germinal cells coalesce, the two psychic fragments that accompany them also combine to form a new (immaterial) soul."

DR. MERCIER'S SPIRIT EXPERIENCES.

WE are so convinced of the serious purpose of all Dr. Mercier's writings, and of the sobriety of his judgement, that we have been a little perplexed to know how to deal with one of his latest works. We are relieved, therefore, to be able to present to our readers the following notice by Dr. A. Skelton. The literary style seems somehow familiar.

"Is Saul also among the prophets? Dr. Mercier commences his little book on *Spirit Experiences*¹ by a brave recantation of his former scepticism and frigid rationalism. He has at length learned the wisdom of Hamlet (was it not?) that there is more in heaven and earth than is dreamt of in plain matter-of-fact philosophy. That stubborn attitude of mind so familiar to those who have to deal with religious controversy, that declines to believe in what is beyond the confines of, though not antagonistic to, human reason, that sees nothing in music but a conglomeration of sounds, is perhaps the outcome of the scientific spirit which dominates our age, but is not on that account wholly commendable. Though we may not be able fully to share the enthusiasm of Dr. Mercier for his new pursuit, merely, for one thing, because we have not ourselves had his wonderful revelations, yet we can admire that ever-young intellect of his which refuses to be strait-jacketed by the incomplete experience of the past. Not long ago, it will be remembered, he produced a book called *Spiritualism and Sir Oliver Lodge*, in which, in his gay, and (shall we say?) juvenile style, he belaboured those who were minded to give serious consideration to the phenomena of spiritualism; he made no bones about it, if one may use so vulgar an expression. *The Times* reviewer of that book, by wisely pointing out that objectors ought to study the subject as closely and carefully as the devotees, for, otherwise, they necessarily came into court convicted in advance of the sin of amateur criticism, is

¹ *Spirit Experiences*. By Charles A. Mercier, M.D., F.R.C.P., F.R.C.S. London: Watts and Co. 1919. (Cr. 8vo, pp. 54. 9d. net.)

entitled to the credit of arresting Dr. Mercier's formerly thoughtless opposition. Now, having studied the subject closely in view of his more recent personal experience, he is convinced of the error of his ways. His first experiments, which are carefully recorded, and which met with marked success, dealt with thought transference of an elementary nature, and were conducted with the assistance of youthful and artless agents and percipients in whom there was no guile. More elaborate experiments followed, and the results were sufficient to confirm his psychological belief in the existence of telepathy as a veridical fact. He points out that a psychological belief is just as good as a scientific belief when one has to meet the rather cheap criticism of trickery and collusion. Several interesting examples, which are subjected to rather searching examination before being finally accepted, are given of the occult powers of the young mediums (or should it be media?). Thereafter, in order to broaden the foundations of his faith, Dr. Mercier had recourse to more highly gifted professional mediums. In former days he himself would have made the sardonic observation, "*facilis descensus Averno*" (or *Averno*, as some authorities have it). It would be unfair to give away, in a review, the experiences he had, though one must hasten to add that they are not of a nature to bring the blush to the cheek of the most modest. We may be allowed, however, to call special attention to the account of the séances in which he converses with the spirit of his old fellow student Hodgkins, passages that are characterized by reverent treatment not unenlivened by delicate touches of humour. We are not of those who are repelled from investigation of the claims of spiritualism by the light tone alleged to be adopted by some of the spirits of those who have passed over, nor by what superior people are pleased to condemn as puerilities, and in this we are glad to have Dr. Mercier's valuable support. Altogether this little book, the price of which is within the reach of all, can be recommended, for it contains much that "gives us furiously to think," as our French friends say, and is written by one whom few could accuse of impetuous and uncritical credulity.

CHILDREN'S DREAMS.

THE results of an investigation of the dreams of more than 5,000 children in elementary, secondary, and industrial schools were brought before the Child-Study Society by Mr. C. W. Kimmins, M.A., D.Sc., some time ago. His analysis, based on written records, of the dreams of boys and girls, to the number of over 5,000, showed that boys had far more fear dreams than girls. Fear of burglars and robbers appeared twice as often among the dreams of boys of the elementary schools as it did among those of the girls. Fear of animals was practically the same in both sexes, and was the cause of some 20 per cent. of the fear dreams. The ghost had practically disappeared from the child's dream. Boys had more kinaesthetic dreams than girls, these dreams including the sensation of falling or excessive motion and loss of muscular control in movement or speech. Although the normal child was associated with the school for half his waking hours, few dreams had any direct reference to school activities. Girls' dreams were more influenced by the school than boys', but the number was almost negligible. A book read just before going to bed affected the dreamer, and the child nearly always played the part of one of the leading characters. The industrial school child was a most ambitious and imaginative dreamer, and the dreams showed a large proportion of wish elements, relating to home life, visits, and parcels. The Food Controller appeared to have had little effect upon children's dreams, for the subject of rations was only mentioned four times in the 5,000 cases. Children of 12 or 13 dreamed less than younger and older children, and dreams at that age appeared to have a morbid tendency.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 31, 32, 35, 36, 37, 38, and 39 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 33, 34, and 35.

THE following appointments of certifying factory surgeons are vacant: Killough (Down), Luddenden (Yorks, West Riding).

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NOTE.—It is against the rules of the Post Office to receive *postes restantes* letters addressed either in initials or numbers.

THE
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THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

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THE PROFESSION OF MEDICINE.

THE present issue of the *BRITISH MEDICAL JOURNAL* is mainly intended for the guidance of two classes—those who need information as to the course which must be followed in order to become a legally qualified practitioner of medicine, and those who, having obtained a qualification to practise, are doubtful as to what particular part in medicine they should choose as a career.

In the United Kingdom the conditions with which those who desire to enter the medical profession must comply are regulated by a statutory body, the General Medical Council, and a statement of its requirements will be found on page 299. The examination of candidates as to their fitness to practise medicine is left to the universities and to certain corporations in England, Scotland, and Ireland. But the Council takes steps to ensure that the tests imposed do not fall below a certain standard, and that the persons examined have undergone certain definite courses of instruction at a recognized medical school. Successful candidates at such examinations eventually receive from the body holding them either degrees, in the case of the universities, or diplomas or licences, in the case of the corporations, entitling them to claim insertion of their names in the *Medical Register* kept by the General Medical Council. In former days the holders of diplomas and licences made up the great majority of all medical men, especially in England and Wales, but universities have greatly multiplied, and so many practitioners now hold degrees that, in almost all cases, the wisest plan for a student at the outset of his career is to aim at a university degree in medicine, though it may be desirable to take also a diploma or licence.

Beyond the qualifications on the strength of which the General Medical Council admits to the *Medical Register*, most of the examining bodies bestow on candidates who have passed further tests such higher titles as "Fellow" and "Doctor of Medicine." It may be said that as a rule they are worth obtaining, though the difficulty of doing so, and the added professional status they confer, vary considerably. There are also diplomas in special branches of work, such as public health and tropical medicine, which are superfluous for most practitioners, but either useful or indispensable for those who wish to specialize in these subjects.

With regard to the question of cost, the expenditure involved in completing a medical curriculum varies so much that no single precise statement can well be made. Apart from differences in the charges made

by medical schools for instruction, there are differences in the fees for examination, as well as in those payable for the certificates of qualification given to successful students. Besides this, not all students, however industrious, get through examinations with equal facility. Since in any case professional education must continue for at least five years—a period exceeded by the vast majority—and since the cost of living in different parts of the kingdom varies much, and personal expenditure varies still more, it can only be said that no one should think of entering the profession in these days who is unprepared to spend at least £1,000 on his medical education.

When the medical graduate, diplomate, or licentiate has registered, many courses are open to him. He can aim at becoming a general practitioner; or at entering one of the Government services at home or abroad; or at specializing in public health or asylum work, in pure science, or in one or other of the many modern subdivisions of medicine and surgery. Most of these different paths in medicine are considered in detail in the sections that follow, but a few observations may here be made as to the first and last of them.

A man becomes a general practitioner in one of three ways: He may take a house and wait for patients to seek his services; he may acquire through purchase the goodwill of a practice rendered vacant by retirement or death; or—perhaps best of all—he may enter into partnership with some already established practitioner. The successful conduct of a private practice demands, however, a great deal of knowledge other than that obtained at the medical schools, and consequently a man is more likely to be accepted as a partner, or to succeed on his own account, if he has first gained experience in private practice as an assistant. As for those who aspire to become consultants or specialists, their path is rugged. For their success will depend in the long run not only upon their mental attainments and capacity for hard work, but on their possession of those qualities which help to win for a man the confidence both of his colleagues and of the general public. Moreover, since it is certain that, however well equipped they may be, they will not for many years make as specialists enough to pay their outgoings, this path is only open to those with sufficient means to maintain themselves for an indeterminate period, or who are able, by teaching or in other ways, to make enough to defray their expenses.

Whatever the branch of practice chosen, it must be remembered that the large majority of doctors make but a moderate income, while the financial

returns of even the most successful compare but ill with those obtained by persons of equal ability in other walks of life. The full effect of the National Insurance scheme on the profession cannot even yet be estimated, for, in spite of modifications by many hundreds of successive orders, circulars, and regulations, it is still far from having reached any stable form. Further, the movement towards unification and co-ordination of the health services of the country, which has now taken legislative shape in the Ministry of Health Act, can scarcely fail to bring about an overhaul of the machinery set up and hitherto controlled by the Insurance Commissioners, and of the Poor Law Medical Service also.

The effects of more than four years of war upon the medical profession and upon medical education have inevitably been far reaching. In October last, a few weeks before the end of hostilities, the Army alone was employing the services of more than 13,150 medical men; and to these must be added the many medical officers serving in the Navy and the Royal Air Force. For comparison we may point out that before the war some 3,800 medical officers were accredited to the Services year by year in the *Medical Directory*. Further, a great many practitioners in civil practice gave up a share of their time to work at military hospitals, and to attendance upon the disabled; while recruiting boards and other professional duties arising directly out of the war employed a considerable number of civilian doctors. From all this it is evident that as the war went on the civil population had to do without a large part of the medical attendance it received in normal times, while most of the practitioners remaining at home were very hardly worked. The shortage of civilian doctors was felt very severely during the second wave of the influenza epidemic, which took place about the time of the armistice, and the strain upon the depleted profession at home became almost unbearable. Medical demobilization presented many problems, and at first there was much delay in returning doctors to their practices. Most of the difficulties had been foreseen by the Central Medical War Committee, whose scheme of priority of release was adopted by the Ministry of National Service—the Government department in charge of medical demobilization. But before it could come into full operation this scheme was thrown aside by the Secretary of State for War, who must be held responsible for such confusion and injustice as resulted from his hasty action. By the end of June some 8,300 medical officers had been demobilized from the Army. Here we may record that 568 officers of the Royal Army Medical Corps gave their lives in the service of their country during the war, and of these 400 were killed in action or died of wounds.

The effect of the war upon the number of medical students in their different years of professional study has been described from time to time by the President of the General Medical Council. Between the years 1910 and 1914 the annual entry of first year medical students averaged roughly 1,440. During the war the number of these entries increased by five or six hundred a year. Thus the whole number of students actually pursuing medical studies in the medical schools of the United Kingdom showed a steady upward movement. In May, 1916, the total was 6,103; in January, 1917, it was 6,682; in October, 1917, it was 7,048; in May, 1918, it was 7,630. By January, 1919, it had leapt up to 9,490. But while the number of first year students was twice as large as in 1913, the students in the final year of their curriculum numbered only 1,158, or barely enough to maintain the normal supply of newly qualified practi-

tioners during the current year. The great increase in the student body since the armistice is of course mainly due to the return to the medical schools of junior students who have been on service, "the accumulated freshmen of a succession of years, whose first year's course was broken by the summons to military duty." As a result, many of the medical schools are overwhelmed. There is thus every prospect that within the next five years or so such shortage of doctors as may now exist will be far more than made good.

Another feature of the last five years has been the great increase in the number of women going in for the study of medicine. In May, 1918, there were 2,250 women medical students in the United Kingdom—a figure 23 per cent. greater than the total for January, 1917, and several times larger than in 1914. At the present time a fifth of the whole number of final year students are women. For this remarkable growth the war must be held mainly responsible.

What are the prospects of the medical profession now that the war is over? The medical services have acquitted themselves extremely well in the war, and medical science comes out of it with an enhanced reputation. Military medicine and surgery have advanced, and not a few of the results of practice and research in the war zones will remain as permanent additions to knowledge. The treatment of wounds steadily improved; orthopaedic relief for the crippled and maimed is more successful than ever; preventive medicine in camp and trenches has scored great triumphs; the work of the pathological laboratory and of the bacteriologist has proved to be of the utmost value. In civil life the spirit of the times is all in favour of extension and co-ordination of the public health services. This has been reflected in the widely supported proposal for the setting up of a Ministry of Health, which came into existence on July 1st with a medical man as the first Minister. On that day all the powers and duties of the Local Government Board and of the Insurance Commissioners for England and Wales passed to the new Ministry, and the new Ministry is pledged to a reform of the Poor Law. At the same time a Scottish Board of Health and an Irish Public Health Council were constituted. These new central departments of health are as yet, however, only in the nascent state. Much depends on the Orders in Council, which will define the transfer of functions to and from the departments concerned, and on the spirit in which the new administrative machinery is worked. Thus the possibilities of the future are large, but as yet ill defined. More medical care has been provided for expectant mothers, for infants, for children, and for the victims of venereal diseases; a great increase in the public work of pathological laboratories throughout the kingdom may be confidently expected. All this means an increase in the official medical services. What ultimate fate is in store for the private practitioner we will not venture to foretell. Before the war his position had been profoundly affected by the Insurance scheme, which converted the majority of general practitioners into part-time civil servants, and subjected them to the discipline of Insurance Commissioners. Pecuniarily it has benefited some and impoverished others. One thing at least can be said: the immediate future is full of uncertainty, especially for the general practitioner. Forces which had long been at work beneath the surface have gained strength through the circumstances of war and of reconstruction, and many believe that the State is gradually tightening its grip on the medical profession.

It follows from what has been said that now more

than ever before the doctor should possess a strong sense of *esprit de corps*. Medicine is a profession which, when it comes to business dealings of any sort, the general public—as also public authorities—regard as being of a semi-philanthropic character. Furthermore, it is a profession whose aims and requirements are very ill understood by lay persons. Hence the interests of the medical profession, both on its financial and scientific sides, are continually being attacked, sometimes openly, sometimes insidiously. It is all-important, therefore, that medical men and women should band themselves together for the common protection of themselves and their profession, and to this end join the British Medical Association.¹ For the objects of this body are to promote the progress of medical science and to maintain the honour and interests of the medical profession, and its history shows that it has well fulfilled them.

THE GENERAL MEDICAL COUNCIL.

THE General Medical Council was set up by the first Medical Act of 1858. A certain number of its members are elected by the medical profession, and the rest—who form the great majority—are nominated by Government, and by the universities and such medical corporations of the United Kingdom as have a statutory right to issue diplomas. Its head quarters are at 44, Hallam Street, Portland Place, W.1, and it has branch offices at Queen Street, Edinburgh, and 35, Dawson Street, Dublin. Its duties are to control the medical and dental professions in the interests of the general public, and to that end to maintain a register of legally qualified practitioners. It is admission to this *Register*, and not the possession of a degree or diploma, that constitutes a person a legally qualified practitioner. The Council is bound to admit to the *Register* those who hold the qualifications granted by the bodies represented among its members, but it exercises supervision over the terms on which those bodies grant such diplomas or degrees, and it can erase from the *Register* the name of any medical man or dentist who has been convicted before a court of law of an ordinary crime or of a serious offence against public order, or who is proved before the Council itself to have been guilty of certain actions which the Council regards as professionally "infamous." Its disciplinary powers are limited to legally qualified practitioners, and it has no control whatever over irregular practitioners of any kind.

An account of the regulations that the Council has drawn up in respect of the education of medical students here follows.

PRELIMINARY EDUCATION.

The regulations with regard to the subjects of the preliminary examinations recognized by the Council have recently been modified. In November, 1916, the Council decided that in the matriculation examinations for the faculties of arts and science, and equivalent examinations, Latin should no longer be regarded as a compulsory subject. For practical purposes this means that all examinations accepted for matriculation in the faculties of art and science in any university of the United Kingdom are approved by the Council as qualifying a successful candidate for admission to the *Students' Register*. This carries with it the recognition of degrees in arts and science of any university of the United Kingdom or of the British Dominions. This decision, however, applies only to the senior or higher grade student; so far as the junior or lower grade of candidates are concerned, it was decided, as a matter of expediency, that Latin should remain compulsory for these candidates, since they do not, as a rule, produce as evidence of general knowledge certificates of examination accepted by a university or national education authority.

¹ The ordinary subscription of members resident within the United Kingdom is £2 2s., but as from January 1st, 1915, those admitted within two years from the date of their registration pay only 25s. until the expiration of four years from such registration. Members resident outside the United Kingdom, including those serving in the military forces abroad, pay 25s. to the parent Association.

The lists of educational bodies whose examinations are now accepted under the regulations made by the Council for the maintenance of the register of medical students, together with other particulars, are published with the *Students' Regulations*, which may be obtained from the various offices of the Council, price 6d.

REGISTRATION OF MEDICAL STUDENTS.

In addition to showing that he has passed one of these examinations, any person applying for registration as a medical student must (1) produce satisfactory evidence that he has attained the age of 16 years; (2) show that he has commenced medical study at a university or school of medicine or at a teaching institution recognized by one of the licensing bodies and approved by the Council. The commencement of professional study will not be reckoned as dating earlier than fifteen days before the date of registration.

Certain concessions have been made by educational authorities, in respect of the grant of certificates of general education, to students who have served with the forces during the war. For information on this point application must be made to the authority concerned.

Application for registration should be addressed to the Registrar for the division of the United Kingdom in which the applicant is residing—England and Wales, or Scotland, or Ireland. It must be made on a special form, which can be obtained from the offices either of the General Medical Council itself or of one of the various licensing bodies and medical schools, and when forwarded it should be accompanied by the certificates as to age and general education.

The regulations with regard to registration apply equally to medical and dental students, with the exception that in the case of the latter pupilage with a registered dental practitioner may be regarded as a commencement of professional study, and that applications for registration should be addressed to the London office only.

PROFESSIONAL EDUCATION.

The rule is that it is only from the date which appears against his name in the *Students' Register* that the medical student's career officially begins; thereafter five years must pass before he can present himself for the final examination for any diploma which entitles its lawful possessor to registration as a qualified medical practitioner under the Medical Acts.

There are, however, certain important exceptions to this rule: thus (1) to meet the circumstances brought about by the dates at which sessions of the medical schools begin and end, the close of the fifth year may be reckoned as occurring at the expiration of fifty-seven months from the date of registration. (2) Graduates in arts or science of any university recognized by the General Medical Council, who have spent a year in the study of physics, chemistry, and biology, and have passed an examination in these subjects for the degrees in question, may be held to have completed the first of the requisite five years. (3) The Council will accept as six months of that year six months passed, subsequent to obtaining a certificate in general education, as a student of chemistry, physics, or biology at any teaching institution recognized by a licensing body and approved by itself. In any case, the period of five years must be one of bona fide study, and during its course education in the following subjects must be pursued and examinations passed:

- (i) Physics, including the Elementary Mechanics of Solids and Fluids, and the rudiments of Heat, Light, and Electricity.
- (ii) Chemistry, including the principles of the science, and the details which bear on the study of medicine.
- (iii) Elementary Biology.
- (iv) Anatomy.
- (v) Physiology.
- (vi) Materia Medica and Pharmacy.
- (vii) Pathology.
- (viii) Pharmacology and Therapeutics.
- (ix) Medicine, including Medical Anatomy and Clinical Medicine.
- (x) Surgery, including Surgical Anatomy and Clinical Surgery.
- (xi) Midwifery, including Diseases peculiar to Women and to Newborn Children.
- (xii) Theory and Practice of Vaccination.
- (xiii) Forensic Medicine.
- (xiv) Hygiene.
- (xv) Mental Disease.
- (xvi) Anaesthetics.

The practical study of Subject (xi) shall not commence until the student has held the offices of Clinical Clerk and Surgical Dresser, and the work done in connexion with it must follow prescribed lines. The Council also expects that study of the Subjects (vii) to (xvi) shall extend over not less than four months subsequent to success at the examination in Subjects (iv) and (v). It also now recommends licensing bodies to require of candidates at their final examinations evidence of instruction in the administration of anaesthetics, in ophthalmology, and in

infectious diseases, and of sedulous attention in hospital wards, out-patient departments, and *post-mortem* rooms, as clerks and the like.

Wherever the first of the five years is spent, the next three must be passed at a school of medicine recognized by any of the licensing bodies enumerated in the schedule to the Medical Act of 1858. The final or fifth year the Council recommends should be devoted to clinical work at any public hospital or dispensary at home or abroad which is recognized by a licensing body.

SPECIAL CONSIDERATIONS.

The requirements of the General Medical Council in respect of the education of those who desire to enter the medical profession have now been given in outline, but before leaving this part of the subject the steps which the aspirant should take may be rehearsed in their due order:

- (1) Pass an examination in arts;
- (2) Enter himself at a medical school or other scientific institution recognized by the Council;
- (3) Get himself registered as a medical student;
- (4) Study for a minimum of five years certain prescribed subjects;
- (5) Meanwhile pass sundry intermediate examinations; and at the end of the fifth year pass a "qualifying examination" which will entitle him to receive from a licensing body a legal authority to practise.

The Arts Certificate.—It is not, however, a matter of indifference what certificate of proficiency in general education, or arts, the student obtains. The General Medical Council, it is true, will accept any of the large number of tests to which reference has been made, and this, too, is the case with practically all the college corporations in England, Scotland, and Ireland. But some of the universities require that their own ordinary matriculation should be passed, others have special matriculation examinations for those wishing to join their medical faculty, and a third and larger number will accept any arts degree and certain matriculation examinations, as well as several other of the tests entered in the Council's list. The first thing, therefore, the future medical student should, if possible, decide is at what degrees or diplomas he intends to aim, and then find out what arts certificates will be required. If he cannot decide the question in advance, the best course probably would be to obtain a school leaving certificate of the English or Scottish Education Departments, or, failing this, to matriculate at London University.

The Minimum Period.—It must be remembered that the period of five years is a minimum; a good deal more will almost certainly be required even by the man of good abilities and reasonable industry. Besides these qualities, a student, to obtain a registrable qualification in the minimum period of five years, or fifty-seven months, must have a considerable amount of good luck; in other words, he must keep in good health through every term, and never fail at a single examination. Thus, for instance, before presenting himself for any examination he must be "signed up" for the subjects covered by that examination; this means that his teachers have to certify that he has diligently attended the required number of lectures or classes in the subjects in question. If, however, the student happens to be ill during the term when such lectures or classes are taking place, he may miss enough of them to make it impossible for him to be "signed up." Then, again, should he fail to satisfy the examiners at some examination, he cannot present himself for re-examination for at least three months. This generally entails further consequences, because, apart from the student's success at the next stage in his career being imperilled by the need for restudying the subjects in which he has failed, the Examining Boards usually insist upon a definite interval elapsing between one examination and the next. Further, many Boards refuse to recognize lectures and classes which have been attended before the student has passed the requisite examination in earlier subjects. Failure at an examination may thus not only mean deferment of the date of examinations, but deferment of the beginning of the student's study of certain subjects. It is thus exceedingly easy for a student to fail to qualify in five years, and, as a matter of fact, the vast majority of students take much longer.

In speaking of the minimum period, it is to be remembered also that that time is only sufficient to gain a registrable qualification, such as a Bachelorship of Medicine or Surgery or a diploma of one of the Royal Colleges. Those who wish to take a higher qualification—for instance, the F.R.C.S.Eng.—must prolong their work for another year or more. So, too, must in some cases those who desire to convert their Bachelorship into a Doctorate. This may entail further formal examination, but at some universities the M.D. is obtainable on presentation of a thesis when the Bachelor has attained a certain age and has practised for a certain number of years. However, a student's career proper may be considered, perhaps, to have ended when he obtains his first registrable qualification, for while preparing himself for any further tests he can, and usually does, hold some junior appointment which more or less covers his expenses.

The Normal Course.

In conclusion, a sketch may be given of the general fashion in which the student will pass his five years or more, but discussion of this need not be prolonged, because once a student has entered at a school, and chosen the degrees or diplomas at which he wishes to aim, the dean of the school will guide his steps in every particular.

Whatever the goal, the path thereto is in all cases identical in broad outline. Practically it is divided into three stages, the conclusion of each being marked by an appropriate examination. In the first stage the student acquires some knowledge of the preliminary sciences—chemistry, physics, and biology; in the second he studies anatomy and physiology; and the third he devotes to the real work of his future life—medicine and surgery and their branches. During each of these the student must attend the prescribed number of lectures and classes to ensure getting "signed up" in the subjects of the stage, and also do much practical work. As for the examinations at the end of the stages, these are known by different titles by different examining bodies, but "preliminary science," "intermediate," and "final" are in common use. Some bodies demand that all the subjects of one stage should be passed at one time; others allow the candidate to present himself in each of the subjects separately, thus multiplying the number of examinations, but limiting their scope. There are also differences in the requirements of licensing bodies as to the length of each stage, but practically all demand that the second shall be longer than the first, and the third not shorter than the second. By the length of the allotted stage the candidate may gauge the comparative importance the licensing body attaches to the subjects within the stage and the difficulty of the tests it will impose; he may feel certain that the time allotted is none too much.

It will be the aim of the student to get through his first two stages as quickly as his abilities and the regulations allow; as a rule, he should have completed the first stage by the end of his first year, and may hope to complete the second stage not later than the end of his third year. He will then have two crowded years in which to prepare for his final examination, the subjects of which include medicine, surgery, and midwifery proper, and many other allied subjects, such as pathology and bacteriology, forensic medicine, gynaecology, and therapeutics. In the first of the final two years he may be able to complete his formal lectures, and thus have the fifth year free for practical work and private study; during those two years, too, he will take part in the work of his hospital by holding clerkships and dresserships in the wards and out-patient department. Then, at length, after perhaps a few weeks of special coaching, he will be ready to present himself for his final examination, which the regulations of most bodies allow him to divide into two or more parts. The final examination passed in its entirety, he will be able to claim registration as a qualified medical practitioner. There is still room for him to continue a student's career if he will, for, apart from the higher qualifications to which reference has been made, it may seem to him worth while to devote time to acquiring greater knowledge of some particular branch of medicine, such as ophthalmology or laryngology, or to study for a diploma of special proficiency in public health (page 329), or in tropical medicine (page 328).

The War.

The General Medical Council has advised the licensing bodies that its recommendations respecting the courses of medical study represent, in general terms, the minimum curriculum that should be required by the various licensing bodies. But it recognized that during the national emergency it might be advisable for them to modify or even suspend some of their regulations. It felt sure, however, that the licensing bodies concerned would recognize the importance, in the public interest, of maintaining unimpaired the present standard of knowledge and skill required of all who seek to be admitted to the status and privilege of registered practitioners. The policy, therefore, during the war was that the standard of the qualifying examinations must be maintained.

The English Universities.

THERE are eleven universities in England and Wales, and some account of each of them follows. With one exception they all have fully developed medical faculties. The exception is the University of Wales, whose constituent colleges are those of Aberystwith, Bangor, and Cardiff. It is in a position, however, to grant degrees, and has laid down a six years' curriculum for candidates for the M.B. degree, and it already provides, at the School of Medicine at Cardiff—of which an account will be found at page 318—thorough training in the work of the first three or four years.

UNIVERSITY OF OXFORD.

THE professional degrees conferred by this university are those of Bachelor of Medicine (B.M.), Bachelor of Surgery (B.Ch.), Doctor of Medicine (D.M.), and Master of Surgery (M.Ch.). It also grants a diploma in State Medicine and a diploma in Ophthalmology (examination suspended during the war). On receiving the B.M. the candidate is entitled to registration by the General Medical Council. In favourable circumstances this degree and the B.Ch. may be obtained in six or seven years from matriculation. Before receiving either, however, the candidate must have taken a degree in arts (B.A.), for which three years' residence within the university is necessary. This, however, does not necessarily mean deferment of professional study for that period; for some of the subjects chosen for the final stage of the arts course may be the same as those in which examinations would in any case have to be passed for the medical degrees.

A candidate may obtain the B.A. degree in either of the following ways:

(a) By passing Responsions (or one of the examinations which are accepted as equivalent), Moderations, a Scripture examination, or, in the event of a candidate objecting, an examination in some substituted book; and the Final Pass School in three subjects, two of which may be the same as two in the preliminary examinations in natural science.¹

(b) By passing Responsions, an additional subject in Responsions, the Scripture examination, some of the preliminary examinations in the Natural Science School,² or the Preliminary Examination and the School of Jurisprudence, or the Honour School of Mathematics in the first public examination; and one of the final honour examinations.

Responsions and the additional subject may be passed before a candidate is a member of the university;² Moderations and Scripture can be passed in or after the second term; the final pass school may be taken any time after Moderations; a final honour school may be taken at the end of the third or within the fourth academical year—that is, twelve or sixteen terms respectively; the preliminary examinations of the Natural Science School may be taken as soon as Responsions have been passed.

PROFESSIONAL DEGREES.

To obtain the B.M., B.Ch. degrees the candidate must first pass in four of the subjects of the Preliminary Examination of the Natural Science School—namely, physics, chemistry, zoology, and botany.

¹ The four subjects of the medical preliminary examinations are four of the subjects in the natural science preliminary, and can be commenced directly after passing Responsions.

² Membership is constituted by matriculation and by becoming either a member of a college or a hall, or a non-collegiate student.

He then has two further examinations to pass—the First M.B. and the Second M.B. These take place twice a year, the first on the Thursday, the second on the Wednesday, of the eighth week of Michaelmas and Trinity terms. Every candidate at the First M.B. is examined in human anatomy and also in physiology and in organic chemistry, unless he has previously taken a first or second class in the two latter subjects in the Natural Science School. Once he has passed this examination he can, on production of certain certificates, be examined as soon as he pleases in pathology, forensic medicine, and hygiene, materia medica, and pharmacology³ (subjects of the second examination), but cannot present himself for the remaining subjects—medicine, surgery, and midwifery—until the twenty-fourth term from the day of his matriculation, and not until a period of at least twenty-two months have elapsed from the date of his passing the first examination, and he must take all the three subjects at one and the same time.

D.M. AND M.CH. DEGREES.

A Bachelor of Medicine who wishes to proceed to the M.D. must have entered his thirty-ninth term and must present a dissertation for approval by the appointed examiners. If a candidate for the M.Ch., he must have entered his twenty-seventh term and must pass an examination which is held in June.

TEACHING.

The several colleges provide their undergraduate members with tutors for all examinations up to the B.A. degree. In addition, the university provides certain courses of instruction, including lectures, demonstrations, and practical work, which cover all the subjects of the Preliminary Examination and First M.B., and in part those of the Final Examination. For the diploma in State Medicine and the diploma in Ophthalmology certain of the courses can be taken in Oxford.

SCHOLARSHIPS.

The several colleges grant scholarships of £80 a year, tenable for four years, in natural science, chemistry, physics, and biology. Exhibitions of varying value are also awarded in these subjects. Particulars can be obtained on application to the college tutors. A Radcliffe Travelling Fellowship of £200 a year, tenable for three years, is conferred annually; candidates must have taken the B.M. degree. A Philip Walker Studentship in Pathology of £200 a year, tenable for two years, is awarded biennially for the encouragement of research in pathology, as also are the Rolleston Memorial Prize, for research in natural science (including pathology), and the C. Theodore Williams Scholarships in Anatomy and Physiology, and in Pathology, of the value of £50 each, tenable for two years. A Burney Yeo King's College Hospital Scholarship of £80 is awarded annually.

FEES.

An annual fee of £2 10s. is paid to the university for the first four years, being reduced to £1 when the B.A. has been taken. For the degree the fees are—the B.A., £7 10s.; the B.M. and B.Ch., £14; the D.M., £25; the M.Ch., £12. College fees, varying in amount, are paid for the first four years of membership and in taking degrees. Tuition fees vary from £21 to £30. The minimum annual cost of living during the three university terms may be regarded as not less than £120.

UNIVERSITY OF CAMBRIDGE.

The professional degrees given by this university are those of Bachelor of Medicine (M.B.) and Bachelor of Surgery (B.Ch.), which entitle the possessor to admission to the Register by the General Medical Council, and the higher degrees of Doctor of Medicine and Master of Surgery. It also grants diplomas in Tropical Medicine, in Public Health, and in Psychological Medicine to persons who are registered medical practitioners, but not necessarily graduates of the university.⁴ A candidate for the M.B., B.Ch. degrees need not possess a degree in arts; it is sufficient if he has passed the previous examination or some other examination accepted by the university as its equivalent.

PROFESSIONAL EXAMINATIONS.

To obtain the M.B. the candidate must pass three examinations, of which the latter two take place twice a

³ A candidate who passed in materia medica and pharmacy under the old regulations in the First Examination before April 14th, 1909, is exempt from the examination in materia medica and pharmacology in the second examination.

⁴ See pp. 328 and 329.

year, in the Michaelmas and Easter terms; those who are finally successful receive the B.Ch. degree without further examination.

First M.B., or Preliminary Examination in Science.—This comprises (1) chemistry, (2) physics, (3) elementary biology. The parts may be taken together or separately. In either case the candidate before admission to examination must have satisfied the requirements in respect of the previous examination, paid the matriculation fee, and entered on his first or some later term of residence. During the continuance of the war students could be admitted to this examination though they had not commenced residence. The examination is held three times a year—in October, December, and June.

Second M.B.—This examination, which cannot be passed until the first examination has been completed, comprises Part I, human anatomy and physiology; Part II, elementary pharmacology, including pharmaceutical chemistry and the elements of general pathology. No one may enter Part II unless he has passed Part I. The candidate must be signed up in both subjects and have dissected for six months. For 1918 the examination will be held in October and December. So far there has been no announcement of additional examinations in 1919.

Third M.B.—This is divided into two parts, to neither of which is the candidate admitted until he has passed the examinations previously mentioned. A candidate for the first part, which deals with surgery and midwifery, must have completed five years of medical study and be signed up in these subjects and have completed two years of hospital practice.

Before admission to the second part the candidate must have completed five years of medical study and be duly signed up in all subjects and have completed three years of hospital practice. He must also possess certificates showing that he has fulfilled all the recommendations as well as the requirements of the General Medical Council. The examination is in the principles and practice of physic, pathology, and pharmacology.

Act for the M.B.—Before receiving his M.B. degree, a candidate who has been successful at the Final M.B. has to write a thesis. This he reads in public on an assigned day, and is then questioned concerning it and other subjects of medicine by the Regius Professor of Physic. If approved at this test he is then certified as having "kept the Act" satisfactorily, and in due course receives his degree. Medical degrees may be taken in absence, the candidate sending a thesis to the Regius Professor of Physic, which is laid before the Board.

THE HIGHER DEGREES.

The M.D. degree may be taken by an M.B. of three years' standing after keeping a further Act and writing a short extemporary essay, in which he may deal at his choice with either medicine, physiology, pathology, or State medicine. The M.Ch. degree may be granted to a candidate who has qualified for the B.Ch. at least three years previously; he is then examined in pathology, surgery, surgical anatomy, and surgical operations, or submits books or writings of his own which constitute original and meritorious contributions to the science and art of surgery.

FEES.

In addition to college fees, tutorial fees, and the expenses of living, the following examination fees are payable: First M.B., £4 4s.; Second M.B., £4 4s.; Third M.B., £9 9s. For schedules referring to the examinations, lists of schools recognized by the university, and other information, application should be made to the University Registry.

UNIVERSITY OF LONDON.

UNDER the regulations of the University of London, the degrees obtainable in the Faculty of Medicine are those of Bachelor of Medicine and Surgery, Master of Surgery in two branches, and Doctor of Medicine in six different branches. The university has its own matriculation examination, and this is of so peculiar a kind that candidates should secure and carefully study the booklets relating to it.

In no circumstances is a degree granted to anyone in less than three years after the date at which he passed the Matriculation Examination or obtained registration in

some other way; and unless they are already registered medical practitioners of a certain age and standing, all students must pass not less than five and a half years in professional study subsequent to matriculation.

PROFESSIONAL EXAMINATIONS.

M.B., B.S.—There are three examinations, the last two being subdivided. They are held twice a year.

The First Examination covers inorganic chemistry, general biology, and physics, there being two papers, a practical test, and a possible viva voce test in each subject. The names of successful candidates are placed in alphabetical order, with a note as to any subject in which a candidate has distinguished himself.

The Second Examination, Part I, cannot be passed within six months of the passing of the First Examination. It covers organic and applied chemistry, the candidate's knowledge being tested as in the earlier examination. It is a pass examination, but a mark of distinction may be won. Candidates for Part II must have passed the First Examination at least eighteen months previously besides having completed Part I of the Second Examination. The subjects are anatomy, physiology, and pharmacology, the tests being written, oral, and practical. Candidates who fail in one subject may sit for re-examination in that subject alone if the examiners think fit.

No candidate is admitted to the Third M.B., B.S. Examination within three academic years from the date of his completing the Second Examination. The subjects are medicine (including therapeutics and mental diseases), pathology, forensic medicine and hygiene, surgery, and midwifery and diseases of women. They may be divided into two groups, one comprising medicine, pathology, forensic medicine, and hygiene, and the other surgery and midwifery and diseases of women. Either group may be taken first at the option of the candidate, or the groups may be taken together. Only candidates who show a competent knowledge of all the subjects comprising a group are passed. There is no separate examination held for honours, but the names of successful candidates are divided into an honours list and a pass list, and a university medal may be awarded the candidate who has most distinguished himself in the whole examination.

THE HIGHER DEGREES.

M.D.—An examination for the M.D. is held twice yearly—in December and July. Every candidate must have passed the examination for the M.B., B.S. unless he became M.B. before May, 1904. He may present himself for examination in any one of the following branches: (1) Medicine, (2) pathology, (3) mental diseases and psychology, (4) midwifery and diseases of women, (5) State medicine, (6) tropical medicine, and, if he wishes, may pass also in another branch at a subsequent examination.

The period that must elapse between acquiring the M.B. and sitting for the M.D. in any branch varies between one and two years, according to the nature of the candidate's previous work, and in all cases evidence must be afforded of special study of the subject chosen; both written and practical examinations must be passed, though exemptions can be obtained from the former in exceptional circumstances. In each branch the scheme of examination is the same: two papers on its special subject, a paper on an allied subject—for example, medicine in the case of branch (4), pathology in branch (1)—an essay on one of two suggested topics connected with the special subject, and a clinical or other practical test. In any branch of the M.D. Examination a gold medal of the value of £20 may be awarded.

M.S.—The regulations with regard to the Mastership in Surgery are of a corresponding kind, but there are only two branches in which it may be obtained—General Surgery and Dental Surgery.

FEES.

The examination fees have been raised from pounds to guineas for all examinations held after September 1st, 1918. For Matriculation: 2 guineas for each entry. First Examination: 5 guineas for each entry to the whole examination. For re-examination in one subject the fee is 2 guineas. Second Examination, Part I: 2 guineas for the first and each subsequent entry. Second Examination, Part II: 8 guineas for each entry to the whole examination. For re-examination in one subject the fee is 4 guineas. M.B., B.S. Examination: 10 guineas

for each entry to the whole examination, and 5 guineas for examination or re-examination in either group. M.D. and M.S. Examinations: 20 guineas, and 10 guineas on re-examination.

Note.—The University has made certain regulations with regard to the position of students called up for war service, and these remain in force until further notice. Inquiries should be addressed to the Registrar, the University of London, South Kensington, S.W.7.

UNIVERSITY OF BIRMINGHAM.

This university confers the ordinary medical and surgical degrees—M.B., Ch.B., M.D., and Ch.M., and also diplomas and degrees in State medicine and dentistry. It has a plan, too, by which, extending his study to six instead of five years, the M.B., Ch.B. candidate may become a Bachelor in Science as well. Of the five years' curriculum, the first four must be spent, as a rule, at the university itself, the fifth being passed at any approved school or schools. Occasionally, however, the Senate will reduce the period of enforced residence to three years and exempt from the First M.B. those who have passed elsewhere an examination considered to be its equivalent. A degree of Ph.D. is also conferred for research study in medicine, and carried out under special regulations. Candidates must be graduates in medicine of a recognized university.

Students entering the Medical Faculty for the M.B., Ch.B. degrees must have passed either (a) the matriculation examination of the Joint Board of the Universities of Manchester, Liverpool, Leeds, Sheffield, and Birmingham; (b) some other examination recognized as equivalent to the matriculation.

Candidates for medical degrees are recommended to take Latin and a science subject—chemistry or physics—at the matriculation examination, although these subjects are no longer compulsory.

The matriculation examination of the Joint Board is held in July and September in each year. The regulations regarding it, and the list of examinations accepted in lieu thereof, will be sent on application to the Secretary to the Board, Joint Matriculation Board, 315, Oxford Road, Manchester.

PROFESSIONAL EXAMINATIONS.

The candidate for the M.B., Ch.B. degrees has five examinations to pass. In the second and final examinations the candidate must pass in all the prescribed subjects or undergo the whole examination again.

First M.B.—This deals with chemistry, physics, and elementary biology; it may be passed before the student commences residence at the university, provided the regulations as to matriculation have been met.

Second M.B.—This deals with anatomy and physiology, and the student must pass in both simultaneously.

Third M.B.—This deals with general pathology and bacteriology, materia medica, and practical pharmacy.

Fourth M.B.—This takes place at the end of the fourth year, the subjects being forensic medicine, toxicology, public health, therapeutics, and special pathology.

Final M.B.—This comprises medicine, surgery, midwifery and diseases of women, ophthalmology, and mental diseases. The candidate, in addition to more ordinary certificates, must be prepared with a certificate of having acted as a *post-mortem* clerk for three months, and received special instruction in anaesthetics and clinical instruction in diseases peculiar to women, asylum ward work, and ophthalmology. In respect to the latter he must show that he has learnt refraction work. He also has to present to the examiners reports drawn up by himself on six gynaecological cases and certificates drawn up by himself regarding four actual cases of lunacy, and notes respecting two others.

M.D.—An ordinary candidate for this degree must be a M.B., Ch.B., of not less than one year's standing. He presents an original thesis for approval, and then passes a general examination in the principles and practice of medicine. From the latter the Board of Examiners may exempt a candidate whose thesis is of exceptional merit. The regulations respecting the Ch.M. are of the same general character. Subject to certain requirements as regards special research or other post-graduate study, graduates of other universities may obtain the M.D. and Ch.M. in the same way as the holders of the Birmingham M.B., Ch.B.

FEE.

The fee for matriculation is £2, and for each of the first four professional examinations the same amount; M.B., Ch.B. degree fee, £8; M.D. and Ch.M. examination, £10 each. For further particulars application should be made to the Dean of the Medical Faculty.

UNIVERSITY OF BRISTOL.

The university grants the following degrees: In medicine and surgery, M.B. and Ch.B., M.D., Ch.M. (the M.D. may be taken in State medicine); in dental surgery, B.D.S., M.D.S. Diplomas in public health (D.P.H.) and dental surgery (L.D.S.) are also granted. Candidates for degrees must qualify for matriculation in the university by passing either one of the school certificate examinations held twice a year in July and in September by the university itself, or the *Higher School Certificate*, or any one out of a list of similar examinations which will be found in the university regulations for matriculation. The winter session opens on October 1st, 1919.

Candidates who possess a *Higher School Certificate* approved by the Board of Education in physics, chemistry and biology may count the first year of the curriculum and the first examination; the curriculum being thus reduced to four and a half years in the university.

PROFESSIONAL EXAMINATIONS.

M.B., Ch.B.—There are three examinations for this degree. They must be passed in proper order, and before admission to them the candidate must be duly certified as having attended in the subjects involved. The first M.B. comprises chemistry, physics, botany, and zoology. The second M.B. comprises organic chemistry, elementary anatomy (Part I), advanced anatomy, physiology (Part II). The two groups may be taken separately or together. The Final Examination includes materia medica and pharmacy, pharmacology, and therapeutics, general pathology, morbid anatomy and bacteriology (Part I), special pathology, forensic medicine, toxicology and public health, obstetrics (including diseases of women), surgery (systematic, clinical, practical, and operative), medicine (systematic, clinical, and practical), including mental diseases (Part II). The two groups may be taken separately or together. At the option of the candidate, forensic medicine and toxicology may be taken either with Group I or Group II. First or second class honours may be obtained by a candidate whose work is deemed of sufficient merit, but cannot be awarded to one who has recorded against him a failure at any examination after the first M.B.

M.D.—A candidate for this degree must be a M.B. and Ch.B. of at least two years' standing. He has a choice between presenting an original dissertation, undergoing a general examination in medicine (including medical anatomy, medical pathology and bacteriology, systematic and clinical medicine), or passing an examination in State medicine.

Ch.M.—A candidate must have attended, since becoming M.B., Ch.B., and for not less than two years, a public institution affording opportunity for the study of practical surgery, and produce certificates to that effect; the candidate shall be required to pass a general examination in surgery (including surgical anatomy, surgical pathology and bacteriology, operative and clinical surgery), and to present a dissertation in some department of surgery. He must be of two years' standing as a M.B., Ch.B.

Applications for other information should be addressed to the Dean of the Medical Faculty.

DENTAL DEPARTMENT.

The university grants the degrees of Bachelor and Master in Dental Surgery (B.D.S., M.D.S.) and a Diploma in Dental Surgery entitling to the letters L.D.S. The courses of the university are available equally for these qualifications and for those of other licensing bodies. Both courses are open to men and women alike.

Fees.—For the entire curriculum, including the mechanical laboratory, lectures, laboratory work, and hospital practice, if paid in one sum: For the B.D.S., 155 guineas; for the L.D.S., 133 guineas. If paid by annual instalments: For the B.D.S., 165 guineas; for the L.D.S., 133 guineas. Fee for the mechanical laboratory if taken alone, 40 guineas paid in one sum. Further details may be found in the Prospectus.

UNIVERSITY OF DURHAM.

To its own graduates, who may be of either sex, this university grants the degrees of Bachelor and Doctor of Medicine (M.B. and M.D.) and Bachelor and Master of Surgery (B.S. and M.S.); it also grants special degrees and diplomas in State Medicine, Psychiatry, and Dental Surgery.¹ To become a graduate, however, at the university it is not necessary to pass the major portion of the five years' curriculum within its precincts, or even to commence that period by matriculation. It is sufficient if, before he presents himself for his final examination, the candidate has passed at least one year in study at the University of Durham College of Medicine, including the practice of the Royal Victoria Infirmary in the same city. The earlier examinations may be passed while the student works elsewhere, but not less than a year must elapse between the date when the student satisfies the requirements of the university as regards matriculation and his presenting himself for the Final M.B., B.S. Examination.

The university has its own matriculation examination, but accepts the tests of a considerable number of other educational bodies as a full or partial equivalent. A list may be obtained on application.

PROFESSIONAL EXAMINATIONS.

There are four professional examinations for the M.B., B.S. degrees. Each is held twice a year—in March and June. The first deals with elementary anatomy and biology, chemistry, and physics; the second with anatomy and physiology; the third with pathology, elementary bacteriology, medical jurisprudence, public health, materia medica, and pharmacy. At the final M.B., B.S., the candidate is examined in medicine and clinical and psychological medicine; surgery and clinical surgery; midwifery and diseases of women and children; clinical and practical gynaecology; therapeutics; diseases of the throat, nose, and ear; diseases of the skin; and diseases of the eye.

M.D.—A Bachelor of Medicine who wishes to proceed to this higher degree must be of at least two years' standing, and satisfy the university that he knows either Greek or German. He then submits a typewritten essay dealing with original work or observations of his own, and is examined in its subject. If the candidate is not a M.B. of the university, he must be a practitioner of fifteen years' standing, 40 years of age, and submit to special tests.²

B.S.—A candidate for this degree must have passed the examination for the M.B. of the university, and have attended courses on operative surgery and regional anatomy. He must then perform operations on the dead body before the examiners.

M.S.—Candidates for this degree must, like those for the M.D., satisfy the authorities as to their knowledge of Greek or German, and must have been engaged in practice for at least two years subsequent to becoming B.S. Durham. They are submitted to an examination which covers the whole range of surgical knowledge.

FEES.

The following fees are payable: Matriculation or its equivalent, £1 10s; First, Second, and Third M.B. Examinations, each £5; Final M.B., £10; M.D., B.S., and M.S., £5 for each examination and £5 6s. for the degrees of M.B. and B.S. The fee for the degree of M.D. is £10.

Further information respecting the examinations and degrees may be obtained from Professor Howden, at the University of Durham College of Medicine, Newcastle-on-Tyne.

UNIVERSITY OF LEEDS.

The degrees granted in the Medical Faculty of this university are Bachelor of Medicine, Bachelor of Surgery (M.B. and Ch.B.), and Bachelor of Dental Surgery (B.Ch.D.), Doctor of Medicine (M.D.), Master of Surgery (Ch.M.), and Master of Dental Surgery (M.Ch.D.). It also gives diplomas in public health, psychology, and in dental surgery.

Candidates for the M.B. must have attended courses of instruction approved by the university for not less than five years, two at least of such years having been passed in the university subsequently to the date of passing the first examination. They must also have matriculated by satisfying the examiners in (1) English (composition and

literature); (2) English history; (3) mathematics; (4) three of the following, one of which must be a language: (a) Latin, (b) Greek, (c) French, (d) German, (e) some other modern language approved by the Board, (f) either mechanics or physics, (g) chemistry, (h) geography, (i) natural history or botany; (j) general experimental science. Exemption from the examination may be granted to applicants holding certificates of having passed examinations of a standard deemed by the Matriculation Board to be at least equal to the Board's examination.

PROFESSIONAL EXAMINATIONS.

The examinations for the M.B., Ch.B. number three. The first deals with (1) physics and chemistry, (2) biology. In each subject laboratory work is included, but the two parts can be taken separately. For neither can the candidate present himself until after matriculation, and at least two or three terms' approved work in the respective subjects indicated.

Second M.B.—This may be taken in two parts: (a) anatomy and physiology, including practical work; (b) materia medica and pharmacy, including actual compounding of drugs. The candidate's certificates must show, among other things, that he has dissected during at least five terms.

Final M.B.—This may be divided into three parts. The first part, pathology and bacteriology, may be taken at the end of the tenth term; the second part, forensic medicine and public health, and the third part, medicine, surgery, and obstetrics, cannot be taken before the end of the fifth year; and before being admitted to the examination in its subjects the candidate, in addition to ordinary certificates, must produce proof that he has done both intern and extern maternity work, and received clinical instruction in gynaecology, in diseases of the eye, skin, or larynx, and in the administration of anaesthetics. This division covers all branches of surgery, medicine (including mental diseases and diseases of children), and obstetrics and gynaecology. Passages for translation from French and German are included in the papers on medicine. First and second class honours may be obtained in this division.

M.D.—A candidate for this degree must be a M.B., Ch.B. of at least one year's standing. He presents a dissertation embodying the results of personal observation or original research, and, if this is approved, passes an examination which consists in the writing of an extemporary essay, and answering questions on the history of medicine and the subject of his dissertation.

Ch.M.—The candidate for this degree must have been admitted to the M.B., Ch.B. not less than a year previously; and during that time must have held for at least six months a surgical appointment in a public institution affording full opportunity for the study of practical surgery. He must also have attended certain courses, including one on ophthalmology and one on bacteriology; he is then examined in the subject of surgery in all its branches.

FEES.

The matriculation fee is £2, and on readmission £1 10s. For each of the other examinations £5, and £2 on readmission. On conferment of the degree of Ch.M. £5 is payable, the same remark applying to the M.D. degree.

UNIVERSITY OF LIVERPOOL.

This university, besides granting degrees in medicine (M.B. and M.D.) and in surgery (Ch.B. and Ch.M.), gives degrees in dental surgery (B.D.S. and M.D.S.), a degree in hygiene (M.H.), and degrees in veterinary science (B.V.Sc., M.V.Sc., and D.V.Sc.). Diplomas are awarded in dental surgery (L.D.S.), tropical medicine (D.T.M.), public health (D.P.H.), and veterinary hygiene (D.V.H.).

MATRICULATION.

The Matriculation Examination is governed by the Joint Matriculation Board, 315, Oxford Road, Manchester, which accepts under certain conditions the test of several other bodies as its equivalent. These include the Matriculation of London University, the Senior Local Examination of Oxford and Cambridge, the Higher Certificate of the Joint Oxford and Cambridge Board, Responsions of the University of Oxford, the Previous Examination of the University of Cambridge, the Leaving Certificate of the Scottish

¹ See p. 332.² See p. 325.

Education Department, and the Senior Certificate of the Central Welsh Board. Of the five years' curriculum, not less than two must be passed in the university itself, one such year being subsequent to the date of passing the first M.B. Examination.

PROFESSIONAL EXAMINATIONS.

Candidates for the M.B., Ch.B. degrees have three examinations to pass, the first including (1) chemistry, inorganic and organic; (2) biology, including zoology and botany; (3) physics. Section 2 may be taken alone or in conjunction with Sections 1 and 3.

Second M.B.—This test covers (a) (1) anatomy, (2) physiology, including physiological chemistry and histology; and (b) (3) materia medica and pharmacy, (4) pharmacology. Candidates may present themselves in (a) and (b) separately.

Final M.B.—The subjects of the Final Examination are: (1) General pathology, morbid anatomy, and bacteriology; (2) forensic medicine, toxicology, and public health; (3) obstetrics and diseases of women; (4) surgery, systematic, clinical, operative, and practical, including ophthalmology; (5) medicine, systematic and clinical, including mental diseases and diseases of children, and therapeutics.

M.D. and Ch.M.—Candidates for these degrees must have received the M.B. and Ch.B. at least a year previously. The M.D. candidate submits for approval a dissertation covering original work, the M.Ch. candidate undergoing an examination. Other information concerning the diplomas of this university and its medical school will be found on page 319.

FELLOWSHIPS, SCHOLARSHIPS, AND EXHIBITIONS.

The university awards Fellowships annually to students of distinguished merit, as follows:

(1) Alexander Fellowship in Pathology and Bacteriology, value £100 and tenable for one year. (2) Ethel Boyce Fellowship in Gynaecology, value £100 and tenable for one year, open to fully qualified medical students of either sex. (3) John W. Garrett International Fellowship in Bacteriology, value £100 and tenable for one year. (4) Robert Gee Fellowship in Human Anatomy, value £100 and tenable for one year. (5) Holt Fellowships in Physiology and Pathology, two in number, value £100 each and tenable for one year. (6) Johnston Colonial Fellowship in Biochemistry, value £100 and tenable for one year. (7) Thelwall Thomas Fellowship in Surgical Pathology, value £100 and tenable for one year.

There are, in addition, scholarships and exhibitions open to medical students.

VICTORIA UNIVERSITY OF MANCHESTER.

This university grants the four ordinary degrees in medicine and surgery, M.B. and Ch.B. and M.D. and Ch.M.; a diploma and a degree (B.Sc.) in public health; a certificate in factory and in school hygiene; a diploma in psychological medicine; and a degree and diploma in dental surgery. Candidates for degrees must pass the special Matriculation Examination prescribed by the Faculty of Medicine (or some equivalent examination accepted in lieu thereof; see the prospectus of the Joint Matriculation Board), and study at the university itself for at least two years of the five years' curriculum, one such year being subsequent to the passing of the First M.B. Examination. The Matriculation Examination comprises (1) Latin, (2) mathematics, (3) the English language, its literature and history; (4) English history; (5) two subjects at choice, one of which must be a language approved by the Joint Board, the other being elementary mechanics, or physics, chemistry, geography, natural history, or botany. It is held in July and September.

PROFESSIONAL EXAMINATIONS.

M.B., Ch.B.—There are four examinations for this degree. They must be passed in proper order, and before admission to them the candidate must be duly certified as having attended in the subjects involved. At all examinations the subjects, or groups of subjects, prescribed can be taken separately or together, as the candidate pleases. The First M.B. is divided into Part 1, inorganic chemistry and physics; Part 2, biology (including animal and vegetable morphology, physiology, and laboratory work); Part 3, elementary organic chemistry and biochemistry. The parts may be taken separately or together. At the Second M.B. the candidate is examined in anatomy and physiology; at the

Third in pathology, hygiene, and pharmacology and therapeutics (including materia medica and practical pharmacy). The Final Examination includes medicine, systematic and clinical (separate papers being given on mental diseases), and diseases of children, surgery (systematic, clinical, and practical, with a separate paper on ophthalmology), obstetrics and gynaecology, and forensic medicine and toxicology.

M.D.—A candidate for this degree must be a M.B. of at least one year's standing. He has a choice between presenting an original dissertation or undergoing a written (as well as practical and clinical) examination in medicine, and a written and practical examination in pathology, and one other subject to be selected by the candidate.

Ch.M.—A candidate must have held, since becoming Ch.B., and for not less than six months, an appointment in a public institution affording opportunity for the study of practical surgery, and produce certificates of having attended certain courses of study. The examination comprises the general field of surgery, including ophthalmology and bacteriology.

FEES.

The following fees are payable: Matriculation, £2; on re-admission, £1 10s. Each M.B. examination, £5; on readmission, after failure, £2. M.D., including the conferring of the degree, £10. Ch.M., £5 each for the examination and degree. Application for further information should be addressed to the Dean of the Medical Faculty.

UNIVERSITY OF SHEFFIELD.

The degrees of this university (M.B., Ch.B., and M.D. and Ch.M.) and the diploma in public health are open to candidates of either sex. Candidates for a degree must have matriculated in the university or have passed such other examination as may be recognized for this purpose.

PROFESSIONAL EXAMINATIONS.

A candidate for the degrees of M.B., Ch.B. must produce certificates that he will have attained the age of 21 years by the day of graduation; that he has pursued the courses of study required by the university regulations during a period of not less than five years subsequently to the date of his matriculation, or exemption from matriculation, three of such years at least having been passed in the university, one at least being subsequent to the passing of the first examination. He or she has eventually to pass the following examinations in due order:

First Examination.—The subjects are chemistry, physics, and biology. The intermediate examination in science—chemistry, physics, and zoology—will, on payment of the required additional fee, be accepted instead of this examination. Candidates on presenting themselves for this examination are required to furnish certificates of having attended for not less than one year approved courses of instruction, after matriculation, in (i) chemistry, inorganic and organic; (ii) physics; (iii) biology.

Second Examination.—The subjects are anatomy and physiology. The candidate must have completed the third winter session of professional study, must have passed the First Examination, and must have attended (1) lectures on anatomy, and dissections during five terms; (2) lectures on physiology during four terms; practical, experimental, and chemical physiology during four terms, and histology during one term.

Third Examination.—The subjects are pathology and pharmacology. Candidates must have completed the fourth year of medical study and completed the requisite courses in these subjects, including *post-mortem* clerkship for three months.

Final Examination.—The subjects are medicine (including forensic medicine, public health, mental diseases, and diseases of children), surgery, and obstetrics (including gynaecology). Candidates must satisfy the examiners in all subjects at the same examination. Candidates must have completed the fifth year of study.

M.D.—Candidates for the degree of Doctor of Medicine must have passed the examination for the degrees of M.B., Ch.B. at least one year previously, must present a thesis embodying observations in some subject approved by the Professor of Medicine, and must pass an examination in the principles and practice of medicine.

Ch.M.—Candidates for the degree of Master of Surgery must have passed the examination for the degrees of M.B.,

Ch.B. at least one year previously, and must, since taking the degrees of M.B., Ch.B., have held for not less than six months a surgical appointment in a public hospital or other public institution affording full opportunity for the study of practical surgery. The subjects of examination are systematic, clinical, and operative surgery, surgical anatomy, surgical pathology, and bacteriology.

Other information concerning this university will be found in the section devoted to Provincial Medical Schools.

UNIVERSITY OF WALES.

THE Supplemental Charter and statutes of the University of Wales provide for a Faculty of Medicine and for the granting of the following degrees: Bachelor in Medicine (M.B.), Bachelor in Surgery (B.Ch.), Master in Surgery (M.Ch.), and Doctor in Medicine (M.D.).

A candidate for the M.B., B.Ch. cannot be admitted to examination until the completion of not less than six academic years subsequent to matriculation in the university, and of these years at least three must have been passed as a student in one of the constituent colleges of the university. He must also hold an Arts or Science degree of the University of Wales, or of some other university approved for this purpose. Some of the courses of study pursued for a B.Sc. or B.A. degree may be counted as part of the courses required for the degrees in the Medical Faculty.

The courses for the M.B., B.Ch. are divided into two sections, of which the first include the preliminary subjects—physics, chemistry, botany, zoology; and the ancillary subjects—organic chemistry, human anatomy, and physiology. Study of the preliminary subjects must extend over at least one academic year; study of the ancillary subjects must extend over at least two academic years, and, excepting organic chemistry, cannot be commenced until all the preliminary courses have been completed; hence the first section of the course must occupy not less than three years. The second section includes courses in pathology, bacteriology, pharmacology, medicine, surgery, and obstetrics, and cannot be commenced, except in the case of pharmacology, until the examinations relating to the preliminary and ancillary courses have been passed. Examinations in the earlier subjects are held at the end of each academic year, and in the subjects of the second section each July.

English Medical Corporations.

THERE are three medical corporations in England—the Royal College of Physicians, the Royal College of Surgeons, and the Society of Apothecaries of London. The first two combine for certain purposes to form what is known as the "Conjoint Board." Details concerning this body, its component colleges, and the third licensing body here follow.

THE CONJOINT BOARD.

THIS body deals with the qualifications of all candidates for the Licence of the Royal College of Physicians of London and for the Membership of the Royal College of Surgeons of England. It prescribes for them certain periods of study, and recommends those who satisfy it for the Licence and diploma of Membership respectively. The successful candidate is then entitled to admission to the *Medical Register* as a L.R.C.P.Lond., M.R.C.S.Eng. It performs the same task in connexion with diplomas in State medicine and tropical diseases jointly issued by the two colleges in question. It obliges all candidates to pass one of a large number of examinations which it considers satisfactory tests of general education, and thereafter to pass five years in professional study at a recognized medical school, allowing, however, six months to be spent at any institution which may be recognized by the Board as giving efficient education in chemistry and physics. A list of such institutions, as also of the tests accepted in regard to general education, can be obtained from the Secretary of the Board at the Examination Hall, Queen Square, Bloomsbury, W.C.1.

PROFESSIONAL EXAMINATIONS.

There are three examinations for the Conjoint diploma, or L.R.C.P., M.R.C.S., which are commonly known as First Conjoint, Second Conjoint, and Final.

First Conjoint.—This examination is in four parts: (1) chemistry, (2) physics, (3) elementary biology, (4) practical pharmacy.

NOTE.—Candidates who have not passed Parts 1, 2, and 3 by May 1st, 1920, will be examined in Materia Medica and Pharmacology as part of the Second Examination instead of in Practical Pharmacy. The new Regulations and the Synopsis of Examination will be issued shortly.

A candidate must present himself for examination in Parts (1) and (2) together until he has reached the required standard to pass in both, or in one of these parts, but he will not be allowed to pass in one part unless he obtains at the same time half the number of marks required to pass in the other part. A candidate may take Parts (3) and (4) separately, or he may present himself for the whole examination at one time.

Before admission to either part the candidate must show that he has undergone certain courses of theoretical and practical instruction, but these courses need not be completed within one year, nor need they run concurrently, and they may be commenced or attended before the candidate passes the required preliminary examination in general education. A candidate referred in any part or parts will not be admitted to re-examination for three months. If referred in chemistry, physics, or biology, he must produce evidence of further instruction. Those who are already graduates in medicine, or who have passed an examination in the same subjects before a university board for a degree in medicine, may obtain exemption from re-examination in those subjects at this examination.

Second Conjoint.—This examination deals with anatomy and physiology, and both subjects must be passed at the same time. A candidate must have attended at a recognized medical school lectures on anatomy, physiology, and a course of practical physiology and histology, and have dissected for twelve months during the ordinary sessions. The study of anatomy and physiology before passing in two of the first three parts of the first examination is not recognized. If rejected, a candidate, before being admitted to re-examination, must continue his studies at a recognized medical school for not less than three months.

Final Conjoint.—This examination consists of three parts: Part I, medicine, including medical anatomy, pathology, practical pharmacy,¹ therapeutics, forensic medicine, and public health; Part II, surgery, including pathology, surgical anatomy, and the use of surgical appliances; Part III, midwifery and gynaecology. The examination may be passed at one time or in each part separately. Evidence of attendance at courses of instruction in the subjects of the three parts must be produced, and also of having conducted twenty labours. A candidate will be admissible to Parts I, II, and III of the Third or Final Examination at the expiration of two years (twenty-four months) from the date of passing the Second Examination, and on production of the required certificates of study, provided that the examination is not completed before the expiration of five years (five winter and five summer sessions) from the date of passing the Preliminary Examination. A rejected candidate must produce evidence of further instruction during three months.

NOTE.—A person holding a Colonial, Indian, or foreign qualification which entitles him to practise in the country where such qualification has been obtained is, after a course of study and examination equivalent to those required by the Regulations of the two Royal Colleges, admissible to the Second and Third or Final Examinations without any interval. Members of an English, Scottish, or Irish university are under certain conditions eligible for admission to the Third or Final Examination two years after passing at their university the subjects included in the First and Second Examinations of the Board.

A member of an Indian, Colonial, or foreign university recognized for the purpose, who shall have passed examinations at his university for the degree of Doctor or Bachelor of Medicine or Surgery in the subjects of the First and Second Examinations of the Conjoint Board, will be eligible for admission to the Third or final examination two years after passing in the said subjects.

FEES.

First Examination £10 10s. Re-examinations, Parts I and II, £3 3s.; Parts III and IV, each £2 2s. Second examination,

¹ Candidates who have previously passed in practical pharmacy will not be re-examined in that subject at the Third Examination.

£10 10s. Re-examination, £6 6s. Third examination, £21. Re-examination, Part I, medicine, £5 5s.; practical pharmacy, £2 2s. Part II, surgery, £5 5s. Part III, midwifery and diseases of women, £3 3s. Members of an English, Scottish, or Irish university, £5 5s. for examination and £36 15s. for the diplomas.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

This College has three grades—its Licentiates, its Members, and its Fellows. The Licence is now only issued through the Conjoint Board. The Membership is only granted to those who have passed the final examinations for the Licence; or those who are registered practitioners and graduates of a recognized university; in any case they must be persons over 25 years of age, who do not practise in partnership, dispense medicines, or engage in trade. Candidates are examined in pathology and the practice of physic, partly in writing and partly viva voce. Those under 40 are also examined in Latin, and either Greek, French, or German. The examination fee is £6 6s.; the Membership fee is £42, or the difference between that sum and what the candidate has already paid if a Licentiate. The body of Fellows is maintained by election from among the Members.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

This College has two grades—Members and Fellows. The Members are admitted as stated in the section dealing with the Conjoint Board. The Fellowship is granted after examination to persons at least 25 years of age who have been engaged in professional studies for six years. There are two examinations—the first in anatomy and physiology, which may be passed after the third winter session; the second, chiefly directed to surgery, which may be passed after six years of professional study. Candidates must pass the Final Examination of the Examining Board in England and be admitted Members of the College before admission to the Second Examination for the Fellowship, except in the case of graduates in medicine and surgery of not less than four years' standing of universities recognized by the College for the purpose, who are required to attend for one year the surgical practice of a general hospital recognized by the College after obtaining their degrees.

Fees.—At first examination: £5 5s. At second examination: £12 12s. Diploma fee: Members, £3 3s.; non-members, £13 13s.

The College also issues a diploma in dentistry.

SOCIETY OF APOTHECARIES OF LONDON.

This body confers a registrable diploma in medicine, surgery, and midwifery, now known as the L.M.S.S.A., on those successful at the following examinations:

Primary Examination.—This is divided into two parts, of which Part I includes elementary biology, chemistry, chemical physics, practical chemistry, pharmacy. Part II includes anatomy, physiology, and histology, and cannot be passed before the completion of twelve months' practical anatomy with demonstrations. Candidates will be excused any or all the subjects of the primary examination on producing evidence that they have passed equivalent examinations before an examining body recognized by the Society. Candidates referred in anatomy will be required to produce evidence of further work in the dissecting room before being admitted to re-examination.

Final Examination.—This is divided into two sections, the first of which is subdivided into three parts. Part I includes the principles and practice of surgery, surgical pathology, operative manipulation, surgical anatomy, instruments and appliances. Part II includes: (a) The principles and practice of medicine (including therapeutics, pharmacology, and prescriptions), pathology, and morbid histology; (b) forensic medicine, hygiene, theory and practice of vaccination and mental diseases. Part III includes midwifery, gynaecology, and diseases of newborn children, obstetric instruments and appliances. Section 2 consists of clinical surgery and clinical medicine and medical anatomy.

The fee for the primary examination is £5 5s.; for the final, £15 15s. Further information may be obtained from the Secretary, Court of Examiners, Apothecaries' Hall, Blackfriars, E.C. 4.

The Scottish Universities.

THERE are in Scotland four universities, each possessing a faculty of medicine, and having the right to confer degrees which admit the holder to the *Medical Register*. In essential points the regulations in their medical faculties for undergraduates are much alike, so that an account can be given of all of them together.

The universities are those of Edinburgh, Glasgow, Aberdeen, and St. Andrews. The provision each of the cities in which these universities are situated makes for the education of medical students will be found in the section on Medical Schools in Scotland; here it need merely be said that degrees in medicine from Scotland as a whole have always enjoyed a high repute.

The degrees granted in medicine and surgery to candidates of either sex are four in number—Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), Master of Surgery (Ch.M.). The two former are not obtainable one apart from the other. Besides these degrees a diploma in tropical medicine and hygiene is obtainable from the University of Edinburgh, as also diplomas in psychiatry and public health. As for public health, registrable degrees in this subject are granted both by the University of Edinburgh and that of Glasgow, while diplomas in public health may be obtained from the universities of St. Andrews and Aberdeen.

PRELIMINARY EXAMINATION.

There is a special preliminary examination for medical students, the subjects being English, Latin, elementary mathematics, and either Greek or French or German. Candidates are required to pass in all these subjects either at one or at not more than two examinations, but they can present themselves as often as they please. Many corresponding tests held by other bodies are accepted as the equivalent of this examination.

PROFESSIONAL EDUCATION.

The regulations comply in all respects with the requirements and recommendations of the General Medical Council, and in addition necessitate definite study for stated periods of diseases of children, of the larynx, ear and nose, of the skin, of ophthalmology, and of mental diseases. In respect of the various courses certificates must be obtained showing that the student has not only attended regularly, but has duly performed the work of the class. Out of the necessary five years of medical study, not less than two must be spent at the university whose degrees the student hopes to obtain, and the balance at any place officially recognized for such purpose. In each academic year there are two sessions—one lasting from the beginning of October to the middle of March, and the other from the middle of April to the end of June.

PROFESSIONAL EXAMINATIONS.

The distinctive feature of the Scottish curriculum is that, though nominally there are only four examinations, each of those may be, and habitually is, split up by the student into sections. Hence, a student may complete some stage of his career during the course of nearly every session. Thus, by the end of the first winter session the student may pass in physics and chemistry. At the end of the first summer session he can finish with botany and zoology, and with anatomy and physiology at the end of the second. Practical materia medica may be taken at any period of examination after the necessary course of instruction has been attended. Pathology and materia medica he will pass at the end of the third year, and so on, until the final examination in midwifery, surgery, and medicine, and the corresponding clinical subjects at the end of the fifth year of study. At each examination the candidate may pass "with distinction," and a record is kept of the merit displayed, so that, when the time comes for the candidate to graduate, one who has done well throughout can be declared as graduating with first or second class honours. A further point in the system is that the student's own teachers commonly take some part in his examination.

Of the four examinations, the first deals with physics, botany, zoology, and chemistry; the second with anatomy and physiology; the third with materia medica and

pathology; the fourth with medicine and surgery (clinical and systematic), midwifery, forensic medicine and public health, and clinical gynaecology. The first three examinations are held three times a year; the final twice a year.

Exemption from the first professional examination can be obtained by candidates who have passed an arts or science degree examination in its subjects at any recognized university. When a candidate presents himself for an examination in several of its parts, but is not successful in all of them, he is credited at the next examination with those subjects in which he has already been approved.

THE HIGHER DEGREES.

It is open to those who are already M.B., Ch.B., to proceed either to the M.D. or the Ch.M. A candidate for the former must have been engaged for not less than one year in work in the medical wards of a hospital, or in scientific research in a recognized laboratory, or in the Naval or Military Medical Services, or have been at least two years in general practice, and he must be 24 years of age. He has to write a thesis on any subject not exclusively surgical, and is examined in clinical medicine and in some one or other of its special departments. The regulations for candidates for the Ch.M. are of a corresponding character, a period of surgical work in a hospital or elsewhere being substituted for medical work, and the thesis being on a surgical rather than a medical subject. He is examined in surgical anatomy, clinical surgery, operative surgery, and in some of the special departments of surgery.

FEES.

It is estimated that the class, examination, and other fees for the M.B., Ch.B. come altogether to about £160, the separate examination fees included in this calculation being as follows:

	£	s.	d.
First Professional	6	6	0
Second Professional	5	5	0
Third Professional	4	4	0
Final	7	7	0

Re-entry in any subject in which the candidate has failed entails a fresh payment of £1 ls. Candidates for the M.D. and Ch.M. pay £15 15s., and on re-entry £5 5s.

More detailed information with regard to the University of Edinburgh can be obtained from the *Medical Programme*, price 2d., which is published by Mr. Thin, 55, South Bridge, Edinburgh, or on application to the Dean of the Faculty of Medicine. Similar information about Glasgow should be sought from the Assistant Clerk, Matriculation Office, Glasgow. With regard to Aberdeen, application may be made to the Secretary of the Medical Faculty, Marischal College. In respect of St. Andrews information can be obtained either from the Secretary of the University, or, alternatively, the Secretary of the United College, St. Andrews, or the Secretary of University College, Dundee, these being the two constituent colleges of the University of St. Andrews.

Finally, it should be mentioned that in connexion with all the Scottish universities there are valuable bursaries and scholarships, some information as to which will be found in the article on Medical Schools.

Owing to the war, special final examinations may be held for such students as have fulfilled the requirements of the curriculum of the General Medical Council.

The Scottish Corporations.

THERE are three medical corporations in Scotland—the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Royal Faculty of Physicians and Surgeons of Glasgow. Their licences can be separately obtained only by persons who are already in possession of a recognized qualification—in surgery in the case of the College of Physicians, and in medicine in the case of the College of Surgeons and the Faculty of Physicians and Surgeons of Glasgow. All others must submit to the examinations held by the Conjoint Board which the three corporations have combined to form. Details concerning this Board and its component colleges follow. The conditions on which their higher qualifications are granted will be found set forth separately in connexion with each corporation.

THE CONJOINT BOARD IN SCOTLAND.

THIS body has charge of all questions connected with candidates for the Conjoint Licences of the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, and the Royal Faculty of Physicians and Surgeons of Glasgow. Those finally approved by it are entitled to registration and to the initials denoting the Licences of the three bodies concerned—namely, L.R.C.P. Edin., L.R.C.S. Edin., and L.R.F.P.S. Glasg. The Board requires all candidates to comply with the regulations of the General Medical Council. It has an arts examination of its own, but is prepared to accept in its place any of the other educational tests approved by the General Medical Council.

PROFESSIONAL CURRICULUM.

Subsequent to registration as a medical student, the candidate must pass not less than five years in medical study, each comprising a winter and a summer session. The Board does not insist that candidates shall pursue their study at any particular place, and is prepared to accept certificates of having attended the necessary courses from any recognized medical school.

Its examinations are four in number, each of them being held four times every year, and these will fall to be held twice in Edinburgh and twice in Glasgow during the present reconstruction period; it is open to candidates to present themselves for examination at either place. The first examination deals with physics, chemistry, and elementary biology; the second with anatomy and physiology, including histology; the third with pathology and materia medica, including pharmacy; and the final with (1) medicine, including therapeutics, medical anatomy, and clinical medicine; (2) surgery, including surgical anatomy, clinical surgery, and diseases and injuries of the eye; (3) midwifery and diseases of women and of newborn children; and, if it has not been passed previously, (4) medical jurisprudence and hygiene. Candidates may also be examined on diseases of children, diseases of the ear and throat, insanity, vaccination, etc.

These examinations must be passed in due order, and before admission to any of them the candidate must supply certificates showing that he has completed the due periods of study of their subjects. He can present himself in any single subject of the first three examinations. As regards the final examination, a candidate can present himself in medical jurisprudence and hygiene at any time after completion of the third examination and of his study of these subjects; but in medicine, surgery, and midwifery he cannot present himself until the completion of five years' study, and he must take them all simultaneously. A candidate who takes up several subjects of an examination or the whole of the subjects at one time, but fails in some of them, is credited at the next examination with those subjects in which he has been approved.

Part or entire exemption from the first three examinations may be granted to those who have already passed before other bodies examinations deemed by the Board equivalent to its own; but all candidates for the conjoint licence must sit for the final examination, and at no examination can a candidate present himself within three months of his rejection by some other licensing body.

FEES.

It is estimated that the total cost of lectures and fees for the conjoint licence is about £152. The separate examination fees are as follows: First, Second, and Third Professional, £5 each; Final, £15. On re-entry for any of the first three examinations £3, and on re-entry for the Final, £5. If the re-entry is only in one or two subjects the fees are smaller.

Information concerning this Board should be sought either from Mr. D. L. Eadie, 49, Lauriston Place, Edinburgh, or from Mr. Walter Hurst, Faculty Hall, 242, St. Vincent Street, Glasgow.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

THIS College has three grades—Licentiate, Membership, and Fellowship; to the two latter women are not admissible. The regulations applying to candidates for the Licentiate have already been generally indicated. If desirous of receiving it apart from those of the other two corporations, they must be holders of a surgical qualifica-

tion recognized by the College, and must pass an examination corresponding to the medical part of the Final Examination of the Conjoint Board, and conditioned in the same way, and also an examination in materia medica. The fee for examination is 15 guineas, a special examination being obtainable on due cause being shown, and on payment of 5 guineas extra. Ordinary examinations take place monthly on the first Wednesday, except in September and October. A candidate for the Membership must be either a Licentiate of a British or Irish College of Physicians, or alternatively a graduate in medicine of a university within the British Empire, approved by the Council, and in either case not less than 24 years of age. He is examined in medicine and therapeutics, and in one further subject at his choice. This may be either (a) one of the departments of medicine specially professed; (b) psychology; (c) general pathology and morbid anatomy; (d) medical jurisprudence; (e) public health; (f) midwifery; (g) gynaecology; (h) diseases of children; or (i) tropical medicine. Licentiates of the College pay £21, others £36 15s. The examination is held quarterly, and application for admission to it must be made a month previous to its date. For the Fellowship, the candidate must have been a member of the College for at least three years, and, if accepted, pays fees amounting altogether to a little less than £65. Further details can be obtained on application to the Secretary of the College.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

This College has two grades—its Licence and its Fellowship. Licentiates may be of either sex, but for the Fellowship women are not eligible.

Licence.

As an original qualification the Licence is only granted after fulfilment of the regulations of the Conjoint Board, but as an additional qualification it can be obtained by those already possessed of a registrable qualification in medicine. In this case the candidate has to pass a written, oral, and clinical examination in surgery and surgical anatomy, and may be asked to operate on the dead body.

The fee is £15 15s., of which £10 10s. is returned to unsuccessful candidates. On due cause being shown, a special examination may be granted, the fee being £20, of which £10 is returned to a candidate if he is not approved.

Fellowship.

Candidates for the Fellowship must be not less than 25 years of age, and have been in the practice or study of their profession subsequent to registration for at least two years, and must hold either a surgical degree from a university recognized for that purpose by the College, or a registrable diploma obtained as the result of an examination which includes surgery as well as medicine and midwifery. Candidates are examined in (a) the principles and practice of surgery, including surgical anatomy, (b) clinical surgery, and (c) one optional subject which they may choose from among the following: Surgical pathology and operative surgery, ophthalmology, laryngology, otology and rhinology, gynaecology, obstetric surgery, anatomy, and dental surgery and pathology. The examination is written, oral, and clinical or practical. A candidate who desires to be examined must give one month's notice, his application for admission being supported by two Fellows of the College, one of whom must be resident in Edinburgh, or, in default, by testimonials obtained specially for the purpose.

No changes in the curriculum or examinations have been made in consequence of the war.

Licentiates of the College pay £35, and others £45. For further information application should be made to the Clerk of the College, Mr. D. L. Eadie, 49, Lauriston Place, Edinburgh.

ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

This body possesses two classes—Licentiates and Fellows. The regulations applying to the former correspond with those respecting candidates for the Licence of the Royal College of Surgeons of Edinburgh. Candidates for the single Licence are examined in surgery (including clinical

surgery and surgical anatomy). The fee is £15 15s., and examinations are held quarterly. Candidates for the Fellowship must be qualified medical men of not less than two years' standing and 24 years of age. Candidates approved at this examination are then eligible for election as Fellows. Special regulations are in force for medical practitioners serving in the late war. The Faculty can also elect four Fellows annually without previously submitting them to examination, provided they "have highly distinguished themselves in medical science or practice." They must be of not less than ten years' standing and 40 years of age. Further information can be obtained from Mr. Walter Hurst, Faculty Hall, St. Vincent Street, Glasgow.

The Irish Universities.

THERE are three universities in Ireland, and each of them has a medical faculty. These are the University of Dublin, usually known as Trinity College, Dublin, the Queen's University of Belfast, and the National University of Ireland. The two former teach students, examine them, and grant degrees; while the third is an academic body only, inasmuch as its practical work is divided among three constituent colleges, situated, one at Cork, another at Galway, and the third in Dublin. Information as to the arrangements for the education of medical students will be found in the section relating to Irish Medical Schools.

UNIVERSITY OF DUBLIN: TRINITY COLLEGE.

THIS university grants two degrees in medicine (M.B. and M.D.), two in surgery (B.Ch. and M.Ch.), two in midwifery (B.A.O. and M.A.O.), and a post-graduate diploma in public health. It also grants a post-graduate diploma in gynaecology and obstetrics for which one year's study is required. The degrees are granted to those who, besides having passed the Professional Examination, have graduated in arts.

PROFESSIONAL EXAMINATIONS.

A candidate for the Final Examination for the M.B., B.Ch., and B.A.O. degrees must be a matriculated student of at least five years' standing. At least three years of the five years' medical curriculum must be pursued at the School of Physic of the university. The examinations which students must pass are the Preliminary Scientific, the Intermediate Medical, and the Final. Before admission to any of these examinations students must be duly signed up as regards study in the subjects involved.

Preliminary Scientific.—This covers (a) chemistry, (b) physics, (c) botany and zoology; the three divisions may be taken together or at different times.

Intermediate Medical.—This is divided into two parts: (a) anatomy, physiology, organic chemistry, and histology; (b) applied anatomy and applied physiology. The two parts may be taken separately or together.

Final Examination.—Part I: Hygiene and medical jurisprudence, pathology, materia medica and therapeutics. Part II: (a) Midwifery and gynaecology; (b) medicine and mental diseases; (c) surgery in all branches, including clinical ophthalmology. The three sections of Part II may be taken separately or together. In either case the full curriculum must have been completed, and the final examination cannot be completed before the end of the fifth year.

M.D.—The candidate must have passed all the qualifying examinations in medicine, surgery, and midwifery, and have taken, or have been qualified to take, the degree of B.A. three years previously. He must read a thesis before the Regius Professor of Physic.

M.Ch.—The candidate must be a B.Ch. of not less than three years' standing, and have been engaged in practice for two years.

M.A.O.—The candidate must be a B.A.O. of not less than two years' standing and must produce satisfactory evidence of having been engaged for two years in obstetric science. The examination is specially directed to obstetrics and practical gynaecology.

Dental Degrees.—The University of Dublin gives two degrees in dental science, namely, B.Dent.Sc. and

M.Dent.Sc. The course for the former has a minimum duration of four years; for the latter five years.

Further information regarding courses of instruction, etc., may be obtained from the Registrar of the School of Physic, Trinity College, Dublin.

QUEEN'S UNIVERSITY, BELFAST.

The degrees granted by the Medical Faculty of this university are as follows: Bachelor of Medicine (M.B.), Bachelor of Surgery (B.Ch.), Bachelor of Obstetrics (B.A.O.), Doctor of Medicine (M.D.), Master of Surgery (M.Ch.), Master of Obstetrics (M.A.O.). The university also confers a diploma in public health. The first three degrees mentioned serve as a qualification for admission to the *Medical Register*, and are not granted separately. In addition to matriculating and passing his professional examinations, a candidate for these degrees must have passed three of the regulation five years as a student at the Belfast School of Medicine.

PROFESSIONAL EXAMINATIONS.

The examinations for the M.B., B.Ch., B.A.O., are four in number. The first deals with: (1) Inorganic, organic, and practical chemistry, (2) experimental and practical physics, (3) botany and practical botany, (4) zoology and practical zoology. It is divided into two parts, of which botany and zoology form one. The Second Examination covers anatomy and physiology, and may be taken at the end of the second year of the student's career. The Third Examination includes: (1) Pathology, (2) materia medica, pharmacology and therapeutics, (3) medical jurisprudence, and (4) hygiene. To be valid a certificate in regard to the study of the subjects of this examination must show that the work has been done after the First Examination has been passed.

The Final Examination includes: (1) Medicine, (2) surgery, (3) midwifery, (4) ophthalmology and otology. The student may pass in all subjects at once at the end of his fifth year, or he may divide the examination into two parts—namely, (1) systematic, (2) clinical, practical, and oral. The first part may be taken at the end of the fourth year, but for the second part the candidate may not present himself until the end of his fifth year. No certificate in regard to the study of the subjects of this examination will be valid unless the work was done subsequent to passing in all the subjects of the Second Examination.

THE HIGHER DEGREES.

Candidates for the degree of Doctor of Medicine must be graduates in medicine of at least three years' standing, unless they hold also a degree of the university in arts or science, in which case a standing of two academic years will suffice. Moreover, candidates must be able to show that the interval has been passed in the pursuit of such courses of study or practical work as may be prescribed. The degree may be conferred either (a) after a formal examination, or (b) in recognition of the merits of a thesis or of some piece of original study or research carried out by the candidate, followed by an oral or other examination in its subject. When an ordinary examination is imposed it will include (1) a written paper on the principles and practice of medicine, (2) a commentary on a selected clinical case, (3) a clinical and viva voce examination, and (4) a written paper and clinical or practical and viva voce examination on a subject chosen from the following list: (1) Human anatomy, including embryology, (2) physiology, (3) pathology, (4) pharmacology and therapeutics, (5) sanitary science and public health, (6) forensic medicine and toxicology, (7) mental diseases. The regulations for the degrees of M.Ch. and M.A.O. are of the same general nature.

NATIONAL UNIVERSITY OF IRELAND.

The National University of Ireland carries on most of its educational work through three constituent colleges—one in Dublin, one in Cork, and one in Galway. Each of these provides a full medical curriculum, and all candidates for the medical degrees of the university must pass three of their five years of study at one or other of them. These years do not count except after matriculation or recognition as a student of the Medical Faculty obtained in some other fashion. The candidates at each constituent college are examined thereat by the university, and a common

standard of education is secured by all courses of instruction and the regulations concerning them having to be approved by the Senate, after considering report thereon from the Board of Studies of the University. In addition to the ordinary degrees in medicine and surgery, the university grants those of Bachelor and Master of Obstetrics, Bachelor and Doctor of Science in Public Health, and Bachelor and Master in Dental Surgery, as well as diplomas in Public Health, in Mental Diseases, and in Tropical Medicine.

PROFESSIONAL EXAMINATIONS.

There are four examinations. The first, which should be passed at the end of the first year, includes Part A (chemistry and physics) and Part B (botany and zoology), which parts candidates may take separately or together. At the end of the second year they should pass in anatomy and physiology; and at the end of the third year in pathology, materia medica and therapeutics, hygiene and public health, forensic medicine, and toxicology. The final examination is divided into three parts, each of which may be taken separately—namely, (a) medicine, including mental diseases; (b) surgery, including ophthalmology and otology; (c) midwifery and gynaecology.

The higher degrees are obtainable either by examination or on presentation of an approved work, but in each case not less than three years must have elapsed since the candidate acquired the corresponding degree of Bachelor. Further information as to the constituent colleges will be found in the section relating to Irish Medical Schools.

The Irish Corporations.

THERE are three licensing bodies other than the Medical Faculties of the Universities, and, just as in London, there are two Royal Colleges of Physicians and Surgeons and an Apothecaries' Hall. In Ireland, as in London, the two colleges have formed an examining Conjoint Board, which is responsible for the recommendation of candidates to the two bodies for their respective licences. The Apothecaries' Hall gives its Licence separately.

THE CONJOINT BOARD IN IRELAND.

This body requires of candidates the passage either of its own preliminary examination in the subjects of general education, or proof that the candidate has passed one of the tests accepted by the General Medical Council.

PROFESSIONAL EXAMINATIONS.

There are four professional examinations, the first of which cannot be passed earlier than the end of the first winter session, nor the fourth before the conclusion of full five years of medical study. Before being admitted to any of them the candidate must show that he has studied the different subjects in practice and theory for the requisite periods, certificates to this effect being accepted from the authorities of most of the recognized medical schools at home and abroad. The first and second examinations deal respectively with (a) chemistry and physics, and (b) biology; and (a) anatomy, and (b) physiology and histology. All parts of these examinations, as also of the following one, which deals with (a) pathology, (b) materia medica, pharmacy, and therapeutics, (c) public health and forensic medicine, may be taken separately.

Final Examination.—This is divided into three divisions, which cannot be completed until at least four years have passed in medical studies other than those for the first examination, and five years, at least, since the beginning of the curriculum. The divisions are (a) medicine, including fevers, mental diseases, and diseases of children; (b) surgery, including ophthalmic and operative surgery; (c) midwifery, including diseases of women and newborn children, and the theory and practice of vaccination. Candidates are recommended to present themselves in all the subjects of the Final Examination at one time, but a candidate at or after the end of the fourth year may present himself in any one of the divisions (a), (b), or (c), provided he has completed his curriculum as far as concerns the division in which he presents himself.

Fees.—Preliminary Examination, £2 2s.; re-examination, £1 1s. First Professional Examination, £15 15s.; Second, £10 10s.; Third, £9 9s.; Final, £6 6s.; re-examination fee is £2 2s. for each division.

Further information can be obtained from Mr. Alfred Miller, Secretary of the Committee of Management, Royal College of Surgeons, 123, St. Stephen's Green, Dublin.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

Those whose names already appear on the *Medical Register* can obtain the separate Licence in Medicine of this College, and its Licence in Midwifery. In either case an examination has to be passed in the subjects indicated, questions on midwifery, hygiene, and jurisprudence being included in the examination for the Licence in Medicine. For the Licence in Midwifery practitioners of over five years' standing are exempted from examination by printed questions. The other grades of the College are Members and Fellows. The former are admitted after an examination which is open to all university graduates in medicine and Licentiates in medicine of Royal Colleges of Physicians, and deals with the general subjects of medicine. Fellows are selected, by vote, from among the Members of the College, irrespective of sex.

Fees.—For the Licence in Medicine, 15 guineas; for the Licence in Midwifery, 5 guineas; or 16 guineas for both if they are taken within an interval of a month. Special examinations cost in each case 5 guineas extra. For the Membership, 20 guineas to a Licentiate of the College, 35 guineas to others; a special examination costing 10 guineas extra. The Fellowship £35, in addition to stamp-duty, £25.

Information as to special examinations and other points can be obtained from the Registrar, the Royal College of Physicians, Kildare Street, Dublin.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

This body, besides granting a Licence in Surgery, admits those possessed of registrable surgical qualifications to its Fellowship under certain conditions. Its Licence is usually granted conjointly with that of the College of Physicians, but it is given separately to holders of a registrable qualification in medicine, provided the College is satisfied that adequate courses of study have been pursued, and provided its own provisional examination is passed. This examination is held on its behalf by the Conjoint Board, and is identical with the ordinary surgical portion of the examinations imposed by that body.

The Fellowship.

Candidates for the Fellowship must pass two examinations, of which the first is in anatomy (including dissections), physiology, and histology; and the second in surgery (including surgical anatomy) and pathology. Both examinations are partly written, partly practical, and partly viva voce; while the final examination includes the performance of operations. All subjects of either examination must be passed at one time, and to neither can a candidate be admitted who has been rejected in any of its subjects by any other licensing body within three months. Candidates are not admitted to the Primary Examination except on evidence that they have already passed an examination in anatomy, physiology, and histology, held by some university or other body whose degrees or licences entitle the holder to admission to the *Register*; if, however, the candidate is a person whose name is on the Colonial or foreign medical *Register*, at the discretion of the Council. Candidates for the Final Examination must be over 25 years of age, produce a certificate of general good conduct signed by two or more Fellows of the College, and, if successful, must make a declaration before admission to the effect that they do not conduct dispensing practices, and will not do so as long as they are Fellows.

Fees.—Candidates for the Licence pay 5 guineas for examination, which sum, if they pass, is counted as part of the fee payable on admission to the Licence, this being 25 guineas. Candidates for the Fellowship pay 5 guineas for each examination, the total of 10 guineas being reckoned as part of the fee payable on admission to the Fellowship. That fee is 25 guineas in the case of those who are already Licentiates, and 40 guineas in the case of others.

APOTHECARIES' HALL OF IRELAND.

A diploma is granted by this Hall which entitles the holder to be registered as a practitioner of medicine, surgery, and midwifery, and confers also the privileges of an apothecary. Two periods of dissection, each not less than six months, must be included, and twenty-seven months of hospital attendance, or its equivalent. Three professional examinations have to be passed; they are held three times a year. The Primary Examination deals with biology, physics, and chemistry, practical and theoretical; the Intermediate Examination is in practical anatomy and physiology, and histology and materia medica. A candidate who has passed tests in any of the subjects of these examinations before another licensing body is exempt from further examination in such subjects. The Intermediate Examination, Part II, consists of pathology, medical jurisprudence, and hygiene. The Final Examination deals with medicine, surgery, midwifery, and pharmacy. The Hall's own examination in all these subjects must be passed. Women candidates are eligible.

Revised Fees.—Primary Examination, £5 5s.; Intermediate Examination, £10 10s.; Final Examination, £15 15s.; Final alone, when the others have been passed elsewhere, £21. Application for other information should be made to the Registrar, 40, Mary Street, Dublin.

MEDICAL SCHOOLS AND COLLEGES.

LONDON.

Information as to the fees at each of the various metropolitan medical schools, and the scholarships, prizes, and junior appointments which they offer, will be found in the following pages. The courses they provide are fundamentally the same, and in all of them the arrangements made are such as to meet the requirements of students of every class—of those who are aiming at the diplomas of the Conjoint Board or the Apothecaries' Society, not less than of those who have London or other university degrees in view. At all, too, special facilities are offered to men who have commenced their professional education at Oxford and Cambridge. Apart from these facts, the only point to which attention can usefully be directed is that on personal inquiry and investigation reason may perhaps be found for regarding the teaching accommodation and general arrangements for students at some schools as superior to those at others.

CHARING CROSS HOSPITAL.

This school, with its hospital, is situated in the centre of London, and is easily accessible. Primary and intermediate students attend lectures and practical work at King's College. The final studies are taken in the school and hospital, where systematic lectures, demonstrations, and tutorial classes are arranged to cover all the subjects necessary for the qualifying examinations. Departments are also available for the other final subjects of bacteriology, clinical pathology, materia medica, toxicology, public health, operative surgery, and for research work. A fine series of laboratories in the school has been taken over by the University of London King's College, to which a full professorial and teaching staff has been transferred. The course of instruction for the Diploma in Public Health is given in these laboratories.

Women students are accepted by the school and hospital upon the same terms and conditions as men, and after qualification are eligible for resident hospital appointments. A separate common room and a female attendant are provided, but beyond this no further distinction is made.

An entrance fee of 10 guineas and 8 guineas is payable by full-course and final-course students respectively, and an annual fee of 25 guineas covers all other expenditure, with the exception of 7 guineas for vaccination, dispensing, and fever hospital attendance, which must be taken outside the hospital. Membership of the Students' Club is included in these fees.

Further information may be obtained on application to the Dean, Medical School, Charing Cross Hospital, London, W.C.

GUY'S.

THE hospital contains 643 beds in constant occupation. Thirty-three beds are set apart for diseases of the eye and 40 for the most urgent and interesting medical cases, which form the subjects of the weekly clinical lectures. There is a special ward of 32 beds for the reception of cases of diseases of women and for cases of difficult labour. Beds are also allotted to the throat and ear departments, the orthopaedic department, the department for the treatment of diseases of the genito-urinary system, and the children's department; there are as well some special beds for the treatment of syphilis.

The medical college fronts the east gate of the hospital, providing accommodation for 60 resident students. This contains a dining hall, reading rooms, a library of general literature, and a gymnasium for the use of the residents and of the members of the Clubs Union. The athletic ground at Honor Oak Park is reached from the hospital in twenty minutes. The Gordon Museum of Pathology, the Wills Library, the newly built Departments of Chemistry, Physics, Pathology, and Pharmacology, and the school buildings in general, afford unrivalled opportunities for a liberal education and for research. Special classes are held for the First and Second Examinations for Medical Degrees of the University of London and for the first F.R.C.S. Eng. Special teaching is provided to meet the requirements of the universities of London, Oxford, and Cambridge in general pathology and pharmacology.

Appointments.—All appointments are given to students without extra payment, and according to the merits of the candidates, as determined by a committee of the medical staff. Sixteen out-patient officers, eight house-physicians, twenty assistant house-surgeons, eight house-surgeons, two ophthalmic house-surgeons, and nine resident obstetric assistants are appointed annually. The house-physicians and house-surgeons, obstetric residents, and ophthalmic house-surgeons hold office for six months each, and receive free board and lodging in the college. Every student is provided with rooms and commons in the hospital during the period of his "take in" as dresser. In addition to the clerkships and dresserships in the medical and surgical wards, students are appointed to the posts of clinical assistant, dresser, or clerk in the special departments of ophthalmology, laryngology, gynaecology, diseases of children, diseases of the nervous system, dermatology, otology, electricity, anaesthetics, dentistry, orthopaedics, vaccine, and genito-urinary and venereal diseases. More than 150 additional appointments have been added to the list of those annually open to students of the hospital, the majority of them being in the special departments; and numerous clinical assistantships in the various special departments are open to post-graduates.

Scholarships, Prizes, etc.—The following entrance scholarships are awarded annually in the month of September: A. Junior Scholarships in Arts, Classics, Mathematics, and Modern Languages, and Science, of the value of £120, £100, and £50, open to candidates under 21 years of age. B. Senior or University Scholarships of the value of £75 and £35, open to candidates under 25 years of age who have completed their study of Anatomy and Physiology. Subjects, any two of the following: Anatomy, Physiology, Pharmacology, General Pathology, Organic Chemistry. Junior prizes for general proficiency, £20, £15, £10; Hilton prize for Dissection, £5; Michael Harris prize for Anatomy, £10; Sands-Cox Scholarship for Physiology, £15 for three years; Wooldridge Memorial prize for Physiology, £10; Beane prize for Pathology, £34; Treasurer's gold medal in Medicine, Treasurer's gold medal in Surgery, and the Golding-Bird gold medal and scholarship for Bacteriology (£20) are awarded annually after competitive examination. The Gull Studentship in Pathology, the Beane Scholarship in Materia Medica, of the annual value of £150 and £40 respectively, and the Anderson Demonstratorship in Clinical Chemistry, value £150 per annum, are awarded without examination to enable research to be carried on in these subjects. An Arthur Durham Travelling Scholarship of £100 is awarded triennially. The Douglas Research Studentship in Pathology, value £300 per annum, and the Hilda and Ronald Poulton Fellowship, value £140 per annum, are awarded without examination.

Various modifications were rendered necessary by the war. In agreement with the practice of the universities, an allowance has been made for military service performed by candidates for the Entrance Scholarships.

An annual composition fee is paid by all students until a registrable qualification is obtained. Further information may be obtained from the Dean of the Medical School.

KING'S COLLEGE HOSPITAL.

THE medical school carried on in connexion with this institution, at Denmark Hill, deals with the advanced or final subjects of the medical curriculum. The arrangements for education in these subjects are complete. The hospital is new and up-to-date, and is now occupied entirely by civilian patients. There are special departments for diseases of women and children, nervous diseases, ophthalmology, otology, laryngology, dermatology, radiology, dental surgery, etc.; pathological and vaccine departments are also included.

Appointments.—Sixteen resident medical and surgical officers are appointed yearly, as well as dressers and clerks in the wards, out-patient departments, *post-mortem* room, and special departments. Each of the special departments has several clinical assistants. There are three registrars and three tutors, all of whom receive salaries. The Clubs and Societies Union combines athletics, music, and other societies connected with the school, and provides also a common room.

Scholarships, etc.—At entrance: Arts Scholarship, £50; Science Scholarship, £50. At commencement of Final Studies: Anatomy and Physiology Scholarship, £50; Pathology and Pharmacology Scholarship, £50; two Burney Yeo Scholarships, each £80 (for Oxford and Cambridge students); Senior Scholarship, £40; Todd Prize, Tanner Prize, Class Prizes and Medals.

Fees.—The composition fee is 70 guineas if paid in one sum, or 72 guineas in two instalments (one of 40 guineas at entrance, and the other of 32 guineas at the commencement of the second year). Entrance fee ten guineas.

The prospectus of the school can be obtained on application to the Dean, H. Willoughby Lyle, M.D., B.S. Lond., F.R.C.S., or to the Secretary, S. C. Ranner, M.A. Cantab., King's College Hospital, Denmark Hill, S.E.5.

THE LONDON.

THIS hospital, with its medical college and dental school, are situated in the Mile End Road, E.1. The hospital contains 933 beds, and, during 1918, 17,247 patients passed through the wards and 94,554 out-patients received treatment. Of the latter number, 26,319 received treatment in the departments for diseases of the ear, nose, throat, eye, skin, and teeth, and in the obstetric, orthopaedic, and venereal departments. The number of major operations which were performed amounted to 9,056.

The hospital presents, therefore, a large field for clinical instruction, and in its wards and out-patient and special departments exceptional opportunities are afforded for acquiring an extensive and practical experience of all phases of disease.

All the departments are modern and adapted for the teaching of all subjects in the curricula. Special courses of instruction are held in preparation for the examinations for degrees of the University of London and the Fellowship of the Royal College of Surgeons. A residential hostel on hospital ground is provided for the convenience of students who wish to live near the wards and casualty departments. The athletic ground is at Highams Park, and is open to all members of the Clubs Union.

Appointments.—The salaried appointments open to students are those of medical registrar (3), surgical registrar (3), obstetric registrar, medical, surgical, and obstetric tutors; senior dressers to out-patients; clinical assistants in the medical, surgical, ophthalmic, aural, light and skin, orthopaedic, and electrical departments; 3 assistants in the Pathological Institute. There are 2 resident accoucheurs, 6 resident house-physicians, and 9 resident house-surgeons, 7 receiving-room officers, 2 emergency officers, also unpaid clinical assistants in the various special departments. In addition, there are numerous assistantships, clerkships, and dresserships in the departments of medicine, surgery, gynaecology, and obstetrics.

Scholarships and Prizes.—The following is a list of scholarships and prizes:—At Entrance: Price Scholarship in Science, £100; in Anatomy and Physiology, £52 10s.; Entrance Scholarship in Science, £50; Epsom Scholarship, "Free Medical Education." After Entrance: Buxton Prize in Anatomy and Physiology, £31 10s.; Letheby Prizes in Organic Chemistry and Chemical Pathology, £25; Prizes in Clinical Medicine, Surgery, and Obstetrics, £20 each; Duckworth Nelson Prize, £10; Hutchinson Prize, £40; Sutton Prize, £20; Sir Andrew Clark Prize, £26; Anderson Prizes, £9; Dressers' Prizes, £40; Practical Anatomy Prizes, £10; Wynne Baxter Prize, £5 6s.

Arnold Thompson Prize, £15; Harold Fink Prize in Dental Surgery, £5 5s.; Prize in Dental Microscopy, £5. The London Hospital Medical College and the Eliza Ann Alston Medical Research Funds amount to over £25,000.

Fees.—Entrance fee, 10 or 15 guineas, according to examinations passed; annual fee 30 guineas.

Full information may be obtained from the Dean at the London Hospital Medical College, Mile End, E. 1.

THE MIDDLESEX.

THE school and hospital are in Mortimer Street, W., close to Oxford Circus, Goodge Street, and Great Portland Street stations. There is a residential college for a limited number of students overlooking the hospital garden, prosperous athletic clubs and a gymnasium within the precincts of the hospital. The hospital contains over 450 beds, including a wing containing 92 beds for patients suffering from cancer, and special cancer investigation laboratories, which offer unrivalled opportunities for the study of this disease, both in its clinical and pathological aspects. In connexion with the investigation laboratories there are several valuable scholarships awarded.

There are special wards for maternity and gynaecological cases, for cases of venereal disease, and for diseases of children and of the skin and eye.

The Bland-Sutton Institute of Pathology is under the charge of a director. The institute includes a pathological and anatomical museum, a lecture theatre, large pathological and public health laboratories, and smaller rooms for original investigation. Bacteriological, chemical, and microscopical examinations of material from the wards, operating theatres, and out-patient departments are carried out in the laboratories. Senior students are eligible for clerkships in the laboratories of the institute, and every facility is given for original investigation.

In the electro-therapeutic department special attention is given to the treatment of lupus and cancer by the x ray, and opportunities are afforded to students wishing to become acquainted with the use of the apparatus employed in this method of treatment. An electro-cardiographic department has also been established.

Appointments.—Twenty-two resident appointments are open annually for competition among students of the hospital. The officers reside and board in the residential college free of expense. Two casualty medical and two casualty surgical officers, and two resident officers to the special departments, are appointed annually. Eight house-surgeons are appointed every year at intervals of two months, after examination; six house physicians are also appointed annually at similar intervals. An obstetric and gynaecological house-surgeon is appointed every six months. In the out-patient departments the appointments are: clerk and dresser to the physicians and surgeons to out-patients; clerk in the departments for diseases of the skin and nervous diseases; dressers to the department for diseases of women, to the ophthalmic surgeon, to the throat and ear department, and to the dental surgeon. Extern midwifery clerks and *post-mortem* clerks are also appointed. The appointments are so arranged that every student may, during his course, hold all the out-patient and in-patient clerkships and dresserships. Students must have held an out-patient clerkship and dressership before being eligible to hold in-patient clerkships or dresserships. Non-resident qualified clinical assistants are appointed in the Medical, Surgical, Skin, Neurological, Ophthalmic, Throat and Ear, Odontological, Children's, and Electro-therapeutic Out-patient departments.

Scholarships.—Three Entrance Scholarships, value £100, £50, and £25 respectively, are open to students commencing their medical studies in April or October, 1915. An annual Entrance Scholarship, of the value of £50, is open to students of the universities of the United Kingdom who have completed the curriculum for, or passed the examinations in, anatomy and physiology. The examination for these scholarships will take place on September 16th, 17th, and 18th. Applications for admission must be made on or before September 7th. Students joining the school in the previous April are eligible. The Freer Lucas Scholarship is annually awarded on the nomination of the head master to a pupil of Epsom College who has passed the first examination for medical degrees (Preliminary Scientific Examination). There is also a scholarship, value £50, awarded annually to students from New Zealand. In addition to the Entrance Scholarships, there are numerous other valuable scholarships, prizes, and exhibitions open to students of the hospital, including the Brodrip Scholarships, value £60 and

£40; Lyell Gold Medal and Scholarship, value £55 5s.; Freeman Scholarship, value £30; John Murray Gold Medal and Scholarship, value £25; Hestley Clinical Prize, value £25; Leopold Hudson Prize, value 11 guineas; and the Second Year's Exhibition, value 10 guineas.

Fees.—(a) Preliminary Science students: For one year or less, £15. (b) Students who have completed the Preliminary Science course: Entrance fee, £15; four annual fees of £30. The annual fee for further attendance at the medical school, if a registrable qualification has not been obtained, is £20. Three-quarters, one-half, or one-quarter of the last annual fee may, at the discretion of the School Council, be returned if the student obtains a registrable qualification within three, six, or nine months of the annual payment becoming due. (c) Oxford and Cambridge and other students who have completed the Intermediate course: Entrance fee, £10; two annual fees of £30; further annual fees as above.

Further information may be obtained on application to the Dean, A. E. Webb-Johnson, C.B.E., D.S.O.

ST. BARTHOLOMEW'S.

THIS institution fills one side of Smithfield and Giltspur Street, sharing with the Post Office buildings a large island of ground separated practically from all other buildings; it is on the edge of the City, and easily reached from all parts of London. The hospital contains 750 beds. Extensive new buildings, opened in July, 1907, occupy part of the ground acquired from the old Bluecoat School, and these materially enhance the attractions of the hospital as a place of medical study. The medical school buildings, including the library and the chemical, physical, biological, and physiological laboratories, and anatomical department, have now at their side a very large building, which includes club rooms for the Students' Union, a writing room, luncheon and dining halls, new quarters for the resident staff, and an out-patient department and accommodation for special departments of such large size as to be unsurpassed by any hospital in the kingdom. During the year 1909 a second block of new buildings was completed. These form the pathological department, and include, in addition to a new and extensive *post-mortem* room, large and well-equipped laboratories for clinical pathology, pathological histology, bacteriology, and chemical pathology, altogether forming the most complete pathological department in the country. Within the precincts of the hospital also there is a residential college for a large number of students. The Students' Union owns, moreover, grounds of some 10 acres in extent for recreative purposes at Winchmore Hill, which is easily accessible from the hospital.

Special classes are held for students preparing for the Preliminary Scientific and other examinations, for the M.B., B.S. of the Universities of London, Oxford, and Cambridge, and for the higher surgical degrees at the same universities, including the M.Ch. Oxon., M.Ch. Cantab., M.S. Lond., and F.R.C.S. Eng. Special laboratory instruction for the D.P.H. of Cambridge, Oxford, Durham, and London is also given.

Appointments.—Clinical clerks to the physicians and to the physician-accoucheur, and dressers to the surgeons and in the casualty department, are chosen from the students; clerks and dressers are also selected from the students to attend in the out-patient rooms, in the special departments (Ophthalmic, Orthopaedic, Gynaecological, Children's, Laryngological, Aural, Dermatological, Venereal, Electrical, and Dental), and in the *post-mortem* room. Chief assistants and clinical assistants are selected from qualified men appointed yearly to help in the general medical, surgical, and in the special departments. Ten house-physicians and ten house-surgeons are appointed annually. During their first six months of office they act as "Junior" house-physicians and house-surgeons, and receive a salary of £25 a year. During their second six months they become "Senior" house-physicians and house-surgeons, and are provided with rooms by the hospital authorities, and receive a salary of £30 a year. A resident midwifery assistant, an ophthalmic house-surgeon, a house-surgeon to the skin and venereal department, and a house surgeon for diseases of the throat, nose, and ear are appointed every six months, and are provided with rooms and receive a salary of £30 a year. Two resident assistant anaesthetists are appointed annually, and receive salaries of £120 and £100 a year respectively. An extern midwifery assistant is appointed every three months, and receives a salary of £30 a year.

Scholarships.—Four entrance scholarships are annually awarded after an examination held in September. The subjects of examination and conditions of eligibility for these scholarships are: (1) One scholarship, value £75, in not fewer than two and not more than three of the following subjects—Chemistry, Physics, Botany, Zoology, Physiology, and Anatomy, limited to students under 25 years of age who have not entered on the medical or surgical practice of any London medical school. (2) One scholarship, value £100, in not fewer than three of the following subjects—Chemistry, Physics, Botany, Zoology, and Physiology, limited to students under 21 years of age who have not entered on the medical or surgical practice of any London medical school. (3) The entrance scholarship in Arts, of the value of £100, will be given in Latin and mathematics, with one other language—Greek, French, or German. (4) The Jeaffreson Exhibition in Mathematics, Latin, and one other language—Greek, French, or German—and of the value of £50. The value of the scholarships and prizes is over £900 annually.

Further information and a handbook can be obtained on application to the Dean of the Medical School, St. Bartholomew's Hospital, E.C.1.

ST. GEORGE'S.

This school is at Hyde Park Corner, and is carried on in connexion with St. George's Hospital, an institution having a service of 436 beds, of which 100 are at the convalescent hospital founded by Atkinson Morley at Wimbledon. It provides for the instruction of its students in the preliminary and intermediate subjects of the curriculum at the teaching centres of London University established at King's College and University College. The school at Hyde Park Corner is devoted entirely to the teaching of clinical subjects, great attention being paid by the members of the staff to individual teaching. A number of special courses are given, in which the requirements of university and all other examinations receive careful attention.

The St. George's Hospital Club consists of an amalgamation club, with smoking and luncheon rooms on the hospital premises, and other students' clubs, with an athletic ground at Wimbledon. Students have the advantage of a well-filled library of medical and scientific books. A register of accredited apartments, and a list of medical men and others willing to receive St. George's men as boarders, may be seen on application to the Dean.

Appointments.—Dresserships to the surgeons and clinical clerkships to the physicians are open without fee to all students of the hospital. There is a large number of resident appointments, which may be held for six, twelve, or eighteen months, and are open without fee to every perpetual student of the hospital, and are made strictly in accordance with the merits of the candidates. Besides this, after the student has held a house appointment, the following are, among others, open to him: Medical registrarship at £200 per annum; surgical registrarship at £200 per annum; assistant curatorship of the museum at £100 per annum; obstetric assistantship, resident, at £50 per annum; the post of resident anaesthetist at £100 per annum; the posts (2) of junior anaesthetists, each at £30 per annum.

Scholarships.—Two university entrance scholarships in anatomy and physiology (70 guineas and £50) are awarded at the commencement of each winter session. The William Brown Exhibition of the value of £135 per annum (tenable for two years) is awarded by examination to a perpetual pupil of the hospital every second year. The William Brown Exhibition of £45 (tenable for three years) is awarded by examination to a perpetual pupil of the hospital every third year. Other prizes to the value of £200 are awarded annually to the students of the hospital.

Fees.—First year (preliminary science or first conjoint), £26 5s., or £21, according to course. Second and third years, £63 in two equal instalments. For the course of clinical study, in the fourth and subsequent years, entrance fee, £10 10s.; annual composition fee, £31 10s. No entrance fee is payable by St. George's students who have studied at King's and University Colleges.

Further information may be obtained from the Dean of the Medical School.

ST. MARY'S.

This school and its hospital are situated in Praed Street, in the neighbourhood of the residential districts of Paddington, Bayswater, and North Kensington, and are thus especially convenient to students who wish to reside in the immediate vicinity. A register of approved lodgings is kept in the office of the Medical School.

The Medical School provides complete courses in the

preliminary and intermediate subjects of the curriculum which are recognized by the University of London as approved courses for internal students. Students may join in October, January, or April.

The departments of biology, chemistry, anatomy, physiology, and pathology are under the direction of full time lecturers, and special courses are provided twice yearly for the Primary F.R.C.S. In addition, special tuition is provided for the Intermediate and Final Examinations of the universities of Oxford, Cambridge, and London, and for the Final F.R.C.S.

The hospital contains 305 beds.

All clinical appointments in the hospital are free to students of the school, and the resident medical officers are chosen by competitive examination. Six house-physicians, six house-surgeons, and four obstetric officers are appointed each year, and receive board and residence in the hospital. A large number of salaried appointments are open annually to qualified students, including those of medical registrar, surgical registrar, casualty physician, casualty house-surgeon, resident assistant anaesthetist, assistant curator, together with several demonstratorships. In the inoculation department there are nine assistantships.

Scholarships.—There are Entrance Scholarships in Natural Science; one of £100, one of £50, one of £25, and two University Scholarships of £52 10s. awarded annually by competitive examination in September.

Fees.—The composition fee for students is £140 if paid in one sum, or £145 if paid in four instalments. University students who have completed their examinations in anatomy and physiology are admitted on payment of a composition fee of 65 guineas (£68 5s.) paid in one sum, or 70 guineas (£73 10s.) if paid in two annual instalments. A system of annual fees is also in operation for students who prefer it. Separate courses of lectures, laboratory work, or hospital practice may be taken.

The School Calendar and full information can be obtained from the Secretary, St. Mary's Hospital Medical School, Paddington, W.

ST. THOMAS'S.

This school and hospital are situated in Lambeth, on the banks of the Thames facing the Houses of Parliament, and forming one of the well known architectural features of London.

The school buildings, which are separated from the hospital by a quadrangle, comprise lecture theatres, laboratories, and class-rooms well adapted for the modern teaching of large bodies of students in the subjects of the medical curriculum. A splendid library and reading room and a complete museum are open to all students from 9 a.m. to 5 p.m., on Saturdays to 1 p.m. The Students' Club premises contain a dining room and smoking and reading room supplied with daily and illustrated weekly papers, and a gymnasium. Good meals are obtainable at a moderate tariff. The Terrace affords facilities for exercise and recreation. The sports ground of more than nine acres in extent is at Chiswick. It can be reached in forty minutes from the hospital; it is admirably adapted for football, cricket, lawn tennis, and athletic sports.

The hospital proper contains 664 beds. In addition to the ordinary provisions of a great hospital there are connected with the out-patient department physicians' and surgeons' rooms provided with ample sitting accommodation, so that students are enabled to follow closely the practice and teaching of the out-patient staff. There is a full complement of special departments, and connected with the hospital a special tuberculosis department gives opportunity for instruction of students. There is a clinical theatre, centrally situated, so as to facilitate the illustration of lectures by patients from the wards and out-patient room; it is arranged also for lantern demonstrations. The maternity ward, containing 20 beds, gives students full facilities for maternity training, under supervision, within the precincts of the hospital. This obviates any necessity for supplementary instruction elsewhere, and fully prepares the student for the extern maternity practice of the hospital district. The revised regulations of the examining bodies can thus be fully complied with.

Appointments.—All hospital appointments are open to students without charge. A resident assistant physician and a resident assistant surgeon are appointed annually at a salary of £200 each, with board and lodging. Two hospital registrars, at an annual salary of £250 each, are

appointed yearly. The tenure of these offices may be renewed for a term not exceeding two years. An obstetric tutor and registrar is appointed each year at an annual salary of £50. Eight resident casualty officers and anaesthetists are appointed every six months. Four house-physicians, four house-surgeons, two obstetric house-physicians, two ophthalmic house-surgeons, and eight clinical assistants in the special departments are appointed every three months, and hold office for six months if recommended for re-election. Two research assistants (bacteriological and chemical) are paid £200 per annum each. Clinical clerkships and dresserships to the in-patient and out-patient departments are available to the number of 400 each year.

Scholarships.—There are five entrance scholarships: Two in Arts, giving one year's free tuition; one of £150 and one of £60, in Chemistry, Physics, and Biology, for students who have not received instruction in Anatomy or Physiology; one of £50 in any two of the following subjects: Anatomy, Physiology, or Chemistry, for students who have completed their examinations in Anatomy and Physiology, for a medical degree in any of the universities of the United Kingdom, and have not entered as students in any London medical school. Valuable scholarships, prizes, and medals are open for competition throughout the whole career of a student, including a Fellowship of £100 given by the Salters' Company for research in Pharmacology, and the Louis Jenner Research Scholarship of the annual value of £60 for Pathological research.

Fees.—The entrance fee for second year's students is 20 guineas; for third year's students 40 guineas. The annual composition fees 30 guineas. For Preliminary Science students the fee is 15 guineas. The fees cover all tutorial classes given by the school teachers, and there are no extra charges made for materials required in practical courses.

Special courses of instruction are given for various examinations, and a register of lodgings is kept at the school. Further information may be obtained from the Secretary of the School, St. Thomas's Hospital, Albert Embankment, S.E.1.

UNIVERSITY COLLEGE HOSPITAL.

The school, which forms part of the Corporation of University College Hospital, is in immediate proximity to the hospital in University Street, and opposite University College. It comprises departments of medicine and clinical medicine, surgery and clinical surgery, midwifery and gynaecology, pathology including morbid anatomy, clinical pathology and bacteriology, cardiography, forensic medicine, mental physiology and mental diseases, dental surgery, practical pharmacy, and other departments for the study of special diseases, such as those of the eye, skin, ear, and throat, and for instruction in anaesthetics, electro-therapeutics, and skiagraphy. The Hospital and School have acquired the National Dental Hospital and College as their Dental Departments, thus providing every facility for the study of dental subjects. The Royal Ear Hospital, Dean Street, Soho, has also been amalgamated as the Ear, Nose, and Throat Department.

The school thus provides the final course of study for the degrees of the universities of London, Oxford, Cambridge, and Durham, and for the diplomas of the Royal Colleges of Physicians and Surgeons in Medicine and Dental Surgery, and the Licence of the Society of Apothecaries. Special bacteriological classes are also held in preparation for the various diplomas of public health. Each department is also equipped for more advanced work, and provides facilities for research.

A student may enter the medical school at the commencement of his career, in which case he will pursue his preliminary and intermediate studies at the University of London, University College, and his final studies in the school. He may also enter the school for the final studies after having completed his preliminary and intermediate studies at any recognized university or school. Women medical students are now admitted to this hospital and medical school on the same terms as men students. They can pursue the whole of their medical education at University College and University College Hospital, and will be eligible for all scholarships and exhibitions at the medical school.

Scholarships.—The following scholarships and prizes are open to competition: Two Entrance Exhibitions of 80 guineas each, awarded after a competitive examination in anatomy and physiology; Radcliffe Crocker Travelling Scholarship in dermatology for one year value about £250; the Graham Scholarship in pathology of a sum not exceeding £200 per annum; Leslie Pearce Gould Research Scholarship in surgery

for one year value about £200; the Atkinson Morley Scholarship of £45 a year for three years, awarded after examination in the theory and practice of surgery; the Atchison Scholarship of £55 a year for two years for general proficiency in medical studies; the Magrath Clinical Scholarship, value about £100; the Filler Exhibition in pathology of £30; the Percival Alleyn Prize for the advancement of surgery by research, value about £60; the Graham Gold Medal for research work; four Fellows Medals in clinical medicine; Liston Medals in clinical surgery; the Bruce Medal in pathology and surgery; two Tuke Medals in pathology, and the Erichsen Prize for practical surgery.

Special arrangements have been entered upon, which, when completed, will enable students of University College Hospital to carry out a portion of their clinical studies at the National Hospital for Nervous Diseases, Queen Square; the Children's Hospital, Great Ormond Street; and the Central London Ophthalmic Hospital, Judd Street.

Fees.—The fee for the full course of final studies at the school is 80 guineas if paid in one sum, or 82 guineas if paid in two instalments.

Appointments.—All the appointments at the hospital are reserved for students of the school, the dresserships and clerkships being open, of course, to those who have still to qualify. The qualified appointments, in addition to a number of posts as house-physicians and house surgeons and obstetric assistants, include the appointments of resident medical officer, surgical registrars, obstetric registrar, casualty medical officers, casualty surgical officers, assistant in ear, nose, and throat departments, assistant in ophthalmic department, registrar in anaesthetic department, and deputy anaesthetists.

Particulars of general and special courses can be obtained on application to the Dean of the Medical School.

WESTMINSTER.

This school, with its hospital, situated in Broad Sanctuary, opposite Westminster Abbey, provides for the education of its students in the preliminary and intermediate subjects of the University of London at King's College. The rest of the work is done in the school buildings near the hospital, which contains upwards of 200 beds, and affords most ample facilities for instruction in all branches of medicine and surgery.

Appointments.—A medical and surgical registrar are appointed annually, each with a salary of £50. Two house-physicians, three house-surgeons, one assistant house-physician, one assistant house-surgeon, and a resident obstetric assistant are appointed after examination, and are provided with rooms and commons, except the assistant house-physician and the assistant house-surgeon, who are provided with commons only. The assistant house-physician after three months' service becomes house-physician for a further period of six months, and the assistant house-surgeon, after two months' service, becomes house surgeon for a further period of six months. Clinical assistants to the assistant physicians and assistant surgeons, and to the officers in charge of special departments, are appointed from among qualified students. Every student must perform the duties of out-patient dresser for four months, and afterwards hold the office of in-patient dresser for four months. He is also required to serve two terms of four months each as medical clinical clerk to in-patient physician and one term as gynaecological clinical clerk. Two pathological clerks are appointed every four months to assist in the post-mortem room. No student is eligible as an in-patient dresser or clinical clerk until he has passed the Second Examination of the Conjoint Board, or an equivalent examination. Clerks and dressers in the special departments of hospital practice are periodically appointed. So far as vacancies permit, students of other hospitals are admitted to in-patients' dresserships or clerkships.

Scholarships.—The following scholarships are offered for competition during the year 1919-20: In the summer session two natural science scholarships, £60 and £30, and one In the winter session two scholarships in anatomy, £50 each. In the spring two scholarships in anatomy and physiology, £50 each.

Fees.—The annual composition fee is 26 guineas, entrance fee of 10 guineas, and fees for primary and intermediate studies for the final subjects, £8 8s. These fees include sum for membership of the Clubs Union.

Further information can be obtained on application to the Dean at the Westminster Hospital, Westminster.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE
FOR WOMEN.

THIS school is carried on at 8, Hunter Street, Brunswick Square, W.C.1, in connexion with the Royal Free Hospital. An agreement has also been made under which students of the school receive clinical instruction at St. Mary's Hospital, Paddington. It is, like all the other London schools which have so far been mentioned, one of the constituent schools of the Medical Faculty of London University. The school buildings have recently been enlarged. The laboratories are extensive and well lighted, and are fully equipped for the examination courses of the University of London. Research laboratories are attached to all departments.

A large, well-equipped library, common room, Union room, and refectory are provided for the use of students. Residence accommodation for 50 students is provided in students' chambers attached to the school.

The Royal Free Hospital, Gray's Inn Road, W.C.1, has 220 beds, all of which are available for clinical instruction. A new block contains the Maternity Department, with a lying-in ward of 8 beds, enlarged students' quarters, an Out-patients' Department, with special operating theatre, and departments for massage, electrical and x-ray work, dentistry, and casualty. There are also separate departments for gynaecology and obstetrics, and diseases of the eye, ear, and skin. Instruction is given in anaesthetics, bacteriology, etc., in addition to the ordinary clinical lectures and demonstrations and tutorial classes. Students attending at St. Mary's Hospital (305 beds) are admitted to the full clinical course and educational facilities of the hospital. Students attend the practice of one of the fever hospitals of the Metropolitan Asylums Board, and receive special instruction in lunacy at Bethlem Hospital; they are also admitted to the practice of a number of special hospitals.

Arrangements are made for students to hold clerkships and dresserships at the Elizabeth Garrett Anderson Hospital, the Cancer Hospital, Hospital for Sick Children, the National Hospital for Nervous Diseases, and the Brompton Chest Hospital.

The work of the school includes preparation for the M.B., B.S. Lond., and the diplomas of the Royal Colleges of England (including the Primary Fellowship examination), also for the medical school and general hospital course for dental students.

Appointments.—Qualified students of the school can obtain appointments as house-physicians and house-surgeons, obstetric assistants, surgical, gynaecological, and medical registrars, pathologists, anaesthetists, medical electrician, skiagrapher, curator of museum, and clinical assistants and demonstrators in various subjects.

Scholarships.—The Isabel Thorne Entrance Scholarship value £30, the St. Dunstan's Medical Exhibition value £60 a year for three years, which may be extended to five years, and the Mabel Sharman-Crawford Scholarship value £20 a year for four years, are offered for competition in each year. The Sir Owen Roberts Memorial Scholarship, of the value of £75 a year for four years, the Mrs. George M. Smith Scholarship of the value of £50 a year for three years, which may be extended to five years, the Dr. Margaret Todd Scholarship of the value of £37 10s. a year for four years, and the Sarah Holborn Scholarship of the value of £20 a year for three years, which may be extended to five years, are awarded in alternate years. The Bostock Scholarship, value £60 a year for two or four years, is awarded by the Reid Trustees on the result of an examination held in May by the University of London every fourth year. The holder of the scholarship must enter the London School of Medicine for Women. The Lieutenant Edmund Lewis and Lieutenant Alan Lewis Memorial Scholarship of the value of £25 a year for four years is awarded every fourth year. The Agnes Guthrie Bursary for Dental Students, value £50, is awarded each year for the present. The Ellen Walker Bursary of £25 for two years is awarded each year to a student beginning her fourth year of study. The John Byron Bursary of £20 a year for two years, the Helen Prideaux Prize of £40, the Mabel Webb Research Scholarship of £30 for two years, the Fanny Butler Scholarship of £14 10s. a year for four years, together with many other scholarships and prizes, are offered on sundry conditions. The Dr. Edith Pechey-Phipson Post-Graduate Scholarship of £40 is awarded annually. Various missionary societies also offer scholarships on certain conditions, and assist ladies who wish to go to India and other countries as medical missionaries.

Fees.—Courses for the University of London, diplomas of the Conjoint Board in England, and other qualifications: First medical examination, £28, course for second and third, £141; course after the second medical examination, £81. These sums include library and laboratory fees.

The Students' Union exists to promote corporate action of the students on matters of common interest, and to promote and maintain athletic and other clubs. All students are required to become members of the Union.

Further information can be obtained from the Warden and Secretary.

KING'S COLLEGE.

SINCE the incorporation of King's College in the University of London, the instruction given to medical students is carried out there in the classes of the Faculty of Science (Medical Division), and deals only with the subjects of the preliminary and intermediate parts of the curriculum. King's College Hospital (see p. 312) is now a separate institution, and the studies for the final examinations only are carried out there.

A special class for the Matriculation Examination is also held.

There is a large athletic ground at Wormwood Scrubbs, managed by the Students' Union Society.

Scholarships.—The entrance scholarships are: 1. Three Warneford Scholarships, each £25 for four years; subjects—mathematics, classics, divinity. 2. One Sambrooke Exhibition of £25 for two years, open; subjects of examination—mathematics, elementary physics, inorganic chemistry, botany, and biology. The holders of the preceding awards must proceed to King's College Hospital. 3. Rabbeth Scholarship, value £20, in July, for the best student of the first year. 4. Second year's scholarship, value £20, for the best student of the second year.

Information as to fees can be obtained from the Dean of the Medical Division of the Faculty of Science at the College (Professor W. D. Halliburton, M.D., F.R.S.).

Women Students.—King's College is now open to women students for the Preliminary and Intermediate portions of the medical curriculum. Application for admission should be made to the Dean.

Information as to scholarships and subjects of examinations can be obtained from the Secretary of the College.

UNIVERSITY COLLEGE.

THIS institution, one of the principal component parts of the University of London, possesses a Faculty of Medical Sciences whose work covers all the subjects included in the group commonly known as the preliminary medical sciences—namely, physics, chemistry, botany, and zoology; and also the intermediate medical sciences—namely, anatomy, physiology, and pharmacology. These courses in intermediate medical sciences were opened to women students on the same terms as to men in October, 1917. The preliminary medical science courses have for many years been open to women students. The Department of Hygiene and Public Health prepares for the diplomas in public health of the Royal Colleges and of the various universities. Research work is undertaken in all the above-named departments. It undertakes the education of students in all the subjects mentioned, leaving them free to complete their education in the strictly professional subjects—medicine, surgery, and the like—at any one of the recognized schools of advanced medical studies. The work is somewhat differently arranged, according to whether the student has in view the degrees of the University of London or the diplomas of the Royal Colleges. In either case the whole work to be done is divided into courses devised to meet the requirements of different examinations, and students can join the College for any of them. The general arrangements for the benefit of students include membership of the Union Society with its gymnasium and athletic ground. There is also a collegiate residence for about forty men students at Ealing.

Scholarships.—The scholarships and exhibitions obtainable include the Bucknill Scholarship, value 135 guineas, in chemistry, physics, botany, and zoology (the successful student must complete his work at University College Hospital Medical School), and two entrance exhibitions in the same subjects, each of the value of 55 guineas.

Fees.—The fees for the courses covering the work of the First Examination for medical degrees of the University of London, and in both parts of the Second Examination, amount to 84 guineas. The fees for the courses covering the corresponding examinations held by the Conjoint Board in England come together to 79 guineas. These fees may be divided into payments for the different courses which it may be desired to take out, but do not cover tuition for more than a stated period.

A handbook specially relating to this faculty may be obtained on application to the Secretary of University College.

COOKE'S SCHOOL OF ANATOMY.

This school is prepared to admit to its supplementary work all who may wish to join, but in regard to its curriculum work it does not receive more than half a dozen students a year. The operations of surgery are performed on the dead body.

The school, which is open all the year round, possesses a good collection of anatomical models, physiological and chemical apparatus, and gentlemen preparing for the higher examinations (F.R.C.S. Eng., M.B. Cambridge, Oxford, London, etc.) receive special instruction in the more difficult subjects. Other information may be obtained from Mr. Knight, 46, Mecklenburgh Square, W.C.1.

THE PROVINCES.

THERE are in England and Wales, not counting London, ten medical schools, each, with one exception, supplying instruction in the full medical curriculum. Accounts of them here follow. In several cases there is appended information concerning other hospitals than those directly connected with the school in question; such hospitals, officially and unofficially, play a part in the education which the students of the school receive, and in any case serve as places of additional or post-graduate study.

OXFORD AND CAMBRIDGE.

BOTH at Oxford and Cambridge there are medical schools which furnish unsurpassed opportunities for obtaining a good knowledge of the preliminary sciences and of anatomy, physiology, and pathology. The laboratories are excellently equipped, and the teaching staffs most distinguished. Both schools provide a full medical curriculum, and there is no essential reason why the student should not complete his career at either of them, but this is not commonly done. The local hospitals are comparatively small, so the authorities encourage the students, as soon as they have completed the earlier examinations, to join some London school, and thus spend the time of their preparation for the final examination in a city where the opportunities for gaining clinical knowledge are greater and more varied.

BIRMINGHAM.

THE school in this city is carried on by the Medical Faculty of the University of Birmingham, its students having an adequate number of good laboratories, classrooms, and other necessities devoted to their use by the university. The clinical work is done at the General and Queen's Hospitals, which are amalgamated for this purpose. Together they have upwards of 500 beds for medical, surgical, and special cases, and with an array of special departments of all kinds, including one for lying-in women. Clinical instruction is given in the wards and out-patient and special departments daily, and formal clinical lectures delivered weekly throughout the winter and summer sessions. Special tutorial classes are also held alike for the degrees of Birmingham and some other universities and for the diplomas of corporations.

Appointments.—The large number of appointments open to past or other students includes the following:—At the General Hospital: Surgical registrar, £200 a year; one resident medical officer, salary £155 a year; one resident surgical officer, salary £180 a year; one resident pathologist, salary £100 a year; two visiting anaesthetists, salary £50 a year; four house-surgeons, office tenable for nine months, £100 a year; one house-surgeon to the gynaecological and one to the special departments, each tenable for six months, £100 a year; three house-physicians, post tenable for six months, £100 a year. At the Queen's Hospital: three house-physicians and three house-surgeons (posts vacant in January and April); one obstetric and ophthalmic house-surgeon (posts vacant in April and October). These appointments are tenable for six months. Salaries at the rate of £90 per annum, with board, lodging, and washing. One resident dresser, tenable for three months; candidates must previously have attended their third-year lectures, etc., and need not be qualified.

Honorarium, £13 13s. on completion of duties. At the Maternity Hospital: one house-surgeon, salary £50 a year. At the City Workhouse and Workhouse Infirmary: five resident medical officers. At the Birmingham General and Branch Dispensaries: twelve resident surgeons. At the Birmingham Lunatic Asylums: five assistant medical officers. At the City Fever Hospitals: three assistant medical officers. At the Children's Hospital: one resident surgical officer, one resident medical officer. At the Birmingham and Midland Eye Hospital: four resident surgeons. At the Orthopaedic and Spinal Hospital: two clinical assistants (non-resident). At the Ear and Throat Hospital: one house surgeon, £70 a year; four clinical assistants (non-resident). There are also four non-resident Poor Law appointments in the gift of the Board of Guardians.

Scholarships.—There are numerous money and other awards for students of sufficient merit, among them being the following: The Walter Myers Travelling Studentship of £150; the Sands-Cox Scholarship of £42 (an entrance scholarship in the Faculty of Medicine, awarded on either matriculation or First M.B. marks); four Queen's Scholarships of £10 10s. each, awarded annually at the second, third, fourth, and final university examinations respectively; one or more Sydenham Scholarships, allotted on entrance to students who are the sons of deceased medical men. The Ingleby Scholarship of £10 for proficiency in midwifery and diseases of women. There is also an entrance scholarship of £37 10s. for students proceeding to a degree in dental surgery. University Clinical Board Prizes are awarded annually as follows: Senior Medical Prize, Gold Medal; Senior Surgical Prize, Gold Medal; Midwifery Prize, Gold Medal; Junior Medical Prize, Silver Medal; Junior Surgical Prize, Silver Medal.

Fees.—The composition fee for university classes is £85. This covers all the work required for the degrees of Birmingham and some other universities, and for the ordinary qualifications of licensing corporations, but not the additional courses required for the Fellowship of the Royal College of Surgeons of England, the diploma and degrees of the university in State medicine, and some other special work. The total cost for the five years' curriculum, including hospital and examination fees, is estimated at £158 2s. 6d.

Other information should be sought from the Dean of the Medical Faculty.

BRISTOL.

THE school is carried on by the Faculty of Medicine of the university, and provides full instruction for all its degrees and diplomas. The allied hospitals (Bristol Royal Infirmary and Bristol General Hospital) have between them about 600 beds and extensive out-patient departments, special clinics for diseases of women and children, and those of the eye, throat, and ear, in addition to arrangements for dental work and large outdoor maternity departments. At each of these institutions there are well-arranged pathological departments, comprising large pathological museums, post-mortem rooms, and laboratories for morbid anatomy. There are also laboratories for work in clinical pathology, bacteriology, and cytology, in which special instruction is given in these subjects. Departments are provided and well equipped for x-ray work both in diagnosis and treatment, the various forms of electrical treatment, including high-frequency currents, electric baths, Finsen light treatment, and massage.

The students of the school have also the advantage of attending the practice of the Royal Hospital for Sick Children and Women, containing 108 beds, and that of the Bristol Eye Hospital, with 40 beds. Excellent facilities are thus afforded to students for obtaining a wide and thorough acquaintance with all branches of medical and surgical work. Each student has the opportunity of personally studying a large number of cases and acquiring practical skill in diagnosis and treatment. All classes are open to women.

Appointments.—(1) Undergraduate: Clinical clerkships, dresserships, also ophthalmic, obstetric, and pathological clerkships are tenable at the Bristol Royal Infirmary and the Bristol General Hospital. In these institutions the dressers reside in rotation free of charge. (2) Post-graduate.—At the Bristol Royal Infirmary: Four house-surgeons, £100 each per annum; four house-physicians, £100; resident obstetric and ophthalmic house surgeon, £100; throat, nose, and ear house-surgeon, £100; dental house-surgeon, £100. All these appointments are made for twelve months. From the resident officers a senior resident officer is appointed at an additional salary of £30. At the Bristol

General Hospital: Senior house-surgeon, £200 per annum; casualty house-surgeon, £100 per annum, if another resident appointment has been previously held; two house-physicians, £80 per annum; house-surgeon, £80 per annum; obstetric house-surgeon, £80 per annum; dental house-surgeon, £200 per annum. All these appointments are for six months, except those of senior house-surgeon and dental house-surgeon, which are for two years.

Scholarships.—The following are among the scholarships and other awards open to students of the school: Two Martin Memorial Pathological Scholarships of £10 each; the Tibbitts Memorial Prize, value 9 guineas, for proficiency in practical surgery; the Committee's Gold and Silver Medals for fifth-year students for general proficiency; the Augustin Prichard Prize, value 7 guineas, for proficiency in anatomy; the Henry Clark Prize, value 11 guineas, for general proficiency; the Crosby Leonard Prize, value 7 guineas, for proficiency in surgery; the Suple Surgical Prize, a gold medal and 7 guineas; the Suple Medical Prize, a gold medal and 7 guineas; the Henry Marshall Prize, value £12, for dressers; the R. M. Clarke Scholarship, value £15, for proficiency in surgery; the Sanders Scholarship, value £22 10s., for general proficiency.

Fees.—The fee for all the courses required for the medical curriculum, including hospital practice, is 135 guineas if paid in one sum. It amounts to 150 guineas if paid by annual instalments.

CARDIFF.

The school in this city is carried on by the University College of South Wales and Monmouthshire, and devotes itself at present principally to training students during the first three or four years of the medical curriculum, all classes being open to women students. The courses of instruction given are recognized by all licensing bodies in Great Britain, and after passing the tests corresponding to the first three years of the curriculum, the student can complete his course, for whatever degree he is aiming at, in London or elsewhere. Besides this, there is an arrangement with the Management Committee of King Edward VII Hospital by which students at the school can take advantage of the opportunities for acquiring experience afforded in the wards of this large, well ordered hospital. Hence many students, especially from Wales and Monmouthshire, find it convenient to avail themselves of the advantages of being able to pursue the earlier part of their medical curriculum near home. They can also obtain instruction in vaccination and in the administration of anaesthetics, and with a little additional work can qualify for the B.Sc. degree of the University of Wales. This degree includes the subjects which comprise the first three years of a medical student's curriculum, and it (or the B.A.) is a compulsory degree for those students who propose to sit for the M.B., Ch.B. of the University of Wales. There is also a department of public health, in which all the work for diplomas in State medicine, whether for the University of Wales or other Examining Boards, can be done. A Chair of Pathology and Bacteriology has been established. It is hoped that before long a complete Welsh National School of Medicine will be established at Cardiff, owing to the munificent offer of Sir William James Thomas to erect and present to the college a school of preventive medicine and medical school buildings, in addition to the Physiological Laboratory he has already provided. A Mansel Talbot Professor of Preventive Medicine will be appointed to the school during the session 1919-20.

Post-graduate vacation courses are carried on in association with the Cardiff Infirmary.

Scholarships.—There is a considerable number of scholarships connected with the college, and open to students of the School of Medicine, information as to which can be obtained on application.

Fees.—The composition fee for the three years' courses required for students proceeding to the M.B., Ch.B., is £53; that for the two years' courses for students proceeding to a diploma of the licensing corporations being £41 10s. The composition fee for D.P.H. classes is £30.

Further information may be obtained on application to the Dean of the Faculty of Medicine.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE.

This, the Medical School of the Faculty of Medicine of the University of Durham, is in the neighbouring city, Newcastle-on-Tyne. Its classes and lectures are arranged to meet the requirements of the university in all the degrees which the latter grants, and also those of the other examining bodies. The students do their work in the pre-

liminary sciences at Armstrong College, also part of the university, and their clinical work in the new Royal Victoria Infirmary, an institution with over 400 beds and special accommodation for the benefit of students. In a new wing of the school itself there are the departments of bacteriology and physiology. There are also in this wing a gymnasium and a set of rooms for the use of the Students' Union.

Appointments.—Assistant demonstrators of anatomy and prosectors for the professor of anatomy, assistant physiologists, pathological assistants, assistants to the dental surgeon, and assistants in the eye department, throat and ear department, and department for skin diseases, are elected annually. Clinical clerks and dressers are appointed every three months.

Scholarships.—A University of Durham Scholarship, value £100, for proficiency in arts, open annually at the beginning of the winter session to intending students. The Pears Scholarship, value £150, for proficiency in arts (when vacant). The Dickinson Memorial Scholarship, interest of £400, with a gold medal, for medicine, surgery, midwifery, and pathology, open to perpetual students in their fifth year. The Tulloch Scholarship, interest of £400 annually, for elementary anatomy, biology, chemistry, and physics, for students at the end of their first year. The Charlton Memorial Scholarship, interest of £700 annually, open to full students entered for the class of medicine, at the end of their fourth or fifth winter. The Gibb Scholarship, interest of £500 annually, for pathology, at the end of summer session. Gibson Prize, interest of £250 stock, for midwifery. Outtersen Wood Prize, interest of £250, for psychological medicine. The Goyder Memorial Scholarship, proceeds of £325; subjects: clinical medicine and clinical surgery. Luke Armstrong Memorial Scholarship, proceeds of £680, for best essay in some subject in comparative pathology. The Stephen Scott Scholarship in Surgery, interest on £1,000 annually. The Heath Scholarship in Surgery, of the value of £200, awarded every other year. First award in 1896. Philipson Scholarships (2), the interest on £1,800 to the candidates who obtain the highest marks in the Final M.B. examinations held in March and June respectively.

Fees.—The composition fee for lectures at the college is 90 guineas. Composition fee for hospital practice 35 guineas, plus £2 2s. yearly for three years payable to the Committee of the Royal Victoria Infirmary. Other information should be sought from the Secretary of the School at Newcastle.

LEEDS.

The School of Medicine—which is open to both male and female students—in this city forms the teaching centre of the Medical Faculty of the University of Leeds, and is situated in immediate proximity to the General Infirmary, where students sufficiently advanced receive their clinical instruction. The buildings were opened in 1894, and contain excellent dissecting rooms, several well arranged laboratories for physiology, pathology, and bacteriology, three lecture theatres, and several similar class-rooms. In addition, there are a library and reading room and two museums, one being devoted to pathology and the other to anatomy. The comfort of the students is secured by common rooms and a refectory in which they can take meals. The General Infirmary has 532 beds, and includes gynaecological and ophthalmic wards and a large out-patient department. The Ida and Robert Arthington Semi-convalescent Hospitals, Cookridge, attached to the infirmary, has 88 beds. The West Riding Lunatic Asylum at Wakefield is also open for the study of mental diseases. Students can, in addition, attend the practice of the Leeds Public Dispensary (where the practical instruction in dental subjects is also given), the City Fever Hospitals (100 beds), the Hospital for Women and Children, and the Leeds Maternity Hospital.

Appointments.—One senior anaesthetist, £50; seven assistants, £25 each; medical and surgical tutor, at £125 each per annum; one resident medical and one surgical officer, each at £150 per annum; one casualty officer, at £125 per annum; one resident ophthalmic officer, at £100 per annum; one resident aural officer, at £100 per annum; one resident obstetric officer, at £50 (attached to the gynaecological ward and an extensive external maternal department); one ophthalmic house-surgeon, at £50 per annum; three house-physicians, each holding office for six months, and four house-surgeons, holding office for twelve months. Surgical dressers are appointed every six months; physicians' clerks, ophthalmic and aural dressers, gynaecological ward clerks, gynaecological out-patient clerks, maternity clerks, assistant physicians' clerk, dermatological clerk, and assistant surgeons' dressers, dressers in the casualty-room, post-

mortem clerks, and laboratory assistants every three months, and dressers in the venereal clinic every month. A resident medical officer (honorarium, £30) is also appointed every six months for the Ida Semi-convalescent Hospital. Appointments are also open to students at the Leeds Public Dispensary (one senior and four junior resident medical officers, with salaries commencing at £80), at the Hospital for Women (two house-surgeons, at £50 per annum, and two anaesthetists, £20), and at the West Riding Asylums.

Scholarships.—The university awards annually a scholarship in the form of a free admission to the lectures and classes given in the university, which are covered by the composition fee. The infirmary also awards a scholarship on the results of the first examination, of the value of 40 guineas, in the form of a free admission to the clinical teaching of the infirmary.

Fees.—It is estimated by the authorities that the approximate cost of medical education to a student in this university is £202, plus, of course, the expenses of living during the five years covered by the curriculum. The fee for a complete course for the First M.B. is £27 lls.; the composition fee for the course for the second and third examinations is £73 2s. 6d. (for students who have passed the second examination, £48 16s. 6d.), and for the clinical work at the infirmary, £42.

Further information can be obtained from the Dean and Clinical Subdean, School of Medicine, Leeds.

LIVERPOOL.

The Medical School of this city is part of the university, and, owing to the enlightened liberality of several men of wealth, is exceptionally well provided with special laboratories, as well as with ordinary spacious and well-equipped class-rooms and laboratories for the instruction of students proceeding to medical degrees and diplomas in special and ordinary subjects. All the laboratories and other rooms are situated close to one another and intercommunicate, together forming large blocks of buildings. The work of students throughout all stages of their career is arranged upon very satisfactory lines, and the teaching hospitals, of which an account is given below, have amalgamated to form the clinical school of the university.

Appointments.—The nature of the appointments open to past and other students at this school will be gathered from the account which follows of the hospitals forming its clinical department.

Scholarships.—The awards made each year to successful students total over £1,000. They include the following: Two Holt Fellowships, one in Pathology, the other in Physiology; a Robert Gee Fellowship in Anatomy; an Alexander Fellowship for Research in Pathology and Bacteriology; a John W. Garrett International Fellowship in Bacteriology; a Johnston Colonial Fellowship in Biochemistry; an Ethel Boyce Fellowship in Gynaecology; and a Thelwall Thomas Fellowship in Surgical Pathology, all of the value of £100; a University Scholarship of £25, awarded on the results of the Second M.B. Examinations; a Scholarship in Mechanical Dentistry of £20; two Lyon Jones Scholarships, of the annual value of £21 each for two years, one for the junior and the other for senior students; the Derby Exhibition of £15; the Clinical School Exhibition of £15; the Owen T. Williams Prize; the Torr Gold Medal in Anatomy; the George Holt Medal in Physiology; the Kanthack Medical in Pathology; the Robert Gee Prize of £5 5s. in Children's Diseases; two Robert Gee Entrance Scholarships, each of the value of £25 per annum for two years; Orthodontia Prizes, Senior £3 3s., Junior £1 1s.; one Thomas H. Bickerton Prize in Anatomy; Dental Operating Prizes, Senior, £4 4s.; Junior, £2 2s.; Ash's Prize in Dental Surgery, value £2 2s.; and other Entrance Scholarships.

Information as to the fees for the courses of instruction provided by the schools should be sought from the Dean of the Medical Faculty.

The Clinical School.

As many as nine hospitals have combined to form the clinical school of the university, these being: The Royal Infirmary, the David Lewis Northern Hospital, the Royal Southern Hospital, the Stanley Hospital, the Infirmary for Children, the Hospital for Women, the Eye and Ear Infirmary, St. Paul's Eye Hospital, and St. George's Hospital for Diseases of the Skin. Between them they provide about 1,140 beds.

MANCHESTER.

The staff of the Medical School in this city constitutes the Medical Faculty of the Victoria University, all the arrangements for the instruction of students, both in their earlier and their later studies, being of an elaborate nature.

The clinical work of the undergraduates is done chiefly in connexion with the Royal Infirmary, an institution which itself contains about 592 beds, and has associated with it a large convalescent home and the Royal Lunatic Asylum at Cheadle. Instruction in practical gynaecology and midwifery is given at the Royal Infirmary and the St. Mary's Hospitals.

Appointments.—The following are among the appointments open to past and present students of this school in connexion with its arrangements for clinical tuition: A surgical registrar, at £75 per annum; a pathological registrar, at £100 per annum; a medical registrar, at £75 per annum; a surgical tutor, at £30 per annum; a director of the clinical laboratory, at £250 per annum; and one assistant director at £75; three assistant medical officers and three assistant surgical officers, each at £35 per annum; one assistant surgical officer, aural department, at £35 per annum; five anaesthetists, at £50 per annum each; one medical officer for skiagraphy and electricity, £100 per annum; one medical officer for home patients, one year, £150 per annum; one resident medical officer, one year, £150 per annum; ditto at Cheadle, one year, £150 per annum; one resident surgical officer, one year, £150 per annum; two resident medical officers for Central Branch, £100 per annum; one accident room house-surgeon, six months, £100 per annum; one assistant medical officer at the Convalescent Hospital at Cheadle, appointed every six months, at a salary of £80 per annum; eight senior and eight junior house-surgeons and ten house-physicians, appointed during the year for a term of six months. Resident officers are appointed to the gynaecological, the eye, and the ear and throat departments every six months. Four or more clinical clerks are attached to each physician and assistant physician, and four or more dressers to each surgeon and assistant surgeon, to the gynaecological surgeon and assistant gynaecological surgeon, to the ophthalmic surgeon, and to the surgeon for the ear and throat department, and four or more clerks to the pathologist, two clerks to the director of the clinical laboratory, and a number of clerks, not exceeding six, are appointed to assist the medical officer for home patients. Accident-room dressers are appointed every three months, three senior dressers and twelve or more junior dressers.

Entrance and other Scholarships.—The following are among the scholarships obtainable by students of the school: Rogers and Seaton Scholarships in Arts (in alternate years), £40 per annum, tenable for two years. Two Dalton (entrance) Scholarships in Mathematics, tenable for two years, value £40, one being awarded annually, except in such years as a Cartwright Scholarship is awarded. Cartwright Scholarship, £35 per annum, tenable for three years. Three Hulme Scholarships, tenable for three years, of £35, one being awarded annually for proficiency in subjects of general education. Two James Gaskill Scholarships of £35, tenable for two years, one being awarded annually for proficiency in the branches of Mechanics and Chemistry. A Dora Muir Scholarship, £30 per annum, tenable for three years, and open to the competition of women students only. This is awarded triennially. Sir J. P. Kay-Shuttleworth Scholarship, £30 per annum, tenable for three years, open to the competition of scholars from Sedburgh School, Giggleswick School, and Burnley Grammar School. Subjects: Mathematics, Chemistry, and Mechanics. Dreschfeld Memorial Scholarship, value £30, tenable for one year and awarded triennially on the result of the Entrance Examination. A Theodores Modern Languages Exhibition, £20, awarded annually. Two Dauntsey Medical Scholarships, value £45 and £35, tenable for one year, for candidates who have not commenced the second year of study leading to a medical qualification. Subjects: Zoology, Botany, and Chemistry. Two Entrance Scholarships in Medicine, value £100, awarded annually for proficiency in Arts or Science respectively. Two Research Fellowships in Public Health of £50 each, awarded annually. Tom Jones Exhibition in Anatomy, £25, offered annually. Robert Platt Physiological Exhibitions: Two, about £15 each, offered annually. A Robert Platt Physiological Scholarship of £50, tenable for two years. A Robert Platt Zoological and Botanical Scholarship, £50. A Leach Fellowship of £100 for original research after graduation. A Graduate Scholarship in Medicine, value £25, tenable for one year, awarded annually for proficiency shown at Final M.B. Examination. A Dumville Surgical Prize, value £15, awarded annually at graduation. The Tom Jones Memorial Surgical Scholarship, value £100, tenable for one year, awarded usually triennially. The Turner Medical Scholarship, value £20, awarded annually for proficiency in certain subjects of the Final M.B., Ch.B. Examination. The John Henry Agnew Scholarship of £30, awarded annually for proficiency in the Diseases of Children. The Bradley Memorial Scholarship in Clinical Surgery of £20. The Ashby Memorial Scholarship, tenable for one year (£100), for research in the Diseases of Children; offered triennially. Sidney Renshaw

Exhibition in Physiology: One, offered annually. The details and regulations of the Dickinson Scholarships—(1) for Anatomy, (2) for Pathology, (3) Research Scholarship in Surgery, and (4) Travelling Scholarship in Medicine—will be announced later. The Sam Gamble Scholarships—the trustees are prepared to award four scholarships of not less than £40 per annum, tenable for not more than four years, to women students who have passed the First M.B. Examination. The conditions under which these are awarded can be obtained from the Registrar. The Knight Prize of £50 for original research in the psychological factors in the causation of mental disorder—open to holders of the Diploma in Psychological Medicine or medical practitioners who have been registered in the University as candidates for that diploma.

Fees.—The composition fee for the university course in medicine is 70 guineas, payable in three instalments of 30, 20, and 20 guineas, but this sum does not include the fee to cover the work required for the first M.B. Examination. This is £25, payable in one sum.

A prospectus and further information about the school and scholarships may be obtained on application to the Registrar.

Clinical Work.—The Royal Eye Hospital, the Manchester Northern Hospital for Women and Children, the well known Hospitals for Children at Pendlebury, and St. Mary's Hospital for Diseases of Women and Children all make arrangements for the instruction of students.

SHEFFIELD.

In this city the Medical School is one of the departments of the University, being conducted and controlled by its Medical Faculty, and occupying practically the entire north wing of the quadrangle of the university buildings overlooking Weston Park. The laboratories and lecture rooms connected with the subjects of the first and second examinations—namely, chemistry, physics, biology, anatomy, and physiology—are, both as regards structural arrangement and scientific equipment, on the most modern and complete lines. No expense has been spared in the matter of apparatus for teaching or research work, and the facilities for practical study in these subjects are as excellent as all the other arrangements of the school.

For students of pathology and bacteriology there are laboratories replete with everything necessary for the most advanced work, and a large pathological museum, which is open daily. In addition, there is a museum devoted to materia medica specimens, and a large library and reading room. There are a number of recreation, athletic, and other societies, all under the management of an annually elected students' representative council, and large and comfortable common rooms both for men and women students. In the university buildings there is a refectory open to all students of the school, and a university journal, *Floreamus*, edited by a joint committee of the staff and students, is published each term. The ordinary clinical work of the school is done at the Royal Infirmary and Royal Hospital, which have amalgamated for the purpose of clinical instruction, and provide over 500 beds for the treatment of medical, surgical, and special cases, including diseases of the eye.

In addition, the Royal Infirmary has special departments for the treatment of diseases of the skin and ear, with beds assigned to them; whilst at the Royal Hospital there are special out-patient departments for diseases of the throat, ear, skin, orthopaedics, and mental diseases. The medical and surgical staffs attend daily, and give clinical instruction in the wards and out-patient rooms. Clinical lectures in medicine and surgery are given weekly. Instruction in the practical administration of anaesthetics is given at either institution by the anaesthetists, and the *post-mortem* examinations at both institutions are in charge of the Professor of Pathology, and afford ample material for study of this subject. Students also have the advantage of being able to attend the practice of the Jessop Hospital for Diseases of Women and the Hospital for Sick Children, while special courses on fever are given at the City Fever Hospital, and on mental diseases at the South Yorkshire Asylum.

Appointments.—The following appointments are open to all students who have passed their examinations in anatomy and physiology: (1) Casualty dresserships, (2) surgical dresserships, (3) medical clerkships, (4) pathological clerkships, (5) ophthalmic clerkships, (6) clerk to the skin department, etc. Except in the case of casualty dressers, these appointments are made for three months, commencing on the first day of October, January, April, and

July. The casualty dresserships last two months, beginning on the first of any month. All students are required to hold them, and to have attended the tutorial classes for casualty dressers, before being eligible for any other of the above appointments.

Scholarships.—Entrance Medical Scholarship, value about £130, open to both sexes. Four Edgar Allen Scholarships of £100 a year for three years may be held by students taking the degree course in Medicine. Two Town Trustees' Scholarships, each of the value of £50, tenable for three years, for boys or girls under the age of 19 years who have been educated in a Sheffield secondary school for a period not less than two years immediately preceding the examination. Four Town Trustees' Scholarships, value £50, for boys or girls under 19 years of age, educated in any school in Sheffield, secondary or otherwise. Town Trustees' Fellowship, value £75, tenable for one year. Mechanics' Institute Fellowship, value £50 (with remission of fees), tenable for one year, and renewable for a second year. The Frederick Cifford Scholarship, value about £50, tenable for two years. Kaye Scholarship, for proficiency in anatomy and physiology, value £22 10s. Gold and bronze medals are also awarded for proficiency in various subjects.

Fees.—Students in the Faculty taking their complete course in the university pay an inclusive composition fee of £30 for each of the five years. The fees for special courses taken separately can be ascertained by inquiry of the Dean.

SCOTLAND.

As will be gathered from the following paragraphs, the facilities for acquiring a medical education in Scotland are very ample, whether the student be proceeding to a university degree or to a diploma. To the descriptions of the different Scottish medical centres is in some cases added an account of hospitals which either play an official part in the education given to students as yet unqualified or offer valuable opportunities for post-graduation work.

ABERDEEN.

The school is conducted by the Faculty of Medicine. This comprises twelve chairs, from which instruction is given in all the main branches of medical science—namely, botany, zoology, physics, chemistry, anatomy, physiology, materia medica, pathology, forensic medicine, surgery, medicine, and midwifery. Courses of instruction in public health and in tropical medicine are conducted by lecturers appointed by the University Court. Special opportunities for practical instruction are afforded in the laboratories and museums attached to the departments.

Clinical instruction is obtained in the Royal Infirmary (accommodating 270 patients), the Royal Lunatic Asylum (900 patients), the Sick Children's Hospital (85 patients), the City Fever Hospital (250 patients), the General Dispensary, Maternity, and Vaccine Institution (10,000 out-patients annually), and the Ophthalmic Institution (3,000 patients annually). Courses of practical instruction are given in diseases of children at the Sick Children's Hospital; in fevers at the City Fever Hospital; in insanity at the Royal Asylum; in diseases of ear, nose, and throat at the Infirmary and Dispensary; in diseases of the eye at the Infirmary and Eye Institution; in venereal diseases and diseases of the skin at the Royal Infirmary.

Bursaries, Scholarships, and Fellowships, to the number of fifty and of the annual value of £1,180, may be held by students of medicine in this university. They range from £3 to £100 per annum, and are tenable in most cases for two or three years. The winter session begins on October 9th.

Fees.—The fee for each university course is, as a general rule, £4 4s.; and for a second attendance, £3 3s. An inclusive fee of 90 guineas is now payable, covering the necessary instruction within the university. Matriculation fee, both sessions, £1 1s.; summer session alone, 10s. 6d. Royal Infirmary, perpetual fee, £10; or, first year, £5 10s.; second year, £5.

EDINBURGH.

There are three Schools of Medicine: the School of the University, the School of Medicine of the Royal Colleges of Physicians and Surgeons of Edinburgh, and the Edinburgh School of Medicine for Women.

THE UNIVERSITY SCHOOL.—This school, in addition to other resources of the university, has the following means of affording practical instruction: Royal Botanic Garden, Herbarium, and Museum; Zoological Laboratory and Museum of Science and Art; Physical Laboratory;

Chemical Laboratories; Dissecting Room, Bone Room, and Anatomical Museum; Physiological Laboratory; Medical Jurisprudence Laboratories; John Usher Institute of Public Health; Materia Medica Museum and Laboratory; *Post mortem* Department of the Royal Infirmary and University Pathological and Bacteriological Laboratory; Tutorial Classes of Practice of Physic, of Clinical Medicine, and Clinical Surgery, Surgery, and Midwifery; and the practice of certain other hospitals.

Fees.—The sessional fee for zoology, botany, chemistry, anatomy lectures, physiology, pathology, materia medica, medical jurisprudence, surgery, medicine, midwifery, and gynaecology is £4 4s. each. Second course £3 3s. Third free. A perpetual ticket taken at the beginning of the first year is £6 6s. Physics, practical chemistry, advanced practical physiology, practical pathology, practical anatomy (winter), operative surgery, obstetric operations, practical materia medica, including pharmacy, pathological bacteriology, experimental pharmacology, vertebrate morphology and comparative embryology, are £3 3s. Clinical surgery, £2 2s. per term. Clinical medicine, first term, £3 13s. 6d.; subsequent terms, £2 2s. No perpetual ticket in these subjects. Practical botany (besides garden fee of 5s.), elementary practical zoology, practical physiology (experimental), practical physiology (histological), practical botany (advanced), practical zoology (advanced), practical anatomy (summer), anthropology, anatomy demonstrations, diseases of children, diseases of the eye, diseases of the larynx, ear, and nose; diseases of tropical climates, clinical instruction on diseases of the skin, regional anatomy, invertebrate zoology, organic chemistry, mental diseases, public health, infectious diseases, £2 2s. Physiological chemistry, applied anatomy (medical and surgical), £1 1s. Vaccination, £1 1s.

Scholarships.—There are many funds for the assistance of students by means of bursaries, scholarships, exhibitions, and money awards from the beginning to the end of their undergraduate career. In addition there are funds which help those who have taken a first degree in medicine and surgery to continue at work as research students. The value of these awards, and the conditions attaching to them, are so varied that those interested should consult the prospectus of the school itself. No other university is in a better, even if in as good, a position to smooth the financial path of earnest students.

THE SCHOOL OF MEDICINE OF THE ROYAL COLLEGES.—This school is composed of lecturers licensed by the Royal College of Physicians and the Royal College of Surgeons, and also recognized by the university through their *licentia docendi*; for the sake of convenience they lecture in separate buildings near to the Royal Infirmary, but form a single corporate body governed by a board consisting of five members elected by the Royal College of Physicians, of five members elected by the Royal College of Surgeons, and of five members elected by the lecturers in the school. This board, with the assistance of the standing committees of the school, supervises the whole management and especially the maintenance of the efficiency and discipline of the school. The different buildings at present utilized for the purposes of lecturing are the following: (1) Surgeons' Hall, Nicolson Street; (2) New School, Bristo Street; (3) Nicolson Square; (4) Marshall Street; and other places. The teaching is similar to that of the Scottish universities, and the students receive similar certificates at the close of each session. The courses on the special subjects not included in the curriculum of the Examining Boards are also conducted by teachers specially qualified in each branch, and have for the last quarter of a century formed a special feature of the school. The fees payable for class and other instruction, and including the sums payable on admission to the examination of the Conjoint Board for the triple qualification, amount to about £120. The Calendar, giving full information regarding classes and fees, can be obtained gratis on application to Dr. R. Cranston Low, F.R.C.P., Dean of the School, 11, Bristo Place, Edinburgh.

WOMEN STUDENTS IN EDINBURGH.—Until the close of the summer session of 1916 women students intending to proceed to graduation in the University of Edinburgh, as well as those entering for the triple qualification of the Royal Colleges of Edinburgh and Glasgow, received their training in the Edinburgh School of Medicine for Women. Now women students study under the same conditions as men, and may obtain either the university degree or the diploma of the Royal Colleges. In the university systematic lectures are given to them by the professors

in the ordinary classes, which are therefore mixed; but in the subjects of midwifery and gynaecology the women are lectured to separately from the men. All the practical classes are taught to men and women separately save in a few advanced classes. The women students also have the same privileges as in the past have been given to the men of attending a certain proportion of the extramural classes taught by the lecturers of the School of Medicine of the Royal Colleges.

GLASGOW.

There are five medical schools in this city: The two schools of the university, one of which (Queen Margaret College) is for women students; St. Mungo's College (the school of the Royal Infirmary), Anderson's College, and the Western Medical School. (The last is closed.)

THE UNIVERSITY SCHOOL FOR MEN.—The whole course of study required for graduation (M.B., Ch.B.) at the University of Glasgow can be taken here. Besides ample provision for lectures there is practical and clinical work at the hospitals, and practical courses are conducted in the laboratories of the following departments: Surgery, Pathology, Public Health, Pharmacology, Physiology, Anatomy, Chemistry, Zoology, Physics, and Botany; the Botanic Garden and the Hunterian Museum (Zoology and Pathology) are also open to students. New buildings and equipments have been provided for botany, for practical anatomy, for operative surgery, as well as for pathology, the very large additions made a few years ago to the Chemical Laboratory rendered it one of the most extensive in Scotland. The class rooms and laboratories for the departments of Physics, Physiology, Pharmacology and Materia Medica, and Medical Jurisprudence and Public Health, are also of recent erection, and are elaborately equipped. Four additional chairs of Medicine, Surgery, Obstetrics, and Pathology have been recently established, the Professors being specially attached to the Royal Infirmary; and a number of University Lectureships in Clinical Medicine, Clinical Surgery, Venereal Diseases, Laryngology, Dermatology, Otolaryngology, and Psychological Medicine have been founded there. The university, in short, has made great and successful efforts to extend and improve the accommodation of the medical departments, to strengthen the teaching staff, and to encourage post-graduation and research work. Three very extensive general hospitals in the city afford exceptional opportunities for clinical instruction—namely, the Western Infirmary (600 beds), near the university, to which the Regius Professors are attached; the Royal Infirmary (630 beds); and the Victoria Infirmary (260 beds); while the Royal Asylum (460 beds), the Royal Hospital for Sick Children (200 beds), the Royal Maternity and Women's Hospital (108 beds), the Glasgow Eye Infirmary (100 beds), the Ophthalmic Institution (35 beds), the fever hospitals at Belvidere (680 beds) and Ruchill (540 beds), and other institutions afford facilities for the practical study of special branches. In each year, since the beginning of the war, special qualifying examinations in Medicine, Surgery, and Midwifery have been held, in order that candidates who had completed their full curriculum might be enabled to graduate without delay.

Bursaries.—Bursaries confined to the Medical Faculty amount in annual value to about £1,000, while bursaries in any faculty amounting to about the same annual sum, may be held by students of medicine, a number of both sets being open to women. Several valuable scholarships may be held by medical students who have graduated in Arts.

The following bursaries are open to undergraduates of both sexes: The Gibson Bursary, annual value £35, tenable for four years. This is open to medical students who are preparing for service as medical missionaries in connexion with the Church of Scotland, and will be awarded to the eligible candidate who has gained the highest number of marks in the First Professional Examination. One Logan Bursary, annual value £16, tenable for four years; appointment by the Senate. The Mackintosh Mental Science Bursary in medicine, of the value of £31, is awarded annually to the student of either sex attending the class of insanity who stands first in an examination in that subject, the bursar to continue the practical study of the subject to the satisfaction of the Faculty of Medicine. The Gardiner Bursary, annual value £14, tenable for two years, will be awarded after the autumn professional examination to the candidate who has passed in physiology at the Second Professional Examination, and whose aggregate of marks in that subject and in chemistry and physics of the First Professional Examination is the highest. The following are tenable in any

faculty; Two Pratt Bursaries (each £20 and tenable for four years); and two Taylor Bursaries (each £10 and tenable for four years). Andrew and Bethia Stewart Bursaries (£50 each, tenable for three years); candidates must have taken the M.A. degree of Glasgow. There is a special examination. Nine Glasgow Highland Society's Bursaries, for students of Highland descent, of the annual value of £25, and tenable for five years; two vacant each year.

The Carnegie Trust for the Universities of Scotland is empowered to pay the whole or part of the university ordinary class fees of students of Scottish birth or extraction, under conditions given in the *University Calendar*. The Dobbie Smith Gold Medal is awarded for the best essay on a prescribed subject within the science of botany. The Brunton Memorial Prize of £10 is awarded annually to the most distinguished graduate in medicine of the year. The University Commissioners issued an ordinance to make regulations for the admission of women to certain bursaries, scholarships, and fellowships. Scholarships and Fellowships are offered by the Carnegie Trust in science and medicine for post graduation study. There are also four McCunn Medical Research Scholarships (£100 for one year) for graduates in medicine of the Scottish universities.

Fees.—The matriculation fee for each year is £1 1s. In most cases the fee for each university class is £4 4s., but in some cases it is £3 3s. For hospital attendance students pay an entrance fee of £7 at the Western Infirmary, with an additional fee of £3 3s. for each winter and £2 2s. for each summer clinical course; at the Royal Infirmary the fees are somewhat similar. The university fee for the four professional examinations is £23 2s. (£6 6s. each for the first and second examinations, and £5 5s. each for the third and fourth). For the whole curriculum the fees for matriculation, class attendance, hospital attendance, and professional examinations amount to £150.

For further information apply to the Registrar, Glasgow University.

QUEEN MARGARET COLLEGE.—In this, the Women's Medical School of the University of Glasgow, the courses of study, degrees, regulations, fees, etc., are the same as for men. Women students have their own buildings, with class rooms, reading-room, library, etc. They are taught in some classes apart from male students, in others together with them, but in either case have all the rights and privileges of university students. Their clinical studies are taken in the Royal Infirmary, where wards containing 520 beds are available for their use, and in its dispensary; also in the Royal Hospital for Sick Children, the Glasgow Ear Hospital, the Royal Asylum, Gartnavel; the Ophthalmic Institution, the City of Glasgow Fever Hospitals, Belvidere and Ruchill; and the Glasgow Royal Maternity and Women's Hospital.

Scholarship.—The Arthur Scholarship, annual value £20, tenable for three years. Open to competition by medical students of first year at the First Professional Examination in October, 1919. This scholarship is restricted to women medical students.

Full information can be obtained from the Mistress, Queen Margaret College.

Board for Students.—A house of residence for women students, Queen Margaret Hall, is situated near the college. The cost of board and residence is from 20s. to 27s. per week, according to accommodation. Apply to the Lady Superintendent, Queen Margaret Hall, Bute Gardens, Glasgow.

Another hostel near the college is South Park House, gifted to the Student Christian Movement, and open to women students of all colleges in Glasgow. Cost of board is from 22s. to 25s. weekly. Applications to be made to the Warden, South Park House, Ann Street, Glasgow.

ST. MUNGO'S COLLEGE.—This is the Medical School of the Royal Infirmary, which is the largest in Glasgow. The infirmary is situated in Cathedral Square, Castle Street, and has car communication with every part of the city. St. Mungo's College is in the infirmary grounds.

The infirmary has (including the ophthalmic department) over 700 beds, the average number occupied in 1918 being over 600. There are special beds and wards for diseases of women, of the throat, nose, and ear, venereal diseases, burns, and septic cases. In the out-patient department the attendances in 1918 numbered over 180,000. In addition to the large medical and surgical departments, there are departments for special diseases—namely, diseases of women, of the throat and nose, of the ear, of the eye, of the skin, and of the teeth. There is also a fully equipped electrical pavilion, and year by year the latest

and most approved apparatus for diagnosis and treatment is added.

Appointments.—Five house-physicians and eleven house-surgeons, who must be fully qualified, are appointed every six months, and board in the hospital free of charge. Clerks and dressers are appointed by the physicians and surgeons. As many cases of acute diseases and accidents of a varied character are received, these appointments are very valuable.

Fees.—The average class fee is £3 3s. The fees for all the lectures, practical classes, and hospital attendance necessary for candidates for the diplomas of the English or Scottish Colleges of Physicians and Surgeons amount to about £100. The classes are open to male and female students.

THE ANDERSON COLLEGE OF MEDICINE.—This school provides education in all subjects of the curriculum both for medical and dental students. The school buildings are situated in Dumbarton Road, immediately to the west of the University and Western Infirmary. The hospital practice and clinical lectures are provided in the Western or Royal Infirmary; pathology in the Western or Royal Infirmary; vaccination and dispensary practice in the Western or Royal Infirmary Dispensary. These classes are recognized by all the licensing corporations in the United Kingdom, and also by the Universities of London, Durham, Glasgow, and Edinburgh (the latter two under certain conditions which are stated in the school Calendar). The courses (lectures and laboratory) in public health are also recognized by the Scottish Licensing Board, Queen's University of Belfast, the Irish Colleges, and the University of Cambridge.

Fees.—The fees for the lectures and practical work required by ordinary students range between 1 and 5 guineas a session. In the Public Health Department the fee for a six months' course is £12 12s. The Carnegie Trust pays the fees of students at Anderson's College on conditions regarding which particulars may be obtained from the Secretary, Carnegie Trust Offices, Edinburgh.

A Calendar will be sent on receipt of a post-card by the Secretary to the Medical Faculty, the Anderson College of Medicine, Glasgow, W., who will forward any further information which may be desired.

The Royal Samaritan Hospital for Women, with over 90 beds, offers facilities for clinical instruction in the diseases peculiar to women. Particulars may be obtained from the honorary secretary, 89, West Regent Street, Glasgow.

ST. ANDREWS AND DUNDEE.

THE medical departments in these two teaching centres cater specially for students proceeding to the degrees of the University of St. Andrews, but admit other students as well. In the former city the United College provides education in all subjects of the first two years. In Dundee, University College provides for the needs of students from the beginning to the end of the five years' curriculum. Its buildings are modern, and contain fully equipped laboratories. The clinical work of the school is facilitated by various institutions. The class fees are 4 guineas for systematic classes, and 3 guineas for practical classes. The hospital ticket is £1 1s. for three months, £3 3s. a year, or perpetual £10 in one sum or £10 10s. in instalments. Added up, the fees for the curriculum, exclusive of the examination fees, amount to £136 10s. In connexion with both institutions there are bursaries and scholarships of considerable value, which are awarded after competitive examination. Information as to these can be obtained from the Secretary of the University of St. Andrews. Information regarding the clinical facilities may be obtained from Professor Kynoch, Dean of the Medical Faculty, Medical School, Dundee.

Clinical Work.

Good opportunities for clinical work are afforded by the Dundee Royal Infirmary, the instruction given thereat being recognized for purposes of graduation by all the Scottish Universities, the University of London, the University of Cambridge, the National University of Ireland, and by the Royal Colleges of England and Scotland.

IRELAND.

THERE is a choice of six schools for those prosecuting their medical studies in Ireland, and for clinical instruction the choice is equally satisfactory and varied, though the hospitals themselves are comparatively small. Some account of the schools follows.

DUBLIN.

The School of Physic.

This school is in Trinity College, Dublin, and is carried on under the joint auspices of the University of Dublin and of the Royal College of Physicians in Ireland; the King's professors of institutes of medicine (physiology), practice of medicine, materia medica, and midwifery being appointed by the latter. Clinical instruction is given at Sir Patrick Dun's Hospital, and some twelve other metropolitan hospitals and asylums are recognized by the Board of Trinity College. The courses of instruction are open to all medical students whether or not they belong to the university.

The Schools of Surgery.

These are schools carried on in Dublin under the supervision and control of the Council of the Royal College of Surgeons. They are formed of the college's own school, combined with two famous old medical schools—Carmichael and Ledwich; they are attached to the college by charter. The buildings contain spacious dissecting rooms, one set apart for lady students, and special pathological, bacteriological, public health, chemical, and pharmaceutical laboratories. Advantage can be taken of the lectures and instruction afforded by students otherwise unconnected with the college.

Prizes.—Among the prizes annually awarded are: The Barker Anatomical Prize (£26 5s.); the Carmichael Scholarship (£15); the Mayne Scholarship (£8); the Gold Medal in Surgery, and the Stoney Memorial Gold Medal in Anatomy; class prizes of £2 and £1, accompanied by silver medals, will also be given in each subject.

A prospectus can be obtained post free on application to Mr. Alfred Miller, Registrar, Royal College of Surgeons, Dublin.

University College.

This is one of the constituent colleges of the National University of Ireland, and at present conducts its work at buildings on St. Stephen's Green, at those formerly occupied by the Cecilia Street School of Medicine, and at the University Buildings in Earlsfort Terrace. All the buildings of its permanent home are not yet ready. The section of the new college buildings at Earlsfort Terrace for the departments of physics and chemistry, and new laboratories for pathology, are now in use. It possesses a good library, and the arrangements for the teaching of medical students from beginning to end of the curriculum are adequate. The teaching staff is numerous, and through it the college is connected with many of the hospitals of the city. Students, however, are allowed to pursue their studies at any of the hospitals recognized for the purpose by the university.

Clinical Work.

There are numerous well-arranged hospitals in and around the city, and almost all of these are recognized for teaching purposes by the Conjoint Board of Ireland, the University of Dublin, the National University of Ireland, and by like bodies elsewhere in the United Kingdom. Among them are the Mater Misericordiae Hospital, with 345 beds; Dr. Steevens's Hospital at Kingsbridge, with 200; Meath Hospital and County Dublin Infirmary, with 160; Mercer's Hospital, close to Trinity College, with 120; the Royal City of Dublin Hospital, with 124; the Adelaide Hospital, with 140; the Royal Victoria Eye and Ear Hospital, with 100 beds; Sir Patrick Dun's which has a direct connexion with the School of Physic, and the combined institutions formed by the Hardwicke Fever Hospital, the Richmond Surgical Hospital, and the Whitworth Medical Hospital, with an aggregate of 230 beds. As for that known as the Rotunda Hospital, this practically consists of two distinct hospitals, and is believed to be the largest combined maternity and gynaecological hospital in the United Kingdom. It receives nearly 3,000 patients every year, and, apart from ordinary out-patient work of a gynaecological order, annually attends approximately 2,000 women at their own homes during their confinement. It

possesses residential quarters for students, and, taken as a whole, offers exceptional opportunities for study both to ordinary students and to post-graduates of any nationality.

BELFAST.

The Medical School is part of the Faculty of Medicine of Queen's University, Belfast, and provides a complete medical curriculum for all purposes. The laboratories in connexion with the departments of biology, chemistry, physiology, pathology, anatomy, physics, and materia medica are all excellent, and there is a Students' Union which gives students the advantages of dining rooms, reading rooms, a library, and various recreation rooms. Women are eligible as students. Clinical instruction is given at the Royal Victoria Hospital, which was rebuilt a few years ago and has 300 beds, and the Mater Infirmorum Hospital, which has 150 beds. Other hospitals open to the students of the university are: The Maternity Hospital, the Ulster Hospital for Women and Children, the Hospital for Sick Children, the Ophthalmic Hospital; the Benn Ulster Eye, Ear, and Throat Hospital; the Union Infirmary and Fever Hospital; the Fever Hospital, Purdysburn; the District Lunatic Asylum, the Samaritan Hospital, Forster Green Hospital for Diseases of the Chest, and the Belfast Hospital for Skin Diseases.

Scholarships.—(1) Twelve, of the value of £40 each, are assigned as Entrance Scholarships in the Faculties of Arts, Science, and Medicine, tenable for one year; (2) sixteen Professional Scholarships, value from £15 to £40 each; (3) one Hutchinson Stewart Scholarship, £12, in mental diseases; (4) one Mackay Wilson Travelling Scholarship, £100, awarded triennially; (5) Isabella Tod Memorial Scholarship, tenable for three years, awarded triennially to a woman student; (6) Magrath Clinical Scholarship, awarded annually, value about £112; (7) numerous sessional prizes. There is also a post-graduate research fund, open to all graduates of not more than three years' standing. Gold medals are awarded at the M.D. examination.

Fees.—The cost of the curriculum intended for students proceeding to the degrees of the Queen's University of Belfast is, approximately, £130. This includes examination fees and a perpetual ticket for attendance at the Royal Victoria Hospital or the Mater Infirmorum Hospital, and fees for the special hospitals. The course for the Conjoint Board costs about the same amount.

The Calendar containing full information can be obtained on application to the Secretary, Queen's University, Belfast, price 1s.

UNIVERSITY COLLEGE, CORK.

THIS institution, formerly known as Queen's College, Cork, is one of the constituent colleges of the new National University. It holds examinations for all the faculties of that university, in addition to continuing the work which it has hitherto performed—namely, that of providing education adapted to the needs of medical students at all stages of their career. Its first aim is to fit students for the degrees of the new university, but students proceeding for the examinations of the Conjoint Boards of England, Scotland, or Ireland, the Society of Apothecaries of London, or the Apothecaries' Hall of Ireland, or London University, can arrange the courses of lectures which they attend, and the order in which they attend them, to meet the requirements of those bodies. Certificates of attendance at the college courses are also accepted by the University of Cambridge. Clinical instruction is given at the North and South Infirmaries (each 100 beds) and at the Cork Union Hospital (1,200 beds). Students can also attend the Mercy Hospital (60 beds), the County and City of Cork Lying-in Hospital, the Maternity, the Hospital for Diseases of Women and Children, the Fever Hospital, the Ophthalmic and Aural Hospital, and the Eglington Lunatic Asylum. The session extends from October to June.

A Dental School has been started within the last four years, in which the degree of Bachelor of Dental Surgery of the National University of Ireland is granted. There is a large well-equipped Dental Hospital in connexion with the school.

Scholarships.—Over £4,000 are available annually for scholarships in the College. Particulars as to each of them can be obtained on application to the Registrar.

Fees.—The fees for the lectures and hospital attendances required by the National University of Ireland course, including examination fees, come to about £120.

Further information can be found in the college regulations, or obtained on application to the Registrar.

UNIVERSITY COLLEGE, GALWAY.

THIS institution is one of the constituent colleges of the National University of Ireland, and includes Faculties of Arts, Celtic, Science, Law, Engineering, Commerce, and Medicine. Candidates for degrees in medicine must reside for three years. For the remaining two years certificates from any recognized medical school are accepted. The college buildings are well lighted and well ventilated, and contain dissecting rooms, an anatomical theatre, and laboratories for the study of physiology, chemistry, physics, and other departments of medical science. For pathology and chemistry new laboratories are now provided. It has good grounds surrounding it, and there are many arrangements, such as a library, a college union, and an athletic union, for the benefit of those belonging to the Medical Faculty, as well as for students in other departments of the college. The clinical teaching, which is recognized as qualifying not only for the degrees of the National University but for those of London University and the diplomas of the various colleges in the three kingdoms, is carried on at the Galway County Hospital, the Galway Union Hospital, the Galway Fever Hospital, and the Galway Dispensaries. The Galway County Hospital is a general hospital, and at the other two hospitals and at the dispensaries students have ample opportunities of studying zymotic and chronic diseases. The Union Hospital has a special ward for diseases of children. Each year the Governing Body offers about £1,500, and the County Councils of Connaught offer about £3,500, in scholarships. These scholarships are tenable in any Faculty. Additional information regarding these scholarships can be obtained on application to the Registrar, and to the Secretaries of the Connaught County Councils.

CLINICAL HOSPITALS IN ENGLAND.

THERE are a great many hospitals in the United Kingdom which, though not connected with any medical school, open their doors either to those who have yet to become qualified, to those who are doing post-graduation work, or to both. The facilities they offer for gaining practical clinical experience are very great, and should not be overlooked. Their honorary staffs commonly make a point of giving such instruction as opportunity offers, and at those which are situated in the larger towns there are often appointments as clinical assistants to be obtained. In addition, they all have to offer, at shorter or longer intervals, appointments for resident medical officers, house physicians, and house-surgeons. These are usually paid offices, which may be held for periods varying from six months to a year. Some of those situated in the great medical centres in the provinces, and in Scotland and Ireland, have already been mentioned in speaking of the medical schools in these localities, but it should be added that there are many other provincial hospitals where admirable work is done, and at which much valuable experience can be gained by both senior and junior students, and by those already admitted to the *Medical Register*. Cases in point are the Royal Infirmary, Bradford; the Royal Sussex County Hospital, Brighton; the Royal United Hospital, Bath; the Kent and Canterbury Hospital; Derbyshire Royal Infirmary; the Royal Albert Hospital and Eye Infirmary, Devonport; the Royal Devon and Exeter Hospital; the West of England Eye Infirmary, Exeter; the Gloucestershire Royal Infirmary and Eye Institution; the Royal Infirmary, Leicester; the County Hospital, Lincoln; the General Hospital, Northampton; the Norfolk and Norwich Hospital; the General Hospital, Nottingham; the Royal Portsmouth Hospital; the Royal Berks Hospital, Reading; the Royal South Hants and Southampton Hospital; the Staffordshire General Infirmary, Stafford; the North Staffordshire Infirmary at Hartshill; the Royal Hants County Hospital, Winchester; the Wolverhampton and Staffordshire General Hospital; and the County Hospital, York. As for hospitals in the metropolis, so many of these play the part of clinical schools that it is worth while to classify them.

General Hospitals.—These include the Dreadnought Hospital at Greenwich, and its annexe at the Albert Dock, which form the head quarters of the London School of Clinical Medicine and the London School of Tropical

Medicine; the West London Hospital and the Prince of Wales's (General Hospital, Tottenham, both of these being described in the article on post-graduate work; the Great Northern Central Hospital, Holloway Road, an institution containing 185 beds; and the Temperance Hospital in Hampstead Road.

Children's Hospitals.—There are at least seven of these, the leader among them being the Hospital for Sick Children, Great Ormond Street, which has 240 beds. There are also the East London Hospital for Children, Shadwell, with 124 cots; the Queen's Hospital for Children, Bethnal Green, with 134; the Victoria Hospital for Children, Chelsea, with 104; the Belgrave Hospital for Children, which has a considerable out-patient department, but in-patient accommodation for only 40 children; the Paddington Green Children's Hospital, an institution of about the same size; and the Evelina Hospital for Sick Children, Southwark Bridge Road, with 76 beds.

Hospitals for Women.—These include Queen Charlotte's Lying-in Hospital, which specializes in the teaching of midwifery; the Samaritan Hospital for Women, Marylebone Road, to which qualified practitioners are admitted as clinical assistants to both the in-patient and out-patient departments. Demonstrations are given daily in both departments, the fees—payable in advance—being £3 3s. for three months. Full particulars may be obtained on application to the secretary at the hospital. In addition may be mentioned the Hospital for Women, Soho Square; the Chelsea Hospital for Women, Arthur Street, Chelsea; and the Elizabeth Garrett Anderson Hospital for Women in Euston Road, the latter being in the nature of a general hospital so far as concerns the class of case treated.

Eye Hospitals.—The largest of these is the Royal London Ophthalmic Hospital (Moorfields), City Road, with 138 beds and a very large out-patient department; others are the Royal Westminster Ophthalmic Hospital, near Charing Cross, the Royal Eye Hospital, Southwark, each with about 40 beds; and the Central London Ophthalmic Hospital, Judd Street, W.C.1, with 28.

Fever Hospitals.—The Metropolitan Asylums Board has under its control a good many institutions for the treatment of the more serious zymotic disorders, and makes special arrangements for the instruction of students in this subject, and grants certificates at the end of the courses. Detailed information should be sought from the Clerk to the Board, Victoria Embankment.

Chest Hospitals.—The largest of these is the Brompton Hospital for Consumption, which has 333 beds and a large sanatorium at Frimley with 150 beds. There is also the City of London Hospital for Diseases of the Chest, Victoria Park, with 175 beds, and the Royal Hospital for Diseases of the Chest, City Road, which has recently reorganized its various departments with the object of better fitting itself to act as a tuberculosis school.

Nose, Throat, and Ear Hospitals.—The institutions which confine their work to disorders of the throat, nose, and ear all make special arrangements for the benefit of senior and post-graduate students. They are the Metropolitan Ear, Nose, and Throat Hospital, Fitzroy Square; the Royal Ear Hospital, Dean Street; the Central London Throat and Ear Hospital, Gray's Inn Road; and the Hospital for Diseases of the Throat, Golden Square—the latter, which possesses 75 beds, being the largest of the four institutions.

Miscellaneous Special Hospitals.—Among these are the Bethlem Royal Hospital, Southwark, which confines its work to the treatment of mental diseases; St. Peter's Hospital for Stone and Urinary Diseases, Henrietta Street, Covent Garden; St. Mark's Hospital, City Road, which devotes itself to the treatment of diseases of the rectum, including cancer and fistula; St. John's Hospital for Diseases of the Skin, in Leicester Square; the Hospital for Diseases of the Skin, Stamford Street, Blackfriars; and the National Hospital for the Paralysed and Epileptic, Queen Square, W.C.1, an institution possessing 200 beds and a world-wide reputation.

Detailed information as to the teaching arrangements of all these institutions may be obtained on application to their secretaries.

MEDICAL EDUCATION OF WOMEN.

WOMEN are admitted to all the medical examinations of the following qualifying bodies: All the universities of Great Britain, with the exception of Oxford and Cambridge; the Royal College of Physicians of London, and the Royal College of Surgeons of England; the Society of Apothecaries of London; the Conjoint Boards of Scotland and of Ireland. The first B.M. examination of the University of Oxford is open to women students under certain conditions, and facilities for studying the subjects of that examination are now afforded to them in Oxford.

The regulations of each body differ considerably, so that it is necessary for a student to decide, before beginning her course, which degree or diploma she will aim at obtaining. The ordinary regulations of the General Medical Council (see page 299) must be observed, and women can pursue their education either at certain schools only open to women, or at ordinary schools where they do their work more or less in common with men students.

The schools which admit women only are the London (Royal Free Hospital) School of Medicine for Women, which is one of the constituent schools of the Medical Faculty of the University of London, and Queen Margaret College, Glasgow (see page 322). Women are also admitted to the schools of medicine conducted in connexion with King's College, University College, Charing Cross Hospital, London Hospital, and St. Mary's Hospital, London; the Universities of Dublin, Dundee, Durham, Liverpool, Manchester, Birmingham, Leeds, Sheffield, Bristol, and Aberdeen; St. Mungo's College, Glasgow, the Schools of Surgery of the Royal College of Surgeons in Ireland and of the National University of Ireland in Dublin, Cork, and Galway. The arrangements for women medical students in Edinburgh are indicated on page 321. Women can also attend classes for the first three years of the medical curriculum at University College, Cardiff.

Year by year the openings for women who adopt a medical career have increased, and the field open to their energies is now wide. Women hold many appointments as resident medical officers in general hospitals and in hospitals for women and children all over the country, and in a large number of sanatoriums, infirmaries, fever hospitals, and asylums. Many medical women are also engaged in public health, tuberculosis, and school inspection work.

As regards the London School of Medicine for Women, particulars will be found at p. 316 in the article on London Medical Schools.

DEGREES FOR PRACTITIONERS.

AT one time it was almost the universal custom for medical students educated in London not to seek a university degree, and as that custom still prevails to a considerable extent, a very large proportion of medical men in England possess diplomas to practise but not degrees in medicine. This is a fact which they sometimes find reason to regret, and to such practitioners the following paragraphs may be of interest. It should be noted that the M.D. degree of the University of Brussels is not registrable when it has been obtained subsequently to June, 1886.

UNIVERSITY OF LONDON.

Registered medical practitioners who have passed the First Examination for medical degrees and the Second Examination for medical degrees, Part I, may proceed to the Second Examination for medical degrees, Part II, and M.B., B.S. Examinations without observing the intervals prescribed by the regulations, on producing certificates that they have gone through the required course of study at a school of the university; subject to the proviso that no degree of the university can in any circumstances be granted by examination to any one in less than three years after passing the Matriculation Examination or after admission by the university of the candidate's right to exemption therefrom.

UNIVERSITY OF DURHAM.

The degree of M.D. is granted by the University of Durham to registered practitioners of not less than fifteen years' standing, who have been qualified and in practice for that period, upon the following conditions without residence: The candidate must be 40 years of age, and must produce a certificate of moral character from three registered medical practitioners. Should he not have

passed an examination in arts previously to the professional examination in virtue of which his name was placed on the Register, he is examined in classics and mathematics; if otherwise, he is required to translate into English passages from any one of the following Latin authors: Caesar, *De Bello Gallico* (first three books), Virgil, *Æneid* (first three books), or Celsus (first three books). Natives of India or the British Colonies are placed on the same footing as natives of Great Britain. Natives of India must produce evidence from an Indian university that they have passed within one year an examination in Latin.

Professional Examination.—The candidate must pass an examination in the following subjects: (i) Principles and practice of medicine, including psychological medicine, hygiene, and therapeutics; (ii) principles and practice of surgery; (iii) midwifery and diseases of women and children; (iv) pathology, medical and surgical; (v) anatomy, medical and surgical; (vi) medical jurisprudence and toxicology. The examination is conducted by means of printed papers, clinically, and viva voce, at the College of Medicine, Northumberland Road, Newcastle, and in the Royal Victoria Infirmary. The classical part of the examination may be taken separately from the professional on payment of a portion (£10 10s.) of the full fee.

The examinations are held twice a year, towards the end of March and of June. Notice, accompanied by the fee and certificates, must be sent to Professor Howden, Secretary of the University of Durham College of Medicine, Newcastle-on-Tyne, at least twenty-eight days before the commencement of the examination.

Fees.—The inclusive fee is 50 guineas; if a candidate fail to pass, 20 guineas are retained, but if he present himself again, 40 guineas only are required.

UNIVERSITY OF BRUSSELS.

This university grants its M.D. to such foreign candidates as are already duly qualified in medicine and surgery in their own countries, provided they pass the three examinations imposed. The examinations, which are conducted solely *viva voce*, begin on the first Tuesday in November, December, March, May, and the second Tuesday in June. The time required for the three parts of the examination seldom exceeds eight days. The examinations are conducted in English. The total fees charged by the university amount to £22. Information can be obtained either from the Secretary of the University, 14, Rue des Sols, Brussels, or from Dr. Arthur Haydon, Honorary Secretary of the Brussels Medical Graduates' Association, 31, Westbourne Terrace, Hyde Park, W. The subjects are as follows:—*First Part*: General medicine, materia medica and pharmacology, general surgery, and theory of midwifery. *Second Part*: General therapeutics, pathology and morbid anatomy, with the use of the microscope, special therapeutics and medicine of internal diseases, special surgery and mental diseases. *Third Part*: Public and private hygiene, medical jurisprudence, clinical medicine, clinical surgery, operative surgery, ophthalmology, midwifery—namely, obstetrical operation on the mannequin—regional anatomy with dissection, and bacteriology.

POST-GRADUATION STUDY.

THE value of post-graduation study is recognized everywhere. The need for some means of acquiring direct knowledge of the technique of the new branches which are constantly springing up is so generally felt among otherwise experienced practitioners that several institutions designed solely for their benefit have been at work for some years, but any comprehensive organization has been lacking in this country. Indeed, all who take an interest in the matter have long felt that post-graduate medical instruction in London and throughout the kingdom has been hopelessly deficient, and that its extension and proper co-ordination are greatly to be desired.

At the close of last year an organization was founded in London, bearing as its designation "The Inter-Alleed Fellowship of Medicine." Its object was to draw together the members of the medical profession of all the inter-allied countries, for the exchange of medical knowledge and the advancement of medical science. A very successful emergency post-graduate course was arranged in the early part of this year by the Fellowship for the benefit of medical officers of the Navy, the R.A.M.C., the Royal Air Force, and of the Dominions, the United States,

and allied countries. The majority of the teaching schools in the metropolis co-operated in the course, and daily lectures and demonstrations on special and general subjects were given. The head quarters of the Fellowship is the house of the Royal Society of Medicine, 1, Wimpole Street, W.1.

In the meanwhile, and for many months previously, the establishment of a permanent Post-Graduate Association in London had been under consideration. The object was to plan a national scheme for post-graduation training with the metropolis as its centre. The details of the scheme, as approved by representatives of post-graduate schools and special hospitals, were published in the *JOURNAL* of April 5th, 1912, p. 424.

A stimulating discussion in our columns throughout the past month has, however, called attention to the urgent need for putting a business-like permanent post-graduate scheme in working order without delay. "If something practical is not done at once," wrote Sir Arbuthnot Lane, "the London profession will have lost an opportunity that will probably never recur." Several writers urged that the Fellowship of Medicine, whose emergency post-graduate scheme has been so successful, should be entrusted with the task of organization along the broad lines laid down by the Post-Graduate Association, which as yet does not possess the necessary machinery. As a result of this correspondence we were able to announce last week that the Fellowship of Medicine has undertaken to continue the emergency course it instituted last spring. This decision will give time for the discussion of the larger schemes for a permanent organization which have been put forward. It is intended to continue the course without interruption, and dates and details will be published in the *Bulletin* of the Fellowship. Full particulars can be obtained on application to the Secretary of the Fellowship of Medicine, 1, Wimpole Street, W.1. The special lectures will be resumed on September 15th.

EDINBURGH POST-GRADUATE COURSES.

In order to provide for the special needs of the present time, the Executive Committee have arranged courses in connexion with the University and Royal Colleges which are specially designed to meet the requirements of graduates returned from active service on demobilization. All courses are open to women graduates.

Three courses have been arranged: (a) Clinical Medicine; (b) Clinical Surgery; (c) Obstetrics, Gynaecology, and Child Welfare.

Courses (a) and (b) are conducted during each of the academic terms. They have already been held during the past summer term (April to June), and were well attended. These courses will be repeated during the autumn term (October to December), commencing October 14th, 1919, and the winter term (January to March), commencing January 6th, 1920. Course (c) is conducted during the summer vacation (August and September) only.

As the work of each course occupies the greater part of each day, only one course can be taken at a time. The instruction is given conjointly by the professors in the Faculty of Medicine, the University lecturers and assistants, the lecturers in the Extra-Mural School, and the members of the honorary staffs of the hospitals.

Course A.—Clinical Medicine.

This course includes a series of daily lecture-demonstrations on General Medicine, Medical Diseases of Children, Tuberculosis, Medical Ophthalmology, Neurology, Dermatology, Infectious Diseases, Mental Diseases, etc. Arrangements are made by which members of the course may follow the general medical practice of the Royal Infirmary and Royal Hospital for Sick Children, in the wards and out-patient departments. Those members of the course who desire to concentrate their attention on a special subject may, by arrangement, be attached as extra-clinical assistants in the medical wards of the Royal Infirmary, the Royal Hospital for Sick Children, the Royal Victoria Dispensary for Tuberculosis, the Eye Department or the Skin Department of the Royal Infirmary.

Provision is also made for practical instruction in Applied Anatomy, Physiology, Pathology, Bacteriology, and a limited number of members of the course may, by arrangement, act as assistant demonstrators in the practical classes on these subjects under the professors and lecturers.

Course B.—Clinical Surgery.

This course includes daily lecture-demonstrations on General Surgery, Surgical Diseases of Children, Aural, Nasal and Laryngeal Surgery, and Venereal Diseases. Arrangements are made by which members of the course may follow the surgical practice of the Royal Infirmary and the Royal Hospital for

Sick Children, in the wards and operating theatres, and in the out-patient departments. Facilities are afforded to members of the course who desire to concentrate their attention on a special branch of surgery, to act as extra-clinical assistants in the department selected.

Provision is also made for practical instruction on Surgical Anatomy, Pathology, and Bacteriology, and a limited number of members may, by arrangement, act as assistant demonstrators in the practical classes under the professors and lecturers.

Members who desire to act as demonstrators in practical classes and clinical assistants in special departments, are allocated to these in order of application up to the number of vacancies. This applies also to Course A.

Course C.—Obstetrics, Gynaecology, and Child Welfare.

This course includes clinics at the Royal Infirmary on Diagnosis and Treatment in Gynaecology, and at the Royal Maternity Hospital on the Diseases of Pregnancy (in the pre-maternity ward), on Labours, the Puerperium, and the New-born Infant; lecture-demonstrations on the Morbid Anatomy of Gynaecology, of Obstetrics (including the Pathology of Pregnancy and the Newborn), and of Ante-natal Diseases (including Teratology); demonstrations of operative measures and of instrumental appliances in Gynaecology and Obstetrics; and clinical instruction in Mother and Child Welfare at the various Health Centres (including clerking at the ante-natal clinic and at infant centres, study of the details of the working of the town system in its social and medical aspects).

Fees.—The fee for each of the Courses A and B is 25 guineas, including hospital tickets; * for Course C 20 guineas.

Those who desire to enter for these courses should do so as early as possible. All particulars may be had on application to the Secretary, Post-Graduate Courses in Medicine, University New Buildings, Edinburgh.

GRADUATE MEDICAL TEACHING IN GLASGOW.

For many years prior to the war post-graduate classes in medicine had been conducted at several of the hospitals in Glasgow, but no organized scheme was in operation whereby the teaching in the different hospitals might be correlated. In March, 1914, at a large and representative meeting of the medical teaching staffs of the university and other medical schools, and of the general and special hospitals of Glasgow, convened at the request of the medical faculty of the university, a committee was appointed to promote co-operation between the various bodies. An executive committee was formed to complete arrangements and draw up a syllabus for the purpose of instituting a general scheme of post-graduate medical teaching early in 1915. With the outbreak of the war the scheme fell into abeyance, and nothing further was done until February, 1919, when, at a conference between the medical faculty of the university and the General Committee for Post-Graduate Medical Teaching, it was agreed to institute an emergency course of post-graduate medical teaching during the ensuing summer session particularly to meet the needs of graduates who had been on service. The course was held during May and June. The Acting Secretary is Dr. A. M. Kennedy, Pathological Institute, Royal Infirmary, Glasgow.

COURSES FOR MEDICAL GRADUATES AT BRISTOL.

The University of Bristol arranged this year a course of clinical demonstrations for medical practitioners. The demonstrations are given from 2.30 to 3.30 p.m. at the Royal Infirmary and General Hospital, Bristol, alternately, on Thursdays. They have been held during May, June, July, and will be continued during October, November, and December, 1919. Each is given by a team composed of a physician, a surgeon, a pathologist or specialist, and any others who have co-operated in the diagnosis and treatment of the case. Attendants on the course have the further advantage of admission for medical instruction for one month to any or all departments of the clinical institutions included in the university. Inquiries should be addressed to the Director of Post-Graduate Studies (Clinical Section), Pathological Department, University of Bristol.

WEST LONDON POST-GRADUATE COLLEGE.

The work of this institution is carried on at the West London Hospital, the first in London to devote its clinical material solely to the instruction of qualified medical men. The college started in 1895, and the present building was opened in 1901; it is provided with lecture, reading, writing, and class rooms, and accommodation of all sorts for the convenience of post-graduate students. In the five years before the war the yearly entry has averaged over 220. The work of the college is

* Graduates who hold a perpetual hospital ticket receive a corresponding rebate.

eminently suitable for men who wish to revive their general clinical knowledge after war work.

As for ward work, the students accompany the senior staff on their visits to the wards at 2.30 p.m. daily, and also go round with the resident medical officers in the morning. Out-patient work begins at 2.15 p.m. This department is large, and affords ample facilities for post-graduates to see and examine patients. There are the usual special departments. Post-graduates are appointed to act as clinical assistants for three or six months. There is no charge to members of the college. Special practical classes are held in medicine, general practical surgery, gastro-intestinal surgery, medical and surgical diseases of children, analysis of blood and urine, cystoscopy, venereal disease, tropical diseases, retinoscopy, ophthalmic operative surgery, and, when material is available, in operative surgery. The size of the classes is limited. A special clinic for the treatment of venereal diseases (male and female) is held every evening (Saturdays included) at 5.30 p.m. Post-graduates are admitted to the work of the clinic free, and certificates of satisfactory attendance and work are given.

Operations take place at 2 p.m. daily, the surgeons often availing themselves of the assistance of the post-graduates, and in any case making arrangements so that they can readily see what is going on. The anaesthetists give instruction in the administration of anaesthetics, including spinal analgesia, on the operating days, students being allowed to administer them under supervision, while special classes are held in each session. The pathological laboratory is in charge of a pathologist who attends every day. In bacteriology and microscopy special instruction is given on three mornings a week.

Demonstrations are ordinarily given in the morning by the assistant physicians and surgeons, and by the medical and surgical registrars. Lectures of a practical kind are given daily. During the war class demonstrations and lectures have been discontinued.

Fees.—Hospital practice, including all ordinary demonstrations and lectures, £1 ls. for one week, £3 3s. for one month, £4 4s. for six weeks, £6 6s. for three months, £10 10s. for six months, £15 15s. for one year, and £30 for a life ticket. Every year in August there is a special vacation class lasting four weeks, for which the fee is £3 3s. Instruction in the administration of anaesthetics is given at the rate of £3 3s. per month.

The certificates of the school are recognized by the Admiralty, the War Office, the Colonial Office, the India Office, and the University of London (for higher degrees). A prospectus can be obtained on application to the Deans.

LONDON SCHOOL OF CLINICAL MEDICINE (POST-GRADUATE) DREADNOUGHT HOSPITAL, GREENWICH, S.E.10.

It has not yet been found possible to resume the entire course of lectures, demonstrations, etc., held at this school, but a certain amount of instruction is carried on. The usual facilities are afforded for operative surgery, and special classes are arranged for two, three, or four students for a cadaver. Arrangements are made for utilizing the unusual opportunities for the study of pathology. The venereal clinic is exceptionally well equipped, and arrangements are made for attendance and certificates of efficiency are issued in accordance with the requirements of the Ministry of Health.

NORTH-EAST LONDON POST-GRADUATE COLLEGE.

The head quarters of this post-graduate school are situated at the Prince of Wales's General Hospital, which is in the midst of a densely populated North London district. It contains 125 beds, and is within a few minutes' walk of South Tottenham Station on the Midland Railway, Seven Sisters Station on the Great Eastern Railway, and Tottenham Hale on the Great Eastern main line. It is also readily accessible from Finsbury Park and Hackney by electric tram, and by corresponding means may be reached easily from Dalston, Edmonton, and other parts of North London.

The college is recognized by the Admiralty and the India Office for the purposes of study leave, and by the University of London as a place for advanced study for the M.D. and M.S. degrees; the course of practical teaching of bacteriology is approved by the University of Cambridge for its D.P.H. diploma, and there are ample arrangements for the convenience of men who are thus working, or who, being in active practice, are desirous of

getting themselves into touch with modern methods. There is provided for their use a reading and writing room, and they can obtain afternoon tea and receive telephonic messages; similarly there is a reference and lending library for their benefit, and a museum and pathological laboratory in which they can work. The hospital as a whole affords excellent facilities to qualified medical practitioners who wish to take part for a time in the work of an active general hospital, or to obtain special instruction in the several branches of medicine and surgery, since it is open to them to study diseases of the eye, ear, throat, nose, skin, fevers, children's diseases, psychological medicine, dental surgery, radiography, the application of electricity in disease, and the administration of anaesthetics. Throughout the sessions into which the year's work is divided, clinics, lectures, and demonstrations are given by members of the teaching staff in the lecture room. Operations are performed every afternoon of the week except Saturday. Special classes are arranged in modern methods of the investigation and treatment of disease.

Fees.—One guinea for a three months' course of study in any one department, which may be begun at any time; a fee of 3 guineas admits to the whole practice of the hospital for a similar term (one month, 2 guineas), and a perpetual ticket for the practice of the hospital may be obtained for 10 guineas.

Additional information can be obtained from the Dean of the Post-Graduate College, at the hospital, or at 19A, Cavendish Square, London, W.1. Owing to the war the number of lectures and set demonstrations was of necessity reduced, but it is anticipated that the full activities of the school will be resumed at the beginning of the winter.

TROPICAL MEDICINE.

THERE are schools of Tropical Medicine in London and Liverpool, and several universities and other examining bodies have instituted diplomas or degrees in the subject. The Colonial Office now expects all nominees for the Colonial Medical Service to pass through one or other of the two schools mentioned before their appointments are confirmed, and commercial firms engaged in tropical enterprise commonly demand from medical applicants for employment corresponding evidence of special knowledge. Information with regard to these schools and diplomas and degrees follows.

DIPLOMAS AND DEGREES.

LONDON UNIVERSITY.—Tropical medicine is one of the six branches in which the M.D. degree may be obtained, the regulations relating to the curriculum and examination corresponding to those applying to the other branches.

LONDON CONJOINT BOARD.—This body grants a diploma in tropical medicine to candidates after an examination usually held in the months of April and July. Ordinary candidates must present evidence of having attended, subsequently to obtaining a registrable qualification in medicine, surgery, and midwifery, (1) practical instruction in bacteriology, parasitology, medical zoology, and haematology, in a laboratory recognized for this purpose during not less than six months; (2) instruction in hygiene applicable to tropical countries; (3) the clinical practice of a hospital recognized for the study of tropical diseases during not less than six months. These conditions may be modified in the case of candidates who have had practical experience in tropical countries. The fee for admission to the examination is £9 9s.

UNIVERSITY OF EDINBURGH.—This university grants a diploma in tropical medicine and hygiene after an examination which is usually held twice a year. It is open to those who are graduates of the university in medicine and surgery, and to registered practitioners who have had experience of tropical diseases in a tropical country, who may be approved by the Senatus on the recommendation of the Faculty of Medicine. In addition to this the candidates must show that they have attended approved courses of instruction in practical bacteriology (including the pathogenic micro-organisms of tropical diseases), in diseases of tropical climates (including the zoological characters and life-history of disease-carrying insects), in tropical hygiene, and in clinical study of tropical diseases. They must possess, too, certificates of efficiency in the conduct of post-mortem examinations. The examination is in the four subjects indicated, the fee being £4 4s.

UNIVERSITY OF LIVERPOOL.—A diploma in tropical medicine is given by this university to students who have been through the courses provided by the Liverpool School of Tropical Medicine and have passed the examination held twice yearly by the university examiners. The examination lasts three days, and consists (1) of three papers dealing with tropical medicine, tropical pathology, and tropical sanitation and entomology respectively; (2) of a clinical examination; and (3) of an oral examination. Further information can be obtained from the Dean of the Faculty of Medicine, University of Liverpool.

UNIVERSITY OF CAMBRIDGE.—This university grants a diploma in tropical medicine and hygiene to any person whose name has been on the *Medical Register* for not less than a year provided that he passes the examination of the university in this subject. Previous to admission to the examination he must produce approved evidence that he has studied pathology (including parasitology and bacteriology in relation to tropical diseases), clinical medicine and surgery at a hospital for tropical diseases, and hygiene and methods of sanitation applicable to tropical climates.

Examinations are held in January and August each year, and last four days. The fee for the examination and diploma is 9 guineas on admission or readmission. Application for further information should be made to Dr. G. S. Graham-Smith, Pathological Laboratory, Cambridge.

SCHOOLS.

LONDON SCHOOL OF TROPICAL MEDICINE.—This school is under the auspices of the Seamen's Hospital Society. Its buildings, laboratories, museum, library, etc., are within the grounds of the Branch Hospital, Royal Victoria and Albert Dock (Station: Connaught Road, Great Eastern Railway), and excellent opportunities are afforded to students and others who may be desirous of studying diseases incidental to tropical climates before entering the services or going abroad. In the hospitals of the Society are to be found cases of tropical disease such as may be met with in actual practice in the tropics. There are three courses in the year, each lasting three months, beginning October 1st, January 15th, and May 1st respectively. The course is so arranged as to equip men for the Cambridge D.T.M. and H. and the D.T.M. of the Conjoint Board.

The Endsleigh Palace Hospital, Endsleigh Gardens, N.W.1, has recently been acquired by the Seamen's Hospital Society for the purposes of a Hospital for Tropical Diseases, and the London School of Tropical Medicine will be maintained in the same building. There is a possibility that the new premises may be ready in time for the session which begins on 1st October, 1919, and, if this be not possible, the School will be removed by January 1st next. An announcement will be made in the public press notifying when the transfer is to be made. Further information can be obtained from the Dean, London School of Tropical Medicine, India Office, Whitehall, London.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE.—This school is affiliated with the University of Liverpool and the Royal Infirmary of Liverpool. Two full courses of instruction are given every year, commencing on January 6th and September 15th, lasting for the term of about thirteen weeks, and followed by the examination for the diploma of tropical medicine given by the University of Liverpool.

In addition to the full courses, an advanced course of practical instruction in tropical pathology and medical entomology, lasting one month, is given every year in June; it is of such a kind as to be very useful to medical men returning from the tropics on short leave. A special course of instruction in entomology, etc., is also given three times a year to officers of the East and West African Colonial Services. Students of the school who do not care to undertake the examination held by the university at the end of each term for its diplomas in tropical medicine are given a certificate for attendance if the latter has been satisfactory.

It is proposed to institute at an early date a course of instruction in tropical sanitation, and full particulars will be issued. The new laboratories of the school adjoining the university, which for the past four years have been lent to the War Office as a military hospital, are now being restored, and will be occupied this autumn.

Since it was instituted the school has dispatched to the tropics thirty-three scientific expeditions, many of the workers having been taken from among its students. The work done by them has been published in twenty-one special memoirs, besides textbooks and numerous articles in the scientific press, also in the "Annals of Tropical Medicine and Parasitology" of the school.

Fees.—The fee for the full course of instruction is £13 13s., with an extra charge of 10s. 6d. for the use of a microscope if required. The fee for the Diploma Examination is £5 5s., and that for the Advanced Course is £4 4s.

Further information may be obtained from the Secretary, H. 24 25, Exchange Buildings, Liverpool.

PSYCHOLOGICAL MEDICINE.

THE study of mental diseases has long been a necessary part of the ordinary medical curriculum, and psychiatry is one of the branches of medicine which candidates for the M.D. degree of the Universities of London and Edinburgh can take up. In addition, diplomas in psychiatry or psychological medicine can be obtained from the Universities of Cambridge, Edinburgh, Leeds, and Manchester. The Medico-Psychological Association of Great Britain and Ireland also grants certificates of proficiency after examination and encourages the study of psychiatry by the offer of prizes for original and research work.

Those who take up psychiatry as a career work as medical officers of public or private mental hospitals, or similar institutions. In practically all cases they are resident officers, having board, lodging, etc., either in the hospital itself or a residence in the grounds. Junior assistant medical officers receive about £300 per annum and senior assistant medical officers about £500, in both cases with board, lodging, laundry, etc., in addition; if married the value of board, etc., is commuted for cash. Medical superintendents, whose pay commonly ranges between £800 and £1,500 per annum, are provided with a house in the grounds of the hospital and draw various allowances.

Since the passing of the Asylum Officers' Superannuation Act in 1909, all officers and others of the established staff of a mental hospital may retire at the age of 55 on a pension varying from one-half to two-thirds of the value of their pay and emoluments, or one-fiftieth for every year served, paying as contribution 3 per cent. of the value of their appointments annually. This very favourable prospect may not appeal to juniors joining the services, but is an eventually valuable asset.

Mental hospital work has undoubtedly not been in favour with newly qualified medical men in years past, the principal reasons for this being as follows:

1. It is a local, and except indirectly, not an imperial service; this tends to slow and uncertain promotion.
2. The rule or custom hitherto prevailing, that assistant medical officers may not marry and are merely perpetual house-surgeons, living as bachelors in rooms.
3. That much of their work is clerical, administrative and routine, which if not destructive to the medically trained individual is at least not conducive to scientific medical initiative, as in medical service in the army or other public services, rather than the possibly more attractive general hospital, or private practice, work.

This is not the occasion nor have we the space to describe what is being done to obviate those three main objections to the service; suffice it for present purposes to say that both the British Medical Association and the Medico-Psychological Association are working separately and together to improve present conditions of service, and have, for example, already removed the "celibacy" objection to the service.

Finally, it may be said that, as in the Army Medical Service or other public medical services, while routine, administrative, and clerical work bulk largely in mental hospital duties, there is ample material, time, and scope for real purely medical work, difficult as the subject may be, in psychiatry as one of the branches of medicine open to young graduates.

PUBLIC HEALTH SERVICES.

THE Public Health Service, to use the term in a strict sense, consists of medical officers of health appointed by local public health authorities and holding office under varying conditions of tenure. In addition there are county medical officers appointed by the county councils. The latter are not, strictly speaking, public health authorities; the duties of their medical officers are somewhat similar to those of other medical officers of health, but include few executive functions. In many of the county boroughs and counties, assistant medical officers of health or assistant county medical officers are appointed, and such appointments may afford stepping stones for promotion to higher offices. The service is, however, not unified throughout the country, and there is no regular system of promotion; appointments are to be obtained only by application to some particular local authority which has advertised a vacancy.

Also ungraded are two other services which have been brought into existence by recent legislation, and whose members are charged with duties which bring them into more or less direct relation with public health authorities or county councils and their officers. The members of the one are called school medical officers, and those of the other tuberculosis officers. Appointments as school medical officer are made by education authorities, while appointments as tuberculosis officer are made in fulfilment of the duties imposed directly on the county councils and the county borough councils, and indirectly on the Insurance Committees by the scheme for the treatment and prevention of tuberculosis which was worked out by the Local Government Board for England in consultation with the Insurance Commissioners.

The Local Government Board for England, it may be noted, has employed a staff of medical inspectors in connexion with the performance of its duty as the controlling department of the Government in matters of public health, and the same is true of the corresponding boards in Scotland and Ireland. The medical men forming these staffs have, however, been appointed to their position directly by the head of the Local Government Board in each country, and the posts are not open to public competition.

At the present time the duties of the Local Government Board have been transferred to the Ministry of Health, and it is to be expected that there will be an increase in the inspectorate and that the duties will undergo expansion to cope with the new efforts about to be made to deal still further with national health.

MEDICAL OFFICERS OF HEALTH.

The office of medical officer of health in a county borough—a designation which now includes nearly all the larger towns—is in practice a permanent appointment so long as the incumbent desires to retain it, and is the same by law in administrative counties and metropolitan boroughs. The position of a medical officer of health to an urban or a rural district, or to a combination of districts which have joined together to obtain the services of a whole-time medical officer of health, is much less satisfactory, for his appointment may be terminated at the whim of the public health authority served by him. This fact tends to militate against the efficiency of the service, and consequently the British Medical Association, in co-operation with some other bodies, has long been endeavouring to induce Parliament to establish security of tenure of office and superannuation for medical officers of health. A medical officer of health to a district or combination of districts having 50,000 inhabitants must hold a diploma in public health. The first step which must be taken by any medical man who desires to follow the career of medical officer of health must therefore be to obtain such a diploma.

SCHOOL MEDICAL OFFICERS.

School medical officers are appointed by local education authorities under schemes of medical inspection of school children which must be approved by the Board of Education. Primarily their duty is to detect among the children attending the public elementary schools any physical or mental defect which may retard the education of such children, and to inform their parents of its existence. But practically their duties vary considerably in different

areas. This is because most approved schemes of inspection include systems of work which aim at facilitating the task of parents in obtaining for their children the necessary treatment, at checking the results of the latter, and at keeping each defective child under skilled observation both at home and at school until it has passed altogether out of the education authority's hands. The general object of all schemes alike is to make the inspection imposed by law of benefit not merely to the individual child, but to the community at large, by preventing conditions which lead to the existence of a large proportion of inefficient citizens among the adult population. In short, the work is so far related to that of a medical officer of health that in most areas the senior school medical officer fills both appointments, his work, when necessary, being supplemented by that of whole or part-time assistants. Whole-time assistants are commonly paid salaries ranging between £350 and £500 a year, the chief attraction of the posts being that they may lead on to appointment as medical officer of health of some large area where the combined salary of medical officer of health and school medical officer will represent a fair income. In view of this consideration, if for no other reason, it is desirable for a prospective whole-time school medical officer to obtain a diploma in public health. In some county and county boroughs it is now the practice for the officer to undertake certain minor ameliorative work, notably prescription of glasses when necessary, the removal of adenoids and treatment in connexion with certain diseases of the skin. The added interest thus given to the work appears to make for increased efficiency and also enhances the value of the post.

TUBERCULOSIS OFFICERS.

The prescribed duties of tuberculosis officers are to act as advisers to Insurance Committees in connexion with the operation of the sanatorium clauses of the National Insurance Act and to take charge of the work of the tuberculosis dispensary, which is the main unit of the Departmental Committee's scheme. A tuberculosis officer is a whole-time officer, who should have special training in tuberculosis work, and be of suitable age and attainments to command general confidence. At present the number of appointments is small, and the salary generally attached to them is in the neighbourhood of £500 a year. In many cases they are now appointed on the staff of the medical officer of health, so that the work of prevention and cure of tuberculosis may be made part of the general health work of the Council.

SANITARY SCIENCE.

In June, 1919, the University of Cambridge issued regulations for the Examinations in Sanitary Science, conducted by the State Medical Syndicate of the University. Two examinations will be held during the year 1920—one in April and one in October. Any person possessing a registered qualification in medicine, surgery, and midwifery may be a candidate, provided that he has satisfied certain demands laid down in the regulations. The examination will consist of two parts, the first having reference to the general principles of sanitary science, the second to State medicine and the applications of pathology and sanitary science. Information respecting these examinations should be sought from Mr. J. E. Purvis, M.A., The Chemical Laboratory, Pembroke Street, Cambridge.

DIPLOMAS IN PUBLIC HEALTH.

Most of the universities and licensing corporations now grant diplomas in public health to candidates who pass the examinations imposed by them. Since all such tests must conform to the requirements of the General Medical Council, there is considerable similarity in their nature, though they differ not a little in their reputed difficulty. All of them aim at excluding any candidate who does not appear to have a thorough knowledge of his work in theory and in practice, for the regulations of the General Medical Council demand that the granting of a diploma in Sanitary Science, State Medicine, or Public Health shall be proof of the "possession of a distinctly high proficiency, scientific and practical, in all the branches of study which concern the public health." The tests, in short, are supposed to constitute an honour and not a mere

pass examination. As regards the special tuition required, it is now easy to obtain this in practically every centre of medical education, and at almost every medical school of any importance. It is desirable to note in this connexion that the chemical and bacteriological examinations for many of the health diplomas are so practical, and the time allowed so short, that unless a candidate—even though familiar with the duties of M.O.H.—has a considerable amount of the manipulative dexterity only to be acquired by ample work in a laboratory, he would not be likely to satisfy the examiners.

The regulations of the General Medical Council require that every candidate (subsequent to obtaining a registrable qualification in medicine and surgery) shall have passed through a stated curriculum in the subjects of sanitary science. This must last not less than nine calendar months, and include four months' study in a laboratory in which chemistry, bacteriology, and the pathology of diseases of animals transmissible to man are taught, six months' practice study of the duties involved by public health administration, and attendance at least twice weekly for three months on the practice of a hospital for infectious diseases at which instruction is given in methods of administration. These rules do not apply to practitioners registered or entitled to be registered before January 1st, 1890, while that regarding six months' practical study of public health administration is waived in the case of a candidate who has himself been in charge of a sanitary district with a population of not less than 15,000 for a period of not less than three years. The study in question must be passed under the personal supervision of a medical officer possessing certain definite facilities for affording it, these being carefully described in the regulations. The period may be reduced to three months in the case of a candidate who has undergone a corresponding period of study in the public health department of a recognized medical school, or who has been resident medical officer at a hospital for infectious diseases with accommodation for 100 patients for not less than three months. The laboratory study must include at least 240 hours' work, not more than half being devoted to practical chemistry. The examinations imposed by the diploma-granting bodies must extend over not less than four days, one at least being devoted to practical work in the laboratory, and one to practical examination in, and reporting on, subjects within the duties of a medical officer of health, including those of a school medical officer.

The steps which examining bodies take to ascertain the candidate's fitness for a diploma are in all cases much the same, though the order in which the subjects are taken is not always identical. Every candidate, therefore, should, when he has settled what diploma or degree in State medicine he wishes to obtain, seek the schedule relating to it from the authority concerned. A certain number of the universities grant degrees in the subject as well as diplomas.

THE PUBLIC SERVICES.

NAVY, ARMY, AIR FORCE, AND INDIAN MEDICAL SERVICE.

THE Medical Departments of the Royal Navy, of the Army, and the Indian Government normally employed between them before the war some 3,000 medical men, and vacancies in the ranks of these services were filled by offering commissions for competition once or more each year. In the abnormal circumstances of the last five years the usual regulations for recruiting the permanent medical staff of these services were, for the most part, in abeyance.

ROYAL NAVAL MEDICAL SERVICE.

IN the JOURNAL of July 26th, 1919, p. 121, the substance was given of an Admiralty order announcing the new rates of pay for naval officers, with special reference to officers of the medical branch and officers of the newly created branch of dental surgeons. The new scales involve a substantial addition to the pay of all commissioned ranks in the several branches of the Royal Navy. The revised regulations for the entry of candidates for

commissions in the Medical Department of the Royal Navy may be obtained on application to the Medical Director-General, the Admiralty, London, W.

The rules regarding the promotion of medical officers have been altered in various respects. Successful candidates at the entrance examinations (of which notice will be given in due course) will be appointed acting surgeon lieutenants and will be required to undergo such courses of instruction as the Admiralty may decide. At the end of these courses they will be examined, and if approved will be given commissions as surgeon lieutenants, the commission dating from the day of passing the entrance examination. Surgeon lieutenants will be eligible for promotion to surgeon lieutenant commander at the expiration of six years from the date of entry, provided they are recommended by the Medical Director-General, have served at sea for three years, and have passed the qualifying examination for this rank. Provision is made for accelerated promotion for those who obtain high marks at the qualifying examination. In exceptional cases special promotion may be made in recognition of distinguished service or conspicuous professional merit. Surgeon lieutenant commanders will be eligible for promotion to surgeon commander after six years' service in that rank under conditions laid down in the new regulations. In exceptional cases special promotion to this rank also may be made. Promotions to surgeon captain and surgeon rear admiral will be made strictly by selection, and will be confined to officers who have proved themselves to be fitted both professionally and as administrators for these ranks.

The new rates of pay include provision for specialist allowances to junior medical officers who have specialized in the following professional subjects: anaesthetics, ophthalmology, ear and throat diseases, genito-urinary and venereal diseases, physical training.

ARMY MEDICAL SERVICE.

THE regulations for admission to the Royal Army Medical Corps, which were issued early in 1912, have practically been in abeyance since August, 1914. During the first two or three years of the war few, if any, regular commissions were given. In 1916 medical officers serving temporarily in the army were invited to apply for permanent commissions in the R.A.M.C., and a number of those who applied were subsequently chosen for this purpose on the recommendation of their superior officers. At the close of 1918 commanding officers of medical units abroad were instructed to furnish lists, arranged in order of merit, of Special Reserve, Territorial Force, and temporarily commissioned officers R.A.M.C., who desired permanent commissions in the corps and could be specially recommended.

Early this summer it was announced that a most important reform had been made in the scientific organization of the Army Medical Service. The aim of the scheme sanctioned by the Treasury is to raise the standard of hygienic and pathological work in the army by the setting up of Directorates of Hygiene and Pathology within the Army Medical Department (BRITISH MEDICAL JOURNAL, May 3rd, 1919, p. 562). This scheme—for which the Service owes a great debt of gratitude to the Director-General, Sir John Goodwin—makes it possible for medical officers of proved scientific merit to continue scientific work throughout their army career, and attain to the rank of Major-General in virtue of their scientific work. By this reform administration will no longer be the only sure road to promotion in the Army Medical Service, and the higher ranks of that Service will be kept in touch with the current of thought in pathology and preventive medicine. The improved prospects thus opening up should do much to encourage young men of ability, whose tastes turn towards sanitary and pathological work, to enter the Army Medical Service. It is greatly to be hoped that further developments in the same direction will include means for the special encouragement also of clinical distinction.

ROYAL AIR FORCE MEDICAL SERVICE.

THE Royal Air Force Medical Service was created a year ago, and the terms and conditions of service were published in detail in the BRITISH MEDICAL JOURNAL of

September 28th, 1918, p. 360. The Air Ministry announced then that permanent commissions would not be granted for the present, and that the conditions of service and scales of pay set out in that memorandum would be subject to revision at the end of the war or earlier; but that on the establishment of the permanent Air Force Medical Service previous experience as medical officer in the R.A.F. would be taken into account in granting permanent commissions. It is understood that when the medical service of the Royal Air Force has been placed on a permanent basis vacancies on the establishment of commissioned medical officers will be filled from the temporary list by selection. In the ordinary way medical officers will be required to pass the physical tests which apply to other officers of the flying service, and on entry they must sign a declaration of willingness to fly if called upon to do so. Revised uniform rates of pay, pensions, and allowances for officers of the Royal Air Force were announced in July last, but it was stated then that specialist services (such as medical and dental) would continue to receive special rates, as hitherto. It was added that medical officers of the Royal Air Force will receive the same rates of pay as may be approved for the medical service of the army, but these have not yet been announced. Information with regard to temporary commissions can be obtained on application to the Secretary, Medical Department, Air Ministry, London, W.C.2.

INDIAN MEDICAL SERVICE.

THE Secretary of State for India announces that 204 medical men are urgently required to fill vacancies in the Indian Medical Service. Of these, 136 will be Europeans and the remainder Indians. The appointment of European candidates will be made by nomination on the recommendation of a selection committee in England. Applications from Europeans, and from Indian candidates resident in this country, will be received at the India Office. Applications from all Indian candidates will be considered together.

Appointment will be by nomination on the recommendation of a selection committee. Candidates must be over 21 and under 32 years of age at the date of application. Preference will be given to candidates who are or have been serving with His Majesty's Forces during the war. All service rendered as a medical or combatant officer, or in a position usually filled by an officer, during the war will count both for promotion and pension on appointment to the service.

The scale of pay, which has recently been greatly increased as a result of the efforts of the British Medical Association, was published in our issue of August 16th, 1919, p. 224.

Application forms and further particulars can be obtained from the Secretary, Military Department, India Office. Correspondence should be marked on the top left-hand side of the envelope, "Medical Recruitment."

PRISON MEDICAL SERVICE.

CANDIDATES for the medical staff are approved by the Secretary of State for the Home Office on the recommendation of the Prison Commissioners. The Chairman of the Board is Sir Evelyn Ruggles-Brise, K.C.B. Application for employment may be made to the Board on a special form, which can be obtained from the Secretary, Prison Commission, Home Office, London, S.W.1.

In the smaller prisons the medical officer is usually a local practitioner, but in the larger the members of the medical staff are required to devote their whole time to the service.

In the case of those required to give their whole time to the service the appointment in the first instance is to the post of deputy medical officer, and from the seniors of this rank the medical officers are selected as vacancies occur.

The pay of the prison medical staff is now under the consideration of the Lords of the Treasury. There are 13 deputy medical officers and 10 whole-time and 33 part-time medical officers. The number of vacancies is never large.

APPOINTMENTS UNDER THE COLONIAL OFFICE.

MEDICAL appointments are from time to time filled up by the Colonial Office in various Crown and other Colonies, and vacancies in the West African Medical staff are of fairly frequent occurrence. As a rule, officers are required on appointment to undergo a two or three months' course of instruction at the London or Liverpool School of Tropical Medicine, and to obtain a certificate of proficiency before taking up their post. In addition to the ordinary medical appointments, vacancies also occasionally occur for which specialists are required—for example, as Government bacteriologists or to take charge of a lunatic asylum.

The nominal value of the appointments varies much; but, as a general rule, it will be found on close examination that the rates of pay correspond in real value pretty closely when questions of climate, opportunities for private practice, the cost of living, and the actual work demanded are taken into consideration. High pay means either few opportunities for practice, a less healthy climate, or work of a special character demanding high administrative ability. Pamphlets relating to the various appointments can be obtained on application by letter to the Assistant Private Secretary, Colonial Office, Downing Street, S.W.1.

Since 1914 considerable increases have been made in the salaries and allowances in the different grades of the West African Medical Staff, which will, it is hoped, render these posts more attractive to the young and well qualified medical men for whom they are intended. As a result of the war, however, the Colonial Office is finding it difficult to obtain the services of medical men in sufficient numbers to fill all existing vacancies in the Colonies and Protectorates to which medical officers are appointed from this country.

Certain medical appointments are made by the Egyptian Department of Public Health. They fall into two main categories—(1) temporary inspectors on two years' contract at ££600 a year, rising to ££720 a year, with certain allowances; (2) divisional inspectors, beginning at ££480 a year, and rising to ££600 a year, with pension. Candidates should be under 30, and unmarried.

Information with regard to medical appointments under the self-governing Dominions may be obtained from the High Commissioners or Agents-General in London for Canada, Australia, New Zealand, the Union of South Africa, and Newfoundland.

Apart from Government appointments, a large number of men find employment as medical officers of mining companies and other commercial undertakings in various parts of the tropics. Much caution should be exercised in accepting these posts.

MEDICAL MISSIONARIES.

To medical men suitably endowed the mission field seems to offer increasing opportunities for interesting work. Just before the war, over 450 medical practitioners holding British degrees or diplomas were employed in different parts of the world by missionary societies, and the latter seem to stand in constant need of men and women to fill vacancies as they occur, and also to enable them to take advantage of fresh openings. It is not usually expected or desired that a medical missionary should take a position such as would otherwise be occupied by an ordained clergyman or minister. But it is essential that he should be prepared to take his share of definite missionary work in any hospital in which he may be placed. As for scientific and other qualifications for the work, a medical missionary, apart from being physically capable of sustaining what may prove to be a trying life, should be a thoroughly well trained physician and surgeon. It is very desirable that he should have held a resident appointment at a general hospital and have a good knowledge more particularly of practical surgery, tropical medicine, and the treatment of eye diseases. Societies from whom useful information can be obtained are the London Medical Missionary Association, 49, Highbury New Park, N.5; the Edinburgh Medical Missionary Association, 6, George Square, Edinburgh; the Church Missionary

Society (Medical Mission Department), Salisbury Square, London, E.C.4; the Society for Promoting Christian Knowledge, Northumberland Avenue, W.C.2; and the Medical Missions Department of the Society for the Propagation of the Gospel in Foreign Parts, 15, Tufton Street, Westminster, S.W.1.

Dental Surgery.

THE profession of dentistry in this country is regulated by enactments very closely similar to those relating to the practice of medicine—that is to say, there is no direct prohibition of the act of practice, and the Dentists Act gives the same degree of protection to legally qualified and registered dentists as is accorded to registered medical practitioners, namely, the reservation of the use of certain titles. Under the Dentists Act, 1878, no person may take or use the name or title of “dentist” (either alone or in combination with any other word or words) or of “dental practitioner,” or any other name, title, or description expressed in words or by letters implying that he is specially qualified to practise dentistry, unless he is registered, under a penalty of £20; nor can an unregistered person recover any fee or charge in respect of any dental operation, attendance, or advice. But, in the case of the practice of medicine by unqualified and unregistered persons, certain deterrent factors come into play—such as the inability to give a death certificate—and these do not operate to the same extent in the case of dentistry; hence, unqualified practice is far more prevalent in dentistry than in medicine, and this has increased since a decision of the House of Lords placing a narrow interpretation upon the words “specially qualified to practise dentistry,” by defining the word “qualified” as not referring to competence but to the possession of a recognized diploma.

Such is the present state of the law, but should the recommendations of the Departmental Dentists Act Committee be given legislative force a more satisfactory state of things will be brought about, as well as possibly some modifications in the requirements for a qualification.

A legally qualified medical practitioner is, however, exempted from the prohibitive provisions of the Dentists Act, and is legally in the same position as though he had obtained a special dental qualification; but, since owing to the lack of technical training he is hardly likely to practise with success, it is not usual for medical men to do so without obtaining the special qualification. The control of the *Dentists' Register* and the supervision of dental education are vested in the General Medical Council, as are disciplinary questions; in all matters concerning erasure from, or restoration to (in the case of persons whose names have been erased for misconduct), the *Dentists' Register*, the General Medical Council must ascertain the facts of each case by means of a statutory committee, whose findings as to the facts are conclusive, but the decision as to the gravity of the facts found is made by the whole Council. Restorations of names erased for other causes, such as incorrect addresses, etc., are made by the Executive Committee. As the law stands at present licentiates or graduates in dental surgery or dentistry of any British medical authority are entitled to registration: those possessed of colonial or foreign qualifications recognized by the Council as adequate, and those persons who were engaged in the bona fide practice of dentistry at the time of the passing of the Act, are similarly entitled to registration, though registration under the last-mentioned condition has been discontinued for many years. Dentistry in the Channel Islands and in the Isle of Man is regulated by separate dental Acts.

The preliminary examination in Arts is the same for medical and dental students, and the early stages of their education embrace much the same subjects; and, as the dental student is required to obtain a knowledge of the broad principles of medicine and surgery, it is necessary for him to pursue some portion of his studies at a medical school as well as at a special dental school, the latter not undertaking the teaching of these subjects. Registration as a dental student is not in all cases compulsory, though it is to be advised as convenient as affording proof of the commencement of professional education, and it is required by some of the licensing bodies, all of whom

insist upon a curriculum covering four academic years. Qualifying licences are granted by the Royal Colleges of Surgeons of England and of Edinburgh and of Ireland; by the Royal Faculty of Physicians and Surgeons, Glasgow; and by certain of the universities in the United Kingdom. Recognized dental schools are numerous. In London there are those connected with the Royal Dental Hospital, Leicester Square; the National Dental Hospital (now the University College Hospital Dental School), Great Portland Street; Guy's Hospital; and the London Hospital. In the provinces there are the Leeds University School of Dentistry; the Liverpool University School of Dental Surgery; the dental departments of the Universities of Manchester, Sheffield, and Birmingham; and the Newcastle-on-Tyne Dental Hospital and School. In Scotland there are the Incorporated Edinburgh Dental Hospital and School; and the Incorporated Glasgow Dental Hospital. In Dublin there is the Incorporated Dental Hospital of Ireland.

There are considerable variations in the order in which the different licensing bodies require the various subjects of the curriculum to be taken up, and every prospective dental student should study not only the regulations of the General Medical Council but also those of the body whose licence he hopes to obtain. This is the more important as in the case of some licensing bodies changes in the curriculum, with the view of making it more closely adapted to the needs of the practising dentist, have either already been made or are in contemplation.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

MARRIAGES.

BARRETT-CHESTER.—At St. Barnabas Church, Kensington, W., on July 9th, 1919, by the Rev. Hector de Courcelles, Henry E. Barrett, M.R.C.S., L.R.C.P., 6, Darnley Road, W.1, to Alice Margaret, youngest daughter of Mr. Chester, 30, Royal Crescent, W.

McWHAE-HOPE.—At St. Mary Abbott's, Kensington, on August 1st, by the Archbishop of Perth, assisted by the Rev. Edward Makeham, Chaplain of the Forces, Colonel Douglas McWhae, C.M.G., C.B.E., M.D., M.R.C.P., A.A.M.C., son of Mr. and Mrs. McWhae, of Maylands, Perth, Western Australia, to Gwynneth, youngest daughter of the late Dr. J. H. Hope, Principal Medical Officer and Commissioner for Public Health in Western Australia, and of Mrs. Hope, of Whaddon Lodge, Leopold Road, Ealing Common.

DEATHS.

ANGUS.—August 23rd, at St. Cyrus, Scotland (very suddenly), aged 36, William Angus, M.D., D.P.H., Medical Officer of Health for Leeds. Interred at Aberdeen August 25th.

QUIRKE.—On the 19th ult., at his residence, Endwood Court, Hands-worth Wood, Birmingham, Joseph Quirke, M.D., R.U.I., M.R.C.P.E., etc., in his 74th year.

ST. VINCENT-RYAN.—Major and Temporary Lieut.-Colonel E. W. St. Vincent-Ryan, T.D., 1st London (City of London) Field Ambulance, Royal Army Medical Corps, Territorial Force, of illness contracted on active service.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
SEPTEMBER.	
6 Sat.	Scottish Insurance Acts Committee, 11.30 a.m.; Scottish Committee, 2.30 p.m.; North British Station Hotel, Edinburgh.
10 Wed.	Special Meeting of Council, 2.30 p.m.
11 Th.	Insurance Acts Committee, 11 a.m.
17 Wed.	Welsh Committee, Shrewsbury, 2.30 p.m.
19 Fri.	London: Parliamentary Subcommittee, 2.30 p.m.
OCTOBER.	
3 Fri.	Central Ethical Committee, 2.30 p.m.

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NOTE.—It is against the rules of the Post Office to receive *post* restante letters addressed either in initials or numbers.

ON THE NATURE OF RABIES AND ANTIRABIC TREATMENT.

BY

SIR DAVID SEMPLE, M.D., D.Sc., D.P.H.,

LIEUT.-COLONEL R.A.M.C. (R.),

CONSULTANT IN RABIES TO THE MINISTRY OF HEALTH; LATE
DIRECTOR OF THE PASTEUR INSTITUTE, INDIA, AND OF
THE CENTRAL RESEARCH INSTITUTE OF INDIA;
LATE DIRECTOR-GENERAL OF THE PUBLIC
HEALTH DEPARTMENT, EGYPT.

I. INTRODUCTION.

THE present outbreak of rabies in England is sufficient justification for the publication of an article on the salient points connected with rabies and antirabic treatment.

In this article I purpose to deal with the subject mainly from a practical point of view, so that whatever information it contains may be available in giving practical advice and prophylactic treatment to those bitten or infected by rabid animals. With this object it is not necessary to enter into every detail connected with rabies; neither is it necessary to give a description of the symptoms of rabies in dogs or hydrophobia in man, as these subjects are fully dealt with in the textbooks.

The fact that the prevention of rabies and hydrophobia is, comparatively speaking, easy of accomplishment in island countries like the British Isles, and that cure or recovery when the disease has become developed has, as far as we know, never taken place, adds to the importance of a dissemination of knowledge on the subject. The truth of the saying that "prevention is better than cure" is nowhere better exemplified than in rabies.

"Rabies" is the term used when animals suffer from the disease, and "hydrophobia" when it has been communicated to man. At present there is a tendency to apply the term "rabies" to man and animals rather than to make a misleading distinction by using two names; besides, the term "hydrophobia" conveys a wrong impression of the disease in man; the dread of water is only in evidence when the patient attempts to swallow water or any other fluid, owing to the fact that such attempts bring on paroxysmal spasms of the muscles involved in swallowing; attempts to swallow solids act in the same way.

In Pasteur's prophylactic treatment of persons infected by rabid animals, we speak of it as "antirabic treatment." A dog or other animal we speak of as "rabid," and sometimes as "mad." The term "mad" applied to some animals, or to man, would probably convey a different meaning altogether. For example, "mad bull" or "madman" would not suggest the condition being due to rabies; whereas in the case of the dog, cat, jackal, or wolf it would suggest rabies.

The point is, that whether we speak of the disease as rabies in animals or hydrophobia in man, the cause is the same in both cases; and on this account it would perhaps be better to use the terms "rabies" and "rabid"—words more suggestive of the cause and condition in man and animals. The French use the term *la rage* for man and animals, and speak of "*rage du chien*," "*rage de l'homme*," etc.

II. THE NATURE AND LOCALIZATION OF RABIES VIRUS.

All warm-blooded animals are susceptible to rabies. When the disease is referred to in the British Isles, in 99 cases out of 100 it means an infection of dogs, but we have also to reckon with cats, horses, cattle, foxes, deer, pigs, and sheep.

In some parts of the continent of Europe (especially in Russia) wolves are an important factor in keeping up the disease, and in India and other Asiatic countries in addition to wolves we have jackals, monkeys, and other wild animals, as well as numerous ownerless dogs. For the practical purposes of this article it will suffice to confine our attention to what happens when dogs are infected with rabies, as they are the big outstanding source from which the disease is kept up in all countries, and practically the only source as far as the British Isles are concerned.

Rabies is a specific infectious disease, the cause of which has not yet been discovered. The saliva of man and animals suffering from rabies contains the infective agent; hence the danger of bites from rabid animals, or of their

saliva coming in contact (directly or indirectly) with wounds, scratches, or abrasions. Infection cannot take place through the unbroken skin, but it may take place through a mucous membrane, injured or uninjured.

In addition to being present in the saliva—which means that it is present in the salivary glands—infection is always present in the brain, medulla, spinal cord, cerebrospinal fluid, and large nerves of man and animals suffering from rabies. It has been found in the pancreas and mammary glands, and, I believe, also in the suprarenal capsules and spleen in some cases of rabies. It is a disputed point whether the virus has ever been found in the bloodstream. I have inoculated many rabbits subdurally with blood taken from animals suffering from rabies, and also from cases of hydrophobia, and the results have invariably been negative. Pasteur's experiments with the blood also gave negative results. Recent experiments by Remlinger,¹ which confirm similar facts published by Konradi, seem to prove that placental transmission can occur.

The saliva of a dog may be infective for as long as five days, and in a few cases it has been found to be infective for six to seven days before any outward symptoms of rabies developed. These are points which should be taken into consideration in giving or refusing antirabic treatment to persons bitten or licked on scratches or abrasions by dogs apparently healthy at the time, but which later developed symptoms of rabies.

Pasteur in one of his early communications laid stress on the early infection of the salivary glands in dogs about to become rabid; he thought the explanation might be that the virus reached these glands from the nerve centres by way of the nerves which supply them.

"Virus" is a convenient term to use in connexion with any disease-producing material about which we know little or nothing.

Rabies virus we know is present in the tissues and localities I have already mentioned when man or animals suffer from rabies; material from any of these sources when inoculated into animals is capable of conveying the disease. We also know that it is very sensitive to heat: a temperature of 50° C. is sufficient to destroy it in fifteen minutes; it remains active for months in neutral glycerin, and for a considerable time at freezing temperature. The chemical bactericidal agents generally in use act injuriously on rabies virus.

In some animals it is more virulent than in others; in rabbits, for instance, after a series of passages from animal to animal, it takes on its most virulent form, and then remains at a fixed virulence; in this condition it is known as "Pasteur's fixed virus," or "*virus fixe*"; on the other hand, its virulence is diminished when a series of passages are made through monkeys.

Advantage is taken of its fixed virulence in rabbits, in the preparation of rabies virus of a fixed strength, or, in other words, "rabies vaccine." It is a filter-passing virus as far as Berkefeld filters and filters of a medium porosity are concerned, but a very fine porcelain filter prevents its passage.

Up to the present all attempts to grow it on artificial media or to stain and demonstrate it under the microscope have not been accepted as successful; on this account, when preparing a vaccine for antirabic treatment, we are obliged to have recourse to the nerve centres of rabbits which have succumbed to rabies after inoculation with fixed virus, where it is found in sufficient quantity and free from contamination.

Whether the bodies found in the brain and medulla in cases of rabies, and generally known as "Negri bodies," are the cause of the disease, or only the result of cellular changes or alterations brought about by the rabies virus, has not yet been finally decided; the balance of opinion inclines to the view that they are cellular changes brought about by the virus. These bodies, which are described and figured in bacteriological textbooks, are found in the brain and medulla in a very high percentage of rabid dogs, possibly in 95 per cent. or more; they are also found in the human brain in cases of hydrophobia, but I am not aware that they have ever been found in the salivary glands or saliva of man or animal coming from rabies. They are most easily found in the cells of the cornu ammonis of the hippocampus major, or in the Purkinje cells of the cerebellum, in sizes varying from 25 μ to minute dots which are just visible when stained and looked at under a

magnification of 1,000 diameters. Only the smallest of these bodies could be looked upon as "filter passers."

Their presence in marked numbers in the brain of a dog or other animal suspected of rabies is diagnostic of the disease; on the other hand, they may be absent in the very early stages of rabies, or possibly so small and few in numbers as not to be found without great difficulty. Bodies indistinguishable from Negri bodies have been found in the brain cells and fascia dentata in conditions other than rabies. Harvey and Acton,* experimenting on healthy guinea-pigs with Russell's viper venom, living *pyocyaneus* emulsion, and the brain matter of a healthy dog which had been preserved in glycerin for seventy-two hours, found bodies indistinguishable from Negri bodies in the brain cells and fascia dentata of a number of the animals experimented on. They quote Babes as having found bodies very analogous to Negri bodies in the spinal ganglion cells of three cases dying from arsenical poisoning; and Pace as having found Negri-like bodies in three persons who died of old age, cerebral embolism, and aortic disease respectively. These authors are of the opinion that

Negri bodies are not truly specific of rabies; at the same time, we must state that in none of the above experiments have the Negri bodies been either so numerous or so large as those seen in rabies. As far as these experiments go we should feel inclined to assert—specificity apart—there is undoubtedly a very high correlation between the presence of numerous Negri bodies and rabies. Thus their presence forms a valuable, if not absolute certain, test for rabies. If they are few in numbers or absent no definite conclusion can be drawn.

The virus of the dog, jackal, or wolf is generally referred to as "street virus." This virus, when inoculated subcutaneously on to a rabbit's or dog's brain, has an incubation period of about fourteen days; in some cases it may be a day or two more or less. When carried on from rabbit to rabbit (using the brain matter or medulla) the virus increases in virulence and the incubation period diminishes until it reaches a fixed period of from six and a half to seven days for these animals; this is known as "fixed virus" (Pasteur's *virus fixe*). The number of passages required to obtain this fixed virulence for the rabbit may vary from twenty or thirty to as many as fifty. "Fixed virus" treated in various ways is used for immunizing persons bitten by rabid animals, or, in other words, for antirabic treatment. It will only be possible to fill in the gaps in our knowledge about rabies virus when its isolation and growth in pure cultures outside the animal tissues has been accomplished.

III. RABIES IN DOGS.

Typical cases of rabies in dogs have been so often and fully described by veterinary authorities that there is no necessity for me to chronicle the many and varied symptoms in rabid dogs,* but it is important to remember that rabies in dogs is not always typical.

In all animals susceptible to rabies the disease manifests itself in one of two forms—namely, "furious," or delirious rabies, and "dumb," or paralytic rabies. In rabbits (with rare exceptions) it assumes the paralytic form, but in dogs and other animals the majority of cases are of the furious form. Paralysis, exhaustion, and asphyxia are the closing symptoms in all forms of rabies.

In dogs, when it assumes the paralytic form, the predominant symptoms are muscular weakness and depression, and the animal shows no tendency to bite. This form is sometimes mistaken for distemper; the lower jaw drops, saliva dribbles from the mouth, and the animal is unable to swallow—a symptom which sometimes gives rise to the suspicion of a bone in the dog's throat. I have known more than a dozen cases of infection of Europeans in India by scratching their hands on the teeth of dogs suffering from dumb rabies when searching for a bone in their throat. At other times the disease at the outset is masked and takes on the form of restlessness and a disinclination for food, and no tendency is shown to bite until a later period, and sometimes not at all. In some cases the animal may remain tame and unaggressive until the end, unless irritated or interfered with. These are the cases in which infection by licks on wounds or abrasions of the hands or face is likely to occur.

IV. MODE OF INFECTION.

The virus of rabies implanted in the wound by the bite of a rabid animal, or by the saliva coming in contact with wounds, scratches, or abrasions, reaches the nerve centres (brain and spinal cord) by growing along the nerves from the seat of infection. On reaching the nerve centres a period of fourteen days or thereabouts elapses before the first symptoms set in.

The period taken by the virus in reaching the nerve centres is variable, and depends on many factors, such as individual susceptibility, whether few or many or large nerves have been infected, amount of virus implanted in the wound; and this, again, would depend on the number, depth, and seat of the bites, whether through clothing, etc. When bites are on the head, face, or neck, the virus has only a short distance to grow along the nerves before reaching the brain; on other parts of the body the distance is greater according to the seat of the bites.

The object aimed at in antirabic treatment is to confer an active immunity against rabies before the virus of the animal which inflicted the bite reaches the nerve centres; when this has been accomplished the failures rarely exceed 0.5 or 0.8 per cent., and they may be even less than 0.5 per cent. On the other hand, should the virus have already reached the nerve centres by the time the patient has arrived for treatment, there will be no symptoms to show that this has taken place, but hydrophobia will set in fourteen days afterwards, irrespective of whether he receives treatment or not. Again, to take another example: should the virus reach the brain one day before treatment is completed, the patient will develop hydrophobia thirteen or fourteen days afterwards, and during this interval he will probably not have a single symptom to show that the object of treatment was defeated one day before completion.

In order to follow the meaning of the examples I have given it is necessary to remember:

1. That the incubation period of the virus of a rabid dog ("street virus") is fourteen days or thereabouts when inoculated on to the surface of a dog's or rabbit's brain.
2. That when rabies is inoculated on to the surface of an animal's brain, no subsequent antirabic treatment will prevent the onset of the disease, and presumably this fact would apply in the case of man.
3. That antirabic treatment extends over a period of from fourteen to twenty-one days, according as to whether light, medium, or intensive treatment is carried out.

As the time occupied by the virus in reaching the nerve centres is variable, depending on the factors I have already mentioned, the importance of early treatment is evident. By treatment I mean local treatment of the seat of infection and subsequent antirabic treatment.

V. TREATMENT OF BITES BY RABID ANIMALS.

When a person is bitten or infected by a rabid animal it is most important that the wounds or seat of infection should receive early attention, with the object of getting rid of as much of the virus as possible.

Proper attention to the wound means cauterization at the earliest possible moment. Undiluted carbolic acid is the most efficient and least painful application; it should be well swabbed into the wound, and washed out with water immediately afterwards so as to prevent destruction of tissues. Carbolic acid has the advantage of penetrating into the crevices of a wound, and is not prevented from doing so by fatty tissue. Crude phenol also answers very well, and so does undiluted izal, lysol, or somewhat similar preparations, and iodine. Caustic soda, caustic potash, or silver nitrate are fairly good when well rubbed into the recesses of the wound, but they cause considerable pain. Nitric acid and the red-hot iron are barbarous methods and should never be used.

Cauterization, when thoroughly carried out within half an hour of the infliction of the bite, will prevent hydrophobia in many cases, but not in all. It is reputed to do some good up to eight or ten hours, but it is probably not much good after three to four hours, and is certainly no good after twenty-four hours.

When the tissues around the wound are excised there is always the danger of the virus in the original wound infecting the larger wound made by the excision. When a

* A clear and graphic account of the subject is to be found in Mr. Frank Karslake's monograph on *Rabies and Hydrophobia: their Cause and Prevention*, published by W. and G. Poyle, 121 and 123, Charing Cross Road, London, W.C.2: 1919; price 1s.

person sucks the wound there is the possibility of the virus infecting the lips or gums. If there be nothing available at hand for cauterization, it is better to wash the wound with any antiseptic lotion, or even with hot or cold water, than to do nothing at all. When washing is done early and thoroughly a certain amount of the virus is washed out. It will be gathered from what I have said that cauterization or other forms of local treatment cannot be relied upon to prevent infection in all cases, but when carried out early and efficiently the virus in the wound may be diminished, the chances of infection diminished, the incubation period prolonged, and treatment made easier and more certain of success. This is the best that can be said for any form of local treatment.

VI. PRECAUTIONS WHEN A PERSON IS BITTEN BY AN APPARENTLY HEALTHY DOG IN A RABIES-INFECTED AREA OR COUNTRY.

In any rabies-infected area or country bites from apparently healthy dogs should receive the same local treatment as laid down for the bites from rabid dogs, for the following reasons:

The saliva of a dog about to become rabid is infective for a few days before it shows any apparent symptoms of the disease, and consequently during this period its bites or licks on scratches or abrasions are capable of transmitting rabies. In probably all cases the saliva is infective for two to three days, but it may be infective for five to six days, and in some cases even longer, but I am not aware that it has ever been proved to be infective for nine or ten days before the disease declared itself by the manifestation of outward and apparent symptoms, although longer periods (thirteen and fourteen days) have been mentioned.

The practical application of these facts, in addition to the local treatment recommended, suggests the following precautions:

1. The dog should not be destroyed, but should be kept under control and close observation for a period of ten days from the date of the bite, and in the event of any symptoms of ill health or departure from its normal habits, a report should be made to the police at once. If at the end of the ten days' observation period the dog is still healthy and free from any symptoms of rabies, the person bitten has nothing to fear as regards infection; even though the animal should develop rabies on the eleventh day or on any subsequent date, no antirabic treatment would be required.

2. If the dog showed signs of rabies within ten days from the date of inflicting the bite, the person bitten should receive antirabic treatment as soon as possible after the condition of the dog had declared itself.

3. A person severely bitten on the head, face, or neck would not be justified in waiting ten days to know whether the animal was infective or not. A delay of ten days, or even four to five days, in a case of that kind might be disastrous, as it might then be too late for successful treatment; the safest course to adopt in such cases would be to commence antirabic treatment at once, and as soon as it became evident that the dog was not infective leave it off. In a rabies-infected district a person bitten by a stray dog which subsequently disappeared and was not again seen or heard of should receive antirabic treatment as a precautionary measure.

4. It is evident that in a rabies infected area it would be a mistake to destroy a healthy looking dog immediately after it had bitten any one, because then all information regarding his condition would be lost unless the carcass or a portion of the brain was sent to a laboratory for experimental tests, which would mean a delay of from four to five days, up to a period of three weeks, or possibly longer, according as to whether Negri bodies were looked for and found, or the inoculation of an animal carried out.

VII. INCUBATION PERIOD OF RABIES.

Rabies virus only gives rise to rabies when it multiplies in the nerve centres. The variable factor in the incubation period is the time taken by the virus in reaching the nerve centres by the nerve paths from the seat of infection; once it reaches the nerve centres the period is limited to fourteen days or thereabouts.

It will be seen that the earliest period at which a man or animal bitten by a rabid animal could show any symptoms of hydrophobia or rabies would be fourteen

days after being bitten; and it could only be fourteen days provided the rabid animal implanted the virus on to the surface of the brain, which is scarcely conceivable. The disease manifests itself oftenest in the course of the second or third month after infection, less frequently after the third month, and rarely after the sixth month. The nearer to the brain the wounds are situated, the shorter the incubation period; hence the serious importance attached to bites on the head, face, or neck, especially when they are multiple, severe, and lacerated. Multiple and deep bites through the exposed skin on other parts of the body where nerves are numerous may have an incubation period not much longer than a similar class of wounds on the head, face, or neck.

When the bites are slight, and only a small amount of virus implanted in the wounds, the incubation period may be prolonged up to five, six, or even nine months, and possibly longer. Individual susceptibility and the early and vigorous treatment of the wounds are also factors in the incubation period. These facts also apply to dogs and other animals when bitten by rabid animals.

It is quite possible that the bite from a dog which was apparently healthy, and which remained healthy, might be blamed for giving rise to hydrophobia in the person bitten. This might happen in the following way: A person with slight scratches or abrasions, when handling a dog with paralytic rabies mistaken for distemper, might easily get infected with the saliva and think nothing more about it, as the dog was thought to have had distemper. Or he might be licked on the hands by an apparently healthy dog whose saliva was infective before showing symptoms of rabies, and not hear anything more about the animal. In the event of his contracting hydrophobia from either source the incubation period would (in all probability) be prolonged. In the meantime he gets bitten by a dog which is apparently healthy and which remains healthy; a few weeks afterwards he contracts hydrophobia. The verdict of most people in a case of that kind would be, "A case of hydrophobia from the bite of a healthy dog." Or suppose the hands got infected in the way I have described, and the subsequent bite from a healthy dog not to have happened, the verdict might be, "A case of hydrophobia without any record of infection." Most cases of alleged very prolonged incubation periods in hydrophobia can be explained by subsequent infections which have not been noticed.

VIII. CHANCES OF INFECTION WHEN BITTEN BY RABID ANIMALS.

It is very difficult to get reliable statistical evidence, partly because some of the animals which inflicted the bites may not have been rabid; in other cases the observations of persons bitten may not have been carried out for a long enough period. The percentages given vary from 16 per cent. to over 60 per cent. I take it that the truth lies somewhere between these two extremes.

When the bites are inflicted through the exposed skin, and are severe and multiple, especially on the head and face or neck, the percentage of infections will be very high, possibly 60 per cent. or more. Bites on the same localities, but single and slight, will give rise to a much lower percentage of infections, and bites through the clothing (unless very severe and the animal has held on and bitten savagely) will give a lower percentage still, and may not be over 16 per cent.

Local treatment has also to be taken into consideration, and so has the biting animal. Wolves and jackals have longer teeth than dogs; they bite more savagely, and by a series of successive snaps, and often spring at the face and neck; besides, the fact that a stray jackal or wolf approaches a human being is almost conclusive proof that the animal is rabid. The percentage of infections following the bites of these animals is very high.

The percentage of infections in a cold or temperate climate is lower than in tropical climates. When the body is only partially covered with a thin cotton garment leaving the legs and arms exposed, there is very little protection against the bites of rabid animals, especially wolves or jackals. I have known of an instance in which a rabid dog bit 15 Indians in a village in the Punjab; 8 came for treatment to the Pasteur Institute, Kasauli, and 7 remained in their village; within three months 5 out of the 7 who remained behind died from hydrophobia; the 8 treated cases remained well. In another instance a dog

bit three Indians in Calcutta; one came to Kasauli for treatment and the other two remained in Calcutta; the treated patient remained well, but the other two died from hydrophobia within two months.

I give these two instances as illustrative of the want of protection afforded by scanty clothing in tropical climates. On adding both sets of figures we get 18 persons bitten by rabid dogs—9 received antirabic treatment and remained well, and of the remaining 9 who were not treated, 7 died from hydrophobia within three months. It would be a mistake to reason from these few cases that 7 out of 9 persons bitten by rabid dogs in Europe, and not treated, would contract hydrophobia; probably not more than 2 would.

It would serve no useful purpose to quote an array of statistics which vary from 16 per cent. to over 60 per cent., but it may be of interest to refer to three sets of figures compiled by the French before Pasteur's antirabic treatment came into operation.

Renault³ gives the percentage of deaths as being one-third of the total number bitten. Bouley² and the Comité d'Hygiène collected 383 cases between 1862 and 1872 with 180 deaths = 47 per cent.

Comité d'Hygiène,² Years 1862-72.

	No.	Deaths.	Percentage.
Bites on the face	50	44	88.0
Bites on the hands	113	76	67.25
Bites on the trunk	22	7	31.81
Bites on the arms	40	12	30.0
Bites on the legs	33	7	21.21
Multiple bites (face, hands, etc.) ...	8	6	
Total	265	152	

It is not stated whether the bites on the trunk, arms, and legs were through the clothing, or whether the wounds received local treatment, or whether they were light or severe. Presumably the bites on the trunk, arms, and legs were through clothing, and it will be noticed that the percentage of deaths in these cases is much lower than in the hands and face cases.

Suzor says that while these figures are not an exact expression of facts, they are of great use in indicating in what direction the truth lies.

IX. RABIES IN MAN (HYDROPHOBIA).

When rabies has developed in man it is generally referred to as hydrophobia. A clear description of a very typical case is given in the *BRITISH MEDICAL JOURNAL* of June 28th, 1919, pp. 795-796, by Sir P. J. Freyer, K.C.B., Colonel I.M.S.(R.). I have seen many cases in India to which this description would apply in every detail, except in regard to the incubation period. An incubation period of eighteen months is exceptional, but there is no denying the fact that it is possible.

There are, however, some cases which might be referred to as atypical, and which conform more or less to the paralytic form of rabies in animals. Gradually increasing paralysis takes the place of the paroxysms seen in typical cases, and sooner or later the muscles of respiration and the heart are involved. Death in these cases comes on more gradually than in those in which there is excitement and paroxysms, and the duration of the illness may be a day or two longer.

In India I have seen several cases amongst Indians in which the symptoms were so masked that a casual observer might well mistake them for an ordinary attack of malaria. The patients covered themselves up in bed, refused food and drink, and implored to be left alone; exposure by removal of the blankets brought on slight paroxysms, which soon disappeared when the blankets were replaced; the expression on the face differed from what we find in malaria, and they were unable to swallow any fluids. I have only known the disease to assume this form in Indians who were weak, anaemic, and debilitated.

There are a few early symptoms which I have never known to be absent—namely, an increase of temperature,

a feeling of unrest, and an appearance of excitement about the eyes and face, and, most diagnostic of all, inability to swallow fluids. At this stage patients may ask why they are unable to swallow, stating at the same time that they are feeling quite well.

Pain in the region of the bite, or in the limb on which it is situated, may or may not be present, but is probably more often present. I have known it to be complained of in cases severely bitten and who successfully underwent a course of antirabic treatment and remained well.

It has not been established that recovery ever takes place in rabies of man or animals. Cases of alleged cure or recovery in man are accounted for by a simulation of hydrophobia known as "spurious hydrophobia," "lyssa-phobia," "pseudo-hydrophobia," "hysterical hydrophobia," and possibly other names. I have only seen one case of this kind.¹

When I was Director of the Pasteur Institute of India, Kasauli, a Eurasian medical student was bitten by a rabid dog on May 15th. The bites were deep, at the base of the left thumb. He came under antirabic treatment three days after he was bitten. On May 22nd, seven days after the bite, he suddenly complained of pain in the throat and chest, difficulty in swallowing and speaking, became delirious and suddenly ran out of the room, saw a dog on the road and immediately ran back in a state of panic. Two hours later his whole aspect was one of extreme terror—eyes widely open; the pupils were dilated and the breathing rapid and laborious; temperature 101.8°, and pulse 120; answered questions with difficulty; complained of great pain in the throat, and after speaking a word or two would roll back on the bed, grasping at his throat with the appearance of suffering the acutest agony from pharyngeal spasms. He constantly asked for water, and when it was brought to him attempts to drink brought on violent pharyngeal spasms, and he dashed the cup away and rolled back on the bed clutching at his throat and groaning. Altogether he was in a condition which might have been mistaken for true hydrophobia.

It was noticed that the examination of his throat with the aid of a tongue depressor could be made with ease and failed to bring on any pharyngeal spasms, an almost impossible and cruel proceeding in a case of true hydrophobia. It was also noticed that the pharyngeal spasms did not spread into one of tetanoid spasms of the respiratory muscles such as we see in the height of the symptoms in hydrophobia.

There was also the fact that the attack had developed with unheard of rapidity, and without any premonitory symptoms, so that in two hours from the commencement he was in the condition somewhat resembling that of a true hydrophobia case on the second or third day of his illness. The most important source of information, and one which threw a flood of light on the diagnosis, was derived from the fact that he had been bitten only seven days previously, and hydrophobia contracted from a bite at that time was out of the question. Then came the difficulty of excluding an anterior infection. There was no history of such an infection, but there was a bare possibility of it from the fact that the patient had within the last year seen and helped to attend three cases of hydrophobia in the hospital where he was a student. Taking all the facts and symptoms into consideration, we diagnosed the case as one of "spurious hydrophobia," and subsequent events proved that this was correct. The patient was given bromide and chloral, kept in bed for a day, when his symptoms gradually disappeared, and the day after his antirabic treatment was continued and completed in due course, and without any untoward incident.

Some two or three weeks after he returned to his home I had a telegram from his medical attendant informing me that "Mr. — has contracted hydrophobia; can anything be done?" I replied by telegram, explaining what had happened in Kasauli, and a few days afterwards I had a letter from the medical attendant, explaining that he had made a mistake in diagnosing the case, and that his patient was now quite well and at his work.

I give this case as an example of what might be mistaken for hydrophobia and recovery.

In most cases of hydrophobia, towards the end of the disease, getting rid of the ropy saliva from the mouth and throat is a troublesome symptom, and attendants on patients should be warned about its infectivity. It gets on to the patient's hands, and when in a paroxysm he may scratch his attendants, or cough or expectorate on to their faces. These are possible methods of infection which would suggest themselves to any medical man attending a case.

REFERENCES.

- ¹ Contribution à l'étude de l'hérédité de la rage; *Annales de l'Institut Pasteur*, vol. xxxiii, p. 375; 1919. ² *Parasitology*, 1911, vol. iv, pp. 255-272.
- ³ Dr. Renaud Suzor: *Hydrophobia and Pasteur's System*; 1887; London, Chatto and Windus.

(To be continued.)

¹ Described in the *Lancet*, July 18th, 1903, by Captain W. S. Harrison, who was then my assistant.

THE ETIOLOGY OF DISORDERED ACTION OF THE HEART.

A REPORT ON 7,803 CASES.

BY

J. A. VENNING, M.D., B.Ch.CANTAB.

This paper is an attempt to analyse and draw some conclusion from the study of 7,803 cases admitted as disordered action of the heart (D.A.H.) or valvular disease of the heart (V.D.H.) to No. 1 Convalescent Dépôt. It covers a period of exactly two years (November 16th, 1916, to November 16th, 1918). This was the first heart centre to be started in France. To Colonel Hume is due the credit of inaugurating this centre and the others which subsequently were established at other bases.

A large amount of work has been done on the so-called D.A.H. cases and a great deal written about them. Colonel Hume published a paper on 1,000 cases and dealt fully with many aspects, which it will be unnecessary to deal with further. The study of a larger number and extending over a long period, however, enables me to bring out certain points which it was impossible to make with a smaller number, and it is these points that I have attempted to elucidate further.

One of the main objects of this analysis is an effort to form some sort of opinion on the apparent causes of D.A.H. As the figures cover a period of two years I have for convenience divided them into four periods of six months. This has the advantage also of showing how the conditions of warfare altered during the two years owing to the use of gas, the increase of trench fever, and the effect of strain on the individual.

Not the least important part of the work was the first sifting of the cases. A careful examination was made on admission of all cases sent as D.A.H. or V.D.H., and where necessary the alteration of diagnosis was made, and cases of "other disease" were transferred to other medical divisions. The following tables show the results divided into the four periods of six months.

TABLE I.—*Diagnosis sent in 7,803 Cases, showing Number and Percentage for Each Period of Six Months.*

	First 6 mths.		Second 6 mths.		Third 6 mths.		Fourth 6 mths.		Total.	
	No.	P.c.	No.	P.c.	No.	P.c.	No.	P.c.	No.	P.c.
D.A.H....	1274	81.1	1784	92.9	1891	91.4	2019	90.0	6968	89.2
V.D.H....	297	18.9	137	7.1	179	8.6	222	10.0	835	10.8
	1571	100	1921	100	2070	100	2241	100	7803	100

TABLE II.—*Actual Diagnosis in 7,803 Cases.*

	First 6 mths.		Second 6 mths.		Third 6 mths.		Fourth 6 mths.		Total.	
	No.	P.c.	No.	P.c.	No.	P.c.	No.	P.c.	No.	P.c.
D.A.H....	1212	77.1	1687	87.8	1765	85.0	1951	87.0	6615	84.7
V.D.H....	91	5.8	72	3.8	72	3.5	69	3.0	304	3.8
Other diseases	268	17.1	162	8.4	233	11.5	221	10.0	884	11.5
	1571	100	1921	100	2070	100	2241	100	7803	100

Tables I and II show a very large error in the diagnosis of the organic lesions. There were 835—that is, 10.8 per cent.—admitted as V.D.H.; but on examination this number was reduced to 304—that is, 3.8 per cent. The error is in fact larger than this, as many of the actual organic lesions had been diagnosed as D.A.H., for out of the total of 304 cases admitted as V.D.H. there were only 182 cases in reality, yet, as the total number of V.D.H. was 304, it shows that 122 had been wrongly diagnosed as D.A.H. The following table shows this error.

TABLE III.—*Diagnosis sent in the 304 Cases of Actual V.D.H.*

	First 6 mths.		Second 6 mths.		Third 6 mths.		Fourth 6 mths.		Total.	
	No.	P.c.	No.	P.c.	No.	P.c.	No.	P.c.	No.	P.c.
V.D.H....	54	59.3	49	68.0	23	32.0	46	33.3	172	56.6
D.A.H....	37	40.7	23	32.0	49	68.0	23	66.6	132	43.5
	91	100	72	100	72	100	69	100	304	100

Table III shows that out of a total of 304 cases of V.D.H. 132 of them had been diagnosed as D.A.H.; that is to say, nearly half of them had been missed.

These errors in diagnosis are important, not so much, perhaps, because early lesions were missed, but in correcting the wrong diagnosis of V.D.H., for when once diagnosed as such the case is passed from one hospital to another, no medical officer taking upon himself the responsibility of altering the diagnosis. Further, the patient learns what its diagnosis is, and it becomes a matter of the greatest difficulty to persuade him that he is suffering from no such thing.

TABLE IV.—*"V.D.H." and Rheumatic Fever.*

	No.	Rh. F.	No Rh. F.
Mitral regurgitation ...	91	53	38
Mitral stenosis ...	68	55	33
Mitral regurgitation and stenosis ...	26	18	8
Aortic regurgitation ...	59	24	35
Aortic regurgitation and mitral stenosis ...	24	16	8
Aortic stenosis ...	1	1	0
Total ...	289	167 (57.8%)	122 (42.2%)

Of 289 cases of valvular disease, 57.8 per cent. gave a history of rheumatic fever; the criterion of this was a history of swollen joints and confinement to bed for at least four weeks. In addition there were 10 men with paroxysmal tachycardia, none of whom gave a history of rheumatic fever, 4 cases of congenital defects of the heart, and one case of infective endocarditis.

A large number of the cases of organic lesions had stood many months of hardship and strain in the front line. Of the 304 cases, 181 complained of symptoms before enlistment, and 123 had none until after varying periods of service.

TABLE V.—*Onset of Symptoms.*

	First 6 months.		Second 6 months.		Third 6 months.		Fourth 6 months.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
Before enlistment ...	762	58.5	797	45.3	708	38.5	624	30.9
After enlistment ...	541	41.5	962	54.7	1,129	61.5	1,396	69.1

Table V shows that there was a marked decrease in each successive six months in the number who gave a history of symptoms in civil life, with a corresponding marked increase of those who developed them after enlistment. This may be attributed partly to the effect of the strain of active service, and partly to the fact that those enlisting during the last two years were of an inferior constitution and so broke down sooner under the conditions of warfare.

Causation.

To attempt to ascertain the main causes instrumental in bringing about the symptoms of D.A.H. is one of the chief objects of this analysis. D.A.H. is not a clinical entity, and the factors which go to produce the symptoms are numerous. Of necessity this cannot be an accurate analysis, as we had to be guided largely by the history given by the patient. Further, it was difficult, and in

some cases impossible, to know to which of several factors the symptoms should be ascribed. For instance, a man after a considerable time in the front line might get a dose of gas which incapacitated him for a day or two only, and might afterwards develop persistent symptoms of D.A.H. The question arises, Are those symptoms due to strain, both physical and mental, the gas being merely the last straw, affecting possibly his mental state rather than his physical condition, or is the gas solely to be blamed?

I have taken the view in such cases that the gas is merely the last incident and is not the real factor, just as in the case of a man being "blown up" by a shell bursting near and symptoms of neurosis following, the being "blown up" is merely the last straw; it is the previous mental struggle and strain which are the real causes.

TABLE VI.—*Causation.*

	First 6 months.		Second 6 months.		Third 6 months.		Fourth 6 months.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
Infection before enlistment	210		263		230		246	
Infection after enlistment	42	20.8	115	22.4	128	20.3	191	22.4
Neurosis before enlistment	165	13.6	141	8.4	93	5.2	99	5.1
Strain after enlistment	237	19.6	418	24.8	638	36.2	626	32.1
Civil occupation	48	3.9	58	3.4	22	1.2	8	0.4
Constitution	148	12.2	187	11.1	190	10.8	188	9.6
Gas	11	0.9	79	4.7	111	6.3	207	10.6
Age	12	1.0	41	2.4	49	2.8	75	3.8
Various	5	0.6	12	0.7	7	0.4	5	0.3
Unknown	334	27.4	373	22.1	297	16.8	356	15.7
Totals	1,212	100.0	1,687	100.0	1,765	100.0	1,951	100.0

In Table VII I have tabulated the apparent causes under nine headings. Those coming under the heading of "unknown" are unavoidably large, but it would have been mere guessing to attempt to classify these cases accurately; in many of them one could find no attributable cause, and in others there were so many possible factors that it was useless to classify them otherwise.

Undoubtedly the greatest factor in the production of symptoms of D.A.H. is the physical and mental strain of war. It accounts for 19.6 per cent. in the first of the six months and as large a percentage as 36.2 in the third six months. It was impossible in many cases to distinguish whether the strain was chiefly mental or physical, the symptoms produced being identical; I have therefore included the two together under the heading of "Strain after enlistment." That is to say, those under this heading showed no symptoms in civil life, but eventually broke down under the stress of training or active service. The effects of this were clearly shown by the large number of admissions after the German push towards Amiens in March and April, 1918.

Infections.

Infections come easily second as a cause, varying in each period of six months very slightly—namely, from 20.3 per cent. to 22.4 per cent.—and by far the greater number of these were due to infections in civil life and not to P.U.O., as has been widely held.

Table VII shows that the most crippling infection and that producing permanent disability of varying degrees is rheumatic fever. It accounts for from 40.7 per cent. up to 56.7 per cent. of the total cases of infection.

It has been asserted that trench fever accounts for over 50 per cent. of all D.A.H. cases. This was found to be far from the case. Infections account for about 21 per cent. of all cases, and of the infections P.U.O. (pyrexia of unknown origin) accounts for from 6.4 per cent. in the first six months up to 23.2 per cent. in the last period.

TABLE VII.—*Varieties of Infection causing D.A.H.*

	First 6 months.		Second 6 months.		Third 6 months.		Fourth 6 months.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.	No.	Per cent.
Rheumatic fever	143	56.7	188	49.7	193	53.9	178	40.7
P.U.O.	16	6.4	62	16.4	68	19.0	101	23.2
Pneumonia	26	10.3	38	10.0	23	6.4	34	7.8
Scarlet fever	15	5.9	11	2.9	0	0	10	2.2
Enteric	14	5.5	10	2.6	18	5.0	21	4.9
Dysentery	10	3.9	17	4.5	11	3.0	12	2.7
Diphtheria	7	2.8	7	1.8	7	1.9	17	3.8
Malaria	4	1.5	16	4.3	17	4.8	31	7.1
Pleurisy	3	1.3	6	1.6	6	1.7	7	1.6
Bronchitis	2	0.8	19	5.1	10	2.8	21	4.9
Measles	2	0.8	—	—	—	—	—	—
Jaundice	2	0.8	—	—	—	—	—	—
Various	8	3.2	4	1.1	5	1.5	5	1.1
Totals	252	100.0	378	100.0	358	100.0	437	100.0

The following particulars of the discharge of D.A.H. cases following rheumatic fever and P.U.O. respectively throw some light on the severity of the disability following each.

In 798 cases following rheumatic fever 560 were admitted as A men. Of these, 175, or 31.2 per cent., were discharged A, and 79, or 14.1 per cent., were evacuated to England.

Of 238 admitted as B men, 60, or 25.2 per cent., were discharged to England.

Comparing this with the discharges in 422 cases following P.U.O., there were 354 admitted as A men, and of these, 211, or 58.0 per cent., were discharged as A men, and only 16, or 4.3 per cent., evacuated to England.

Of 58 admitted as B men only one man was evacuated to England.

From these figures it appears that P.U.O., which includes all the cases of trench fever, is not a very serious factor in the production of D.A.H., nor does it produce D.A.H. of great or lasting severity.

Pneumonia was the infection which produced the next largest numbers, varying from 6.4 per cent. to 10.3 per cent. of the total infections. Scarlet fever, enteric, dysentery, diphtheria, and malaria caused about the same number.

Neurosis before Enlistment.

Under this heading I have included those men who gave a history of nervous instability in civil life. "Nervous breakdown" was a frequent symptom. This heading accounts for from 5.1 per cent. to 13.6 per cent.

Civil Occupation.

This apparently was not a very important factor. Bakers frequently complained of symptoms of D.A.H. in civil life. From 0.4 per cent. to 3.9 per cent. of cases were accounted for in this way.

Constitution.

From 9.6 per cent. to 12.2 per cent. were accounted for in this group; it includes those who were undeveloped, weakly, and those who from boyhood had been incapable of severe physical exertion.

Gas.

This increased each period of six months, from 0.9 per cent. to 10.6 per cent. In 1917 Colonel Hume published a report on 33 of the cases of severe mustard gas poisoning. His conclusions were that as the symptoms were neither marked nor persistent it seemed unjustifiable to assert that any of them presented a true picture of D.A.H.; that the symptoms of which the patients complained during convalescence seemed to be sufficiently accounted for by the injury done to the lung, by the fever, and by the rather prolonged period in bed; and that there seemed no evidence that the heart was in any way affected save through the increased excitability of the sympathetic nervous system.

In April, 1918, another batch of 16 severe cases of mustard gas poisoning were admitted. These were sent by Captain Barber, R.A.M.C., No. 25 General Hospital; only one had to be evacuated to England owing to symptoms referable to the heart. This man was fit previous to being gassed. On admission he was very short of breath, and had a markedly dilated heart, the apex beat being $4\frac{1}{2}$ in. from mid sternum with a short apical systolic murmur. The remainder returned to duty without any symptoms of D.A.H.

Table VIII shows how 318 gas poisoning cases were discharged. Only 8 of them were evacuated to England, and 61.1 per cent. of the A men were discharged as A. How these gas cases were discharged is a good indication as to the permanence of their D.A.H. symptoms, especially if the following table be compared with the discharges from other causes in Table IX.

TABLE VIII.—Discharge of 318 Gas Cases.

Category.	How Discharged.
A 293	A 179 = 61.1%
	B 62 = 21.2%
	Hospital 20
	England 8 = 17.7%
	Other dépôt 24
B 23	B 21 = 91.3%
	Other dépôt 2 = 8.7%
Unknown 2	Discharged A 1
	Discharged B 1
Total 318	318

I think, therefore, we may conclude that though gas produces during convalescence symptoms of the same nature as D.A.H., yet that these symptoms are neither serious nor lasting.

Age and various diseases other than those mentioned are the cause of a small percentage.

Lastly, those to whom it was impossible to attribute a definite cause accounted for from 15.7 to 27.4 per cent. This seems a large number, but in order to obtain figures of any value in working out the causation this could not be avoided.

CONCLUSION.

In conclusion, I would state that the strain, mental and physical, of warfare is the chief cause of the symptoms of D.A.H. That the causation of next importance is infective diseases, and of these the majority was due to those contracted in civil life, rheumatic fever being the worst offender.

Table IX shows how 6,269 cases of D.A.H. were discharged, and for comparison I have added a table giving the discharge of 790 cases which were due to rheumatic fever and 422 cases following P.U.O.

TABLE IX.

Discharge of 6,269 D.A.H. Cases.

Admitted as A men	4,991 cases.
Discharged as A men	48.0 per cent.
Discharged as B men	39.1 "
Discharged to hospital, O.C.D., England	12.9 "
Admitted as B men	1,278 cases.
Discharged as B men	89.0 per cent.
Discharged to hospital, O.C.D., England	11.0 "

Discharge of 790 Cases of Rheumatic Fever.

Admitted as A men	560 cases.
Discharged as A men	31.2 per cent.
Discharged as B men	44.5 "
Discharged to hospital, O.C.D., England	24.3 "
Admitted as B men	230 cases.
Discharged as B men	69.8 per cent.
Discharged to hospital, O.C.D., England	30.2 "

Discharge of 422 Cases of P.U.O.

Admitted as A men	364 cases.
Discharged as A men	58.0 per cent.
Discharged as B men	17.6 "
Discharged to hospital, O.C.D., England	24.4 "
Admitted as B men	58 cases.
Discharged as B men	86.2 per cent.
Discharged to hospital, O.C.D., England	13.8 "

My thanks are due to Colonel W. E. Hume, C.M.G., A.M.S., for permission to use the records from which the above figures are taken, and also to Lance-Corporal Dillingham, R.A.M.C., whose assistance in extracting the figures was invaluable.

THE PATHOLOGY AND TREATMENT OF STIFF KNEE IN RELATION TO COMPOUND FRACTURE OF THE FEMUR.

BY

CAPTAIN C. BERESFORD ALEXANDER, R.A.M.C.(T.),
ALDER HAY SPECIAL MILITARY SURGICAL HOSPITAL, LIVERPOOL.

FIBROUS or bony ankylosis of the knee frequently follows compound fracture of the femur when the fracture is into the joint or when there has been prolonged suppuration near the joint.

There is, however, another class of "stiff knee" which follows compound fracture of the shaft of the femur in which the limitation of flexion is not due to articular so much as periarticular and muscular changes. This is the type which yields very satisfactory results with careful treatment, but is frequently dealt with in a very offhand sort of way, leading often to disastrous results. Stiff knee after compound fracture of the femur may be due to articular, periarticular, or muscular causes.

It is chiefly the changes in the quadriceps which concern us at the moment, and before we discuss the treatment it is useful to glance at the pathology of these, as our methods must be guided largely by it. We should keep it in mind that some degree of joint infection must occur in all cases of compound fracture, although in those we are considering the reaction of the joint tissues is generally sufficient to deal with this. The real obstruction to flexion is to be looked for in the very profound alteration occurring in the quadriceps as a result of sepsis and prolonged disuse.

In a typical example we find a markedly wasted and scaphoid quadriceps. On attempting passive flexion of the knee considerable pain is generally caused on account of periarticular adhesions, but if these are absent a very much shortened quadriceps prevents flexion for more than a few degrees. This means that the normal functions of extensibility and contractibility are absent; that in parts dense scar has replaced the muscle tissue; and that there are scars of healed sinuses reaching down to bone. This state of affairs has resulted from the original injury, the persistence of sepsis, and prolonged disuse.

Histologically the picture varies with the position from which the sections are taken. Those near the septic focus show absolute replacement of muscular tissue by scar, while other sections show decreasing amounts of scar as we get further from the site of injury.

Throughout the muscle, even in that portion most distant from the injury, there is considerable shortening of individual muscle fibres, which, in addition to showing marked contraction in size, are in a state of partial degeneration, and as a result of prolonged disuse have "forgotten" how to function. Their condition is in fact that of typical disuse-atrophy.

It is a well established pathological fact that cells in this state tend to be replaced by fibrous tissue, and this does occur to some extent just as in the same way such structures as the ductus arteriosus and thymus, when they cease to function, are gradually replaced by fibrous tissue.

But not only is the muscle substance shortened and partially replaced by scar; the individual fibres are surrounded by lymph spaces which drain into lymph capillaries, and it must be remembered that lymph is coagulable in virtue of the fact that it contains fibrinogen and its cellular elements thrombin. Coagulation will follow any of those incidents which cause clotting of the blood; among these are trauma, contact with harmful nucleo-proteins manufactured in the septic focus, and stasis. Nature attempts to remove this clot by phagocytosis, but as a result of the special conditions we are considering a certain amount of scar tissue remains, gluing the fibres together and forming intramuscular adhesions.

In opposition to the changes above enumerated there is a certain degree of regeneration going on as a result of

proliferation of sarcolemma nuclei, and muscle cell budding and splitting. The survival of the young muscle cells thus formed depends upon the degree of encouragement they receive to function; otherwise they run the risk of destruction before they reach maturity, either simply by disuse-atrophy or by condensation of the recently formed scar tissue. Their failure to survive only increases the amount of fibrous tissue formation.

During the treatment of compound fracture of the femur, then, we have all the necessary conditions for the formation of fibrous tissue in muscle—namely, trauma, sepsis, and prolonged disuse. Our picture of the quadriceps, therefore, is that of a muscle which has practically lost its contractility and extensibility and is pervaded throughout with fibrous tissue gluing the fibres together, and to a large extent actually replacing the muscle cells. In addition, in the neighbourhood of the fracture and about each sinus the muscle is riveted, as it were, to the bone by dense scar. Even with a normal joint such a shortened muscle forms a very considerable obstacle to flexion of the knee. Similar changes are found about tendon sheaths and in tendons and ligaments around the knee-joint due to the same causes.

The conditions to be dealt with, therefore, before we get movement are perimuscular and periarticular adhesions, intramuscular adhesions, contracted and imperfectly functioning muscle cells. Experience in the treatment of stiff knee, following the type of compound fracture we are considering, shows that the real block to flexion is not due to changes in and about the knee but in the quadriceps.

Treatment should be first prophylactic, by chemical sterilization, removal of all sequestra, and early secondary closure of wounds when possible. Secondly, any scarring which binds the muscle to bone and all intramuscular and periarticular adhesions must be broken down. Thirdly, the normal functions of contractility and extensibility must be restored and growth of young muscle cells encouraged.

As soon as the condition of the wounds permit the quadriceps should be treated by graduated contraction by means of the Bristow faradic coil. This loosens intramuscular and periarticular adhesions, and restores tone to the muscle, which begins to increase in size.

If the fracture is united and the patient out of the Thomas splint, a small sand-bag is placed beneath the knee as he lies in bed, the heel being off the bed. The weight of the leg is then sufficient to commence flexion. As the knee begins to bend the size of the sand-bag is increased, the patient being encouraged in the meantime to extend the knee voluntarily. In this way flexion of 20 to 30 degrees is obtained, and graduated contraction and exercises are continued until he is able to fully extend the knee from the flexed position.

The knee should then be further flexed under gas, the remaining intramuscular and periarticular adhesions being broken down in this way. It is most important that during this operation the knee should not be bent beyond the point of extreme muscular extensibility at the time. When this point (generally just short of 90 degrees) is reached the surgeon feels a characteristic jerk, which can only be recognized by experience, but which closely resembles the sudden stop felt on dorsiflexing the ankle of a patient with contraction of the Achilles tendon. The knee and thigh are then vigorously slapped (tapotement)—a procedure which tends to limit any effusion into the joint and deep tissues. The patient is put back to bed either in a suspended knee flexion splint, in which the thigh only is fixed, and which is bent at an angle beyond that obtained during the operation, or simply with the joint flexed over sand-bags as before described. The following day the knee may be slightly swollen, and the patient may complain of some pain on each side of the patella ligament, and where the muscle scarring is most dense. Gentle massage (effleurage) is comforting at this stage, while weak faradic graduated contraction undoubtedly hastens absorption of effusion from the tissues.

This treatment—massage and graduated contraction—should be continued for three days; at the end of this time any effusion will have disappeared and passive movements should be commenced in addition.

Two points will now be noticed: First, that flexion cannot be obtained to the same degree as in the theatre—the loss may be as much as 10 degrees—and secondly, that voluntary extension is only to about 165 degrees. This

range, particularly the extension, will increase from day to day under treatment by the Bristow coil and voluntary exercises until the patient is able to perform active movement from about 100 degrees to full extension.

At the end of a week or ten days, if the fracture is firmly united, the patient should be instructed in knee-bending exercises while standing at the foot of his bed. At least every other day he should be made to lie face downward on the bed, and the surgeon, holding the thigh down by grasping just above the knee, should flex the leg passively with his other hand in one slow, firm, continuous movement. By these means flexion beyond a right angle is generally obtained. Daily graduated contraction should be continued for four or five weeks, at the end of which time, if improvement is not satisfactory, the knee should be wrenched again.

There are several precautions to be taken, apart from those already mentioned, when wrenching a knee: First, if the site of fracture is tender to deep pressure, coaptation splints should first be applied. Secondly, there should not be too much anxiety to get too much flexion at one sitting. Overflexion may result in rupture of the quadriceps, injury to the patella ligament and capsule of the joint, or even fracture of the patella. Thirdly, whatever the degree of flexion, the patient is not ready for a second wrenching until he is able to extend his leg fully.

During the after-treatment the graduated contraction should not be too severe. If, following treatment by this method, the patient complains of stiffness in his muscle, it is probable, as pointed out by Major Bristow, that more harm than good is being done. An overworked muscle does not develop, it atrophies.

What has been said about the knee applies obviously, though to a lesser extent, to the other joints of the limb. During treatment, then, it is the duty of the surgeon to see also that the hip and ankle joints and the toes are not allowed to become stiff.

TREATMENT OF BILHARZIAL INFECTION BY TARTAR EMETIC.

BY

MAJOR ARTHUR INNES, M.B., R.A.M.C.(T.F.),
ATTACHED EGYPTIAN ARMY.

TARTAR EMETIC, as advised by J. B. Christopherson,¹ must be accepted as a positive cure of bilharzial infection. I knew many of the cases on which his recommendation was based, and had commenced the treatment in the Egyptian Military Hospital, Khartoum, where the opportunities of proving or disproving its efficiency are many among the fellahs recruits of the Egyptian army. Since then McDonough has reported that he had previously used the drug; and Major Strong of the Australian Medical Service tells me that he and one or two brother officers had worked with it in 1916, in fairly small doses and at intervals of not less than a week between the injections, but no one felt convinced of the possibility of curing the disease, nor had anyone the courage to adopt the truly heroic dosage which is necessary to affect the bilharzia worm and its ovum.

Our cases are divided into two series; the first is composed of twenty-six cases which were treated in the period from June 27th, 1918, to August 10th, 1918, and the second of thirty-six cases treated from August 12th, 1918, to January 15th, 1919.

The interval between these two series was longer than the actual dates seem to indicate, for there happened in August an outbreak of influenza in the ward where these cases were; the temperature in all the cases was considerable—never less than 104°—and one patient died whose organs showed most extensive fatty degeneration;² fearing the toxic effect of antimony in such cases, the treatment was discontinued in several patients whose urine still showed bilharzia, and the first three of the second series were started on injections of 10 c.cm. of mercury perchloride solution, 1 in 1,000, as has been tried by Madden of Cairo. But this solution failing to have the effect, of clearing the urine of blood and ova, we again resorted to tartar emetic, and have used it invariably since.

Of the first series of 26 cases, 14 were discharged with the urine free of blood and ova, 11 were still infected but

were discharged on account of the influenza epidemic, after receiving doses of tartar emetic varying from 3 grains to 23 grains, and one died. All these patients were very heavily infected, having indeed been picked out at inspections for their unhealthy look, and found on examination to be infected with bilharzia. With the one exception all were returned to duty looking fit, and have been able to continue with their units since.

Early in January we asked for these men to be sent for examination, but unfortunately only nine could report.

Of the fourteen discharged cured, four reported.

The result of microscopic examination of the urine was in one completely negative. One had a few ova in a clear urine, and the ova did not hatch out in two hours. One had a little blood, but no ova. One had blood and pus in slight amount, but no ova.

Of the eleven discharged before the urine had quite cleared, five reported.

Two who had received 23 grains and 15 grains respectively had blood and pus, but no ova. One who had had 13 grains had many ova, but none hatched in two hours. One who had 5 grains had some blood and many ova, of which a few hatched. One who only had 3 grains had much blood, and many ova which hatched.

It will probably be contended that these results are anything but satisfactory, but I think they are sufficient to justify a claim for the treatment, if for no other reason, that all the cases were so anaemic and looked so delicate before being treated that they were certain of discharge, but after the injections were able to carry on and do all their duties. Further, of the nine examined five months after treatment had ceased, only four contained ova, and two of this four had barely received treatment, having only had 5 grains and 3 grains respectively before being discharged; yet it was only in these two that any ova in the freshly voided urine would hatch on the addition of water. In the others the ova were dark or granular and did not hatch; they were presumably ova which had been lying dead or so altered as to be harmless, and were only present in the urine because their numbers having been so great in the bladder tissues, and the papillomatous masses one sees in such cases, that their extrusion was taking a long time. Symmers' records these same changes in ova found dead by him in the tissues.

The presence of blood and pus without ova in four cases is not to be wondered at when the unhealthy state of a heavily infected bladder wall is remembered; indeed, it is rather a matter for surprise that these two things disappear relatively so quickly as they do when a case begins to clear up.

In this first series the patients had for the first week or two been kept on milk diet, and then bread was added, but the diet never approached an equivalent of the full diet of hospital; this we recognized was a failing in our method, for it is well known that rest in bed on a milk diet will clear up bilharzial urine and give the semblance of a cure which may even persist for some time. It is impossible to state any average dose for the first series, as treatment was so interfered with, but in those cases which were continued until the urine was clear never less than a total of 25 grains was given, and in two cases over 30 grains were administered. This high dosage is in accordance with Christopherson's original work on the subject, but our more accurate and carefully controlled second series show that this dose is unnecessarily large.

The results in the 36 cases of the second series are reported thus early so that others may give the treatment a trial.

The diet throughout was either the ordinary diet or its equivalent—namely, milk 4 rotls, eggs 4, vegetable 1 rotl, rice 1 rotl, and bread 1 rotl; rest was not insisted on except for two hours after the injection—in fact, three of the cases were treated as out-patients, and carried on all their duties between times, as we shall show.

As has been said, the first 3 cases were started on intravenous injections of 10 c.cm. of a 1 in 1,000 solution of mercury perchloride. There were no untoward results from the injection of this apparently large dose every second day, but there was no alteration in the presence of ova in the urine. The influenzal epidemic made its first appearance in the Sudan in the bilharzial ward, and we not unnaturally associated the high temperatures which laid low patient after patient with our vigorous pushing of the tartar emetic; having seen patients not infested with bilharzia become ill and some die, we again attempted the antimony tartrato.

CASE I.

Mohamed S. H. was a typical illustration of how things went. The urine contained great quantities of blood and ova. From October 10th to October 18th he was given an injection every other day of 10 c.cm. of mercury perchloride, 1 in 1,000. No improvement in the condition of the urine occurred. On October 22nd, when the urine contained much blood and many ova, treatment with tartar emetic was begun. He received on that day $\frac{1}{2}$ grain; on October 24th 1 grain, on October 26th $\frac{1}{2}$ grain, and on October 28th, and every second day until November 6th, 2 grains. After the first three injections of 2 grains he had some cough. On October 28th the urine still contained a little blood and ova were present. On November 2nd blood had disappeared and ova were few. Thereafter neither blood nor ova were detected, and the patient was discharged on November 7th. He was examined on November 19th, when the urine contained neither blood nor ova. The total amount of tartar emetic given in this case was 12 grains.

In order to control the effect still more, the "hatching out" time of the ova on the addition of water to the fresh urine in special glass containers was determined, and the following case is illustrative.

CASE II.

Mohamed F. A. was very heavily infected, the urine containing much blood and many ova, hatching in ten minutes. On November 5th he was given $\frac{1}{2}$ grain of tartar emetic, and on November 7th 1 grain; on that day he had cough, and the condition of the urine in respect of blood and ova was unchanged. On November 9th he was given $\frac{1}{2}$ grain, and again had cough; on November 11th he received 2 grains, and on these two days the ova hatched in fifteen minutes. Thereafter he was given 2 grains every second day until November 27th. On November 13th the ova hatched in half an hour; on November 15th in one hour; on November 17th in an hour and a quarter; on November 19th ova hatched, but movements were very sluggish; on November 21st the ova did not hatch in three hours, and this was true also on November 23rd, on which day the patient felt weak. On November 25th there were few ova, and on November 27th none, but the patient had cough followed by slight fever. He was discharged on November 28th. When examined again on January 12th, 1919, the urine was quite clear, but contained a few black ova, which did not hatch. He was detained in hospital and the urine examined on two succeeding days, when ova were still found, but always black and apparently dead. The total dose of tartar emetic in this case was 20 grains.

Two interesting but quite common phenomena were displayed in this case—namely, the gradual killing of the vitality of the ovum, as seen by the lengthening out of the hatching period until at last when it broke it released a slow moving miracidium in place of the rapidly darting one; and, secondly, the discoloration of the ovum.

This case also shows what we had come to recognize as a general fact—namely, that after the patient had received 5 grains of the drug the improvement is rapid; the amount of blood for the first time begins to diminish and the "hatching out" time appreciably lengthens.

But all these results might quite easily be ascribed by doubting critics to the restful life of hospital, so we have pleasure in recording three cases whose mode of life was in no wise altered while under treatment, except to give them a two hours' rest after the injection, and even that one of them—the son of a civilian syco—did not have, as he constantly ran out of the ward so soon as he found it possible to evade the orderly, and that was usually in a quarter of an hour.

The following case is typical of the three:

CASE III.

Ahmed S. reported voluntarily for treatment, and we took trouble to explain to him that the idea of the treatment was not to discharge soldiers but to retain them, for every one knows how the Egyptian fellah loathes the army and will even mutilate himself to escape his military service. He said he understood the matter fully, but that he was anxious to be cured.

On December 9th, 1918, when treatment with tartar emetic (half a grain) was begun, the urine contained much blood and ova, which hatched in fifteen minutes, were present in numbers. He received one grain of tartar emetic on December 11th, and one grain and a half on December 13th. The examined on these days was in the same condition as on December 9th. From December 15th to December 25th he received two grains of tartar emetic every second day. On December 15th the ova hatched in forty minutes. On December 17th there was much less blood; ova were present but did not hatch. On December 19th the urine was clear and the ova did not hatch. After that date the urine was clear and no ova were seen. Examination of the urine on many occasions down to January 1st, 1919, revealed nothing but a few oxalates. The total amount of tartar emetic given in this case was 14 grains.

Method of Administration.

The tartar emetic is made up with normal saline in the strength of $\frac{1}{2}$ grain in 2 c.cm., and is sterilized in an autoclave each time immediately before injection. A 10 c.cm. syringe is used, and as we sometimes had over twelve cases to inject at one time, and only one syringe was at that time available, we did not sterilize it afresh between each injection, but washed it out carefully by filling several times with sterile saline, and in that way removed all blood, so that any danger of haemolysis was removed. There was always a sufficient supply of needles kept freshly sterilized; if any of these needles became blunt we discarded them, as the danger of not getting properly into a vein only exists with such an unreliable needle. An injection was never commenced until the blood of the vein had been seen in the barrel of the syringe, and the plunger was always pulled back a little twice or thrice while the injection was being made to ensure that the needle had not shifted out of the vein. The skin over the vein was painted with tincture of iodine and one turn of bandage constricted the arm above the part. Working in this way in the last thirty-eight cases we did not have a septic arm nor anything more than a very slight and passing phlebitis; but in the first seven we had three rather severe infections; two had to be opened and dressed. The reason we found afterwards to be that one of our assistants had septic fingers, and though he never handled the needles or articles actually giving the injections, the infection must have passed from his fingers to the lips or edges of some of the dishes. Anyhow, when he was excluded from taking part in the procedure, all went well.

Injections were always given fairly slowly, especially in those cases where vertigo developed; by this means the number of such cases is diminished.

Complications.

Cough is extremely common, but is usually very slight. In two cases, however, we had seen it so bad as to lead to slight haemoptysis; even in these the symptoms disappeared in a quarter to half an hour. The cough is usually associated with a considerable amount of frothy expectoration which ceases when the coughing is over.

Vertigo is much less common but more troublesome; in three cases we first of all reduced the dose from two grains to one, and had finally to discontinue the treatment before the urine had been quite cleared, as the effect on the men was so great.

Vomiting was fairly common, but never severe. We have never seen any of the bowel complications—for example, diarrhoea—mentioned by Christopherson as seen in the treatment of bilharzia, and of which we have seen cases when treating kala-azar by this drug.

Of complications resulting from the injections themselves, the only one to be expected, if reasonable attention to asepsis is given, is a little phlebitis at the seat of puncture of the vein. This was not very common, and depends on the idiosyncrasy of the patient, for in a case where it had once occurred it tended to occur again. It was never severe, being little more than a tenderness with a rise of 1° or 1.5° F. in the worst cases; all symptoms disappeared on the exhibition of a hot fomentation to the painful spot. On the other hand, if any of the fluid were allowed to escape from the vein into the tissues, the resulting inflammation and necrosis was much greater than is seen with a similar accident from "606," although the ultimate result is always good once the necrotic tissue has been evacuated. In our second series we did not have one case where phlebitis or any similar conditions gave us the least trouble.

Results.

The results of the second series of thirty-eight cases were as follows: Twenty-eight were discharged cured, no ova being found on careful examination of the urine. In one or two very little blood still existed, but it was surprising how in the vast majority, from being almost pure blood, the urine became absolutely negative.

Two were invalided from the service after receiving only 4 grains each; the first of these was invalided because of his very poor state of health, and the second because of the multiplicity of the intestinal infestations (ankylostoma, taenia, oxyuris) and a continued low fever. One, after receiving 16 grains, was much affected with vertigo and treatment was stopped, although the urine contained more

blood and mucus than we liked. We might possibly claim this case as actually a cure, for no ova were found on the last examination. Four were discharged with ova still in the urine after doses of 15, 13, 11, and 10 grains respectively because of vomiting and vertigo. Our intention in such cases is to suspend treatment for a month or two and then resume it, but so far we have no data to give. We are firmly convinced that severe vertigo and vomiting are indications for the discontinuance temporarily of tartar emetic.

Of the twenty-eight cases discharged cured we had the good fortune to examine fifteen during the first to second month after they left the hospital, and in none were blood or ova found. The other thirteen were not in Khartoum, so that we have so far no details to give of them.

CONCLUSION.

We apologize for the recent character of the cases in this paper, for we know only too well the criticisms to which it is exposed. At the same time we feel that the faith that is in us relative to the value of tartar emetic in bilharzial infections is justified by the results we have given, for these results are not based on naked-eye observations or beliefs, but on the non-partisan findings of the microscope. Nor can it be said that we have done no more than has so often been done by rest in bed or low diet, for our most instructive results were on ambulant cases with full diet, and no case was treated on anything else than a generous diet.

"But the blood and ova will recur," says the persistent sceptic. Perhaps he is correct; if so, we will repeat the treatment, and so kill the few remaining schistosomes that escaped our last injections.

Let any one try the effect of even four initial injections—that is, 5 grains—and watch the effect on the hatching period of the ova when water is added to the freshly voided urine, and we are sure he will feel justified in going on to the 15 grains, which we feel is a sufficient and perfectly safe dose to kill the bilharzia without affecting the patient, although in saying this we see no danger in going on to the 25 grains which Christopherson now considers the optimum.

Acknowledgements.—We are extremely grateful to Colonel Carroll, D.S.O., P.M.O. Egyptian Army, for allowing us to do this work and to publish these results; and to Yusef Eff Bakri and Suleiman Eff Abaza, both medical officers of the Egyptian Army, who gave kind assistance and showed keen interest in the work.

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A CASE OF HYDROCEPHALUS.

BY

SAMUEL LODGE, M.D.,
BRADFORD.

ON February 14th, 1916, Dr. Squire of Pudsey asked me to see with him an ex-soldier invalided owing to suspected cerebral tumour. For the previous eighteen months headaches and diplopia had been the principal symptoms. Latterly his sight had deteriorated, and during the last few days he had suffered from intense left-sided supra-orbital neuralgia.

He was found to have right homonymous hemianopsia; papillitis on both sides; on the right with swelling of 1 D., and on the left of 4 D. The pupillary reflexes were present and the hemianopic pupillary reflex absent. Irritation of the recurrent meningeal branch was considered to be the explanation of the intense neuralgia. He had diplopia from paresis of left external rectus.

There was ataxy of the arms, more pronounced on the right side. The plantar reflex was extensor on the right side. Eleven days afterwards the pulse rate was 48, and the respirations 12; slow cerebration and cerebral vomiting were very pronounced.

First Operation.

The same day the left subtemporal area was decompressed. On reflexion of the dural flap the pent-up cerebrospinal fluid burst through the wall of the lateral ventricle. The dural flap was turned down and invaginated between

the bone and the temporal muscle, and the wound closed in the usual manner.

The next day the pulse was 86, the respirations 22, and previously subnormal temperature had risen to 99.2°. By the second day the plantar reflex had become flexor in type.

On the third day he said that "there was a little man kept running along the bed-rail"; "everything has a red appearance"; "the room is queer-shaped—there are so many corners in it." The auditory cortical centres were also disturbed, as he heard "some one talking to him behind the bed-head." The hallucinations ceased in a few days, and might have been prevented by operating on the right side, had this been feasible. In the case of another right-handed patient, published in 1912,¹ the wall of the posterior horn of the right lateral ventricle ruptured spontaneously during the operation, but no such symptoms occurred during convalescence.

Three months later vision was as follows:

R. $\frac{1}{6}$; 1 Jaeger at 13 in. L. $\frac{1}{6}$; 10 Jaeger at 13 in. No signs of papillitis. Right homonymous hemianopsia still present.

The patient sought relief from the disfigurement of a large hernia over the temporal area which displaced the upper part of the pinna downwards and outwards; he was quite prepared to undergo any operation which would open up fresh channels of escape for the cerebro-spinal fluid. Cushing's operation of retroperitoneal drainage through the lumbar theca was contraindicated, since lumbar puncture had demonstrated that the foramen of Majendie was blocked. We decided to explore the right cerebellum for tumour, and, if no tumour were found, to open up the posterior subarachnoid reservoir (Parkin's operation), and to utilize the deep tissues of the neck as a drainage area, if needful.

Second Operation.

The right lobe of the cerebellum was explored with a negative result. There was a gush of fluid on opening up the posterior extremity of the cisterna magna.

Recovery was uneventful, and, when re-examined two years later, the hernia had disappeared. The stretched skin over the left temporal area could be rolled between the fingers and thumb. The right suboccipital area was not prominent. The sight of both eyes had improved but the hemianopsia persisted. He has resumed his pre-war duties, the chief of which is that of driving a motor car.

The etiology, as is not unusual in these cases, remains unknown.

My thanks are due to Dr. Squire for much assistance in the conduct of the case, and to Mr. Haigh, of the Royal Infirmary, Halifax, for taking post-operative skiagrams of the decompressed area of the skull.

REFERENCE.

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FLAT-FOOT.

BY

LIEUT.-COLONEL HENRY SMITH, C.I.E., I.M.S.,

AMBITSUR.

A good deal written on the subject of flat-foot has been far too much to show that the leg muscles attached to the tarsus were intended by Nature to support and maintain the arch of the foot. It seems to me that Nature no more intended the leg muscles attached to the tarsus to maintain its form than that the corresponding muscles attached to the carpus were intended to maintain its form. The corresponding muscles attached to the carpus are plainly intended to move the joint and nothing else, and in my opinion the same holds as regards the leg muscles attached to the tarsus. They are merely intended by Nature to move the ankle-joint and the joints of the tarsus. If these muscles had to support the weight of the body or a portion of that weight they would very quickly lengthen and be useless for that purpose. The strong ligaments of the sole have something to do with the maintenance of the arch, though if the weight of the body is excessively thrown on them, as in the development of flat-foot, they too give way and lengthen. The cause of the evil in flat-foot and in over-high instep is to be found in the skeleton formation. Normally the heel, the outer side of the tarsus, and the metatarsals carry the weight at rest and in motion. If

the formation is such that the weight of the body is thrown too much on the inner side of the foot we have flat-foot; if too much on the outer side of the foot we have over-high instep, which cripples a soldier in marching as much as a flat-foot. When for knock-knees we cut the thigh bones in a child of, say, 10 or 12 years of age and set the legs straight, we would have reason to be anxious about the loose ankle-joints, due to the undue looseness of the external ligaments. When we see the patient five or six years later we find that Nature has "taken up the slack" and that the ankle-joints are perfect, as well as the general symmetry of the limbs. Here we have merely dealt with the skeleton. We have adjusted it so that the weight is conducted as in a normal case, and Nature takes care of the rest.

I know a farmer in Ulster whose amusement from boyhood was to shoe a crooked-footed horse. He had no teacher in the art, studied the issues himself, and never read books on the subject. He had experimented to such a degree that I doubt if there is a professional or other horse-shoer in the empire—including veterinary surgeons—who could shoe a crooked-footed horse better than he, and exceedingly few who could do it as well. He was a born mechanical genius. I often talked the matter over with him, and though he had never heard of the centre of gravity or of muscle attachments, he had got to the bottom of the subject, and was scientific to the last degree. A few years ago I was spending an evening with him, and a flat-footed workman came up to us. I requested him to strip the feet, and asked the farmer how he would "shoe" him. He had not previously devoted any attention to orthopaedics—a term he had never heard of. He asked the man to stand in an attitude which a soldier calls "attention," and walked round him, looking at the legs and feet. He drew my attention to the fact that the inner side of his feet was not straight, but bulged inwards at and below the ankle. He then said the cause was plain; that flat-foot was due to the formation of the skeleton, which threw the weight of the body too much on the inner side of the foot, and that the remedy was plain. I then asked him about an over-high instep. He replied that it was the opposite of an over-low instep, and the cause must be the reverse, and the remedy the reverse. He said he would get the bootmaker to make the insole (which is usually made of thin leather all the same thickness) of the heaviest sole leather for the flat-foot, full thickness from heel to toe on the inner side and pared away like a wedge to the outer side, and the reverse for an over-high instep. By this means he said he would throw the weight further out on the foot in the case of a flat-foot and further in in the case of an over-high instep. In the case of the over-high instep he said the instep would sink under this treatment. He also said it would require some experimentation to find the most suitable thickness of the thick side of the insole to suit the individual case. I then explained to him the steel plates which orthopaedists use for flat-foot, and that they claimed that they supported the arch. He laughed at the idea, and said that if the plate supported the arch, it would press on it and would certainly lame the man, and that any benefit it might have was due to raising the whole inner side of the foot, and thus throwing the weight of the body further out.

I am personally convinced that the farmer was right both as regards the causation of these two conditions and as to the method of treating them, and I would respectfully invite the attention of those who have to deal with these conditions to this aspect of the question.

KEIFFER has published in *Le Scalpel* the results of a study of the physical and mental state of Belgian women during the war. The effects of privation began to show themselves in 1915 in disturbances of nutrition, wasting, enlargement of the glands of the neck, and rickety lesions. Tuberculosis caused great ravages, especially in young girls. In married women, long before the menopause, amenorrhoea was very common; with the signature of the armistice it diminished. Keiffer attributes it to the insufficiency and bad quality of the food, as well as to the mental suffering caused by the German occupation.

THE Massachusetts Commission of Mental Diseases states that 200,000 persons in the United States suffer from epilepsy, and that only 3.5 per cent. of these are in institutions. Thirteen States in the Union have colonies providing for the care of 7,000 epileptics.

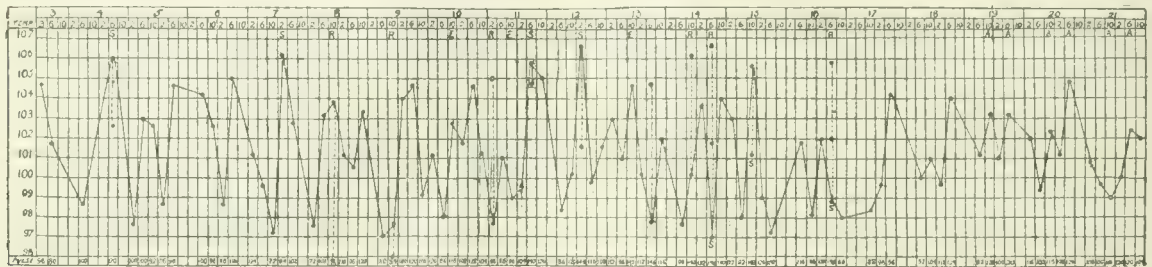
Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF TREVES'S MASKED APPENDIX.

The following case is worth publishing for two reasons—first, because the patient recovered from a severe portal pyaemia, and secondly, because every possible source of primary infection was very carefully gone into without throwing any light on the cause of his disease:

The patient, an engineman R.N.R.T., aged 39, was admitted to hospital from a trawler on October 3rd, 1917, giving a history of having been ill for forty-eight hours with headache and severe shivering fits. On admission there was a slight icteric tinge in the conjunctiva, and the liver and spleen were a little enlarged. A suppurating superficial wound of middle and ring finger of right hand, with fracture of first phalanx of ring finger, had been caused by the chafing of a wire rope. No history was obtained of malaria or any previous illness. There were no abnormal physical signs in the heart or lungs, and no history of appendicitis could be elicited. A diagnosis of portal pyaemia was made, but the *fons et origo* of the condition could not be discovered. The four-hourly temperature chart (of which a portion only can be reproduced) showed a series of severe rigors. The patient's heart muscle soon began to deteriorate, and his



S=Sponged. R=Rigor. E=Eusol, intravenously. A=Antistreptococic serum.

dependent parts became waterlogged, causing sloughing of the scrotum and perineum, and producing a perineal urinary fistula, through which all his urine escaped.

The fractured phalanx showed no attempt at union, and the patient's vitality was so lowered that his condition was many times considered to be hopeless. Intravenous injections of 100 c.cm. of eusol were given on October 10th, 11th, 12th, and 13th, and two 40 c.cm. doses of antistreptococic serum were given daily from October 19th to 29th inclusive, but neither seemed to have the smallest effect. Very gradually the patient seemed to wear down his disease and slowly returned to convalescence. His appetite had remained excellent throughout.

As soon as the denuded surfaces showed signs of the appearance of healthy granulations, a plastic operation was performed to close his urinary fistula and provide covering for his testes, and at the same time good union took place in his fractured phalanx, after weeks of no attempt at union.

On February 7th, 1918, when quite convalescent and about, the patient developed a typical attack of appendicitis. At the operation a matted appendix was found densely bound down with old adhesions. He was discharged to duty on March 10th, 1918.

He always denied having any pain in his abdomen, and certainly allowed deep abdominal pressure with the examining hands all over his abdomen without experiencing even discomfort, to say nothing of pain, until he developed his attack of appendicitis, when well of his pyaemia.

F. DALTON,

Royal Naval Hospital, Portland.

Surgeon Commander, R.N.

A CASE OF SUDDEN DEATH FROM ELECTRICITY.

DEATH from an electric discharge is due to the actual current passing through the body. The voltage in most recorded fatal cases is very high, and often there have been circumstances which would lessen the usually high resistance of the body, and so increase the amount of current electricity passing through the tissues, such as wet clothing or, more especially, moisture of the skin. In the following case the pressure was 250 volts (alternating current), the maximum allowed in dwelling-houses, etc., by the Board of Trade regulations.

On April 9th, 1919, whilst I was a medical officer in a military hospital, I was called to see F. H., a private in the Royal Engineers, employed in the engine house of the hospital. The chief engineer, who had called me out, told me on our way to the engine house that H. had been using a portable electric

hand lamp which suddenly went out; the lamp was connected to the ordinary lighting wires. The man removed a small piece of the insulation, leaving one wire exposed. He was seen to fall suddenly and lie still. The current was shut off promptly and the man removed to the open air. The engineer stated that as he left to get a medical officer, H. was of a "bad colour and gasping for breath."

Ten to fifteen minutes must have elapsed before my arrival, when I found H. lying on his back in the open with his clothing well loosened. His face and ears were a dusky bluish colour. The heart sounds could not be heard; the pupils were equal but widely dilated, and no sign of life was apparent. The body seemed to have cooled a little. Artificial respiration was tried in vain. I believe death was practically instantaneous. A thorough examination of the body later failed to show any marks except a small raised thickening on the inner side of the left middle finger near the tip: it bore the imprint of the wire, and was brownish in colour, but it did not smell of burning. There were no marks of any sort on the clothing.

The deceased was a powerfully built young man without any history or evidences of heart trouble. He had been playing football about an hour before, but his army shirt and his hands were free from perceptible perspiration. He was wearing the ordinary army ammunition boots, shod with iron heel-plates and nails, and at the moment of the accident he was standing on an iron grating. The fuse in the distribution box did not give out, as only one of the wires had been completely exposed.

It is worthy of note that the stated voltage of an alternating current is only the mean of a rhythmical rise and

fall, so that in this case the pressure could have risen to a maximum of 260 volts. Electricians are of opinion that 250 volts alternating current are more dangerous than 500 volts continuous current.

Aberdeen.

A. G. B. DUNCAN, M.D. Aberd.

A CASE OF PALATAL PARALYSIS FOLLOWING INFLUENZA.

The following case of palatal paralysis, which occurred during the November epidemic, is worth recording, as it is difficult to dissociate it from what was apparently a straightforward case of influenza.

A girl aged 6 years had an attack diagnosed as influenza in November, 1918. It seems from the mother's description to have been only moderately severe, the fever lasting about four days. There was some general catarrh, cough, and furred tongue. At about the same time the whole household was afflicted with the same disease. A little more than two weeks after the fever the child began to speak with a nasal voice, and a week later still was brought to see me at the Children's Hospital in Harrow Road. I had often seen her before, as she was a delicate child and had attended with various ailments, so that I recognized immediately the alteration in the voice; it was, in fact, the typical nasal voice of palatal paralysis. The palate was found to be immobile. The fauces were quite clean. The pupils were equal and reacted well. The right knee-jerk was completely absent, the left knee-jerk feeble. The condition cleared up in about two months, and the voice is now normal.

Peripheral neuritis is recognized as a sequel of influenza, but is, I believe, rarely located in the palate. The obvious objection to the diagnosis of influenzal paralysis is that there is no real proof that the feverish attack was not diphtheria. This objection would have been difficult to meet had the case been isolated, although the symptoms and course did not sound very like those of diphtheria; but since all the members of the household were having influenza at about the same time, it at any rate comes within the bounds of possibility that the palatal paralysis was produced by the influenza toxin.

London, W.

HAZEL H. CHODAK, M.D., M.R.C.P.

Rebieus.

TRENCH FEVER.

THE heavy wastage and the increasing invalidity from trench fever caused the War Office to establish a Committee of Investigation at Hampstead in December, 1917, with a view to determining with certainty the methods of transmission of the disease. The committee had as its chairman Sir David Bruce, and the volume entitled *Trench Fever, a Louse-borne Disease*,¹ is a report of its work, edited by Major BYAM, with the assistance of Captains J. A. Churchill, Lyn Dimond, V. E. Sorapure, and Lieut. Lt. Lloyd of the R.A.M.C., and Captain J. H. Carroll, of the U.S. Medical Service. It was probably rather more than a coincidence that almost simultaneously an American Red Cross Commission was beginning similar work in France, and an interesting competition for priority was thereby instituted, which, according to Sir David Bruce in the preface, was won by the English committee by a very narrow margin. Of more importance than priority was the essential similarity of the findings of the two committees. A detailed review of the American Commission's Report has recently been published in these columns,² but a summary of it by Lieutenant R. H. Vercoe appears as an appendix to Major Byam's book.

Is trench fever a new disease? The majority of observers would answer this question in the affirmative, but Major Byam rather leans to the opinion that it has always been present, and quotes Werner in support. Whether this be so or not, it is certain that it has never before been recognized as an entity and taken from the great waste-heap of pyrexias, fevers, febriculae, etc., which the older medicine, without the aid of pathology and bacteriology, had accumulated. The war may be said to have defined trench fever as a specific pyrexial disease, characterized by an abrupt invasion and pyrexia of five days, associated with splenic enlargement, general pain, mild conjunctivitis, and showing a tendency to periodic relapses. The acute early stages are now familiar to all, either from personal observation or from current literature, and need not detain us long. It is necessary to note, however, that the temperature curves show many variations, and six definite types are charted in the book. Another point to note, because it was not reported until comparatively recently, and subsequently elaborated by Carmalt-Jones, is that definite areas of skin tenderness may develop, corresponding to the eighth cervical, first and seventh dorsal, and lumbar segments.

The mode of transmission of the disease was the main problem before the committee. It was known from McNee's work in 1915 that the blood of a patient was infective, for he had produced the disease in a healthy man by injecting blood obtained from a patient. The American work in France indicated that the infecting agent was free in the plasma. Whether the virus is filterable or not is still a moot-point, for the findings of the Americans that it is a filter-passer are not accepted in their entirety by the War Office Committee. Should the virus prove to be a filter-passer this will add another point to complete the resemblance with typhus fever, which is regarded as the type of louse-borne diseases. This brings us to the most important point in the experimental work, the final incrimination of the louse as the conveyor of the disease. What had long been suspected on clinical and epidemiological grounds in France was proved in the laboratory, thanks to the self-sacrifice of many volunteers, men who from age or physical infirmity were unfit for military service but who gladly did what they could, and whose photograph forms a fitting frontispiece to the book. In their incrimination of the louse the British are at one with the Americans. As to the actual method of transmission they vary, for by the former the bite is regarded as an uncommon mode of infection, the common one being by the grinding of infected excreta into an abraded surface, whereas the latter regard the bite as the

most frequent mode of infection. Probably both are correct, for the one method can hardly exist without the other under natural conditions. But the discovery that the excreta of infected lice may convey infection is highly important, for it indicates possibilities of dissemination when the lice themselves have been destroyed. The experiments were conducted with the greatest exactitude, and the results briefly summarized are that excreta from lice fed on trench fever patients are capable, when applied to an abraded skin area, of producing clinical trench fever. This property does not belong to the excreta of healthy lice. Infected excreta retain their virulence for long periods, even up to 120 days. The excreta from a single infected louse are capable of producing trench fever.

That the infection can persist for a very long time is evidenced by the fact that blood from an infected man has been found still infective 300 days after the onset of the disease. This fact is one of fundamental importance in dealing with cases in the field, because it indicates the necessity for preserving patients from reinfestation with lice if the spread of the disease is to be checked. Only those who have had experience in field hospitals where "delousing" facilities are inadequate will fully realize the difficulties to be combated.

On the pathology of the disease little fresh light is shed. A certain amount of evidence is adduced concerning the rickettsia bodies, which have frequently been demonstrated in infected lice, but the search for a causal organism cannot as yet be regarded as having afforded any satisfactory conclusion.

For the first time in English literature, so far as we know, the chronic stage of the disease has been adequately dealt with, and to this chapter special attention should be paid. Occasional notes have appeared in medical journals describing cases of trench fever cachexia, which the writers seemed to look upon as rare. There must, however, be many hundreds of men, either discharged as permanently unfit or still in hospital, who are examples of the chronic infection. How long this may continue the authors cannot tell us; nor can they indicate when the possibility of a relapse may be definitely excluded. Further, many cases of so-called neurasthenia and D.A.H. have undoubtedly originated in trench-fever infection. The descriptions of the chronic disease, with its long continued recrudescences, and the explanations of the cardiac and nervous conditions arising therefrom, should be studied by all who are concerned in the care of such cases.

On treatment itself nothing very new is forthcoming. A formidable list of drugs tried and found disappointing is given, but so far no specific has been discovered. Reference is made to the good results claimed by Major Sweet, U.S.M.C., from the use of intravenous collargol, but independent confirmation is needed before his view can be accepted, for in other hands the treatment has failed.

Prophylaxis is fully discussed, and it may be summed up in the one word, so popular in France, "delouse." How that may best be effected was a problem which taxed the ingenuity of sanitarians in the field. Now that the excreta have been proved infective the problem is widened, for mere laundering of patients' clothing is insufficient to disinfect. All recognized methods of delousing are described by the authors, and we are glad to see that they are in favour of steam as opposed to dry heat. One of the medical lessons of the war is the necessity for a portable standard steam box which can be relied on to disinfect clothing and equipment, and such a box will have to become part of the equipment with which every unit will take the field in the future.

The moral of the whole book is—"The louse is the carrier of infection; kill him."

Future generations will look back on the work of these two commissions, and will regard it as one of the best examples the war has furnished of "team" work carried to a successful conclusion. Meanwhile, present-day medical men who are concerned with the immediate problem of repairing the wreckage of war will find Major Byam's book invaluable, for it contains all that needs to be known about trench fever, and its intelligent study should ensure that in peace, at any rate, the ravages of this disease shall be confined to the present actual victims.

¹ *Trench Fever, a Louse-borne Disease*. By Major W. Byam, R.A.M.C. London: Henry Frowde, and Hodder and Stoughton. 1919. (Med. Soc. pp. xvi+196; illustrated. 16s. net.)

² *BRITISH MEDICAL JOURNAL*, November 23rd, 1918, p. 577.

TREATMENT OF INJURIES OF THE LIMBS.

In November and December, 1917, Professor ARTHUR KEITH, Conservator of the Museum of the Royal College of Surgeons of England, delivered a course of lectures on the anatomical and physiological principles underlying the treatment of injuries to muscles, bones, and joints. These he has now collected into a volume with the title *Menders of the Maimed*.⁸ He follows the historical method; he begins with John Hunter and goes on to Hilton and H. O. Thomas and to the introduction of tenotomy by Stromeyer and W. J. Little. Then with Marshall Hall and Duchenne of Boulogne he passes to what may be called the neurology of injuries. Next he deals with tendon transplantation, and then with the introduction of certain orthopaedic methods to British surgery, and with the forerunner (Sayre) of the modern American school of orthopaedic surgery. Then there is a chapter on movement as a means of treatment, in which justice is done to Lucas-Championnière, and after that the introduction of gymnastics and massage to surgery is described. Three chapters follow on the physiology and pathology of bone, and on bone grafting. The penultimate chapter deals with the origin of our knowledge concerning articular cartilage in health and disease, and the last chapter is on bonesetting, ancient and modern.

We strongly commend the book to attention; it is not a compilation nor a history, but an essay tracing the development of a department of surgery always important, but now of greater significance than ever. It is agreeably written, and illustrated by a series of sixteen portraits, from John Hunter to Peter Redfern.

VICIOUS CIRCLES.⁴

CLINICAL experience affords abundant evidence of the fact that morbid conditions of all kinds are apt to produce effects which react upon each other. Such evidence is scattered through many textbooks and treatises, but it has only been collected and analysed of late years by Dr. J. B. HURRY, the third edition of whose work has now been presented in a somewhat more expanded form than on its first appearance eight years ago.

Well printed in large type and abundantly illustrated with diagrammatic schemes of the various vicious circles dealt with, the book contains a wealth of material. Successful treatment depends largely upon the possibility of checking causation, but too often the starting-point of the morbid process lies outside the range of the physician's powers of attack. When it is being maintained by the formation of a vicious circle a great deal may be done to break its continuity, and so to remove one link at least in the causative chain. Some new chapters are devoted to the manner in which such circle-breaking may be achieved by natural processes and by art. In these, as in almost all other parts of his book, the writer makes free use of quotation from authorities of greater or lesser weight. The sequence of vicious circles in the diseases of animals and plants is examined in like manner and presents many points of interest.

As an educational work, the volume does not contain much that is not familiar to every experienced clinician; but the discussion of well known phenomena from a different standpoint is always interesting, and Dr. Hurry has succeeded in presenting his subject in an attractive and readable form.

MEDICINE AND NURSING.

THAT no one can write such a pleasant medical sermon as the author of *Aequanimitas* is emphasized by Sir WILLIAM OSLER's article on "Medicine and Nursing,"⁵ which is reprinted and sold separately from the *Essays on Vocation*, edited by Mr. BASIL MATHEWS. The four prominent features of the medical profession are its noble ancestry

from the Greeks, its world-wide identity of aims, its progressive advance, and its beneficent ideas. It is true that there are "Gehazis among us who serve for shekels, whose ears hear only the lowing of oxen and the jingling of the guineas," but these are exceptions. Medicine is a most difficult art to acquire and a broad outlook is most essential, for there are no more dangerous members of the profession than those born into it, so to speak, as specialists. The student's ambition should be to become a general practitioner; to speak of the passing of the family physician is absurd, for never was he as prominent or so useful; he still does the work while the consultant and the specialist do the talking, the writing, and the fee-taking. In no profession does culture count for so much as in medicine, and no man needs it more than the general practitioner.

It was during the Crimean war, one of the recurring attacks of race mania, that the nursing profession, until then unsettled and ill defined, took, under the guiding hand of Florence Nightingale, its modern position. The trained nurse with the priest and the doctor form a trinity to look after suffering humanity, and there is no higher mission in life than to look after God's poor.

NOTES ON BOOKS.

DR. J. F. SPENCER'S *Metals of the Rare Earths*⁶ is a valuable monograph on a subject that is of great commercial importance to the world at large, as well as of immense interest to the chemical theorist. It is doubtful whether the man in the street has ever heard of any of the score or so of these metals, although to two of them—thorium and cerium—he owes his incandescent gas mantles, and to one of them—cerium—his automatic cigarette lighter. The book is one for the chemist, and contains an exhaustive list of references to the literature of the rare earths.

OSTROM'S *Massage and the Original Swedish Movements*⁷ is a practical little book that may serve as an introduction to the subject with which it deals. Clear directions are given showing how the different forms of massage may be applied to various parts of the body in disease, and numerous illustrations do much to add to the clarity of the text. The book is one for those practising massage.

Captain G. MALAN'S synopsis of symptomatology and therapy in internal medicine⁸ is a rather breathless and crowded little volume designed to serve as a refresher for the memory of medical students, whose labour he compares—rather unkindly, perhaps—to that of the Danaïdæ. It may be recommended to those in search of an Italian cram-book of symptoms and treatment.

⁶ *The Metals of the Rare Earths*. By James Frederick Spencer, B.Sc., D.Sc., Ph.D., F.I.C. London: Longmans, Green, and Co. 1919. (Med. 8vo, pp. x + 279; with diagrams. 12s. 6d. net.)

⁷ *Massage and the Original Swedish Movements: Their Application to Various Diseases of the Body*. By Kurre W. Ostrom, from the Royal University of Upsala, Sweden. Eighth edition, revised and enlarged. London: H. K. Lewis and Co., Ltd. 1919. (Cr. 8vo, pp. x + 196; 12s. figures. 5s. net.)

⁸ *Sunto di Sintomatologia e Terapia Medicinica Interna*. By Dott. Guido Malan, Medico dell'Ospedale Maggiore di Torino. Milano: Società Editrice Libreria. 1919. (Post 8vo, pp. 152. L. 6.50.)

APPLIANCES AND PREPARATIONS.

Osmos Aperient Water.

"OSMOS" is the proprietary name of a British aperient water manufactured by Messrs. Valentin, Ord and Co., Ltd., Hayes, Middlesex, and claimed by them to be identical in composition and properties with Hunyadi-Janos water. Analysis of a sample recently submitted to us shows it to contain:

Magnesium sulphate (anhydrous)	1.73 per cent.
Sodium sulphate (anhydrous)	1.79 "
Sodium chloride	0.16 "
Sodium bicarbonate	0.18 "
Potassium and calcium salts	traces

The above figures agree closely with the published analyses of Hunyadi-Janos, and bear out the makers' claim that the composition and osmotic value of the two waters are practically identical. It consequently follows that the therapeutical properties of Osmos are also equivalent to those of Hunyadi-Janos, and that it can safely be recommended for all purposes for which the Hungarian water was formerly employed. The taste is not unpleasant.

⁸ *Menders of the Maimed. The Anatomical and Physiological Principles underlying the Treatment of Injuries to Muscles, Bones, Nerves, and Joints*. By Arthur Keith, M.D., F.R.C.S., F.R.S., etc., Conservator of the Museum and Hunterian Professor, Royal College of Surgeons, England. London: Henry Frowde, and Hodder and Stoughton. 1919. (Demy 8vo, pp. xii + 335; 16 portraits, 7 figures. 16s. net.)

⁴ *Vicious Circles in Disease*. By Jamieson B. Hurry, M.A., M.D. Cantab. Third and enlarged edition. London: J. and A. Churchill. 1919. (Demy 8vo, pp. xx + 377; 22 plates. 15s. net.)

⁵ *Medicine and Nursing*. By Sir William Osler. Issued separately from *Essays on Vocation*. Edited by Basil Mathews. Oxford University Press: Humphrey Milford. 1919. (Pp. 12. 6d. net.)

THE TEACHING OF OBSTETRICS AND GYNAECOLOGY.¹

(Concluded from p. 279.)

E.—THE BASES OF AN EFFICIENT TRAINING IN MIDWIFERY AND GYNAECOLOGY.

1. OWING to their intimate relationships these subjects should be taught, as is the British practice, by the same teachers, and the training of students in them should run concurrently.
2. Midwifery training should be extended in one direction (ante-natally) so as to comprise a fuller study of the whole course and management of pregnancy, and in the other (post-natally) so as to comprise the management of the whole nursing period and the management of the infant. Reference has been already made to the opportunities offered by the maternity and infant welfare centres for instruction in the care of the nursing mother, in infant feeding, and in the general management of the infant. The work of these centres is the natural sequence to the care of pregnancy and labour, and some acquaintance with it is essential if the application of preventive medicine to maternity and childhood is to be properly realized by the student. The co-operation of the paediatrician in this work is very desirable.
3. The management of labour should be taught as a surgical procedure; this can only be done in hospital, under surgical conditions, with adequate equipment and a highly trained staff of teachers. Owing to the peculiar nature of the work the senior officers upon whom the ultimate responsibility rests should be resident in the hospital, or should be available at any time their presence may be required.
4. There should be adequate hospital accommodation in all large centres of population to allow of all serious obstetric emergencies being immediately admitted for treatment; this is recognized as being necessary in respect of surgical conditions, and it is equally necessary in respect of midwifery.
5. From (4) it follows that the number of beds available for cases of midwifery must be very largely increased, allowing due provision to be made for the emergencies which so frequently arise.
6. Medical students and midwives cannot be suitably trained in the same institution unless in separate classes.
7. The proportion of beds allotted to midwifery and gynaecology is quite inadequate to the importance of the subject from the point of view of the public health; the number should bear a definite proportion to the total number of beds in the hospital; at the present time the average proportion is less than one-twentieth of the total in the twelve hospitals shown in Appendix B; this proportion should be increased to at least one-tenth. A considerable number of gynaecological cases are dealt with by the surgeons in the surgical wards, which are largely lost for teaching purposes.
8. The requirements of the examining bodies in both subjects should be strengthened so as to enforce (a) an adequate period of clinical training during which the student should be allowed to undertake no other work, (b) the provision of suitably arranged and sufficiently large facilities for clinical work.
9. In the system of training the following methods of instruction should be followed, their relative importance being in the order named.
 - (a) Clinical demonstrations upon patients in out-patient departments, wards, operation theatre, and labour wards.
 - (b) Demonstrations of specimens, fresh and preserved.
 - (c) Lecture demonstrations, at which surgical anatomy, the construction and use of instruments, the details of operative procedures, etc., can be shown in detail. Under this head would be included the present practical midwifery lectures.
 - (d) Systematic lectures, which should be limited in number, and concerned with principles rather than details.
10. The extent to which the student's training is influenced by the nature of the qualifying examination must not be overlooked, and the present system of examination in midwifery and gynaecology urgently needs amendment. The examination of the Conjoint Board, for example, is very unequal owing to the large number of examiners from different teaching hospitals in London and from provincial universities, who often set widely different

standards, and the absence of a clinical examination in both subjects leads the student to neglect his clinical work and to underrate its importance.

The examining authorities should be urged, whenever it is possible, to recognize the principle that the student should be examined by his own teacher with a second examiner as assessor, and that clinical examinations should be accorded the same importance as in the case of medicine and surgery.

F.—SKETCH OF A SATISFACTORY SCHEME.

I. The inadequacy of the clinical facilities in the existing hospitals, not only for teaching midwifery but also for the treatment of pregnant women and women in labour, has been already emphasized. It is not possible for the existing hospitals to allot the number of beds to midwifery which are required, in view of the deficiency of their present accommodation in all departments, as is shown by the long waiting lists which are found at all hospitals. Before long additional hospital space will therefore have to be provided to meet the requirements of the community, and full use for teaching purposes should be made of this new provision.

II. There are two different lines upon which fully equipped departments of adequate size for the teaching of midwifery and gynaecology could be organized:

(a) Certain of the larger teaching hospitals might provide for a great expansion of their existing midwifery wards, from which, with their associated gynaecological, pathological, and other services, a midwifery department could be formed capable of providing for the training, not only of their own students, but also, if necessary, of students from other hospitals where there is no midwifery ward in existence.

(b) New centres might be founded in outlying districts where there is at present no adequate maternity service. These new centres, though not in proximity to existing teaching hospitals, might be affiliated to certain of them which were unable to develop fully equipped maternity departments of their own, and which might send their students to the new centre for training. These new centres could be made use of for training not only students, but also post-graduates, and in addition they would afford much needed facilities for research.

In the case of both (a) and (b) a small number of midwives could also be trained for service in the institutions.

III. Departments developed out of existing maternity wards at a teaching hospital (Subsection IIa) ought to provide a minimum of seventy-five beds, of which fifty would be for midwifery and twenty-five for gynaecology. Of the midwifery beds a certain number would be allocated to ante-natal conditions and puerperal complications. "Departments" developed in connexion with the larger teaching hospitals, which have greater facilities for expansion, might exceed these figures if students from other hospitals were received in addition to their own.

In the opinion of the Committee a midwifery department containing less than fifty beds cannot be satisfactory for the teaching of students, as it will not afford them an opportunity of seeing all the ordinary difficulties and complications of pregnancy and labour during the limited period of time in which they are attending the department. It would be impossible for every one of the existing teaching hospitals to supply such a large number of beds for midwifery. So it is obvious that under this scheme some form of concentration would be necessary—that is, that some of the hospitals should provide midwifery departments which would be attended by their own students, and, in addition, by students from the hospitals which were unable to provide such departments.

IV. Newly founded Centres (Subsection IIb) would probably be much larger than the "departments," on account of the urgent public need which exists for increased hospital accommodation for midwifery cases. They could provide about two hundred beds each, of which roughly twenty would be for ante-natal conditions, one hundred for labour, twenty for infective cases (isolation), and sixty for gynaecological cases. The provision of a certain number of such centres as these, in selected outlying districts, would form a most valuable contribution to the provision of an efficient maternity service for London. It is obviously of great importance that full use for teaching purposes should be made of such new centres when they come into existence.

The provision of a proportion of gynaecological beds in the centre is an essential feature of the scheme. It would be needed to meet the medical requirements of the district, and, further, it would allow the student to do his practical

¹ Report by a committee appointed by the Council of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine.

work in the two subjects together and under the same teachers; knowledge of either subject is incomplete without the other, and the student learns them together much more readily than separately.

V. The medical staff required to work the "Centre" also involves a new departure. Reasons have been advanced for the view that a much larger proportion of the teaching in the conduct of normal and abnormal labour should be given by senior obstetric officers than is the case at present. This involves senior officers being either in residence at the Centre or on duty during certain definite hours of the day and night. Such services could not be required of them without payment upon an adequate scale. Next to them would be required assistants in residence of the status of the present registrar or tutor, whose whole time would be required, and who also must be adequately paid.

VI. "Departments" developing out of existing midwifery wards at teaching hospitals (Subsection IIa) would probably be best staffed as follows:

1. A staff of two or more *Visiting Obstetric Physicians* (or surgeons) who would, in rotation, undertake the duties appertaining to the Director or Chief of the department for definite periods, as might be most suitable.

2. A resident "*Chef de Clinique*," appointed for a term of years, who must be a whole-time officer, and who would have charge of the department under the visiting staff. His professional status should be above that of an obstetric registrar—that is, comparable with that of a resident assistant surgeon or a resident assistant physician.

3. One or two resident *Senior Assistants* of the status of a registrar, who would direct the students personally in their work in the labour wards, the lying-in wards, and in the district, and a number of resident *Assistants* (house-surgeons). These would also be whole-time officers.

Departments such as these would probably eventually develop into "units" with professors of midwifery and gynaecology, on the lines of the units of medicine and surgery which are about to be founded. Such professors of midwifery and gynaecology should not be "whole-time" professors, but should remain in touch with consulting practice.

VII. New centres formed in outlying districts (Subsection IIb) would probably be best worked by

1. A resident *Director* or *Superintendent*, who might be appointed for a term of say five to seven years. He would be of the status of an obstetric physician at the teaching hospital. He would be responsible for the control of the work of the institution generally, and would take a large share in operative work, in teaching, and in research. The Director should not be a "whole-time" officer, but should remain in touch with consulting practice.

2. One or more resident *Assistant Directors*.

3. Working under (1) and (2) a sufficient number of resident *Assistants* to direct the students personally in their work in the labour wards, the lying-in wards, the gynaecological wards, and in the district. They would also be responsible for the clinical pathology of the centre, and would carry out research under the supervision of the Director and the Assistant Director.

These appointments when first instituted would afford an opportunity for the teaching hospitals affiliated to the centre to be represented upon its teaching staff, and thus keep the students in touch with their own hospital staff.

It must be borne in mind that outlying districts which are in need of a midwifery hospital service require general hospitals as well; these would, no doubt, eventually be established, and thus provide for the association of pathological and other services with the new centres.

Such schemes would involve such heavy expenditure that they could not be put into operation without support from the State.

VIII. In the opinion of the Committee the requirements of the students' training can only be completely met under the scheme of new "Centres," on account of the necessity which has been already emphasized of the senior teachers taking a considerably larger part than at present in the work of clinical instruction. Under the alternative scheme of "departments" at existing teaching hospitals the senior teachers would, in effect, not take any larger part in teaching than they do now.

IX. Students belonging to hospitals with a fully equipped midwifery department (Subsection IIa) should be attached to the department for a period of four months, during which their whole time would be devoted to midwifery and gynaecology, and they would be in residence for, at any rate, a part of the time. Students from other hospitals would probably come to the department for practical midwifery only; they would be in residence for at least one month. In the second month they would attend their

cases in the district of their own hospital under the supervision of their own medical staff, and would, in addition, continue to attend the department for clinical teaching, operations, etc. These students would receive their gynaecological training at their own hospitals as at present.

X. The midwifery districts of the teaching hospitals would therefore be continued, for it is of great importance that the student should have experience of district work during the latter part of his training, as long as it is under proper supervision. In the case of certain hospitals the district could not provide sufficient cases to enable each student to attend the required number. Arrangements could perhaps be made for a proportion of the students from these hospitals to do their district work elsewhere—that is, in the district of another hospital.

XI. Each teaching hospital should provide means of properly supervising its students in their work in the district. Under the present system the assistant obstetric physician is in nominal charge of this work, with the assistance of the registrar and the resident obstetric officer. The control of the assistant obstetric physician should be made effective under the rules of each hospital, and the duties of the registrar should include the instruction of each student in the management of his district cases during the puerperium.

XII. Students attending a new Centre (Subsection IIb) would be attached to it for a period of four months during which their whole time would be devoted to midwifery and gynaecology, and they would be in residence for, at any rate, a part of that time.

G.—FIRST STEPS TO BE TAKEN.

I. While the Committee are of opinion that eventually the foundation of new "Centres" will be necessary for the proper training of students in midwifery and gynaecology, it is recognized that it will probably be some time before such a scheme could be put into operation. The necessity of taking steps promptly to effect the most urgently needed improvements is, however, obvious, and the formation of "Departments" at existing teaching hospitals (F, Subsection IIa) could be put into operation without prejudice to the later formation of new "Centres." In this way the two schemes could be developed side by side, and there is no doubt that the one found by experience to be best suited to the special requirements of London would eventually prevail.

II. The development of fully equipped "Departments" at existing teaching hospitals being the easier part of the scheme to put into operation, it might prove practicable to make a start forthwith. This would be preferable to an attempt by all the hospitals to open midwifery wards of about the same size as the existing ones, which would result in too much dispersal of clinical material, and dissipation of effort on the part of the teachers. Farther, wards of twenty beds or under are too small for the purposes required, which include beds for ante-natal and puerperal cases, while large wards would not be fully utilized at the smaller teaching hospitals except under some system of grouping teachers and students from different schools together.

III. It is of great importance that a "Department" of the size indicated, formed at a teaching hospital, should in addition to their own students receive a certain number of students from one or more hospitals which have no midwifery ward. If this plan were carried out, the existing inequality of the training in practical midwifery in London which results from the absence of a midwifery ward in many teaching hospitals would be to a great extent obliterated, and the general level of midwifery training would be at once appreciably raised.

IV. As hospitals without a fully equipped midwifery department would continue to train their own students in gynaecology as at present, an immediate increase in the number of gynaecological beds at these hospitals is urgently required for the reasons which have been already stated.

V. The first steps to be taken would probably be to inquire into the following points:

- (a) The possibility of the hospital designated being able to allot the required number of beds to midwifery.
- (b) The willingness of other hospitals to make use of the "Department" for training their students.
- (c) Suitable financial arrangements being made between the affiliated hospitals, assisted by a Government grant.

VI. Another development which might be put into immediate operation is the much greater utilization of ante-natal and infant welfare clinics for the instruction of students.

VII. It is also very desirable that all teaching hospitals should as far as possible compel their students to give up a minimum of four months solely to midwifery and gynaecology, and the examining bodies should be moved to alter their requirements in this sense.

In considering the length of time the student should devote to the subject, it must be recollected that the Committee propose that midwifery training should include work at ante-natal clinics and infant welfare centres. The latter work especially will in the future form so important a part of the duties of the practitioner of medicine that the examining bodies must make some provision for it in the curriculum. Obviously the best time is immediately after the study of obstetrics. There is the further advantage in making the study of the infant concurrent with or immediately succeeding the study of midwifery that the two together afford a concrete example of the methods of preventive medicine applied to the health of the community which must impress itself on the student. Experience may show that four months devoted solely to midwifery, gynaecology, and the study of the infant would not be long enough for the importance of these subjects in the health service of the community, and some extension would be then required.

II.—THE TEACHING OF GRADUATES.

Midwifery.

1. There is no doubt that it is very desirable that provision should be made for the clinical instruction of graduates in midwifery; there is a considerable demand for it now, and this demand is likely to be greater in the future.

2. The essential conditions for the practical instruction of graduates in midwifery are: (a) An institution able to receive large numbers of cases, and making special provision for difficult and operative labours; (b) resident teachers of status and experience.

3. The case of the medical student is, in our opinion, more urgent than that of the graduate and should be dealt with first. When large central institutions on the lines indicated above have been set up, there will be no difficulty, in addition to meeting the needs of the students, to provide the clinical material, the teachers, and the laboratory facilities which are requisite for the instruction of graduates.

4. Under the conditions which exist at present it is practically impossible to organize post-graduate instruction upon satisfactory lines.

Gynaecology.

1. The abundant clinical material of the special hospitals for women is largely lost for teaching purposes under the present conditions. A certain number of clinical assistants (qualified) are usually attached to them who attend out-patients and operations, but there are no systematic arrangements for clinical teaching upon a considerable scale.

2. These hospitals would be of invaluable service in providing clinical teaching for graduates, and this appears to be their proper educational sphere.

3. The three principal hospitals (Chelsea Hospital for Women, Samaritan Free Hospital, Soho Hospital) should be affiliated, so that graduates taking a course would be entitled to follow the practice of all of them. In this way graduates taking a course of clinical gynaecology could be continuously employed in out-patient departments, wards, operating theatres, and laboratories.

4. Courses of instruction lasting for six to eight weeks should be provided—namely, (a) clinical gynaecology; (b) operative gynaecology; (c) gynaecological pathology.

Clinical Gynaecology.—Demonstrations on selected cases should be given in the in-patient and out-patient departments, and the senior and junior members of the staff should take part in the teaching in both departments. Facilities should be afforded to each graduate to acquire a knowledge of the bi-manual methods of examination by repeated practice while the patient is anaesthetized; to acquire a knowledge of the instruments, appliances, etc., used in the practice of gynaecology. Case taking cards should be provided in both in-patient and out-patient departments.

Gynaecological Pathology.—Instruction should be given in (a) recent specimens, (b) microscopic preparation, (c) bacteriology, (d) specimens in the Museum of the Royal College of Surgeons.

5. Advanced courses might be arranged for those who desire to specialize in gynaecology, and opportunities afforded them both in the wards and in the laboratory for research.

6. Clinical assistantships might still be available for those who, having taken a post-graduate course, desire to continue their work at the hospital.

PROPHYLAXIS AGAINST VENEREAL DISEASE.

MEMORANDUM BY THE COMMITTEE ON INFECTIOUS DISEASES.

A NOTE on prophylaxis against venereal disease* has been signed by Major Waldorf Astor, M.P., chairman of the Interdepartmental Committee on Infectious Diseases in Connexion with Demobilization. The memorandum is addressed to Dr. Christopher Addison, Minister of Health, who, in January last, as President of the Local Government Board, appointed that committee to consider concerted measures for mitigating the dangers of the dissemination of tropical and other diseases among the civil population from the process of demobilization and the abnormal shifting of population during the restoration of industry to peace conditions. The terms of reference of the committee were:

To consider the possible risks of introduction of infections and parasitical conditions into the country in the course of demobilization from the various fronts, and to make recommendations for the purpose of securing close and effective co-operation in administrative measures for dealing with these conditions on the naval and military (including the Air Service) and the civil side.

The membership of the committee is indicated only in the most general terms, and no names of members are given other than those of its chairman and its secretary, Dr. Seymour. The committee held that the objects coming within the terms of reference were:

(i) To institute inquiry and to make recommendations with a view to preventing the spread of infection on demobilization. (ii) To consider and advise as to the co-ordination of the administrative activities of the departments concerned and to render assistance by the interchange of information. (iii) To consider whether any special methods of preventing and treating various infective conditions might be required in consequence of demobilization, or of the occurrence from time to time of epidemics or other disturbing factors in the civil community.

In view of the public interest in the subject the committee thought it right to present forthwith to the Minister of Health a note on the prophylaxis of venereal disease, reserving for subsequent statements any recommendations they may have to make with regard to this or other diseases. The present memorandum is concerned mainly with the question of making available to the civil community certain methods of prophylaxis (known as the "packet" system) which have been publicly commended as having been successful among combatants during the war. The committee sought to ascertain whether the claims of the advocates of such methods have been made good; first, on the ground of indisputable and substantial benefit in the services where they have been adopted; and, secondly, on the ground that, if proved efficacious in the services, they may be adjudged applicable and appropriate to the civil community. The committee excluded for the purposes of this memorandum the whole subject of the incidence of venereal diseases generally, and the desirability or otherwise of introducing compulsory notification. Nor does it touch on the provision of skilled treatment after exposure to risk of infection. The one issue raised is the advisability or otherwise of special encouragement being given officially by the Government to the sale of "packets," that is, the provision, before exposure to infection, of means of prophylaxis for use by the individual, whether before or after such exposure.

Invitations were given to medical representatives especially qualified from professional experience, as well

* [Cmd. 322.] H.M. Stationery Office. (3d. net.)

as others who have taken an active interest in the question, to meet the committee or furnish it with memoranda of their views. Among the witnesses were Colonels J. G. Adams, F.R.S., and J. A. Amyot, C.A.M.C.; Lieut. Colonels G. Raffan and Sir James Barrett, A.A.M.C.; Major Falconer Brown, N.Z.M.C.; Colonels Whaley, Young, and Snow, U.S.M.C.; Major C. F. White, R.A.M.C.; Sir Bryan Donkin, Sir G. Archdall Reid, Sir Bertrand Dawson, Sir William Osler, Lady Barrett, M.D., Dr. Agnes Savill, and Dr. Morna Rawlins. A brief abstract of the data laid before the committee by these witnesses is appended to the report. The body of the memorandum gives only the main conclusions of the committee on the point under consideration.

The committee is satisfied that while certain drugs and medical preparations may be relied upon to remove or destroy venereal infection, if applied by skilled attendants very soon after exposure, such satisfactory results cannot be secured if the preparations are used unskilfully or too long after exposure. In the committee's view, experience indicates that—

However careful the instruction, and however scientifically effective the prophylactic in itself might be if used under proper conditions, it frequently fails to protect when applied by the individual, even when this self-application is supported later by additional skilled treatment. The consumption of alcoholic liquors, carelessness, natural excitement, forgetfulness, or ignorance, has been the cause of numerous failures, even amongst those troops where the use of such prophylactic measures has been most efficiently organized and taught.

Figures showing the incidence of venereal disease amongst Canadian, Australian, British, and American troops, and also in the British navy, are set out in tabular form. In a summary of its examination of these figures the committee recognizes that there is much that they cannot prove and that severe limitations govern deductions to be drawn from them. The figures are few and open to certain statistical fallacies (due to differences of age, marriage, occupation, social factors, and so forth), which bear a much closer relation to the incidence of venereal disease than to that of other infectious diseases. They are, however, the only figures of their kind available. In the committee's opinion they show, so far as they go, that there was an almost continuous fall in the venereal rate in the British army and navy during a long period before the war; throughout that period there was no organized system of any form of prophylaxis, but continuous improvement was taking place in social and other conditions affecting the incidence of these diseases. The second inference is that in those forces which during the war employed the prophylactic packet system most energetically, no proportionate reduction was brought about in the infection rate.

After pointing out that certain conditions of war exert an effect on human desire and action which tends to create an artificially high rate of exposure to risk of venereal disease in the services during the war, the committee says:

Under any mechanical system which does not afford absolute protection, the venereal incidence must be proportionate to the risks taken, and it must be borne in mind that the introduction of such a mechanical system may easily, by its promise of protection, lead to an increase in the number of exposures.

Again—

Many of those who wish the Government to utilize in peace time for the civil population methods which have been tried among the forces in war, have not sufficiently appreciated the fundamental differences between the two groups, or between the conditions of war and peace; nor have they been aware of the comparative failure of packets even in a disciplined force. The civil authorities cannot command or control the general population (men and women) as officers can properly and legitimately control enlisted men. . . . It is also the direct interest of the officers in charge of men to keep the venereal rate amongst them as low as possible. There can be nothing in the civil population analogous to this pressure of responsibility and discipline.

While there are no civil peace figures available, the committee holds that the assumption that the present incidence of venereal disease in the army is greater than that among a similar number of men in civil life is not established.

In regard to the general experience of prophylactics distributed before exposure to infection, as prevailing in

the various services, the committee has come to the following conclusions:

(1) That certain drugs, if properly applied, are efficacious in preventing venereal disease.

(2) That if these drugs are not properly or skilfully applied their efficacy cannot be relied upon.

(3) That the issue of prophylactic "packets" tends to give rise to a false sense of security, and thus to encourage the taking of risks which would not be otherwise incurred, and the neglect of facilities for early treatment when available; and, in certain circumstances, might even increase the spread of disease.

(4) That in spite of the most careful instruction, the grant or issue of "packets" results in many an individual using them for self-treatment after he finds himself infected. They are not intended for this purpose, and are ineffective when so used. Drugs which are accredited with the power of preventing diseases are very frequently accepted by the public as useful in their treatment. Their use for the treatment of developed disease may be definitely harmful, since they delay diagnosis and the application of proper treatment at a time when promptitude is of the very first importance to its success.

(5) That where preventive treatment is provided by a skilled attendant after exposure to infection, the results are better than when the same measures are taken by the individual affected, even after the most careful instruction.

(6) That the excessive consumption of alcoholic liquors not only diminishes the sense of responsibility, but also tends to prevent the proper use of prophylactics and to delay the individual's application for skilled treatment.

(7) That the most carefully organized packet system, such as exists now in the army (a system which would be unattainable in the civil community), has not produced such a general reduction in the incidence of venereal disease as to counteract the disadvantages mentioned in these conclusions.

(8) That the organization of recreation and social amenities has assisted in the reduction of the incidence of venereal diseases in the services before the war, and has also assisted in preventing that increase in the incidence of these diseases which, from past experience, might have been anticipated during the war.

(9) That energy should not be dissipated on measures of doubtful value, but concentrated rather on wise propaganda and the provision of early, prompt, and skilled treatment in order to diminish the prevalence of these diseases. It should be recognized that failure to cure these diseases is one of the main causes of their prevalence, and that failure to cure, in the most skilled hands, results largely from failure to treat them in their early stages.

All the representatives of the different departments who assisted in the committee's deliberations record their unanimous view that the true safeguard against these diseases is individual continence and a high standard of moral life. To this the committee adds that it set out to examine the evidence placed before it from the scientific and the medical point of view, and strictly in this spirit it desires to state its opinion that the irreplaceable effect of the moral factor has been too often neglected or forgotten.

In conclusion, the committee is not satisfied that sufficient evidence has been put before it of the beneficial results gained by the distribution of prophylactic packets in various Forces to prove the value of the system or to justify the committee in recommending its official encouragement among the civil population.

"Unquestionably there have been many individual cases which appear to afford positive evidence in favour of a system of distribution of such prophylactics before exposure to infection; but the volume of such evidence is too small and too exceptional, and the instances of its failure, even under favourable circumstances, are too numerous to allow of any other conclusion than that, in view of the considerations mentioned above, and of the administrative and social difficulties involved, the official application of a packet system to the civil community is neither desirable nor practicable."

The seventeen appendices to the memorandum include abstracts of the evidence submitted by medical women on prophylaxis among women, and of the evidence given to the committee by Sir Archdall Reid.

A MEDICAL faculty has been established at Vladivostok. It is intended to form the nucleus of a fully equipped university which it is hoped will come into existence in the near future. The projectors hope to obtain financial support from foreign countries, particularly the United States, Canada, and Japan.

MADAME BROUARDEL, widow of the distinguished professor of forensic medicine in the University of Paris, is well known for her skill as a painter in water colours. Some time ago she organized two lotteries of these works of art for the benefit of the fund for the assistance of the families of medical men who lost their lives in the war. The amount realized was £1,600.

British Medical Journal.

SATURDAY, SEPTEMBER 13TH, 1919.

THE TEACHING OF OBSTETRICS AND GYNAECOLOGY IN LONDON.

THE report to the Council of the Obstetrical and Gynaecological Section of the Royal Society of Medicine on the teaching of obstetrics and gynaecology in London, the second portion of which appears in our columns this week,¹ marks the completion of another stage in a needed reform. It will be within the recollection of our readers that the subject was first raised at a meeting of the Section last winter, when several papers were read placing the matter before the meeting from different points of view. The meeting was remarkable for the comparative unanimity with which the London teachers confessed their dissatisfaction with the existing state of affairs. The remedy was, however, less obvious than the disease, and it was ultimately decided by the Council to refer the whole subject to a special committee for inquiry and report as to the alterations needed to render the teaching more efficient. The report shows that the Committee has done its work with the most praiseworthy thoroughness and promptitude, and its conclusions and recommendations deserve careful study, not only by the profession but by the public, whose interests are closely and directly affected.

The greatest weakness is apparent in regard to the practical or clinical teaching of midwifery. Only four London hospitals have maternity wards open to the teaching of medical students. In these the students obtain some sound practical experience and teaching following, or concurrent with, their systematic instruction before they go out into the district to attend the set number of labours required by the regulations of the General Medical Council. The students of the other hospitals get no teaching of the actual conduct of labour in their own schools, but pass straight from the lecture-room to the extern practice of the hospital, and are expected to tackle their first confinements with, or as often as not without, the assistance of the resident obstetrical officer—a junior officer with little experience either of obstetrics or of teaching. In other words, the student essays to conduct a labour *secundum artem* without having even seen a delivery before; and he is left to pick up for himself such practical experience as he can, and at the most impressionable stage of his whole career, in circumstances which make it almost impossible for him to carry out adequate antiseptic technique, even if he has more than a hazy book knowledge of what that means. The only alternative to this process of enlightenment is to “attend” the requisite number of cases at one of the large lying-in hospitals, which means that he looks on at a number of deliveries, and, if he is fortunate, may be allowed to deliver one or two patients under the supervision of the resident medical officer or the sister. The latter plan has at least the advantage that he is given an opportunity of seeing how a labour ought to be conducted.

In this respect the teaching in London would appear to be, so far as our knowledge goes, behind that of

every other school in the United Kingdom. In Edinburgh, Dublin, and the provincial schools the clinical teaching is comparable to that given in the London hospitals with maternity wards open to students—that is to say, the students attend the maternity hospitals for a month or more prior to “taking out” their cases in the extern department. It is an open question whether the system of attending cases in houses where proper technique is next to impossible does not directly undermine much of the teaching as to the importance of surgical methods and scrupulous antiseptics given in the lectures and in the hospitals. This is a question which the teachers of obstetrics and the General Medical Council will have to face before long. But so long as the number of beds available for midwifery remains as limited as it is at present, there is no other means of meeting the existing requirements of the General Medical Council.

But the “education” of the students at those London hospitals which provide no maternity beds for their instruction will be a revelation to many. The Committee describes the effects of such perfunctory teaching in language which is almost too moderate and restrained. “A not unfair analogy would be for surgeons to teach students the technique of abdominal operations under conditions where they would be deprived of adequate light, ventilation, and the means of cleanliness.” The analogy would be more complete if they pictured the student setting out to perform an abdominal operation in such conditions after having listened to some systematic teaching on the subject, but without ever having seen an abdomen opened. “Students who are taught thus, under makeshift conditions, will absorb the impression that careful and exact precautionary measures are unnecessary. The effect of such an impression upon their future work in private practice can only be disastrous, and may be related to the incidence of puerperal fever in the country as a whole.” We should have been inclined to say “must be” so related.

Than this portion of the report nothing could be a more illuminating commentary on the clamant need for the reform urged by Mr. Bonney at a subsequent meeting of the Section, when he pressed for greater recognition of the essentially surgical nature of the whole practice of midwifery. If practitioners so trained are not a danger to the community, it is no thanks to their “practical teaching.”

The Committee draws attention to an important point when it says that “practitioners do not consider it necessary to obtain the services of a specialist or of a hospital in obstetrical emergencies to the same extent as they undoubtedly do in the case of general surgery.” This is, we believe, a universal experience. The general practitioner tends to regard himself as an obstetrical specialist, and feels, perhaps, that to call in a hospital specialist is a confession of weakness or failure. “Muddling through” is as prevalent in obstetric practice as in the purlieus of Whitehall, and it is legitimate to trace it in some measure to the perfunctory training given in practical midwifery. In many areas the lack of hospital accommodation, and almost everywhere the lack of public means of transporting a patient to hospital, confirm the practitioner in his attitude on this point.

The defects in the present training in gynaecology are not on the same plane, nor are they peculiar to London. There is an inadequate amount of time given to the subject and an inadequate number of beds allotted to it. Unquestionably this needs correction, but inasmuch as the gynaecological affections most commonly met in general practice are the sequels of obstetrical conditions, the improvement of the

¹ The first portion of the report was printed in the *BRITISH MEDICAL JOURNAL* of August 30th, p. 276.

practical training in midwifery is obviously the first desideratum.

The Committee's statement of the bases of an efficient training should be carefully studied as an authoritative pronouncement. It is interesting to observe, as a sidelight on the slowness of progress in London, that they still have to repeat the plea, put forward by Lister forty years ago or more after his experience of its advantages in Scotland, that one of a student's examiners should be his own teacher.

The gist of the changes recommended by the Committee lies in the provision of more hospital accommodation for midwifery and gynaecology under experienced resident officers and available for the direct personal instruction of students. They also recommend that the student should devote his whole time to the combined subjects throughout a period of at least four months, during part of which he should be in residence in hospital and so be available day and night. Only after a thorough practical training in hospital would the student go out into the district. All the recommendations may not prove practicable, but the first step—and it is an urgently necessary one—is the provision of maternity wards in connexion with every teaching hospital. Later, "centres" may be built in populous districts, where combined teaching can be started, but any such scheme will require State subsidy and will have to be linked up with the schemes for health centres, which have figured in the imagination and hopes of all who have considered the possible future development of the Ministry of Health.

MENDERS OF THE MAIMED.

THE war with Germany is ended, but the war carried on by Medicine and Surgery against the results of war itself is still being waged, and will need to be continued, though on a diminishing scale, for a long time to come. We have reason to be almost as proud of our country's achievements in the fight against disease and deformity as we are of the countless gallant feats of arms, and of the indomitable resolution of our sailors and soldiers. The triumphs of prophylactic medicine are none the less tremendous because they are in a sense negative, silent, and unseen. The triumphs of preventive and curative surgery, and especially of that branch which has become known as "war orthopaedics," are more obvious, although the nakedness of the title "Military Orthopaedic" Hospital has been covered by scandalized surgical Mrs. Grundys under the decent veil of "Special Surgical" Hospital.

Shortly after the beginning of the war we published a series of articles on orthopaedic surgery by Mr. (now Sir Robert) Jones, which must have brought home to many readers the importance and the wide scope of the specialty as practised by a master of his art. This publication must have prepared the minds of the medical world to appreciate and approve the important part soon to be played by military orthopaedics, which quickly established a claim to recognition as a most important department of war surgery.

Who were the men and what manner of men were they who forged the weapons so successfully wielded in the military orthopaedic hospitals? In the winter of 1917-18 Professor Arthur Keith set out to answer these questions in a series of lectures; of five of them detailed abstracts appeared in our columns, and in a recently published volume the whole series is printed *in extenso* (see page 346). Whoever has the good fortune to read the lectures cannot fail to profit

thereby and, if of British birth, to have his pride in the scientific and surgical achievements of his countrymen greatly enhanced. For many of the *Menders of the Maimed*—to use Professor Keith's title—and not the least worthy of them, have been our fellow-countrymen. After the Frenchman Andry had coined the word "orthopaedia" and the Hanoverian Stromeyer (a subject of King George III and King William IV) had introduced the subcutaneous method, the Englishman, W. J. Little, brought orthopaedic surgery into England and advanced our knowledge of deformities and their treatment.

But just as the rules of Christian ethics have been observed by some who did not profess and call themselves Christians, so, as Professor Keith shows, have the true principles of orthopaedic surgery been applied by some who did not think of calling themselves orthopaedic surgeons. John Hunter's acute mind led him along the right road as far as his investigations into the matter went, and much of the work of Hilton was orthopaedic in the best sense, while the researches of Marshall Hall, of Goodsir, of Redfern and Macewen and others have contributed much to the success of the methods of to-day. One surgeon, however, stands out head and shoulders above his contemporaries in the surgery of bones and joints, to which he made many valuable contributions, and in which his principles govern so much of present-day practice. The name of Hugh Owen Thomas must always be associated with the history and the progress of orthopaedic surgery; and although it might be said of him as of Wren, "*Si monumentum requiris, circumspice*," we are glad to know that a movement is now on foot to commemorate him in a useful and appropriate manner. Thomas had thoroughly studied the methods of bonesetters, but his patient study and intimate knowledge of the treatment of all sorts of deformities convinced him that a surgeon properly trained in what may be called industrial surgery had nothing to learn from the bonesetter, Sir James Paget's dictum to the contrary notwithstanding.

Many of the menders of the maimed of whom Professor Keith has written would have been surprised to find the treatment of broken bones included in the scope of orthopaedic surgery, yet the improved treatment of fractures is one of the great results of military orthopaedic work during the war; and it is to be hoped that the wider diffusion of a knowledge of this subject will result in more attention being given to it in our medical schools, and in much more successful treatment of the injuries of civil life, so that the advocates of open operations as well as the advocates of careful non-operative treatment as exemplified in the practice of Thomas may no longer be justified in stigmatizing the usual treatment of many fractures as a "disgrace to surgery."

THE NEEDS OF THE INDIAN MEDICAL SERVICE.

IN our Educational Number we published last week at page 331, under the heading "Indian Medical Service," an announcement by the Secretary of State for India that 204 medical men are urgently needed to fill vacancies in the Indian Medical Service, and that 136 of these commissions would be given to Europeans. In the SUPPLEMENT this week will be found some details as to the conditions of employment; the new rates of pay were given in the JOURNAL of August 16th (p. 224). There can be no doubt that the urgency is very great. As we have pointed out in recent issues, officers of the I.M.S. are being detained in India long after their leave is due because the service is so depleted that reliefs cannot be found. It will be remembered that the British Medical Association has for some time been in negotiation with the

Secretary of State for India as to the relief of the grievances of which the Indian Medical Service has for long justly complained. Mr. Montagu gave a definite promise that these grievances would be removed; and as regards the chief one—namely, the inadequacy of remuneration—figures published show that the promise made to increase the grade pay by $33\frac{1}{3}$ per cent. has been kept. It is hoped that the Indian Government is about to remedy other grievances and that a clear pronouncement will no longer be delayed. The Naval and Military Committee of the Association at its meeting on September 16th will consider various criticisms of the new rates of pay which have been put forward by present members of the I.M.S., and will, without doubt, press upon the Secretary of State the necessity of satisfying the profession that his assurances have been fulfilled in spirit as well as in letter. In the meantime it must be assumed that the promises publicly made by Mr. Montagu will be kept, and that medical men of the right type—young, energetic, and keen on their profession—may be recommended to enter the Service which in the past has offered so fine a career.

SERUM DIAGNOSIS OF SYPHILIS.

THE use that was made by Wassermann and his collaborators of the reaction of Bordet and Gengou and the scant acknowledgement of the work of these brilliant investigators is now an old story. It is therefore a pleasure to record some recent observations by Bordet and Ruelens¹ in the technique of what is nowadays, perhaps, the most frequently used clinical laboratory reaction. Theoretically, a good antigen for the diagnosis of syphilis ought to have the following qualities: (1) It should be a very specific reagent—that is to say, it should not absorb complement by itself or in presence of a non-syphilitic serum, and it should manifest to a high degree the absorptive power in presence of syphilitic serum; (2) in emulsion it should be an almost transparent fluid, so that in mixtures it may not obscure haemolysis and render the readings difficult; (3) it should keep indefinitely without undergoing alteration; (4) it should be easy of preparation so that experimenters may have a uniform product to deal with. Bordet and Ruelens claim that their antigen, which they have used in a large number of tests during the last four years, fulfils all these requirements of stability, purity, and specificity. The muscle of calf's heart is minced, not necessarily very finely, care being taken not to express the juices. To 100 grams of this, in a flask, are added 125 c.cm. of 94 per cent. alcohol and the mixture shaken. Here the purpose is merely to coagulate the proteins and not to dissolve the fatty substances or lipoids; and as the alcohol is in comparatively small proportion and is immediately diluted by the tissue juice, it exerts practically no dissolving power on the lipoids. The mixture is allowed to stand at room temperature for several days and then filtered, and the residue is spread in a crystallizer and put in the incubator for a day. The tissue dries very quickly without undergoing any change, and is then treated in a flask with 200 c.cm. of acetone at a temperature of 18° to 20° C. for about a week, after which it is filtered. A further treatment of the tissue with fresh acetone for another day serves to rid it of all traces of acetone-soluble substances. It is now filtered and is completely deprived of acetone in a few hours in the incubator. Finally the tissue is put in a flask with 200 c.cm. of 94 per cent. alcohol and kept for eight to ten days at a temperature of about 20° . The fluid thus obtained, when filtered, is the antigen. It has a yellow golden tint, and though at very low temperatures it may become slightly opaque, with gentle heat it completely clears again. This alcoholic solution keeps unaltered indefinitely. When about to perform the tests,

0.5 c.cm. of the alcoholic solution is measured out in a large watch-glass and rapidly evaporated in the incubator, and to the minute quantity of yellow residue thus obtained, 2 c.cm. of distilled water are gradually added, the emulsion being made with a glass rod. This is transferred to a test tube, and shaken up with 18 c.cm. of physiological salt solution. Used alone or in presence of normal serum this emulsion does not absorb any complement, whereas it has a considerable absorptive power with syphilitic serum, so that when the reaction is very active an extremely feeble dilution of the antigen will still deviate complement, and it is remarkable that it will deviate considerably more than an extract prepared in the usual way. Bordet and Ruelens proceed with the reaction as follows: To tubes containing 1 c.cm. of saline solution 3 drops of the emulsion of antigen are added, and then 1 drop of fresh guinea-pig serum previously diluted in its own volume of saline, and finally either 0.05 c.cm. or 0.1 c.cm. of the suspected serum which has been heated to 56° for twenty minutes. The pipettes used for the drops are made from quill tubing, and so prepared that each gives 25 drops for each cubic centimetre of physiological saline solution. Naturally, all the usual controls are put up. After leaving the tubes for an hour in the incubator, 1 drop of sensitized corpuscles is added. The authors employ washed goat's corpuscles, diluted with twice the volume of saline solution, to which is added the necessary quantity of immune serum to give haemolysis in the control tubes in twenty to thirty minutes. The degrees of activity of a syphilitic serum may be measured by a series of dilutions of the antigen. It has been noted, also, that the lipoid in the antigen comes down as a flocculent precipitate under the influence of inactivated syphilitic serum, and the flocculation occurs more promptly at a temperature of 50° to 55° . This precipitate has an intense absorptive power for complement.

TRENCH FEVER.

No apology is needed for referring repeatedly to the necessity for a wider knowledge of trench fever, a disease which probably caused greater invalidity and more wastage than any other infection in the British armies during the war. Not only was it a drain on man-power when every able-bodied man was needed, but in a certain proportion of cases the effects have been very prolonged and thousands of men are suffering, and will suffer for a length of time that cannot at present be determined, from its debilitating after-effects. Though the war was a medical triumph, in that great epidemics which kill men by the thousand were averted, it would be erroneous to think that sickness did not bulk largely in the total casualty returns; when the full history of the war is published, it will in all probability be found that more men were evacuated from the armies for disease than for battle casualties. The figures given below are not derived from official sources, but we believe that in France alone some 1,800,000 sick cases were evacuated from the front to the bases. A very large percentage were suffering from trench fever. An unofficial analysis made of 100,000 sick admissions to casualty clearing stations in 1917 is helpful as an indication. About 25 per cent. were suffering from trench fever or its sequelae; and very many had to be evacuated, certainly a larger percentage than would apply in most of the other large groups of diseases which were analysed. Some idea of the magnitude of the numerical problem and the strain it put on the Army Medical Service is thereby obtained. Carrying the argument a stage further, we have the authority of Major Byam, whose book is reviewed in another column, that about 15 per cent. of the cases which reached the bases were transferred to England. This figure also probably errs on the side of being an underestimate. Of these he further states that over a third had lasting disability. Cases have come under

¹ *Comptes rendus de la Soc. de Biologie*, July 19th, 1919.

observation in which the first attack had occurred over four years earlier, and the victims were still liable to recurrences, which with the passage of time were milder, but nevertheless still hindered full activity and lowered mental and physical fitness. In trench fever the rare experience has been given to us to see a disease which, if not new, was at all events never before clearly identified; to watch its progress, its manifestations in various forms (which differed so much as to raise the question whether several separate infections were not present); to note its evolution from the mild infection without relapse of the early months of 1915 to a severe recurrent type with persisting disability; to have the epidemiological facts proved to the hilt by two commissions working independently and arriving at substantially the same results; and, finally, to have the means of prophylaxis clearly determined. Trench fever is a disease of the war and should remain a war disease. Should it spread in civil life, now that the means of prevention are understood, it will be a lasting blot on the escutcheon of our health authorities.

DANGERS OF ELECTRICITY IN THE HOME.

RECENTLY a well-known Lancashire business man, aged 44, was electrocuted whilst having a bath in his own home. He suffered from rheumatism, and was in the act of applying an electric vibrator to the upper part of his body when the accident happened. This vibrator was attached to an ordinary lighting socket. A cry for assistance was heard, and when the door was burst open he was found sitting in the bath grasping the vibrator and unconscious; artificial respiration was tried without success. At the inquest it appeared that one of the wires of the vibrator had corroded, with a result that the whole machine became "alive." This is not the first time that such an accident has happened in a bathroom, but usually death has been due to a flaw in the electrical fittings; the victim has attempted to switch an electric light off or on whilst he is immersed in the water, the switch is defective, and he is killed instantaneously. Dr. A. G. B. Duncan reports this week, at page 344, a fatality due to defect in a portable electric lamp connected with the lighting circuit. The lay public are so used to seeing electricity used in their homes for many domestic purposes that there is a tendency to overlook its dangers. Further, the uses of electricity, and of all kinds of electrical apparatus, in the treatment of soldiers disabled by wounds and sickness, have become so familiar to large numbers of people of all classes, and so many unqualified assistants, male and female, have conducted the routine applications, that probably a general feeling has sprung up that all this apparatus is quite safe, and that anyone can handle these machines, and administer treatment with them, without the least danger to themselves or to others. No doubt there is often little or no risk, but familiarity tends to breed contempt, and then an accident such as that narrated is the result. Certain it is that no treatment should ever be carried out by means of any apparatus which utilizes the main electrical house current, unless under the direct control of an expert. No one with the most elementary knowledge of the danger of an electric current would immerse himself in the ordinary household bath and then proceed to administer treatment from any piece of apparatus connected with the ordinary lighting circuit, nor, indeed, would he allow anyone else to administer such treatment. It is practically useless to attempt to insulate an ordinary bath fitted with metal water pipes and a waste pipe, and a person immersed in a bath becomes an excellent conductor for electricity. In a properly fitted bathroom the switches, lights, and wires should be so arranged that it is impossible for anyone whilst in the bath to touch any of them with any part of his body. Further, all these fittings should be at a distance from the pipes, and care should be taken that

no defect is possible and that the insulation is perfect. When an accident occurs the first thing to be done is to switch off the current, and the victim should never be handled with the bare hands before this is done. Rubber gloves are, of course, safe, but these are seldom likely to be at hand; a practical thing to do is to wrap up the hands in several folds of dry cloth before attempting to touch the person. Death results from inhibition of the heart's action, but an attempt should be made to save life by means of artificial respiration.

DISTRESS AND DISEASE IN VIENNA.

THE general question of relief in German-Austria is at present being studied by the Supreme Economic Council, whose head quarters are in Paris. The British department of that Council has recently forwarded to the British Medical Association an appeal to the public and to the medical profession of the United Kingdom on behalf of Vienna hospitals and of Vienna as a centre of medical study and research. The appeal has been drawn up by representative Viennese medical men, and is supported by the chiefs of the British and American Missions and by Dr. Hector Munro, who is now engaged on relief work in that city. After touching on the value and importance of the hospital training and the research work into the cause and cure of disease conducted in Vienna during the past century and a half, the history of the Vienna medical school is briefly outlined. "The prestige of the Vienna medical school was never higher and the number of its students never greater than was the case in 1914, on the eve of the war. The contrast between its situation then and the situation of the school to-day is both striking and tragic. Now that the war is over, vast problems confront the Vienna medical school. War was terrible, with its wounded and its invalids, its series of epidemics and infectious diseases—typhoid, dysentery, spotted fever, and cholera. All of these diseases reduced the population and enfeebled those who remained. Tuberculosis has developed into a deadly and acute disease, particularly in Vienna. Nephritis is present and has taken vast toll. As the result of continuous underfeeding and hunger, dropsy, rickets, scurvy, and Barlow's disease—a disease due to malnutrition—the wards of the Vienna hospitals are filled to overflowing. In one clinic alone there were 18 cases of spontaneous fracture in adults due to continuous starvation." To this appeal is appended a report on the health of the city of Vienna, drawn up by Dr. Boehm, the principal medical officer. In addition to the urgent need for special food in large quantities, it would appear that there is an absolute shortage of such hospital supplies as soap, surgical dressings, and essential drugs. The total number of deaths from tuberculosis is given as 6,233 in 1914 and 11,741 in 1918; and Dr. Hilda Clark, who is engaged with Dr. Hector Munro in investigating the state of the hospitals of German-Austria and Hungary, is informed by the Vienna Health Department that the death rate from this disease for the past three months has been higher than it was for the corresponding months last year. With regard to the question of what is being done, we are informed that the American Children's Relief Organization gives 100,000 children one meal a day in Vienna. The Internationale Spitalshilfe Aktion has been formed from leading Vienna practitioners and representatives of Great Britain and America to distribute help given for the hospitals. Through this committee arrangements are being made for a better method of supplying eggs and milk to the patients. The American Red Cross also is supplying a considerable quantity of Red Cross stores to relieve the distress in Vienna, but we understand that much more remains to be done to cope with the grave increase in tuberculosis and rickets. The needs of the moment appear to be food, fuel, clothing, and hospital supplies.

TEMPORARY COMMISSIONS IN THE R.A.M.C.

The War Office makes the following announcement. The terms and conditions are in several important respects a considerable improvement upon those previously offered: "The War Office is prepared to accept the services of medical practitioners, including those who have been demobilized, who are desirous of undertaking duty with the army. Candidates who have served before will be commissioned in their previous rank. Lieutenants who have completed one year's satisfactory service as such will be commissioned as captains. Those who have not served previously will be commissioned as lieutenants. The period of engagement will be for six months, and the contract will not be terminable by either party prior to the expiration of that period except for misconduct, inefficiency, or medical unfitness. Pay to be at the rate of: Lieutenants £600 per annum, captains £650 per annum, and in addition the following will be issuable: (1) Pay at the rate of £50 per annum when serving elsewhere than in Europe. (2) Rations or an allowance in lieu thereof (present rate 2s. 1d. per diem). (3) Specialist, or charge pay, when holding a position for which the issue of such is authorized. (4) Officers holding higher acting or substantive rank than that of captain will, if desirous, be granted the pay and allowances of their rank. Kit and outfit allowance will be issued to candidates who have not previously received such allowance. All candidates must be fit for general service or garrison duty abroad and will require to undergo a medical examination prior to being accepted. Applications should be addressed to the Secretary, War Office, Cornwall House, Stamford Street, S.E.1."

INFLUENZA AND NEURO-SYPHILIS.

AMONG the numerous papers dealing with influenza and its complications attention may be called to Menninger's¹ discussion of the effect of influenza on syphilis of the nervous system, as illustrated by the experience gained during the recent epidemic of influenza at the Boston Psychopathic Hospital. These cases fell into four groups (i) in which symptoms of neuro-syphilis were entirely absent before the attack of influenza; in pre-Wassermann days some of these cases would on circumstantial grounds have been accepted as proof of a non-syphilitic etiology for general paralysis; (ii) in which the previous symptoms were trivial and not diagnostic, but in which typical and advanced neuro-syphilis appeared immediately after influenza; (iii) in which the previous symptoms were diagnostic of neuro-syphilis but were intensely aggravated by influenza; and (iv) cases of neuro-syphilis in which the clinical manifestations and course were not perceptibly affected by influenza; these were advanced cases. No evidence was forthcoming to show that influenza ever exerted any beneficial effect. The literature on the effect of influenza on syphilis of the central nervous system is scanty; it has been thought that influenza acts merely as an incidental precipitating factor, and that any other infection, particularly oral sypsis, may behave in just the same way. It certainly appears from the data about influenza and syphilis that simultaneous infections may by their combined attack produce a clinical picture resembling that of one of them only.

MAMMALIAN AND CLINICAL PHYSIOLOGY.

THAT the medical student is encouraged to learn his work at all stages by practical experiments and observation, and, still more important, by his own observation and experiments, has always been the pride and boast of British medical schools. This system is the one that suits our students best, and for a practical race is infinitely better

than the best schemes of professorial or tutorial demonstrations as practised in other countries. We have recently received from Professor Sherrington of Oxford a copy of his class book on *Mammalian Physiology*,² in which the principle of letting the medical student perform his experiments for himself, of course under skilled supervision, is carried a step further than, we believe, it has hitherto been carried elsewhere in Europe. The book consists of twenty-one exercises in which are described nearly a hundred separate practical experiments, the material being the decapitate or decerebrate surviving mammalian carcass of animals such as the cat or rabbit. Very clear descriptions of the experimental methods and manipulations to be employed are given, freely elucidated with figures and plates where necessary, and annotations at the end of each exercise bring into prominence any special historical or clinical importance that may attach to the particular experiments performed. It is impossible to mention more than a few of the many important and illuminating experiments the student is here instructed how to perform; they include work on the mechanism of the heart, lungs, alimentary tract, kidneys, nervous system, blood, and pancreas, and illustrate subjects of great clinical importance, such as haemolysis, air embolism, reflex inhibition, and many others. An appendix gives directions for the general arrangements of the course, and the apparatus and material required by a class of eighteen students working in nine pairs; the course itself is designed to extend over the academic year at Oxford, one exercise being worked through in the course of three hours once a week, and three sessions being left unoccupied in order that any particular exercise may be repeated as required. Professor Sherrington's course breaks new ground, and is designed in a thoroughly practical manner; it should prove most attractive as well as useful to the intelligent medical student, and has, indeed, been singled out for special commendation by Sir George Newman³ as "the kind of applied physiology which should in my view be taught in all schools of physiology." In addition to this course of practical exercises in mammalian physiology Professor Sherrington has instituted at Oxford another course entitled "Clinical Physiology," also given weekly throughout the year, providing instruction in modern physiology as applied to the human body; it is to be regarded as a liaison course between the mammalian course described above and the hospital, and comprises instruction given partly in the university laboratory and partly in the local infirmary, and should enjoy a wide popularity.

A MINISTRY OF HEALTH IN THE UNITED STATES.

Two bills for the establishment of a national department of health are now before the United States Congress. One provides for a Secretary of State, who is to be a member of the Cabinet, and a commissioner of health, both to be appointed by the President. The department is to include bureaux of sanitary research, child hygiene, vital statistics, food and drugs, quarantine, sanitary engineering, government hospitals, personnel and accounts; an advisory board of seven expert consultants; and an official conference of State and territorial health. The existing Public Health Service, Bureau of Chemistry, and Division of Vital Statistics would be transferred from their respective departments. The other bill is similar in provisions, except that it appropriates £2,000,000 annually, £200,000 to be applied in co-operation with the States in establishing a uniform system of health administration, £400,000 in co-operation with the States for sanitation, £1,000,000 in co-operation with them in the control of communicable disease, and £400,000 for scientific research.

C. S. Sherrington, M.D., D.S.
 Physiol., 1919. (Demy 4to, pp. xi + 456; 48 illus.)

² Notes on Medical Education in England, 1918.

¹ K. A. Menninger: *Arch. Int. Med.*, Chicago, 1919, xxiv, 93-115.

AMERICAN AID TO CHECK TUBERCULOSIS IN ITALY AND FRANCE.

A COMMISSION was set up during the war by the American Red Cross in Italy to study the conditions under which tuberculosis was developed and fostered in that country. The success which has attended that investigation forms a striking testimony to the wisdom of the Italian health and educational authorities in accepting foreign criticism of their own shortcomings no less than to the tact and courtesy with which such criticism has been conveyed. From a report of the results of the preliminary inquiry, it appears that special attention was first paid to three most important factors—school hygiene, child labour, and housing in Italy. Special facilities were afforded by the Italian School Hygiene Association for visiting and making a close inspection of the existing conditions in each case; and full access was given to all rules and regulations at present in force. That a great need exists in Italy, and indeed in most of the countries of Eastern Europe, for the introduction of rational methods of teaching the elementary rules of hygiene and of putting them in force, is only too obvious. Having ascertained the defects of the present lack of system, the reporters are able to present a series of schemes for improvement which have been approved by the Italian authorities. To what extent these recommendations can be carried out in actual practice must depend upon the local powers for overcoming the resistance of vested interests and private antagonism. The adoption of American methods, aided by material grants, has already fired the enthusiasm of Italian health workers; and it is hoped that from these beginnings may arise a system of international co-operation which will have far-reaching results. It is satisfactory to note that prevention rather than cure of tuberculosis has been the aim of the work thus far, and that legislation to this end has already been formulated. The protection of the infant, the maintenance of hygienic conditions during school life, and the prevention of unsuitable work for the young adult have formed the chief points of attack up to the present year, and the means whereby the advance has been brought about are well set forth in the Report of the Commission. In France also a Commission was established to investigate the conditions favouring the spread of the disease in certain towns and areas, and by the help of liberal grants of money a chain of centres was set up providing facilities for special treatment. A novel method of inculcating hygienic principles in schools was to furnish every child with a list of daily tasks to be observed on which they were required to mark with a cross their compliance under each heading, the marks being checked daily or weekly by the parents or teachers. Credit was given for the best record for observance of ordinary hygienic rules with respect to cleanliness, open windows, exercise, and so on; these records formed a constant reminder, not only to the children but also to the parents, and have played a useful part in the general propaganda. Two interesting papers in the June number of the *Revue d'Hygiène* give expression to the keen appreciation by French authorities of the assistance given by their American colleagues. Among several new features it may be noted that a system of appointment of local practitioners to carry out treatment has been established in some parts of France, the diagnosis being made in the first instance by the physician attached to the dispensary.

THE SANATORIUM AS A TRAINING SCHOOL.

Much stress has been laid upon the value of sanatorium life as a guide to the consumptive in the ordering of his own future. Its value as a training school for specialist doctors and nurses has not been so fully appreciated. In the annual reports of the Trudeau Sanatorium in America¹ this aspect of the work is

brought prominently forward. By the institution of endowed Fellowships, young physicians have the opportunity of studying tuberculosis in all its aspects, and many of those who have availed themselves of it have had personal experience of the disease as patients. A training school for nurses has also been established and has been instrumental in keeping up the supply of skilled women for national service. The success which has attended the treatment provided at the Trudeau Sanatorium, which is situated in one of the most ideal spots in the Adirondack Mountains, sufficiently explains its popularity both with patients and students. Equipped with every possible appliance for the study of disease and for the arrest of its progress, it is also well supplied with means of entertainment, educational and otherwise. Occupation, both bodily and mental, is essential to success in treatment, but this fact is not always kept in view in some of our home sanatoriums, where a minimum staff only is maintained. The introduction of special students and of selected probationer nurses would serve a double purpose. While studying the disease and its treatment they could contribute in no small degree to the mental interest and well-being of the patients.

THE EPITOME.

We propose to resume the Epitome of Current Medical Literature, which was suspended during the later part of the war, and the first issue will be published with the JOURNAL of September 27th. The Epitome is intended to supply the needs of those in general practice who have not access to many other medical journals. It is not proposed to make abstracts from all articles appearing but merely to select those which would seem to be of interest to those who are not specialists. Even at the present time the exchanges of journals are far from being restored to the pre-war conditions, and the arrangements for abstracting suitable articles are not yet complete; but it has been thought advisable to make a beginning with what we have at our disposal, in the expectation of improving the Epitome gradually as conditions become more normal.

THE Council of the British Medical Association, at a special meeting held on September 10th, appointed Dr. G. C. Anderson, who has been honorary secretary of the Fife Branch and a member of the Scottish Committee since 1911, to the post of Deputy Medical Secretary of the Association. The Council also appointed Dr. J. R. Drever of Glasgow to the new post of Scottish Medical Secretary.

THE "Dogs' Protection" Bill was rejected by the House of Commons on June 27th. Notwithstanding this defeat, it would seem that the opponents of the progress of medicine by research are already at work again. Mr. Stephen Paget, in a letter which we print this week, says that anti-vivisection shops are appearing once more, but that the Research Defence Society has many suitable leaflets and is ready to arrange for their distribution.

WE regret to announce the death of Mr. Thomas Pickering Pick, consulting surgeon to St. George's Hospital, and H.M. Inspector of Anatomy in England and Wales. We hope to publish an obituary notice in an early issue.

THE King of the Belgians has granted the "Médaille du Roi Albert" to the following medical men for services rendered to Belgian refugees: Sir Rickman J. Godlee, Sir Frederick Taylor, Dr. C. St. Aubyn-Farrer, Dr. S. Squire Sprigge, Dr. Chittendon Bridges, Dr. Neville Hart, Dr. J. H. Philpot, Dr. W. E. Robinson, Dr. Arthur C. Roper, Dr. H. R. M. Randell, and Dr. L. Vintras.

¹ Thirty-fourth Annual Report of the Trudeau Sanatorium, Saranac Lake. New York, November, 1918.

HONOURS.

MENTIONED FOR WAR SERVICES.

THE names of the following medical officers have been brought to the notice of the Secretary of State for War for valuable services rendered in connexion with the war:

Department of the Under Secretary of State for War.

Colonel L. K. Harrison, 5th Northern General Hospital R.A.M.C.(T.F.).

Colonel U. Matthews, London Vol. R.A.M.C.

Lieut.-Colonel J. G. Yolland, Kent Vol. R.A.M.C.

Major J. Lytle, Shropshire Vol. R.A.M.C.

Department of the Chief of the Imperial General Staff.

Captain J. P. Kinloch, R.A.M.C.(T.F.).

Department of the Adjutant-General to the Forces.

Lieut.-Colonel H. A. Williams, D.S.O., M.M., I.M.S.

Majors: G. N. Anderson, E. L. D. Dewdney, and J. H. Dixon, R.A.M.C.(T.F.), J. Fairbairn, R.A.M.C.

Temporary Majors: A. S. G. Bell, L. E. Lanyon-Owen, R. T. Meadows, P. J. A. Secombe, T. Walcott, and A. W. Wilcox, R.A.M.C.

Captains: E. B. Allnutt, M.C., H. F. Bellamy, and L. C. Hayes, R.A.M.C., C. A. Laubach, M.C., U.S.A., A. B. Pettigrew, R.A.M.C.(T.F.).

Temporary Captains (acting Majors): W. A. Clayton, H. McIntyre, and H. H. O'Heffernan, R.A.M.C.

Temporary Majors: W. G. E. Allen, I. M. Byers, H. B. Emerson, P. R. Eskell, J. H. Glover, S. W. Green, W. R. G. Hamilton, J. G. Heath, T. Heywood, W. P. Jones, F. Jubb, H. A. Lane, J. C. Lavertine, J. M. Lazenby, G. W. P. Maitland, J. A. Quin, R. E. Smith, H. G. Steel, and L. H. Walsh, R.A.M.C.

Department of the Quartermaster-General to the Forces.

Captain S. C. Wyatt, R.A.M.C.

Temporary Lieutenant (acting Captain) J. L. Wright, R.A.M.C.

Aldershot Command.

Lieut.-Colonel W. Turner, C.M.G., R.A.M.C.

Temporary Majors: T. W. Eden, R.A.M.C.; T. Rankin, Special List, attached R.A.M.C.

Captain (acting Lieut.-Colonel) A. G. Wells, D.S.O., R.A.M.C. Temporary Captain A. D. Ball, Special List, attached R.A.M.C.

Eastern Command.

Colonels: C. R. Elliott, R.A.M.C.(R.P.), G. T. Goggin, A.M.S.(R.P.), A. D. Sharp, C.B., C.M.G., A.M.S.(T.F.).

Lieut.-Colonels: T. Archer, R.A.M.C., G. E. Wherry, R.A.M.C.(T.F.).

Temporary Lieut.-Colonel L. W. Rolleston, R.A.M.C.

Majors: G. F. Alexander, R.A.M.C., W. Patterson, V.D., R.A.M.C.(T.F.) (Lieut.-Colonel T.F. Reserve).

Temporary Majors: W. A. Chapple, H. Irving, W. F. Jones, A. Neve, A. O'Neill, and E. Swainston, R.A.M.C.

Captains (acting Majors): A. J. Gibson, L. J. E. McHugh, E. W. Matthews, W. Redpath, and A. E. Ridsdale, R.A.M.C.(T.F.).

Temporary Captains (acting Majors): J. V. Bates, M.C., A. E. Marsack, G. A. Skinner, and A. W. Tabuteau, R.A.M.C.

Captains: C. N. Atlee, H. J. Blackler, C. Clifford, and A. K. MacLachan, R.A.M.C.(T.F.); T. M. Savage, R.A.M.C.

Temporary Captains: H. E. Batten, R. L. Bell, and J. B. Dalton, R.A.M.C., L. Dinnis, Special List, attached R.A.M.C., J. W. Edington, G. D. Gripper, H. A. Hancock, H. Johnston, W. Kirk, W. E. Passmore, F. J. Rawlinson, J. Renwick, and M. E. A. Wallis, R.A.M.C.

Northern Command.

Colonels: A. Connell and A. E. L. Wear, C.M.G., R.A.M.C.(T.F.); Lieut.-Colonel (acting Colonel) E. V. Gostling, D.S.O., R.A.M.C.(T.F.).

Lieut.-Colonel and Brevet Colonel H. L. Battersby, R.A.M.C.(R.P.).

Lieut.-Colonels: A. G. Barrs, T. Beattie, and W. M. Gabriel, V.D., R.A.M.C.(T.F.); F. Harvey, R.A.M.C., W. B. Mackay, C.M.G., T.D., R.A.M.C.(T.F.), A. Martin, R.A.M.C., W. Murray, R.F.A.(T.F.), attached R.A.M.C., S. Nesfield, T.D., R.A.M.C.(T.F.), J. A. Wait, T.D., R.G.A.(T.F.), attached R.A.M.C., G. H. Younge, R.A.M.C.(R.P.).

Temporary Lieut.-Colonels: J. J. G. Blandford, E. G. Coward, H. H. Curgrave, A. Russell, and W. Scatterry, R.A.M.C.

Major and Brevet Lieut.-Colonel J. W. Watson, R.A.M.C.(T.F.).

Majors (acting Lieut.-Colonels): H. E. J. A. Howley, R.A.M.C., J. K. Jamieson, W. H. M. Telling, and W. Thompson, R.A.M.C.(T.F.).

Majors: G. Ashton, R.A.M.C.(T.F.), R. H. Clement, R.A.M.C.(R.P.), J. A. Coupland, H. L. de Legh, E. F. Finch, F. S. Genney, A. R. Hallam, W. W. Jones, W. M. Mackay, J. B. McBride, S. Newfield, S. W. Plummer, H. A. Rudyard, T.D., G. A. C. Shipman, J. D. Slight, E. C. Stack, W. E. F. Tinley, C. B. Turner, and A. G. Yates, R.A.M.C.(T.F.).

Temporary Majors: H. S. Brander, M.C., C. D'O. Grange, and T. E. Holmes, R.A.M.C., F. R. Lucas, R.A.M.C. (Major 9th Battalion Royal Scots, T.F.), J. M. Macmillan, H. D. Macphail, J. M. Mathieson, J. Phillips, A. Robertson, J. G. Rowell, T. C. Sqaunce, R. H. Trotter, W. H. Whitehouse, and J. C. Wright, R.A.M.C.

Captain (temporary Major) G. S. Simpson, R.A.M.C.(T.F.). Captains (acting Majors): L. R. Braithwaite, R.A.M.C.(T.F.), J. Gossip, R.A.M.C.(S.R.), A. Griffith, W. A. Robertson, and C. W. Vining, R.A.M.C.(T.F.).

Temporary Captains (acting Majors): B. Cox, J. McF. Donnan, H. G. Drake-Brockman, J. Maxwell, and J. P. Musson, R.A.M.C.

Captains: G. P. Anning, J. le F. C. Burrow, W. J. Gray, G. C. Hayes, G. S. Levis, A. H. Lowe, J. W. Mallin, H. Mason, J. P. Matthews, A. Miller, A. Richardson, S. Thompson, and C. Tweedy, R.A.M.C.(T.F.).

Temporary Captains: J. Cameron, Special List, attached R.A.M.C., J. J. Healy, H. Keighley, H. A. Mahony, E. Montgomery, R. Park, and P. L. Pollard, R.A.M.C., B. B. Samuel, General List, attached R.A.M.C., W. C. Sharpe, R. S. Snowie, R. E. Walker, J. B. Whitfield, and T. L. Wormald, R.A.M.C.

Scottish Command.

Major-General J. B. Wilson, C.B., C.M.G., A.M.S.

Colonel E. Butt, A.M.S.(R.P.).

Lieut.-Colonels: J. B. Jamieson, T.D., A. Mackintosh, J. Mill, V.D., and A. D. Moffat, T.D., R.A.M.C.(T.F.).

Temporary hon. Lieut.-Colonel H. Chaffer, R.A.M.C.

Temporary Lieut.-Colonel H. C. Marr, R.A.M.C.

Major and Brevet Lieut.-Colonel E. S. Forde, R.A.M.C.(T.F.) (Major 5th Battalion K.O.S.B.(T.F.)).

Majors: J. W. B. Hodson, A. MacGillivray, and W. J. Mackinnon, T.D., R.A.M.C.(T.F.).

Temporary hon. Major A. MacD. Westwater, R.A.M.C.

Captain (acting Lieut.-Colonel) W. Brown, R.A.M.C.

Captain (temporary Major) G. N. Anderson, R.A.M.C.(T.F.).

Captain (acting Major) A. McWhan, R.A.M.C.(T.F.).

Temporary Captain (acting Major) D. J. Glen, R.A.M.C.

Captains: W. C. Davidson, R.A.M.C.(S.R.), J. C. McKenzie, R.A.M.C.(T.F.).

Temporary Captain A. Campbell, R.A.M.C.

Southern Command.

Colonel and honorary Major-General W. F. Stevenson, C.B., K.H.S., R.A.M.C.

Colonels: A. W. Bewley, C.M.G., R.A.M.C., C. H. Melville, C.M.G., A.M.S.

Lieut.-Colonels: W. T. Brooks, R.A.M.C.(T.F.), W. G. Clements, R.A.M.C., W. Collier and G. W. Craig, R.A.M.C.(T.F.), G. H. Goddard, D.S.O., and E. P. Hewitt, R.A.M.C., C. W. S. Magrath and A. E. Master, R.A.M.C., W. A. Mawson, R.A.M.C.(I.M.S.), E. G. Peck, D.S.O., T.D., R.A.M.C.(T.F.).

Temporary Lieut.-Colonel A. C. Sufern, R.A.M.C.

Major and Brevet Lieut.-Colonel (acting Lieut.-Colonel) J. E. H. Sawyer, R.A.M.C.(T.F.).

Majors: G. S. Abram, E. C. Bevers, E. J. Davies-Taylor, and A. G. Gibson, R.A.M.C.(T.F.), A. E. Milner, R. of O., R.A.M.C., W. J. Orr, J. Orton, and W. P. Purvis, R.A.M.C.(T.F.), C. E. G. Stalkart, R. of O., R.A.M.C., E. G. Stocker, and P. McK. Terry, R.A.M.C.(T.F.), E. C. Whitehead, R.A.M.C.

Temporary Majors: G. E. MacLeod, E. M. J. O'Farrell, and E. W. Witham, R.A.M.C.

Captain and Brevet Major J. L. Joyce, R.A.M.C.(T.F.).

Temporary Captain (acting Lieut.-Colonel) C. J. West, R.A.M.C.

Captains (acting Majors): C. W. J. Brasher, A. Campbell, and G. P. D. Hawker, R.A.M.C.(T.F.).

Temporary Captains (acting Majors): N. Dunn, W. Martin, H. E. Rawlence, J. A. W. Watts, and W. A. Wheelodon, R.A.M.C.

Captains: F. Clarke, R.A.M.C.(T.F.), J. M. Courtney, R.A.M.C.(S.R.), W. J. Foster, A. Gregor, G. H. R. Holden, S. Jones, G. D. Kettlewell, H. R. Parsloe, T. S. Pettitt, E. W. S. Rowland, W. A. Stokes, and J. W. Stretton, R.A.M.C.(T.F.).

Temporary Captains: M. Ashley, H. H. Butcher, E. K. Campbell, H. G. Carlisle, T. H. R. Crowle, C. E. Fenn, E. L. Z. Fickling, J. C. Fox, K. Fraser, J. C. Glen, A. F. Hewat, E. Huntley, W. M. M. Jackson, H. Joslen, B. L. Livingstone, I. Learmouth, G. E. Lockyer, J. N. Martin, M.B.E., H. W. Pigeon, G. Y. Richardson, C. H. L. Rixon, E. A. Shirvell, A. G. Welsford, and S. Wyborn, R.A.M.C.

Lieutenant (temporary Captain, acting Major) R. G. Oram, 9th Battalion London Regiment, attached R.A.M.C.

Lieutenant F. J. Babb, Dorset R.A.M.C.(Volunteers).

Western Command.

Colonels: C. Averill, V.D., and W. Coates, C.B., V.D., R.A.M.C.(T.F.).

Lieut.-Colonel and honorary Surgeon-Colonel D. Hepburn, C.M.G., V.D., R.A.M.C.(T.F.).

Lieut.-Colonels: J. H. P. Graham, R.A.M.C.(S.R.) (honorary Lieutenant Indian Army), and G. A. Wright, R.A.M.C.(T.F.).

Temporary Lieut.-Colonels: E. Goodall, A. Lingard, and A. Simpson, R.A.M.C.

Majors: H. T. Jenkins, 6th Battalion Royal Welsh Fusiliers (T.F.), attached R.A.M.C., R. W. Murray, and F. T. Paul, R.A.M.C.(T.F.).

Temporary Major F. M. Rodgers, R.A.M.C.

Captain (acting Major) J. Tait, R.A.M.C.(T.F.).

Temporary Captain (acting Major) A. J. H. Borton, R.A.M.C.

Captains: A. E. Hodgson and C. P. Lapage, R.A.M.C.(T.F.).

33rd Army Corps.

Majors: H. A. Howes, T.D., R.A.M.C.(T.F.) (Major 4th Battalion Lincolnshire Regiment T.F.), S. R. Matthews and D. J. Penney, T.D., R.A.M.C.(T.F.).

Captains (acting Majors): R. Armstrong and G. Raymond, R.A.M.C.(T.F.).

Temporary Captains: E. S. Cuthbert, R.A.M.C., attached 51st (Grad.) Battalion Royal Fusiliers, A. Grant and S. B. Hanbury, R.A.M.C.

Irish Command.

Lieut.-Colonels: J. B. Buchanan, M.C., R. of O., R.A.M.C., G. J. Coates, R.A.M.C., H. C. Donald, T.D., and H. Jones, R.A.M.C.(T.F.), J. P. J. Murphy, A. de C. Scanlan, C.M.G., and B. W. Somerville-Large, R.A.M.C.

Surgeon-Major G. W. Trouton, West Kent Yeomanry (T.F.).

Major E. T. Vint, R.A.M.C.(T.F.).

Temporary Majors: R. D'A. Irvine, R.A.M.C., A. K. Macdonald, Special List, attached R.A.M.C.

Temporary Captain (acting Lieut.-Colonel) J. D. O'D. Egan, R.A.M.C.

Temporary Captains (acting Majors): W. Law and D. Murphy, R.A.M.C.

Captain O. H. Blacklay, R.A.M.C.(T.F.).

Temporary Captains: I. A. Davidson and B. Ferrar, R.A.M.C., A. F. A. Howe, Special List, attached R.A.M.C., R. B. Hunt, T. Kirkwood, H. S. Laird, N. C. Patrick, C. B. Pearson, R. H. Scovell, and H. R. Wright, R.A.M.C.

Channel Islands.

Surgeon-Captain and honorary Surgeon-Major H. D. Bishop, R. Guernsey Artillery and Engineers Militia.

Miscellaneous.

Captain and Brevet Major C. W. Wirgman, R.A.M.C.(T.F.).

Ministry of Munitions.

Captain J. M. McQueen, R.A.M.C.(T.F.).

Temporary honorary Captain C. G. L. Wolf, R.A.M.C.

Dominion of Canada.

Captains (acting Majors): T. McC. Creighton and W. Ross, C.A.M.C.

Captains: E. A. Campbell and H. Coppinger, C.A.M.C.

Commonwealth of Australia.

Lieut.-Colonel (temporary Colonel) J. M. Y. Stewart, D.S.O., A.A.M.C.

Lieut.-Colonels L. O. Betts, O.B.E., G. A. W. J. Knight, H. S. Newland, D.S.O., G. Raffan, C. G. Shaw, D.S.O., J. W. Springthorpe, and H. C. Taylor-Young, A.A.M.C.

Majors (temporary Lieut.-Colonels): E. J. Brown, C. J. Wiley, and H. J. Williams, D.S.O., A.A.M.C.

Majors: T. L. Anderson, J. B. Bell, J. P. Fogarty, M.C., A. C. Fraser, H. A. C. Irving, H. O. Lethbridge, M.B.E., P. A. Maplestone, D.S.O., J. C. Mayo, H. H. McWilliams, and E. H. M. Stephen, A.A.M.C.

Captain (temporary Major) K. Russell, A.A.M.C.

Captains: W. R. Bailey, S. M. Cordeau, G. Finlay, F. R. Forster, R. L. Forsyth, A. Goode, A. Juett, E. McKenzie, and S. B. Thomas, A.A.M.C.

Dominion of New Zealand.

Colonel P. C. Fenwick, C.M.G., N.Z.M.C.

Lieut.-Colonel B. E. Myers, C.M.G., N.Z.M.C.

Majors: A. Hosking, T. McKibbin, O.B.E., and T. R. Ritchie, N.Z.M.C.

Captains: S. Allen, P. Chisholm, and A. T. McCaw, N.Z.M.C.

Union of South Africa.

Lieut.-Colonel C. H. van Zyl, S.A.M.C. (died).

Temporary Lieut.-Colonel J. H. Whitehead, D.S.O., S.A.M.C.

Captain D. Mack. MacRae, S.A.M.C.

Dominion of Newfoundland.

Major C. Macpherson, C.M.G., Newfoundland R.

Ceylon.

Captain (acting Major) P. W. Mathew, R.A.M.C.(S.R.).

Egypt.

Lieut.-Colonel (acting Colonel) C. Garner, C.B.E., R.A.M.C. (R.P.).

Gibraltar.

Temporary Captain W. O. Roberts, R.A.M.C.

Hong Kong.

Lieut.-Colonel G. B. Crisp, R.A.M.C.

Jamaica.

Major R. S. Turton, R.A.M.C.

Malta.

Surgeon-Majors: A. E. Mifsud and R. Randon, Royal Malta Artillery.

Temporary Majors: T. Mackenzie, V.D., and C. R. Nicholson, R.A.M.C.

D.C.M.

The Distinguished Conduct Medal has been awarded to 4th Class Assistant Surgeon D. M. Mackay, Indian Medical Department.

For the display of great courage and presence of mind at Medo, East Africa, on April 12th, 1918, when he repeatedly went out to collect wounded under heavy rifle and machine-gun fire. His services on this occasion were admirable.

Scotland.

ANNUAL MEETING OF THE INCORPORATED SANITARY ASSOCIATION OF SCOTLAND.

THE forty-fifth annual congress of the Incorporated Sanitary Association was held at Perth from September 3rd to 6th. This association is one which, without being distinctively medical, yet plays, and has played, a not unimportant part as a sort of auxiliary to the regular professional societies, more especially in the education of the laity in the proper appreciation of the meaning of the problems of hygiene, national and personal. For instance, in the recently published volume of *Transactions* (for 1918), the subjects dealt with are "Individual responsibility in sanitation," "A Ministry of Health," "Future developments in sanitary administration," "The State and pre-natal care," "Maternity and child welfare schemes," "Employment of children," and "The State and the health of the child." Furthermore, many medical men are members of the association. During this year's congress the subjects discussed were again admirably practical and all more or less in the eye of the nation, so to say. The proceedings were opened on the evening of September 3rd by an attractive and suggestive address by Professor J. Arthur Thomson of Aberdeen on "Health hints from Nature," and on the 4th the president (Mr. W. E. Whyte) referred to the possibilities bound up with the passing of the new Scottish Board of Health Act and of its successors, the Housing and Town Planning (Scotland) Act and the Acquisition of Land Act, legislative enactments which marked a welcome break away from the ever unsuccessful attempt to apply English statutes to Scottish conditions. The standard of a house of three apartments which had been set up showed a better appreciation of the requirements of healthy living in the land. Ex-Baillie Robert Russell of Paisley opened a discussion on maternity and child welfare schemes, and stated that all infantile mortality over 50 per 1,000 births was excessive; at the same time, he thought that town improvement schemes would do more good than clinics, maternity hospitals, and other palliative measures. Drs. F. Dittmar of Edinburgh, and William Robertson of Leith, dealt with various aspects of the question of venereal diseases in Scotland, and the latter pleaded for a full exposure of the truth about these dire scourges. Dr. T. F. Dewar, of the Local Government Board, Edinburgh, discussed in a critical spirit the present methods of disinfection; and Mr. Francis Braid, Kirkcaldy, spoke on the issue of certificates in connexion with the production and sale of milk. On Friday, September 5th, the subjects introduced before the Congress were water and drainage provision for housing schemes, tuberculosis expenditure and results (by Dr. James Crockett, Dr. Brown, and Dr. Ebenezer Duncan), the salvage of town refuse, the care of young children's teeth (by Mr. Samuel Dunn, L.D.S.), and new houses, their rents, and their tenants. In the course of discussion, Dr. Clark Trotter, the M.O.H. for Paisley, referred to the establishment of a clinic in that town for the care of children's teeth; it was known as the "greetin' meeting." The annual dinner, a smoking concert, and excursions in the neighbourhood constituted the lighter side of the association's activities.

Correspondence.

THE CULT OF INDIVIDUALISM.

SIR,—In recent issues of the medical press there have appeared references to yet another endeavour of certain members of our profession to bring about greater "union" through the formation of another body, to be known as the British Federation of Medical and Allied Societies. I trust that the importance of the subject just now will be accepted as the excuse for this lengthy communication, and that you will be able to throw open your journal to correspondence on the subject.

The Formation of Separate Bodies.

In 1914 an attempt was made to form a medical federation in consequence of the distrust of the Insurance Acts as likely to be interpreted by the regulations. This was quickly followed by the birth of the National Medical Union, the Medico-Political Union, and the Association

of Panel Committees. The judgement of an onlooker would be probably that the individualistic tendency of members of our profession is still further exemplified by this evident weakness for splitting into separate bodies, all formed in order to secure what many consider to be impossible—namely, greater union in the profession.

Now each of these bodies hopes, if its good intentions were fully realized, that it will be able to co-ordinate medical opinion, and so cause the public, as represented by the Government and its local bodies, to give just consideration to the common views of the medical profession.

The Reason for the New Formation.

Before restating the objections as they existed in 1914, and still exist, to the formation of another body, it would be as well to face the main cause for the latest move. This, there is no doubt, is the profound distrust, suspicion, disappointment, or disgust which at present exists in the minds of many with regard to the British Medical Association as an efficient, reliable, virile, up-to-date organization capable of dealing with medico-political and sociological problems with vision, imagination, grit, and some of the enthusiasm of youth; and to be relied on to lead the profession and the public on questions affecting health safely through the many difficulties and dangers of the transitional and reconstruction periods of the new age now upon us.

But should not such a complaint be more clearly defined? Is it the machine, or those who control it, or both, to which objection is taken? If it is the machine, is it capable of being remodelled? If it is, why not assist to do this from inside? If not, would it not be far better to scrap it before building up another to which it must always be a hindrance? Or, if it is those who control the machine who stand condemned, are there not constitutional methods available by which they can be replaced? This was done in 1902 and succeeding years. Why not repeat it—always providing that the majority is available? Can the formation of new medical bodies outside the Association, but having the same objects, in any conceivable way bring about that union which we all so greatly desire? Will it not rather tend to develop friction, discord, and bring about defeat? It is futile to assert and reassert as some do "we have no intention whatever to injure the Association. We can exist side by side, can co-operate, can assist one another," and so on. Division is schism, and such an assertion is only heresy, and to be looked on with the greatest suspicion. Do its advocates really believe in it?

Objections to the Proposal.

Now what are the objections to this the latest proposal?

(a) The Association is now recognized by all departments in the State, in the United Kingdom, and also in certain Dominions as the mouthpiece of the profession.

(b) To all intents and purposes such a federation means a new British Medical Association, but under another name—that is, the formation of a rival body.

(c) The existence of two independent bodies authorized to deal with the same subject will lead to overlapping in work, confusion in policy, and undoubted consequent defeat for our profession when treating with public bodies.

(d) The number of medical practitioners actively interested in medical politics is limited, all their spare time being required by the British Medical Association. Every one who is induced to transfer his activities to a new and rival body would be a direct loss to the profession.

(e) The medical profession will not find sufficient money to make a success of two bodies with similar objects. It considers that when it pays £22s. a head to the Association it is paying quite enough.

(f) As both bodies will be consulting from time to time the same practitioners on exactly the same problems, although those practitioners may be differently grouped together, the profession will be expected to attend two meetings in order to express their ideas twice over. It is very difficult to get practitioners to attend one meeting. It would not be long before we heard "that they were sick of the whole subject," and that they were "fed up."

(g) Those favouring a federation state that in some way—but which they seem unable to define—it will be possible to form a body more representative of the profession, and to secure more loyalty and co-ordination of purpose in the profession than the Association has succeeded in doing. Are they not proposing to make silk purses out of sows' ears, and to produce blood out of stone?

The Association in 1915 determined to co-operate in every way possible with medical societies formed to represent sectional interests in the profession. It has

already included representatives of several on its standing committees and desires to include others. Also, it co-operates with the Royal Society of Medicine, the Colleges, the British Dental Association, the Pharmaceutical Society, and the Central Committee for the State Registration of Nurses. The Council has been instructed to go further and to call conferences with allied societies in order to see in what way even closer co-operation is possible. The war delayed action; it will now no doubt deal actively with the problem.

An Appeal to Individual Members.

May one therefore appeal to the individual members of the many London and provincial medical societies (BRITISH MEDICAL JOURNAL, July 19th, 1919, p. 86; *Lancet*, July 19th, 1919, p. 121) formed primarily for scientific purposes which it is proposed now to band together under this federation for medico-political and sociological purposes, if they approve generally this communication, to at once approach their respective councils and to ask to be consulted before they are pledged finally to approve and financially to support the development of their society into a medico-political body which can result only in still further dividing the profession, which will be likely to cause a split amongst the members of the society itself, will weaken the Association, besides being redundant and against the best interests of the profession as a whole?

There never can be any effective union of the two groups in our profession until the one group realizes that whilst material interests should have due consideration, the intellectual side must not be neglected; and the other group, whilst developing that intellectual side and appreciating that the peaceful pursuit of its scientific studies depends very largely on the satisfactory determination of material interests, realizes that it is incumbent on it to give its loyal support to those whose attention is primarily concentrated on such interests. It is only when such a well-balanced co-operating union is formed that any Government can be expected to respect our profession and to accept its advice. Such a union is possible if the individual members will take an active interest in their respective sectional societies and at the same time will be loyal to a body which has existed for close on ninety years to safeguard the honour and interests of the profession; ceasing to look to any newly-formed bodies whose sole attractiveness is their expressed intention to try to do the impossible.—I am, etc.,

Hove, Sept. 6th.

E. ROWLAND FOTHERGILL.

PROPHYLAXIS AGAINST VENEREAL DISEASE.

SIR,—The presentation of the Note on this subject from the Chairman of the Interdepartmental Committee to the Minister of Health sets the seal on the Government policy with regard to the general advocacy of and the issue broadcast of prophylactic packets. This being so, it is the duty of everyone in the medical profession who, whatsoever opinion they may hold with regard to this particular branch of the campaign, are all united in wishing to do their best to prevent and cure this disease, to take whatever measures may be possible to attain these ends.

First of all, with regard to prevention, it is essential that there should be education of the whole of the population, male and female, given at that age which may be most suitable, having regard to the position in life and surroundings of the individual. The Ministry of Health is helping an educative propaganda by means of films, posters, and advertisements, by a subsidy to the National Council for Combating Venereal Diseases; but these measures alone are not enough. Every member of our profession should be prepared, whenever opportunity may offer, to speak in public or to give a lecture to as many persons as possible, pointing out what these diseases mean to the individual, to the community, and to posterity. If it be widely known among all sections what the mischief done by these diseases is, it will, as day follows night, diminish the number of risks of infection taken, and therefore, of course, the number of cases of disease. It may be urged that in so doing you are simply invoking fear to promote your ends; but if I were driving along a road and came to a danger board on top of a hill, unless I were drunk—and this analogy is very apt—I should not

go down that hill at forty miles an hour, but slow up and negotiate the hairpin corner at the bottom with discretion. I should not call that fear, but simply a wise appreciation of the consequences which would follow an act of folly.

With regard to cure, those who have had the greatest and most recent experience in the treatment of these diseases are agreed that if only afflicted persons can be induced to come for treatment at the earliest possible moment, and that if the disease be at once accurately diagnosed and the appropriate treatment applied on the spot, this will do much more to eradicate the illness than any prophylaxis or early treatment possible. It is therefore up to every member of our profession to see that he or she is competent to make this early diagnosis at once, and himself apply the appropriate treatment. There is no doubt that where practice is by contract there is a great temptation to take the line of least resistance and send all cases of these illnesses straight to the hospital or clinic; and in some cases it may be to the professional interests of the doctor to do so, as until the public be really educated, and know that many times these diseases are contracted without entailing any stigma of immorality, some people might object to consult one who lays himself out to treat them, fearing that their friends and neighbours might consider that they themselves were infected. This, however, is only a matter of education, and must soon disappear as enlightenment proceeds. It is absurd to expect that a labourer in a rural district can or will give up a day to tramp many miles to a clinic for the necessary treatment two or three times a week. The opportunity for treatment must be brought to him in his own surroundings and given at the hands of his own doctor; and to ensure this it is essential that proper inducements be given to the practitioner to give this treatment both early and efficiently, thus making the general practitioners of the country the first line of defence.

In conclusion, it is to be hoped that those members of the profession who are divided into two camps with regard to the use of packets should agree to differ, if differ they still must, in private. One of the most impressive speeches at the late Sanitary Congress at Newcastle was made by Mr. Sherwood, a gentleman who is in close touch with some 280,000 workmen and trade unionists in the north-east of England, and he said that the working men had got so confused by the discussions and differences among members of the profession as to prophylaxis and early treatment that they had come to the conclusion that the medical profession knew nothing whatever about these diseases, and that they therefore preferred to follow the advice and take the treatment of their own quacks and herbalists. The disastrous result of such a procedure as this must be apparent to everyone.—I am, etc.,

London, W., Sept. 8th.

E. B. TURNER.

* * A summary of the Note to which Mr. Turner refers is given at p. 349.

NEURASTHENIA AND ANXIETY NEUROSIS.

SIR.—It is regrettable in the very highest degree that the reactionary views regarding neurasthenia and its treatment which Sir William Hale-White delivered before the South Midland Branch of the British Medical Association, and which appeared in your issue of August 23rd, should have met with such wide publicity, for they are entirely contradictory to the views which now are accepted by almost all of those who have been brought into closest contact with functional nervous diseases during the war, and are, indeed, certain to have a very adverse effect on all to whom the facts are unknown, and will lead to the improper treatment of such cases.

In the first place, Sir William Hale White confuses anxiety neurosis with neurasthenia—two entirely different conditions, each characterized by its own clearly defined syndrome.

In the second place, he recommends that the patient suffering from anxiety neurosis (which he speaks of as neurasthenia) should be urged to repress his war experiences and to "turn his mind from the past." Seeing that experience has taught that treatment must be along exactly opposite lines—namely, that the patient must be led to think about, and especially to talk about, his war experiences and to work off the emotion connected with them, it is lamentable that anyone should give such

wrongful advice, and especially that it should be given by anyone with the authority of Sir William Hale-White.—I am, etc.,

Golders Green, N.W., Aug. 27th.

H. E. DAVISON, M.D.

LOCAL CLINICAL LABORATORIES.

SIR,—The letters by Drs. Hugh Miller and A. G. Shera and by "Bacteriologist" in your issues of August 16th and 30th draw attention to a problem which must be faced by the Ministry of Health if the population in rural areas is to receive the medical service to which it is entitled. As I have for several years been in charge of a small laboratory doing, I fancy, much the kind of work referred to by your correspondents, the following notes may be of some interest.

In 1911 the County Council of Dumfriesshire instituted a laboratory for the use of its Public Health Department and the doctors practising within its area. The laboratory serves a population of, roughly, 64,000, spread over an area of about 1,000 square miles, and including six small burghs, one general and four isolation hospitals. It is supported by public health funds, the authorities other than the county council which take advantage of its facilities paying an annual sum, but no charge being made to practitioners or patients for any work done. When first organized it was suggested that we would be mainly concerned with diphtheria, tuberculosis, enterica, and a certain amount of milk and water bacteriology. The work, however, rapidly developed, and I soon realized that the need for a laboratory in a rural district was greater than I had imagined, and that I had to meet calls of very varying kinds. To-day the laboratory undertakes all bacteriological, microscopic, and chemical work required by the general practitioners and school medical officers, all tests required under the venereal diseases regulations, general public health work—for example, examination of water, sewage, etc.—examination of milk samples sent in by the county veterinary inspector, as well as reports on anthrax, sheep scab, parasitic mange, etc., for the county police. Occasional specimens are submitted by veterinary practitioners, while odds and ends, ranging from a dead salmon to a razor strop suspected by its owner of having given him impetigo, relieve the monotony of routine investigation.

Eight years' experience of this work has convinced me absolutely of the truth of "Bacteriologist's" view—that personal association of general practitioner, laboratory specialist, and patient is of primary importance. The fact that one is personally acquainted with the practitioner sending a specimen, can ring up on the telephone to discuss the case, and can, if necessary, visit the patient, is of inestimable value in guiding one's investigations. This is, perhaps, specially true in regard to Wassermann tests, T.A.B. agglutinations, and malaria. I am certain that had the samples from this area to be sent to a laboratory in one of the large towns, the number examined would be materially smaller, and the loss of time entailed would reduce the value of the reports still more.

In regard to public health bacteriology, there can be no question of the advantage of the "local" over the "central" laboratory. Apart from the value of discussion on daily problems between medical officer of health and bacteriologist, the local laboratory receives the earliest possible intimation of suspected infectious disease; such matters as, for instance, the detection and control of diphtheria carriers can be undertaken efficiently and economically only by a bacteriologist working on the spot, while in dealing with cerebro-spinal fever, suspected food poisoning, and a host of other matters his rôle is equally important. I need not labour the point.

On the other hand, in a scheme of efficient local laboratory service such as, one trusts, may eventually be developed the large central laboratories must play a very important part. The excellent work done by the Oxford Standard Laboratory in preparing standard antigens for enterica and dysentery agglutinations indicates one line of activity. I suggest that the Ministry of Health should arrange that certain large laboratories attached to teaching schools, and directed by pathologists of established reputation, should have affiliated to them all local laboratories within a certain area.

In Scotland—which is geographically well designed for administrative purposes—one or at most two such central

institutions would probably suffice. Inspectors or, to use a term less suspect, consultants appointed by the Ministry would have to be in constant touch with both local and central laboratories. Under such a scheme the pathologist in a country area could at once obtain from his "parent laboratory" all necessary antigens, agglutinating and haemolytic serums, standard living cultures of known pedigree, small quantities of special and rarely used mediums, etc.; would have the satisfaction of knowing that all such material was prepared and tested by skilled pathologists; and, further, would realize that, as precisely similar material was being used by his colleagues in other districts, his results were so far comparable with theirs.

To the central laboratory, again, could be submitted investigations requiring much time, special methods, or apparatus not at the disposal of the local pathologist, and—though this applies more particularly, perhaps, to hygienic than clinical work—the establishing and revising of standard methods for routine work might also be one of its functions.

Some such scheme, based on (1) constant personal co-operation between local pathologist, practitioners, and Public Health Department, and (2) co-operation between the local pathologist and the central laboratory which acts as his consultative and supply base would, I submit, enable us to evolve a really efficient laboratory service. *Inter alia* it would ameliorate a disadvantage under which the local pathologist at present labours, and which only those who have experienced it can estimate—the deadening effect of being out of touch with other workers in his own line, of losing the atmosphere of research which pervades the laboratory of a teaching school, and, above all, of lacking the suggestions and criticisms of colleagues, often more valuable than a shelf of textbooks. Given the association with the parent laboratory which I have suggested, this loss could, in great measure, be supplied.—I am, etc.,

Dumfries, Sept. 1st.

JOHN RITCHIE.

SIR,—It is to be earnestly hoped that the correspondence on this subject in your issues of August 16th and 30th will receive the serious consideration of the Ministry of Health. It can scarcely be disputed that it would be in the best interests of the public if proper facilities were afforded to practitioners (especially to those in small towns and the country) for the collaboration, in person if necessary, of a pathologist. It could be reasonably expected also that the practitioner would welcome the additional assistance in making and confirming his diagnoses, and of treating suitable cases with laboratory products. With the introduction of the scientific element the doctor might even take more interest in his cases, and with this object he should be treated as an active partner in the business.

I am in entire agreement with the various contributors to the JOURNAL as to the urgent need for such a scheme, and particularly as to the necessity, emphasized so much by "Bacteriologist," for the personal association of the practitioner and the pathologist. My late colleague frequently discussed this very question with me, and with an experience of 20,000 or more cases we had ample opportunity for forming an opinion as to its value. The pathologist, when acquainted with the salient features of a case, is often able to make useful suggestions as to the nature of the specimen which should be taken, and the examination which should be carried out, with a considerable saving of the time which might otherwise be spent in fruitless search. The obvious advantage of being able to secure specimens as fresh as possible and properly obtained and prepared needs no comment. I have often received samples from long distances badly made or spoiled in transit, and of no value whatsoever.

Lastly, a wealth of clinical material would be available for original investigation. Many of the mild infectious fevers, for example, rarely go into a hospital, and it would be possible to examine early cases and "contacts"—probably an important factor in searching for the cause of those diseases.

As it is now, I believe, three months or more since the Insurance Commissioners raised the question as to the desirability of establishing such clinical laboratories, I feel sure that many pathologists, like myself, would be glad to know whether any substantial progress has been made in the matter.—I am, etc.,

Sutton, Surrey, Sept. 4th.

J. W. CROPPER.

PLAGUE RATS ON SHIPBOARD.

SIR,—On page 276 of your issue of August 30th, 1919, I notice a statement in connexion with plague on ss. *Nankin*:

"The most probable explanation seems to be that infected rats got aboard either in the Port of London or that of Marseilles."

In my opinion it is improbable in the extreme that infected rats got on board in London or Marseilles.

A suggestion for such drastic emendation of the note in the JOURNAL requires explanation. The following facts which have come under my observation are in aid:

1. A ship came from Bombay to Middlesbrough, discharged freight there, and came to London. This ship landed plague rats in London.

2. A ship went from India to Wellington, N.Z., and after discharge in Wellington returned to Bombay. She had cases of human plague on board when nearing India on the return voyage.

3. A ship went from Bombay to Sydney; she discharged in Sydney, and just after arrival again in Bombay had human plague on board.

4. A ship came from Bombay to Middlesbrough, where she discharged cargo; from Middlesbrough to London, where she loaded cargo; on the return voyage to Bombay she had plague on board.

5. A ship went from Alexandria to Montreal and discharged cargo in Montreal. On arrival in Bristol from Montreal she had cases of plague on board.

6. A ship went from Calcutta to Buenos Aires, was fumigated in Buenos Aires with cargo *in situ*, and came to London. While lying in London she had plague on board.

7. *Ss. Nankin* came from India to London, discharged cargo, and on the return voyage to India had plague on board.

What is common to all the cases mentioned is that the ships came from endemic centres of plague in the East to non-infected ports. If London supplied the *Nankin* with infected rats, then Wellington, Sydney, Middlesbrough, Montreal, and Buenos Aires supplied infected rats to their respective plague ships, which is a remote proposition as compared with the following suggestions.

When plague rats board a ship with the cargo at an endemic centre, plague may reach the ship's complement either during the voyage to the port of discharge, or during the stay of the ship in that port, or during the outward voyage of the ship from that port; very often it does not reach the ship's complement at all.

The pestis is driven to the surface—that is, from the hold to the deck—on discharge of the cargo and consequent disturbance of the infected hold-rats. This disturbance of cargo will take place at a port of discharge or on such interference as the futile attempt to disinfect a ship with the cargo *in situ*. The disturbed hold-rats infect pantry, food store, and other deck-rat communities on board. This infection of the surface-rat communities and the further passage of infection to man often takes a sufficient time for the ship to have left the port of discharge and reloading where the disturbance of the infection has taken place. This port of discharge and reloading then wrongly incurs the odium of the infection which has been acquired abroad.

I may add that though search has been conducted steadily both for mortality amongst rats and for infected rats in the port sanitary district, neither mortality nor infected rats have been found for a long period.

I have only dealt with cases parallel to that of the *Nankin*. There is a mass of other evidence—indeed, the whole record of the course of plague on ships, which is counter to the suggestion quoted.—I am, etc.,

W. M. WILLOUGHBY.

Greenwich, Sept. 4th. Medical Officer of Health Port of London.

A POST-GRADUATE SCHOOL FOR LONDON.

SIR,—In his essay upon the education of graduates, published in your issue of August 30th, Sir Andrew Macphail says:

Teaching is the most precious of all gifts, and medicine without that aid perishes in all its branches. There is nothing more pitiable than the performance of a teacher who lacks the spirit.

There are in the world at any time very few teachers; for a teacher is an artist who transmutes, or mints, and sets in circulation the ore which the scientist discovers, although in the rarest instances he himself may be artist and scientist too.

Quite so. How, then, are we to discover these teachers? Graduate and undergraduate teaching do differ and must differ widely in many respects. We can allow the student to choose his teachers only within very narrow limits;

and as to what he will study he has practically no choice at all. This must be so, for, whatever other purpose may be served by undergraduate teaching, the State requires that a certain minimum of knowledge of a number of specified subjects shall be imparted to each and every student. Such uniform instruction can only be given in highly organized schools, and it is not practicable to choose all the professors and lecturers solely for their teaching ability. In fact, it is well recognized that in any given school particular subjects are badly taught, though the teachers of them may be eminent men.

But graduate teaching is quite a different matter. It is, or should be, essentially eclectic. The students are men in actual practice, conscious of special and personal needs, seeking each to get the instruction which suits his particular case. A doctor in the Colonies, for example, has read the writings of some particular man, and wishes to be taught by him. But this man may not be attached to any large medical school; and in the past he has been debarred from teaching.

Now, for the first time, the Fellowship of Medicine, of which Mr. Philip Franklin is the secretary, has broken down these barriers. Their motto has been, "Men, not schools," and in that lies the secret of their success. By providing for a series of lectures at the house of the Royal Society of Medicine, they enabled those seeking instruction to, as it were, sample the men who offered it. Whatever his scientific reputation, unless the lecturer could convince his hearers of his ability to *teach*, few cared subsequently to follow him to his hospital clinic. On the other hand, the man who seemed to have something worth saying and who knew how to say it, was sure of a flux of students, no matter whether the hospital he worked at had 50 beds or 500.

The Fellowship of Medicine, in short, has provided a centre where all those who think they have a message can deliver it; and where those seeking knowledge may hear and choose their teachers. This is a democracy of learning in the truest sense, and in harmony with what is best in the spirit of the times.—I am, etc.,

London, W., Sept. 6th.

F. HERNAMAN-JOHNSON.

THE ASYLUM MEDICAL SERVICE.

SIR,—Your correspondent "12 Bore" might, while conveying the same matter, have still further abbreviated his short but excellently self-revealing letter, had he merely written thus: I am a person without any ideal of duty and without energy or ambition other than is contained within the idea of self-indulgence.

It is true that many of us had to engage assistants of the type of "12 Bore" during the war, and, owing to the exigencies of national conditions, staff of all kinds in mental hospitals, as in other institutions, had to suffer similar deterioration; this was, however, to our sorrow, not to our satisfaction.

The fact of the matter is that the medical service of mental institutions, like all other whole-time services of a like nature, has certain disadvantages compensated by certain advantages. Inasmuch as the medical staff of these services has not the stimulus, present in general practice, which provides a direct relationship between pay and work done, the type and amount of work done by any medical officer is a direct reflection of the character that he possesses.

Assistant medical officers of the type of "12 Bore" are a curse to this or any service, and it is the existence of this type that has made many committees of mental hospitals quite clear that the security of tenure of office of a mere idler is a mistake which must be remedied.—I am, etc.,

August 31st.

MEDICAL SUPERINTENDENT.

SIR,—"12 Bore's" mischievous letter calls for an immediate reply, even though he writes in a facetious spirit, as indicated by his putting "the impossibility of marriage" amongst the "advantages" of asylum life.

If the grievances of the asylum A.M.O. are a "hardy annual," it is only proof that the grounds of discontent hold a sound root that strives to find a place in the sun.

"12 Bore" would appear to be a man of leisure, who is content to do the minimum routine in return for an easy life, but having been a locum in one asylum can hardly qualify him to express an opinion on the asylum service.

I have been in four asylums, have always had night calls, and never been in a position to enjoy shooting or fishing close by. My salary began at £150, and is now, after seven years, £300 per annum. Is this what he calls good pay?

The work has its unpleasant aspect, and for that very reason should be adequately rewarded, but to call it uninteresting shows merely a lack of interest in modern methods of diagnosis and treatment.

I should be surprised to hear that "12 Bore" had ever examined the spinal fluid of an insane patient with a view to clinching a diagnosis or giving a reliable prognosis to the patient's anxious relatives.—I am, etc.,

August 30th.

ASYLUM A.M.O.

REMUNERATION FOR 1920.

SIR,—Dr. Evans's letter in your issue of August 30th is of interest: it is undoubtedly true that the reports of Panel Committees would lead one to think that they fail to realize the gravity of our position. Dr. Evans must, however, take into consideration the fact that, until the terms of our contract for 1920 (apart from the remuneration) are known, it is extremely difficult to arrive at a definite sum which would be a just equivalent for our services. Had the conditions of service remained unaltered, it would be easier to secure a satisfactory basis for our demands, and I am certain that Panel Committees would ere this have given expression to their opinions on the subject. I regret that Dr. Evans did not state what he would consider a suitable capitation fee, but I surmise that he too is hampered by this ignorance on our part of the conditions of service for 1920.

It would, however, be well for us first of all to obtain a clear understanding as to what, with the present decreased value of money, our demands for 1920 would require to be were the conditions of service to remain unchanged. Dr. Evans quotes the Leader of the House as having said that "the increase should be 250 per cent." in order to bring a salary up to its pre-war equivalent. But that goes very far beyond his argument that money has depreciated at least 50 per cent. We have, however, a definite actuarial calculation to go upon: the actuarial estimate of the average increase of wages since 1914 among the insured labouring classes is 133 per cent. This, I submit, is a fair increase for us also, who have, unlike the civil servants, no pension to look forward to.

Let it then be clearly understood that our capitation fee for 1919 should have been not less than 17s. 6d. to bring it up to the 1914 standard. Once that is definitely grasped and insisted upon by the profession it will be easier for our representatives to arrive at an agreement as to the sum which we must demand in view of the extended conditions of service for 1920.—I am, etc.,

Largo, Fife, Aug. 31st.

WM. EGGELING.

SIR,—The capitation fee for the work which is going on, and which has been going on since service under the Insurance Acts began, was before the war 7s. per insured person per annum. The war has, however, caused the £1 to fall in value, until to-day the fall has reached 11s. 3d., making the £1 to be only valued at 8s. 9d. Therefore 16s. to-day is equivalent in value to 7s. in 1912, and to this must be added 6d.—equivalent value 2½d.—for invalided soldiers, making 16s. 6d. The capitation fee, therefore, to-day must be 16s. 6d. to equal the capitation fee of 7s. in 1912, plus the damage to insured men caused by the war.

It is interesting to note that the increase in wages paid to the labouring classes since 1912 is about 133 per cent.

With regard to the capitation fee for invalided soldiers—namely, 2½d. (equivalent value 6d.)—this matter requires to be investigated, for it is probably due to the fact that large numbers of doctors may for various causes have failed to send in accounts.—I am, etc.,

Stalybridge, Sept. 7th. ADAM FOX, L.R.C.P., L.R.C.S.Ed.

ANTIVIVISECTION SHOPS.

SIR,—One of the antivivisection societies lately opened a shop for three weeks in Oxford, and will probably open it elsewhere, moving it from place to place. There were many of these shops in the years before the war, and I shall be grateful if anybody in whose neighbourhood the

shop appears will immediately let me know of it, so that arrangements may be made for the distribution of leaflets to counteract its influences.—I am, etc.,

STEPHEN PAGET,

Honorary Secretary, Research Defence Society.

11, Chandos Street, Cavendish Square, London, W.1,
September 8th.

TERRITORIAL MEDICAL OFFICERS' DINNER.

SIR,—As it is not possible to send notices to individual officers I shall be obliged if you will allow me to announce in the *BRITISH MEDICAL JOURNAL* that the dinner of the Territorial Force Medical Officers' Association will take place on Thursday, October 30th, at 7.30 p.m. at the Holborn Restaurant. The charge for tickets (wine not included) is 12s. 6d.

All Territorial officers can attend and bring guests. Application for tickets should be made to me at 37, Russell Square, London, W.C.1.

September 8th.

D. L. HAMILTON, Lieut.-Colonel.

SUDDEN DEATH UNDER AN ANAESTHETIC.

SIR,—I am sorry to say that I have not been so fortunate as Sir R. H. Woods in that I have lost a case under an anaesthetic, and moreover under ether by the open method. Twice previously I had administered an anaesthetic to the child, in each case ether by the open method. At the third operation, which was carried out to complete a radical cure for extroversion of the bladder, the operation being carried out in stages, the child suddenly ceased to breathe, although I had ceased to give her ether and was allowing her to come round, as the surgeon had finished his work. Despite restoratives, artificial breathing, direct insufflation, and heart massage, she never recovered.

At the *post-mortem* examination the findings were consistent with the condition known as status lymphaticus—namely, persistent thymus, fatty changes in the myocardium, and a general overgrowth of the lymphoid tissue; and I may say that I saw the *post-mortem* examination myself, so am satisfied that the findings were not the fevered imaginings of a pathologist anxious to screen the delinquencies of a professional brother. Perhaps some advocate of the virtues of chloroform will now come forward and state that status lymphaticus is also a euphemism for ether poisoning.

Advocates of the substitution of ether for chloroform as a general anaesthetic will not welcome such sweeping and quite unproven statements as these made by Sir R. H. Woods in his letter of August 16th as being likely to help them much in their campaign.—I am, etc.,

H. PINTO LEITE,

Honorary Anaesthetist London Throat Hospital,
National Dental Hospital, Evelina Hospital
for Sick Children, etc.

London, W., Aug. 26th.

MEDICAL DEMOBILIZATION.

SIR,—Is it not time that steps were being taken to release temporary medical officers in Mesopotamia who are now threatened with being kept out there till April, 1920?

Most of them have been in that country at least two years without one day's leave, and the only leave spoken of is leave to India, which they cannot now afford. Compare this with the medical officers in France who had leave every six months at least, also medical officers from France are being demobilized who have less service than the former.

Take the position of those who are married. They have not seen their homes for over two years. Their pay is now barely sufficient to keep themselves and a home in England owing to the rise in value of the rupee, the high cost of living at home, and the fact that the purchasing value of the rupee in Mesopotamia has not altered. Surely the term "national emergency" cannot now hold when peace is signed, and did not mean looking after Indian and Arab coolies who are engaged on (?) military work, as they are now doing. Cannot medical officers from France junior in service, or recent graduates, be called on (as promised) and sent out to replace them? Ought these men not to have preference over young medical officers who have fewer responsibilities and only a few months' more service?—I am, etc.,

September 5th.

A. B.

R.A.M.C. CONTRACTS.

SIR,—The editorial in the *JOURNAL* of August 2nd, p. 144, referring to the new contract of service in the R.A.M.C. is timely, and fairly adequately expresses the attitude of non-regular officers still serving. Unquestionably the prime factor influencing men who have served against the new contract is a distrust of the War Office, begotten of service under it. It would be well if consultation with the Association as to the terms of service by the army medical authorities preceded the issue of any further contract.

It is doubtful whether any new voluntary contract will be attractive unless:

(a) Clinical ability in the various specialist branches is recognized as a ground for considerable increase in pay over the flat rate of remuneration.

(b) A serious effort is made, by enabling men to serve in their "home" area, to make army service less of a blind alley.

(c) Preferential treatment of regular officers in matters of appointments carrying extra pay, leave, living out, and decorations is abolished.

My personal experience has been that extra duty pay as operating surgeon during 1917 worked out at 1½d. per operation; that I have been away from home for nearly five years; that nine decorations have been awarded to my five commanding officers, while my bosom remains unadorned; and that it is ten months since I had any leave.—I am, etc.,

NEARLY FIVE YEARS OF IT.

The new terms and conditions announced this week by the War Office are given at page 355.

Obituary.

CHARLES ARTHUR MERCIER, M.D.LOND.,

F.R.C.P., F.R.C.S.

Consulting Physician for Mental Diseases, Charing Cross Hospital;
Past President of the Medico-Psychological Association.

WITH deep regret we have to record the death at Bourne-mouth, on September 2nd, of Dr. Charles Mercier, whose brilliant intellectual gifts adorned the profession of medicine. For many years past Dr. Mercier's health had been very bad, but his indomitable spirit rose above all physical disabilities. Although for long an invalid his mental powers remained unimpaired, and his wit shone as brightly as ever.

Charles Arthur Mercier was born in 1852. His father, the Rev. L. P. Mercier, was of Huguenot descent; at his death the family was left in straitened circumstances. After a few years at Merchant Taylors' School, Charles Mercier went to sea as a cabin boy, and worked for a time as warehouseman and clerk in the city before beginning the study of medicine at the London Hospital, where he had a brilliant student career. He obtained the M.R.C.S. diploma in 1874, and four years later the F.R.C.S. and the M.B. degree of the University of London. In 1896 he became a Member of the Royal College of Physicians, and in 1904 was elected Fellow. He proceeded to the M.D. degree in the following year, winning the University gold medal for special distinction in mental science. His practical knowledge of insanity began during his tenure of the post of medical officer first to the Bucks County Asylum, near Aylesbury, and later to the City of London Asylum. Dr. Mercier was for many years resident physician to a private asylum near London, and became lecturer on insanity first in the Westminster Hospital Medical School and subsequently at Charing Cross Hospital, to which he was appointed physician for mental diseases. He was for long a member of the Council of the Medico-Psychological Association of Great Britain and Ireland, of which he was sometime president. He was examiner in mental diseases in the University of London, and at the annual meeting of the British Medical Association at Oxford, in 1904, he was president of the Section of Psychiatry. He was a member of the Departmental Committee on the Treatment of Inebriety and contributed largely to the report. He also gave expert evidence before the Royal Commission on the Care and Control of the Feeble-minded, representing the Royal College of Physicians of London.

The legal side of mental disease made a strong appeal to

Dr. Mercier's acute and subtle intellect, and for many years he took a close interest in the work of the Medico-Legal Society. In 1909 the Royal College of Physicians awarded him the quinquennial Swiney Prize, for the best work on jurisprudence, for his book on *Criminal Responsibility in the Insane*, and this honour was again conferred upon him this year in recognition of his work on *Crime and Criminals*. His other published works on lunacy and its legal and social relationships were: *Sanity and Insanity*, *The Nervous System and the Mind*, *Lunacy and Law for Medical Men*, *Psychology Normal and Morbid*, *A Textbook of Insanity* (now in its second edition), *Crime and Insanity*, and *Conduct and its Disorders*; the last a book which has not yet produced its full effect. In 1913 he delivered the FitzPatrick lectures on "Astrology in Medicine," and about the same time appeared his striking essay *A New Logic*. It was written with all his accustomed vigour, but it failed to convince his old enemies the formal logicians. Nor indeed did he expect that it would, though to it and to his writings on conduct he himself probably attached most importance. Two years ago he published *Causation*, with a *Chapter on Belief*, a piece of most original work, clear and sparkling. In *Spiritualism and Sir Oliver Lodge* he drew an astonishingly able parallel between the evidence for spiritualism and the evidence for witchcraft. One of his last published works was a little book, *Spirit Experiences*, mocking the absurdities of the cult of spiritualism, of which a burlesque review appeared in a recent number of the JOURNAL. Dialectics fascinated him; he was ready to join issue on any and every subject, and with anybody. Sometimes, indeed, "he also argued round about him." In our columns for many years his controversial letters were the delight of countless readers and as often as not the despair of those who crossed swords with him. Occasionally, too, he could be induced to contribute to our editorial columns; but he was a wayward contributor and would not write unless the subject happened to take his fancy. All that he wrote was lucid, trenchant, and precise.

We are indebted to Sir BRYAN DONKIN for the following appreciation:

Dr. Mercier—Psychologist, Physician, Logician.

It would be hard for any one who had the privilege of knowing Dr. Mercier as intimately and as long as I have to write an adequate and just account of his scientific and literary work, and also of his character as a man, within the necessary limits of a weekly journal. But to refuse the opportunity of paying a slight tribute to his memory was impossible, though I feel I must confine myself chiefly to an appreciation of his personality and ability and of the general character of the abundant work he achieved, and dwell only for a moment on the contents of his psychological and other treatises, which will be his main, but not his sole, title to a lasting reputation.

I began to know Mercier from a correspondence that occurred between us in the early eighties on a coincidental similarity of ideas expressed in some articles written by him and myself to different medical publications. Shortly afterwards he was appointed, on the recommendation of Sir James Crichton-Browne, as medical superintendent to a private asylum near London, where he remained for many years until, owing to ill health, he was forced to resign. It was there that the disease (osteitis deformans) set in from which he suffered severely until his death. During this period of nearly forty years he and I maintained a friendship unbroken by many disputations. Unless actually incapacitated by pain or other intercurrent ailments which from time to time confined him to bed, he never ceased working at his professional duties or devoting himself at all spare times to his scientific and literary pursuits. From first to last his mental powers never failed him, and even during the last few years, when he had become wellnigh deaf and blind, in addition to his almost complete incapacity for moving about, his memory, even for recently acquired knowledge, was but little impaired.

He was, as is well known, vigorous and trenchant in controversy, and this caused some who knew him slightly and more who knew him not at all, to look on him as a fighter merely for fighting's sake. There was, perhaps, some little excuse for this misconception. He doubtless enjoyed, more than most men, the actual glory of mental conflict, and, when not otherwise deeply engaged in original work,

he often seized on opportunities to crush what he deemed to be important errors of fact or thought. He certainly did not suffer superficial thinkers gladly. But no rancour or personal animus ever marked his attitude to those with whom he fought, however strong the literary expression of his criticisms might be. In all his publications or speeches, controversial or otherwise, he was straight, courageous, clear, and logical, and but rarely allowed himself to be led astray by his exuberant joy of battle, or to write either in attack or defence without due consideration of the subject in hand. There are several men with whom, to my knowledge, he fought strenuously, sometimes on the losing side, with all his available weapons on certain biological and philosophical questions, between whom and himself there remained a mutual and warm regard until the end.

Quite apart from his well-known works on psychology, conduct, logic, causation, and others treating of his special subject of insanity in all its bearings, all of which are of the highest degree of importance and value, especially to every serious student of mental disorder, his two books, entitled *Criminal Responsibility* and *Crime and Criminals*—both winners of the Swiney Prize in 1909 and 1919 respectively—are rightly regarded by authorities on both those subjects as of high scientific and practical value. And his truly remarkable versatility and rare literary craftsmanship are illustrated in his small volume named *Temperaments*, which from their style and matter give him a place by the side of our best modern essayists. I can mention no more of his smaller works than his recent book on *Spiritualism and Sir Oliver Lodge*, which is an excellent example of his strict adherence to the true scientific method of attacking a subject and the irresistible force of his logical argument.

With regard to Dr. Mercier's philosophical opinions and the biological views that more or less underlie some, and especially the earlier, of his writings, it must be borne in mind that he assimilated very early the doctrines of Herbert Spencer and the personal teaching of Hughlings Jackson. His leanings towards a free use of the deductive method in his scientific writings, as well as towards the so-called "Lamarckian" doctrine of evolution, as particularly set forth by Spencer, may be thus accounted for. But it should be noted that there are several signs in his later writings that he had considerably, if not altogether, changed his opinions on some questions of biological evolution, and that, in spite of the use he made of deduction in the process of his reasonings, he was but very rarely chargeable with forsaking the scientific method by omission to seek, by means of further observations, fresh verification of his conclusions before adopting them. But this interesting aspect of Dr. Mercier's work cannot be further considered here. Suffice it to say that the somewhat obscure dictum, in a recent obituary notice of Dr. Mercier, that "the quality of his mind might best be styled forensic and analytic" seems to me to be gravely misleading, as far as it is intelligible. Dr. Mercier's "forensic" or debating power was certainly forceful, but he was none the less pre-eminently a searcher after truth; and whatever the word "analytic" may mean in this context, his philosophical trend of thought would, I take it, be far more appropriately described as "synthetic."

Mercier's literary "style" was almost unique in the purity of its English and its freedom from such peculiarities of phrase or word as mark the writings of most of our best-accredited authors. He had been taught but little Latin and no Greek, but was acquainted more intimately and widely with the best examples of English writers of prose than many professors of the literary craft. Hence it came about that for all the purity and clarity that doubtless raises him as a prose writer above the immense majority of his medical contemporaries and places him high in the ranks of all other writers of the day, he never penned anything in a literary style that could possibly be named after him.

Sir WILLIAM OSLER writes:

May I bring the tribute of a few words to the memory of Dr. Mercier? Though not of Oxford, and a sharp critic of her methods, the university had a great fascination for him, and of late years he not infrequently would spend a few days at the Randolph seeing old friends. It was a rare treat to have him dine in Hall and afterwards in Common Room start a discussion on the need of reform

in our methods of education. He had very clear and sound views, and argued with great ability upon the uselessness of logic as at present taught. He delighted to shock the classical don by unmeasured abuse of Aristotle, whose methods, he claimed, had done irreparable damage to the human mind. With a rich vocabulary and a keen wit, he had no equal among us as a conversationalist. He was best with a few friends after dinner, with enough port, as he would say, to quiet his gout. When last with me, a few months ago, he was in fine form—I never saw such a triumph of mind over matter—and entertained us with stories of his student days and anecdotes of Hughlings Jackson and Jonathan Hutchinson. Maître François must have been a man of this type, and Mercier's trick of tongue was racial. Controversy he loved, and, strange to say, it brought him friends; despite the caustic pen he had a warm, generous heart. The courage with which he bore his many infirmities is a lesson to us all. Never complaining, he worked on to the end, and went down, as he promised, "with all the flags flying." We shall miss the brilliant critic of our ways and words.

ALEXANDER MACALISTER, M.A., M.D., LL.D.,
D.Sc., F.R.S.,

Professor of Anatomy, University of Cambridge.

We regret to record the death, at Cambridge, after a long illness, of Professor Alexander Macalister, who had held the chair of anatomy in the University of Cambridge for the past thirty-six years. Alexander Macalister was born in Dublin in 1844, and received his education at Trinity College, Dublin. He obtained the qualifications of the Irish Royal Colleges in 1861, and the M.B. degree at Trinity College ten years later, proceeding M.D. in 1876. After holding a demonstratorship of anatomy at the Royal College of Surgeons in Ireland he was appointed in 1869 professor of zoology in the University of Dublin, and eight years later he was elected to the chair of anatomy and chirurgery. On the retirement of Sir George Murray Humphry in 1883 from the chair of anatomy in the University of Cambridge, Professor Macalister was appointed to fill his place, and was elected to a professorial fellowship at St. John's College. In the following year he took the M.A. and M.D. degrees at Cambridge. Professor Macalister was a member of the senate of Dublin University, and received the degree of D.Sc. *honoris causa* in 1892. The Universities of Edinburgh, Glasgow, and McGill University, Montreal, also conferred on him the honorary degree of LL.D. He was a Fellow of the Royal Society, and served on the Council in 1894 and 1895. Professor Macalister was the author of an *Introduction to Animal Morphology* published in 1876, the *Morphology of Vertebrate Animals* (1878), and a *Textbook of Human Anatomy* (1889); he contributed many papers upon animal morphology and human anatomy to scientific journals, and a number of small textbooks for students of zoology and physiology. While the study and teaching of anatomy formed his life-work, Professor Macalister had many other interests. He was an ardent Egyptologist, a student of church history, and one of the mainstays of the Presbyterian community at Cambridge. His kindly nature endeared him to many generations of Cambridge medical students.

Professor E. BARCLAY-SMITH sends us the following appreciation:

Within the short space of ten years British anatomy has suffered grievous loss. Turner, Cunningham, Young, Patterson, and Buchanan have passed away, Thane and Symington have vacated their chairs, and now Macalister—the most learned and scholarly of all—has gone.

When in 1883 Humphry forsook anatomy to devote himself exclusively to surgery, it was chiefly through his farseeing influence that Macalister was invited to fill the chair of anatomy at Cambridge. No choice could have been wiser. The great triumvirate—Paget, Humphry, and Michael Foster—had laid the foundations of what was to prove the largest and most flourishing medical school in England. For this success no small share is due to Macalister. He literally threw himself into the work with the utmost zeal and enthusiasm; for thirty-six years his energy and devotion to the Anatomical School have never flagged.

Macalister's young days saw anatomy slowly emerging from a purely descriptive and mechanical study into a

living science. Comparative anatomy, embryology, genetics, and the study of variations were all helping to lift the study of man on to a new morphological plane. In this movement Macalister was a pioneer. Endowed with a marvellous memory, a most comprehensive knowledge of zoology, and a wonderfully well-balanced judgment, he early recognised that fundamental biological principles could be culled from dry anatomical facts.

No pen could do adequate justice to Macalister's knowledge of anatomy. To state that it was stupendous and encyclopaedic is no exaggeration. Although he impressed one as being familiar with everything that had ever been written on the subject, his was no mere book knowledge, but was largely gleaned from the body itself. He seemed to live in the dissecting-room. His technique was marvellous, and no one could approach him in facility and neatness as a dissector. The many beautiful models and preparations which adorn the Anatomical Museum at Cambridge testify to his superb skill as a craftsman.

Macalister was trammelled by no convention. His lectures were unique, and although the fledgeling student might occasionally feel almost suffocated by the flood of unexpected facts which came pouring forth, yet his power of exposition was so wonderful, his diction so graceful, his descriptions so lucid, that, if bewildered, the student could not fail to be charmed.

To me Macalister always seemed old beyond his years; old in learning and ripe judgment, but ever young in sympathy and kindness of heart. Reverenced and beloved by students and staff alike, his great knowledge was at the service of all. No detail was too small, no trouble too great, but he met it with the most sympathetic and active help. Of late years Macalister's contributions to anatomical literature have been few, but his monograph on muscular anomalies and his textbook of anatomy are monuments of learning, originality, and industry, and will keep his memory green for all time.

WILLIAM ANGUS, M.D., CH.B. ABERD., D.P.H. CAMB.,

Medical Officer of Health, City of Leeds.

DR. WILLIAM ANGUS died on August 23rd, at the age of 35. A native of the city of Aberdeen, he was educated at the Grammar School and University of that city. After a distinguished student career he graduated M.B. and Ch.B. in 1907, and M.D. in 1909, being awarded honours for his thesis. He went to London immediately after qualifying, and held resident appointments at the Chelsea Infirmary, Great Northern Central Hospital, St. Pancras Infirmary, and the Hospital for Sick Children, Great Ormond Street. From the first he had a leaning towards preventive medicine. After a course of study at University College, London, he took the Diploma in Public Health at Cambridge in 1910. After sixteen months as Assistant M.O.H. of the County of Hereford he transferred to Ipswich, and in 1913 he went to Leeds as Assistant M.O.H. and Chief Sanitary Inspector. During the illness of Dr. Cameron, the Medical Officer of Health, Dr. Angus carried on the work until June, 1915, when he was appointed Acting M.O.H., and in February, 1917, he was appointed Medical Officer of Health for the city. He believed that as a young and fit man his place during the war was in the army. The serious illness of his chief, and the heavy and responsible duties which fell to his lot in consequence, prevented his hopes being realized. In 1917, however, he was able to make satisfactory arrangements to carry on the public health work of the city, and he received a commission in the R.A.M.C. He went to Egypt, where he was at once appointed A.D.M.S. (Sanitation), 1st Echelon, with the rank of lieutenant-colonel. He threw himself wholeheartedly into this work, and drew up a valuable report on malaria.

Dr. Angus was demobilized in February last, and resumed his duties in Leeds. In every department of his work he had keen interest, but most of all in maternity and child welfare. The Leeds scheme, for which he was responsible, is held to be a model to others. He possessed in an unusual degree the faculty of putting his thoughts into clear and simple language, and was able to put his schemes for the public good before a lay committee in a form that ensured their adoption. The same gift made him a clear lecturer and a sound teacher.

In August he went with his family to St. Cyrus, near Montrose, for a much-needed holiday, and while there

contracted septic tonsillitis, followed by septicaemia, which proved fatal. An athlete in his youth, he had always enjoyed the best of health, and the news of his sudden death came as a great shock to his friends. He endeared himself to all with whom he came in contact. He was singularly quiet and unassuming, and abhorred anything that savoured of advertisement. His sound knowledge and painstaking work gained him the confidence of those he served, while his kindness, courtesy, and sense of justice and fair play gained him the respect of his subordinates.

A colleague writes: Our profession and the community generally are the poorer for the death of William Angus. A man of sterling and transparent honesty and high purpose, he combined in a remarkable degree the qualities of the idealist and the man of action. The possessor of great executive ability and sound common sense, he impressed all with whom he came in contact by his breadth of vision and power of grasping the essentials of a situation. He was a man of few words, but those well chosen, cogent, and to the point. His clarity of expression is well exemplified in his admirable report, just published, on malaria in the Egyptian Expeditionary Force during 1918, a document of high scientific and historical importance. Of the quality of Angus's professional work it is impossible to speak too highly. All of it was done with energy and enthusiasm, and he would tackle the biggest and most difficult problems with the keenest possible zest and determination. In the academic sphere—as professor of public health in the University of Leeds—he was equally successful. He enjoyed to the full the confidence of his colleagues, and one felt that, in these days of change and reconstruction, Angus, the steady, wise, and clear-visioned, was the right man in the right place. Personally, William Angus was a most lovable man and a delightful companion, and it was undoubtedly in his home life, as husband and father, that he showed at his best. His death leaves a gap in the circle of his friends which it will be impossible to fill. To his wife and two little daughters goes out at this time the heartfelt sympathy of all their friends.

M. J. S.

WILLIAM SOLTAN ECCLES, M.R.C.S.ENG.

At the age of 76 there died on September 9th, at Upper Norwood, another member of an old medical family, W. Soltan Eccles. He was the son of the late John Henry Eccles, M.R.C.S., of Plymouth. He entered St. Bartholomew's Hospital in the sixties, was house-surgeon to the late Sir James Paget, and afterwards surgeon to the G.I.P. Railway in Bombay. Retiring from this post, he settled in practice in Upper Norwood, where he was succeeded by his younger son Dr. Annesley Eccles, his elder son Lieut.-Colonel W. McAdam Eccles being now Surgeon to St. Bartholomew's Hospital. Mr. Soltan Eccles was the first to use ipecacuanha in the treatment of dysentery, and while professor of hygiene in the Grant Medical College, Bombay, he was much interested in the treatment of tetanus by oxygen.

H.M.S. *Glowworm* was blown up accidentally on the Dvina river, North Russia, on August 27th, when three officers and eighteen men were killed, and a large number wounded. Among the former was Surgeon Lieutenant RICHARD MORTIMER ROWLAND THURSFIELD, R.N. He was educated at St. Bartholomew's Hospital, and at Cambridge, where he graduated as M.B. and B.C. in 1911, having previously taken the M.R.C.S. and L.R.C.P.Lond. in 1909. After filling the post of house-physician of Chesterfield Hospital, he entered the navy as surgeon on April 3rd, 1912.

A CASUALTY list published on August 25th contained the name of Lieutenant GEORGE HILTON MIDDLETON, R.A.M.C. (S.R.), killed in action, presumably on the Indian frontier, as most of the names in the list were those of Indian officers. He was educated at Edinburgh University, where he graduated as M.B. and Ch.B. in 1918, and took a commission as Lieutenant in the Special Reserve of the R.A.M.C. on October 24th, 1918.

Medical News.

THE annual general meeting of the Medical Defence Union will be held in the Board Room of the Public Medical Service, East Bond Street, Leicester, on Thursday, September 18th, at 4 p.m. Medical practitioners who are not members of the Union are cordially invited by the council to attend this meeting. Those who intend to be present are asked to send their names to Dr. E. Lewis Lilley, 86, New Walk, Leicester.

DR. IDRIS D. EVANS of Cardiff has been appointed a medical assessor on the Pensions Appeal Tribunal.

THE old students' dinner of St. Thomas's Hospital will be held on Wednesday, October 1st, at 7.30 p.m. in the Connaught Rooms, Great Queen Street, W.C.2, with Sir George Makins, G.C.M.G., in the chair.

THE honorary staff of the Manchester Royal Infirmary will give a series of post-graduation lectures and demonstrations each Tuesday throughout the coming educational year, beginning on October 7th.

THE old students' dinner of St. Bartholomew's Hospital will be held at Princes Restaurant on Tuesday, September 30th, at 7.30 p.m., with Dr. W. S. A. Griffith in the chair. The honorary secretary is Sir C. Gordon Watson, 82, Harley Street.

THE lecture advertised for Monday, September 15th, in connexion with Mr. A. J. Walton's course in surgical dyspepsia at the London Hospital Medical College, will be held on the following Wednesday, September 17th, at the usual hour—namely, 4.30 p.m.

A COURSE of lectures for prospective tuberculosis officers, general practitioners, and others, will be given in the Tuberculosis Department of the Royal Institute of Public Health during October, November, and December, on Thursdays at 5 p.m. Particulars can be obtained from the Secretaries, 37, Russell Square, W.C.1.

As we were able to announce a fortnight ago, the Fellowship of Medicine has decided to continue the emergency course it instituted in London last spring. It has arranged with the medical schools in London and other hospitals for an emergency post-graduation course of three months for qualified medical officers from the R.N., R.A.M.C., and R.A.F., from the Dominions and the United States and Allies. The dates and details are published each week in the *Bulletin* of the Fellowship, and full particulars can be obtained on application to the Secretary to the Fellowship, 1, Wimpole Street, London, W.1. The special lectures at the house of the Royal Society of Medicine will be resumed on September 15th at noon.

THREE post-graduation courses in tuberculosis will be given in Paris during the coming academic year under the direction of Drs. Bernard, Bezançon, Calmette, Kuss, Lelulle, Rist, Sergeant, and Teissier. The courses will be of six weeks' duration, commencing on October 20th, 1919, April 15th and June 15th, 1920. They will be essentially practical in nature and will include pathology, bacteriology, physical diagnosis, x ray, laryngology, social welfare and dispensary administration. An opportunity will be given to work each morning in a dispensary or hospital under the guidance of the physicians. The course will be open to graduates in medicine who are citizens of France, allied and neutral countries. The Commission for the Prevention of Tuberculosis in France will grant subventions to a limited number of French physicians. Further details of the course may be obtained from Dr. E. Rist, 5 rue de Magdebourg, Paris.

THE nineteenth congress of the French Urological Association will be held in Paris on October 8th and following days. The question proposed for discussion is the treatment of non-tuberculous pyelo-nephritis in men. The Secretary-General is M. O. Pasteau, 13 avenue de Villars, Paris viii.

THE International Conference of Women Physicians, which is due to open in New York on Monday next, September 15th, will be attended by Dr. Mary Gordon (London) and Dr. Frances Stores Johnston (Edinburgh) from the United Kingdom. The conference will continue until October 25th.

DR. CHARLES ARTHUR OWEN OWENS, V.D., of Long Stratton, and Dr. Legge Pauley, of Pulham Market, have been placed on the Commission of the Peace for the county of Norfolk.

THE legislature of New Jersey has passed a bill making a medical certificate compulsory before marriage can be contracted in the State.

THE Medical Research Committee during the war issued a *Medical Supplement* to the Review of the Foreign Press by the General Staff of the War Office. This Supplement, which was found to be of considerable service, especially to medical men serving abroad, was discontinued last April. It is now being revived in somewhat different form, under the title of *Medical Science, Abstracts and Reviews*, and will be published monthly, commencing in October, at the price of 2s. per volume. The subjects comprised will be surgery, medicine, pathology and bacteriology, neurology, and radiology.

THE third interallied conference for the study of questions relating to war invalids will be held in Rome in October (12th to 17th). The programme includes artificial apparatus for crippled men; physical and functional re-education; help for the blind, deaf, and tuberculous; international legislation for war invalids, material and economic organizations (benefit societies, co-operative production, etc.), and pensions. An exposition of prosthesis will be held in connexion with the conference.

THE annual meeting of the British Association for the Advancement of Science, interrupted for two years by the war, began at Bournemouth on Tuesday of this week and ends on Saturday. The presidential address by Sir Charles Parsons, as well as several of the opening papers by the sectional presidents, dealt largely with the part played by scientific workers during the war. The evolution of sound-locating instruments for the detection of submarines and of the position of enemy guns, directional wireless apparatus, and the development of our imperial resources in the past as well as in the future, were subjects touched upon by Sir Charles Parsons. Professor D. Noël Paton in the Physiological Section, in introducing his paper on "An aspect of protein metabolism," said that the research worker must not only have the overpowering desire for knowledge and the keen zest in its pursuit, but he must also have that coldly critical spirit enabling him to know if he was pursuing a reality or a phantasy. Professor A. D. Waller in the same section demonstrated a method of measuring emotional response by the movements of a light spot on a scale. Professor Arthur Keith in the Section of Anthropology introduced the idea that the endocrine glands, especially the pituitary, are the principal agents in determining the various racial characteristics.

At a meeting of the executive committee of the Medical Sickness and Assurance Society held on August 15th, when Dr. F. J. Allan was in the chair, it was reported that influenza had practically disappeared from the claims made. The new business continued to be large, but it was reported, on the other hand, that an increasing number of medical men were retiring from practice at a comparatively early age, a feature that had not been met with before; if it continued it would be necessary to obtain increased new business to maintain the membership. The claims were under the expectation for the month, but signs were not wanting that the strain on the older members during the last few years was beginning to show in nervous breakdowns, etc., necessitating long rest from all work. The society's sickness contract provides for payment for years if necessary, whereas under many policies the benefits only last a certain time. Over £310,000 has been paid in sickness claims since 1884. All particulars may be had from the Secretary, Medical Sickness and Accident Society, 300, High Holborn, W.C.1.

DURING 1918, 1,805 cases underwent antirabic treatment at the Pasteur Institute in Paris. Of these 5 died of hydrophobia, a mortality of 0.27 per cent. One of these 5 showed signs of hydrophobia during treatment, whilst another failed to attend regularly; the remaining 3 developed symptoms after the course of treatment, in one case as long as four months afterwards. All cases treated at the institute are put into three categories according as the biting animal is experimentally proved to have been rabid, verified as rabid after veterinary examination, or only suspected of rabies. Only one of the fatal cases belonged to this last category. From England there came 18 cases for treatment; none of these developed hydrophobia. In the last thirty years, out of 32,817 cases treated, the total mortality has been 92, or 0.28 per cent.

THE Housing Department of the Ministry of Health has issued standard specifications for cottages drafted so as to cover various alternatives, and therefore adaptable to suit the particular circumstances of each scheme.

THE Medical School of Washington University has received a donation of £1,000 to be used in the investigation of hypotrichiasis. The research will be chiefly in the fields of anthropology and heredity.

A PERMANENT board for the control of venereal diseases has recently been established in Spain by royal decree. It will study all the measures proposed by the Spanish Antivenereal League and report to the Government on the steps to be taken for combating these diseases. Dr. Martin Salazam, director of public health, has stated that it is proposed to create institutions after the English model for prompt diagnosis and treatment. Among the members of the board are several of the leading members of the medical profession, besides representatives of all classes of society in Spain.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology*, Westrand, London; telephone, 2631, Gerrard.

2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate*, Westrand, London; telephone, 2630, Gerrard.

3. MEDICAL SECRETARY, *Medisecra*, Westrand, London; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

J. M. W. asks for information as to literature dealing with advanced thought elaborated from the general tenets of Darwin's *Descent of Man*. Modern theories are sought after as to the place in evolution of such structures as the appendix and the mammary gland in man.

HYPERIDROSIS.

"SUDOR" asks if any reader can suggest treatment for a patient (male), 30 years, in apparently perfect health, who suffers from excessive sweating (bilateral) of face and scalp on the slightest exertion, and even when at rest. Our correspondent has tried all the usual remedies—belladonna in full doses, etc.—but nothing seems to do any good.

INCOME TAX.

"QUAIN" has, from August 1st, given up general practice work and has taken a research appointment at £450 per annum; what is his position with regard to the three years' average?

*(a) As from August 1st he ceases to be liable on the average profits of past years—notwithstanding the fact that fees for past work may still be received—and is liable on the emoluments of his present work, according to the amount accruing for the year of assessment; for example, taking the average profits for 1916, 1917, and 1918 to be £1,100, his liability for the year to April 5th, 1920, would be four-twelfths of £1,100 = £367, plus eight-twelfths of £450 = £300; total, £667. (b) It would appear that "Quain" probably has a title to repayment of tax for 1918-19 owing to the fall in profits due to employment of a locum for six months. Under Sec. 29 of the Finance Act of 1916, where the total actual income of a taxpayer is less by more than 10 per cent. than his assessed income, he is entitled to such repayment as will reduce the total tax paid to the tax on the total actual income. We suggest that "Quain" should write to the surveyor of taxes and ask for a copy of the form of claim used in appeals under Sec. 29 of the Finance Act, 1916.

LETTERS, NOTES, ETC.

WAR HONOURS.

"PERMANENT R.N.V.R." writes: I wonder if the profession is aware of the scurry way the permanent R.N.V.R. doctors have been treated by the Admiralty in the matter of war honours? As a pre-war organization we were mobilized at one hour's notice and taken right away from our practices without any chance of even arranging for locums, mostly to the ruin of such practices. And the great majority of us have served away from our homes until peace arrived. If we were not among the many fortunate medical war workers who were able to combine private practice with war duties. At the beginning of the war we were hailed by the authorities with honeyed words as "having saved the situation for the

R.N. Medical Service by being already trained," as "being the type of war doctor so urgently needed—that is, men of the wide experience of general practice, or physicians and surgeons on the honorary staff of large hospitals who would be used as consultants," etc. Omitting any consideration of pre-war service, it is interesting to know what the Navy really thinks of our war services as judged by a study of the honours lists. Apparently they class us as a crowd of "dud turns," for the highest honour awarded to any permanent R.N.V.R. doctor is the second grade from the bottom of the prolific Order of the British Empire. Do the Admiralty really expect any self-respecting doctor to remain in the R.N.V.R. when their long services have been held to be of such small account? We are sore, and very sore, particularly when we read of the K.C.B.s, K.C.M.G.s, C.B.s, and C.M.G.s given so freely to our Army counterpart, the R.A.M.C.(T.F.).

"ICONOCLAST" writes: With reference to the letter of "Fair Play" (August 23rd, p. 260), surely this bickering about what medals and how many is rather beneath the dignity of members of a learned profession. The only thing that seems to me to matter is what each man's own conscience makes him feel, and if we feel we have done our duty we do not need a row of medal ribbons to remind us of it. Nor can I believe that the said row of ribbons or medals will make a man's children respect him if they have not other more first-hand knowledge of his worth. True, my daughter loves to be told a story in the evening about "Mesopotamia," but I am sure she would think just as much about it if I substituted "Manchester" with the same accent on the name. And if I get a special medal for going to Mesopotamia I shall not forget that I was moved from a job where I was doing some good work to one for which I was thoroughly unfitted. As to the rank of captain against that of major or even lieutenant-colonel, will it make for increased respect, or will it bring one in higher fees? I am speaking, of course, of "temporary officers," as it is different with the regulars whose pay depends on it. The only occasion I can conceive on which an extra medal or two would be of any value would be if we donned our uniform again to mix with a gathering of regular officers. And then we would find we had to console ourselves for our shortcomings by remembering that if we had chosen the career of regulars, we also might have had our extra pips and crowns at the same age, and our rows of O.B.E.'s, C.M.G.'s, and D.S.O.'s. What I say is: "Thank God the war is over, and instead of trying to hang on to our martial glory let us forget it as quickly as possible." But let us try to make sure that in the future there will be no need for questions of "fair play," or for Mons medals and 1914-15 stars, or even for the use of such terms as "volunteer," "Derby man," or "conscript." I mean let us medical, and therefore educated, men—and especially those of us who have been "through it"—see if we cannot preach the doctrine of national service, so that when we have our next war there will be real fair play. Every medical man is a person of influence, and without any trade union or any organization at all each one of us could do a little. That would be something to talk to our sons about; and although they will not bother much about what happened in this war, they will appreciate it when their turn comes for the next effort.

JUNIOR PRACTITIONERS AND THE R.A.M.C.

"F. Y. S." writes: There are few newly qualified men available for the R.A.M.C. for the following reasons:

(1) The men who became medical students in 1914, and would normally qualify this year (a) joined the army as combatants in 1915 and have lost at least a year, (b) joined the navy as surgeon sublieutenants and have lost at least six months, (c) got qualified under the War Regulations of the Conjoint Board in 1918—nine months before normal and joined before the armistice.

(2) Those of us who by reason of (a) and (b) above, or by reason of age, could not qualify in 1918, are advised, now the war necessity has apparently passed, to work for higher examinations, such as the primary F.R.C.S., and not to consider ourselves qualified till we have passed the M.B., which for those who started in October, 1914, cannot be till March, 1920.

(3) Demobilized surgeon sublieutenants are still bound to the navy. In March, 1918, service as surgeon sublieutenant became obligatory. Many men who qualify in the year October, 1919–October, 1920, will therefore be obliged to serve in the navy if required, and if they are not required it naturally follows that they are not obliged to serve in the R.A.M.C.

MOTOR SPIRIT REBATE.

"G. H. S." writes: I think many of your readers will agree that members of the medical profession have a just grievance in that motor spirit rebate is only allowed to them on that spirit purchased and consumed within a period of six months anterior to the date of making claim. One cannot always be referring to dates of purchase and of previous claims, and I, for one, am being constantly left with a balance on which my claim is disallowed. Surely if the spirit is legitimately used in the performance of one's medical duties the rebate claim

should be allowed irrespective of the date of purchase of the spirit. I should be glad of your opinion and that of other readers in this matter.

WARTS ON THE FACE.

DR. R. H. OULTON (Boston Spa) writes: In the correspondence on "Warts on the Face" I have seen no mention of the application of castor oil. For sixteen years I have prescribed oil of ricini for soft multiple warts on the face, a little to be rubbed on the warts frequently. They disappear invariably in less than three weeks, leaving no mark of any kind. The Kafir uses the oil freshly squeezed from the bean. I do not know if it acts any quicker. The only point I find necessary in its use is not to tell the patient what he is using—until he is cured, at any rate—as he will be sceptical and not rub it in diligently.

MOVING PICTURES IN MEDICAL TEACHING.

THE applicability of the cinema as an instrument of medical education is being tested in various countries. As an example may be mentioned a film lesson in anatomy given in America. A skeleton was taken to pieces on the screen and the various parts demonstrated; it was then reconstructed. Operations by well known surgeons are being recorded by cinema photographers, and will be used in medical schools for practical instruction. In France a "film library of medicine" has been formed for teaching purposes. Films are to be taken of all important operations. To prevent abuse the films will be subject to a special censorship.

SCAVENGING AND BIOLOGY.

THE *Journal des Praticiens* is responsible for a story that a doctor who has already won considerable distinction as a biologist has applied to the Paris Hôtel de Ville for a job as a street sweeper. His pension on retirement from army service is insufficient for him to provide a livelihood, therefore he is prepared to sweep the streets till mid-day; in the afternoon he will return to his laboratory.

A SIAMESE MEDICAL JOURNAL.

WE have received Part I of the first volume of the *Medical Journal of the Siamese Red Cross*, published at the Chulalongkorn Memorial Hospital, Bangkok. The patron is the Prince of Pitsanuloke, chairman of the committee of the Red Cross. The honorary editor is the Prince of Chiuat, Director-General of the University Department. The editorial committee consists of Dr. Léopold Robert, director of the Pasteur Institute, Dr. H. Campbell Hight, Minister of Local Government and ophthalmic surgeon to the hospital, Commander Mom Chow Thavara, M.R.C.S., L.R.C.P., and Major Huang Sakda Bholaraksha, M.R.C.S., L.R.C.P., director of the hospital. Dr. Hight contributes a paper on the treatment of trachoma by carbonic snow; Major Bholaraksha writes on the treatment of concussion aphasia by general anaesthesia; Dr. Robert discusses the symptom of itching in human rabies; Dr. R. W. Mendelson of the Local Sanitary Department writes on the spirochaetal infection of ulcers; and G. Coedès, conservator of the National Library, describes public medical assistance in the twelfth century from Sanskrit inscriptions found in Cambodia. The journal is printed in native characters, and translations of the papers are given in English and French.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 34, 38, 39, 40, 41, and 42 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 35, 36, and 37.

THE Home Secretary gives notice that, in consequence of the resignation of Dr. J. L. Russell, one of the medical referees under the Workmen's Compensation Act, 1906, for County Court Circuit No. 12, the appointment held by him is vacant. Applications for the post should reach the Private Secretary, Home Office, Whitehall, not later than September 25th.

THE Chief Inspector of Factories announces the following vacant appointments: Brigg (Lincoln), Belper (Derby), Birmingham East, Dartford (Kent), Erdington (Warwick), Hailsham (Sussex), Hanley (Stafford), Ulceby (Lincoln).

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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NOTE.—It is against the rules of the Post Office to receive *postes restantes* letters addressed either in initials or numbers.

THE INTERNATIONAL CONTROL OF DRUGS OF ADDICTION.

THE PRESENT POSITION OF THE INTERNATIONAL
OPIMUM CONVENTION, 1912.

BY

SIR WILLIAM J. COLLINS, K.C.V.O., M.D., M.S.,
B.Sc.LOND., F.R.C.S.ENG.,

A BRITISH PLENIPOTENTIARY AT THE HAGUE INTERNATIONAL
OPIMUM CONFERENCES, 1911-12, 1913, AND 1914.

It may be of interest to review, at the present time, the question of the international control of drugs of addiction and the present position of the International Opium Convention of 1912, which is the chief instrument whereby the traffic in so-called "habit-forming drugs" may be restricted to medical and legitimate purposes only.

The BRITISH MEDICAL JOURNAL of August 31st and September 14th, 1912, contained full accounts of the Proceedings of the First International Opium Conference held at the Hague in the winter of 1911-12, and of the Convention which was there and then drawn up and signed by the twelve Powers there represented. In the JOURNAL of April 10th, 1915, there was an account of the Proceedings of the Third International Opium Conference, held at the Hague in June, 1914, only a few weeks before the outbreak of the great war. In that article a summary of the then position contained in a report made by Mr. Max-Muller and myself, who had acted as British Plenipotentiaries at all the three Conferences, was quoted as follows:

"At the close of the first Conference twelve Powers had signed the Convention which they had participated in drafting, and thirty-four Powers were invited to attach their signatures.

"At the close of the second Conference thirty-four out of the total of forty-six Powers had signed the Convention, and twelve had not then done so, while eight Powers had either ratified it or were disposed to do so.

"At the close of the third Conference forty-four out of the total forty-six Powers have signed the Convention, eleven have ratified it, and fourteen more are disposed to do so, while not one of the remaining nineteen signatories has expressed any intention of not proceeding to put the Convention in force. Moreover, all the signatories present were desirous that respectful representations should be pressed upon those which had not deposited their ratifications to do so as soon as possible."

By a resolution of the Conference it was further provided that a special protocol should be opened at the Hague for signature by such Powers as were willing to proceed to put the Convention in force without awaiting ratification by other signatory Powers.

Thus the matter stood when the conflagration broke out in August, 1914, and put a stop for five years to any further international proceedings as regards the greater part of Europe.

In our report to the Foreign Office (Parliamentary Paper Cd. 7813) my co-delegate and I said:

"We are under no illusion as to the influence which events which have occurred since the rising of the Conference must have upon all international concert of the nature contemplated by the Opium Convention. Humanitarian aims of the kind which invoked these three Conferences and inspired their constructive work must suffer eclipse or serious retardation during a time of warfare. We nevertheless recall that one of the first objects attained in 1815 at the Congress of Vienna, after the close of the Napoleonic wars, and on the initiative of the British representative, was an international declaration of the abolition of the slave trade.

"We trust that when, in the course of time, international relations are resumed, the progressive stages in abolishing the abuse of opium and other kindred drugs may be resumed, and that the efforts of the three International Conferences may achieve the beneficent objects which from first to last inspired those who have borne their part in these deliberations."

On October 24th, 1918, when there appeared some prospect of the cessation of hostilities, I put a question to Lord Robert Cecil in the House of Commons as to the position of ratification and enforcement of the Convention and of the special protocol of 1914. Lord Robert Cecil replied:

His Majesty's Government are still considering the question of putting into force some or all of the articles of the International Opium Convention without waiting for its ratification by all the signatory Powers.

The armistice was signed on that ever-memorable date, November 11th, 1918, and it seemed important to press the question of the international control of drugs of addiction upon the notice of the public, and especially on that of our representatives at the approaching Peace Conference at Paris. On December 24th, 1918, I had a letter in *The Times* calling attention to recent disclosures of the abuse of cocaine, opium, and morphine, urging the need for the restrictions which the enforcement of the Convention would impose; and action by our representatives at the Peace Conference, adding "the occasion is ripe and the opportunity a great one."

On March 10th, 1919, Sir James Agg-Gardner kindly put a question for me to Mr. Cecil Harmsworth, Under-Secretary for Foreign Affairs, and was assured that

His Majesty's Government hope to be able to bring the question of international co-operation in the control of drugs before the Peace Conference, with a view to the adoption of a resolution binding the Powers represented at the Conference to the speedy enactment and enforcement of the laws, regulations, and measures contemplated by the Opium Convention of 1912 for the purpose of confining to medical and legitimate purposes the manufacture, sale, and use of opium, morphine, cocaine, and similar noxious and habit-forming drugs, such a resolution to be made binding on the enemy Powers.

In correspondence with Lord Robert Cecil, then in Paris, I received his assurance that it was hoped that "a satisfactory solution of the question of the Opium Convention would be arrived at" at the Conference; and in his speech at the public session of the Conference on February 14th, on the League of Nations Covenant, he urged the need for effective international co-operation on this question.

On April 29th the text of the League of Nations Covenant was published, and on June 28th the whole Treaty of Peace, including the revised Covenant, became public property.

An examination of the Treaty of Peace shows that under its provisions great progress is secured for the operation of the International Opium Convention of 1912. Under Part I, article 23 (c)—that is to say, in the Covenant of the League of Nations, it is provided that—

"Subject to and in accordance with the provisions of International Conventions existing or hereafter to be agreed upon, the members of the League will entrust the League with the general supervision over the execution of agreements with regard to the . . . traffic in opium and other dangerous drugs.

Again, under Part X, Section II, dealing with treaties, there is a very valuable article, No. 295, specifically providing for the ratification and enforcement of the Opium Convention of 1912, alike by signatories and non-signatories, who have hitherto failed to ratify, as well as the endorsement by them of the Special Protocol adopted by the Third Opium Conference in 1914. Article 295 runs as follows:

Those of the High Contracting Parties who have not yet signed, or who have signed but not yet ratified, the Opium Convention signed at the Hague on January 23rd, 1912, agree to bring the said Convention into force, and for this purpose to enact the necessary legislation without delay and in any case within a period of twelve months from the coming into force of the present Treaty.

Furthermore, they agree that ratification of the present Treaty should in the case of Powers which have not yet ratified the Opium Convention be deemed in all respects equivalent to the ratification of that Convention and to the Signature of the Special Protocol which was opened at the Hague in accordance with the resolutions adopted by the Third Opium Conference in 1914 for bringing the said Convention into force.

For this purpose the Government of the French Republic will communicate to the Government of the Netherlands a certified copy of the Protocol of the deposit of ratifications of the present Treaty, and will invite the Government of the Netherlands to accept and deposit the said certified copy as if it were a deposit of ratifications of the Opium Convention and a signature of the Additional Protocol of 1914.

Among the concluding paragraphs of the Treaty of Peace is one providing that it will itself come into force from the date upon which the first *procès-verbal* of the deposit of ratifications is drawn up announcing that the Treaty has been ratified by Germany on the one hand and by three of the Principal Allied and Associated Powers on the other.

Now, according to the latest note from the Hague, with which the Netherlands Minister, His Excellency M. de Marées van Swinderen, has courteously favoured me, the

Powers may be classified as follows in regard to their attitude towards the Opium Convention of 1912:

A. *Signed and Ratified Convention and Signed Special Protocol.*

- | | | |
|--------------|-----------------|-------------------|
| 1. China. | 3. Netherlands. | 5. United States. |
| 2. Honduras. | 4. Norway. | |

B. *Signed and Ratified Convention but not Signed Special Protocol.*

- | | | |
|-------------------|---------------|----------------|
| 1. Belgium. | 6. Guatemala. | 11. Spain. |
| 2. Brazil. | 7. Italy. | 12. Sweden. |
| 3. Denmark. | 8. Nicaragua. | 13. Uruguay. |
| 4. Ecuador. | 9. Portugal. | 14. Venezuela. |
| 5. Great Britain. | 10. Siam. | |

C. *Signed Convention but not Ratified.*

- | | | |
|----------------|-----------------|------------------|
| 1. Argentine. | 9. Bulgaria. | 17. Panama. |
| 2. Chili. | 10. Columbia. | 18. Paraguay. |
| 3. Costa Rica. | 11. Cuba. | 19. Persia. |
| 4. France. | 12. Dominica. | 20. Peru. |
| 5. Haiti. | 13. Germany. | 21. Russia. |
| 6. Luxemburg. | 14. Greece. | 22. Rumania. |
| 7. Mexico. | 15. Japan. | 23. Salvador. |
| 8. Bolivia. | 16. Montenegro. | 24. Switzerland. |

The first seven of these had before the war expressed their intention to ratify.

D. *Not Ratified nor Signed Convention.*

- | | | |
|--------------------|------------|------------|
| 1. Austro-Hungary. | 2. Serbia. | 3. Turkey. |
|--------------------|------------|------------|

Greece, although not appearing as a signatory in the official list from the Hague, was announced by M. Loudon as having signed without any reserve at the final session of the 1914 Conference, and is therefore included under C.

It will be observed that by the terms of the Treaty of Peace all those Powers which are party to it, whether signatories or not of the Opium Convention and if signatories who have not ratified it, are at once transferred into the first category as if they had both ratified the Convention and signed the Special Protocol. This applies to:

- | | | |
|-------------|------------|-----------------|
| 1. France. | 5. Greece. | 9. Rumania. |
| 2. Japan. | 6. Haiti. | 10. Serbia, and |
| 3. Bolivia. | 7. Panama. | 11. Germany. |
| 4. Cuba. | 8. Peru. | |

The first two being among "the Principal Allied and Associated Powers" and the last being the other "High Contracting Party." Presumably the new Powers mentioned in the Treaty of Peace—that is, the Hedjaz, Liberia, Poland, Slovene State, and Czecho-Slovakia—will be in the same case, as they have "not yet signed," not having yet been invited to do so, and therefore "have not yet ratified," the Opium Convention of 1912. All these Powers will therefore be under obligation "to enact the necessary legislation without delay, and in any case within a period of twelve months from the coming into force of the present Treaty," and will be held to have signed "the Special Protocol of 1914 for bringing the Convention into force."

It does not appear from the terms of the Peace Treaty that those Powers which had already ratified the Opium Convention will be similarly bound by the terms of the Special Protocol of 1914, unless and until they have signed it. This applies to the case of Great Britain and of Belgium, Brazil, Denmark, Ecuador, Guatemala, Italy, Nicaragua, Portugal, Siam, Spain, Sweden, Uruguay, and Venezuela.

The cases of Bulgaria, Austria, Hungary, and Turkey remain to be dealt with.

It is pretty clear that some time must elapse before all the Signatory Powers and those who have not already signed are in line with those which either voluntarily or under duress shall have undertaken to conform to the Special Protocol—that is, to put the Convention into force without waiting for the adhesion of the rest. It would obviously be advantageous if all the fourteen Powers which have ratified the Opium Convention were voluntarily to sign the Special Protocol forthwith. The coming into force of a Treaty or Convention (*mise en vigueur*) is not the same thing as putting into force the legislation which flows from that Treaty, and it behoves all those Powers which desire to make up for the delay which the war has caused in the effective international control of drugs of addiction to get ready the legislation which ratification of and putting into force of the Convention imply.

To this end and with a view to ascertain how we

ourselves stand in this matter, I requested Sir James Agg-Gardner to put the following question on May 7th, 1919:

Whether, in view of the incorporation of the effectuation of the Opium Convention in the Covenant of the League of Nations, and the amendment of pharmacy law which must follow the enforcement of the Convention, it is proposed to introduce legislation for that purpose this session.

The Home Secretary replied:

Instructions have already been given for the preparation of a bill on the subject, but I cannot say at present whether it will be possible to pass it into law this session.

Now, it will be remembered that under D.O.R.A. Regulations 40 and 40 b certain restrictions were temporarily placed upon the supply to the public of opium and cocaine, and of opium, morphine, and cocaine to members of His Majesty's Forces, and that by proclamation made under the Customs Consolidation Act, 1876, the import of cocaine and opium was restricted as if the drugs were "arms, ammunition, or gunpowder."

These temporary limitations, which are considerably in excess of our ordinary pharmacy legislation, but yet not thoroughly effective, will before long come to an end, and it becomes a question whether the new legislation flowing from the Opium Convention will be ready and in force against their withdrawal. Again by the favour of Sir James Agg-Gardner, the following question was recently addressed to the Home Secretary:

Whether Regulations 40 and 40 b under the Defence of the Realm Act, restricting the use of opium, morphine, and cocaine, will cease to be operative before the projected pharmacy legislation to give effect to the provisions of the International Opium Convention, 1912, has been enacted.

Mr. Shortt's rather cryptic and cautious reply was:

I hope Parliament will agree to keeping Regulation 40 b in force long enough to allow legislation to be passed to give effect to the International Convention.

Inasmuch as there is considerable hostility to keeping D.O.R.A. in operation or to continuing regulations made under that exceptional instrument, as well as grave doubt as to the legality of proclamations issued under the Customs Consolidation Act, 1876, restricting the import of commodities not *ejusdem generis* with "arms, ammunition, and gunpowder," it is of the utmost importance that Great Britain should set an example by expediting the enactment of such pharmacy legislation as will be necessitated by the coming into force of the Opium Convention.

One need only cite two of the articles of that Convention to show how far-reaching the reform of our present pharmacy laws will require to be. Article 9 of the Convention provides that:

"The Contracting Powers will enact pharmacy laws and regulations, so as to limit the manufacture, sale, and use of morphine, cocaine, and their respective salts to medical and legitimate uses only, unless such laws already exist. They will co-operate amongst themselves in order to prevent the use of these drugs for any other purpose."

Various measures are then set out whereby the Contracting Powers will use their best endeavours to control the manufacture, import, sale, distribution, and export of these aforementioned drugs. Moreover, by Article 14 (which reproduces a resolution I submitted as chairman of the Technical Commission) it is further provided that—

"the Contracting Powers will apply the laws and regulations for the manufacture, import, sale or export of morphine, cocaine, and their respective salts, to (a) medicinal opium; (b) to all preparations (official and non-official, including the so-called anti-opium remedies) containing more than 0.2 per cent. of morphine or more than 0.1 per cent. of cocaine; (c) to heroine, its salts and preparations, containing more than 0.1 per cent. of heroine; (d) to every new derivative of morphine, cocaine, or their respective salts, or to any other alkaloid of opium which, as the result of scientific research, shall be generally recognized as giving rise to analogous abuse or as producing the same injurious effects."

It would be well if the Home Office bill, which has already been drafted, were made public as soon as possible, not only that pharmacists and the public generally may study its terms, but also to indicate to our Dominions and other Contracting Powers the nature of the control of the manufacture, import, sale, distribution, export, and use of these drugs of addiction which the Convention requires and the bona fides of Great Britain in giving effect to those restrictions for which her representatives were instructed to press.

ON THE NATURE OF RABIES AND ANTIRABIC TREATMENT.

BY

SIR DAVID SEMPLE, M.D., D.Sc., D.P.H.,

LIEUT.-COLONEL R.A.M.C.(R.).

CONSULTANT IN RABIES TO THE MINISTRY OF HEALTH; LATE DIRECTOR OF THE PASTEUR INSTITUTE, INDIA, AND OF THE CENTRAL RESEARCH INSTITUTE OF INDIA; LATE DIRECTOR-GENERAL OF THE PUBLIC HEALTH DEPARTMENT, EGYPT.

(Concluded from p. 336.)

X. ANTIRABIC TREATMENT.

PERSONS bitten by rabid animals should apply for treatment as soon as possible; not a day, not even one hour, should be unnecessarily wasted. This applies more especially to cases in which the bites (or other methods of infection) are situated on the head, face, or neck, and to severe bites on the wrists or hands, or on the exposed skin where nerves are plentiful.

The object aimed at is to immunize the patient against rabies before the virus implanted in the wound by the animal which inflicted the bite reaches the nerve centres. Should the virus succeed in reaching the nerve centres before immunity has been conferred, no treatment yet devised will save the patient. These few remarks, taken in conjunction with the explanations in Section IV as to how infection takes place, are the reasons why early treatment is advocated.

Antirabic Vaccines.

The material used for antirabic treatment is prepared either from the spinal cords, or from the brain, medulla, and spinal cords of rabbits which have died from rabies after inoculation with "fixed" rabies virus.

The virus, being of a fixed virulence, may be termed a "vaccine" when prepared for use; but the method of preparation varies in different Pasteur Institutes.

Dried Cord Method.

Pasteur's original system was to dry the spinal cords hung in glass jars over caustic potash or caustic soda, under fixed conditions as to time, temperature, humidity of the atmosphere and the exclusion of light, and for varying periods up to fourteen days from the time the fresh cords were removed from the rabbits. When a cord was treated under these conditions for fourteen days he found that it had lost all its virulence, but when dried for three days the virulence was practically the same as a fresh cord. Attenuation of the virus in the cords commences after the third day of drying, and is completed from the twelfth to the fourteenth day, but is, practically speaking, a weak or attenuated virus after the eighth or ninth day.

From cords treated in this manner a series of vaccines of different degrees of strength can be prepared. Pasteur commenced treatment by injecting vaccines prepared from cords which had been dried for fourteen days, and then from cords which had been dried for thirteen, twelve, eleven, ten days, and so on down the scale to cords which had been dried for three days only. By this means he was able to commence the immunization of his patients with vaccines which were perfectly safe, but established a degree of immunity sufficient to render the subsequent injection of living and virulent virus also quite safe.

The dose for an adult consists of 1 cm. of cord finely ground down in 3 c.cm. of a sterile fluid such as normal saline solution, and injected into the subcutaneous tissue on the side of the abdomen; it corresponds to about a 5 per cent. cord emulsion. This method modified in various directions is what is known as the "dried cord method" of treatment. It has undergone many modifications since Pasteur's time, but the system is essentially that of Pasteur. A modification which is sometimes used, especially when the vaccine is sent to a distance, is to dry the cords from two to six days and preserve them in glycerin in a cool chamber.

Dilution Method.

Some time after Pasteur inaugurated his system of treatment Högyes of Buda-Pesth introduced a method of anti-

rabie treatment by injecting high dilutions of living and virulent virus to begin with, and gradually going on to lower dilutions. In this method, which is known as the "dilution method" of treatment, it is convenient to begin by making a 1 per cent. dilution of virus from the fresh cord or medulla, and from this to prepare any dilutions required. The treatment is commenced by the injection of a highly diluted virus, such as 1 in 10,000, or 1 in 6,000 in some institutes, and 1 in 4,000, or even 1 in 2,000 in others, and gradually going on from day to day to a less diluted virus, such as 1 in 500, 1 in 200, or even a 1 per cent. dilution.

This method has been adopted by several antirabic institutes. It has the merit of being easier to carry out and less expensive than the method advocated by Pasteur and his followers; but whether it is the safest and best method which science can devise in the absence of exact knowledge about the causal micro-organism of rabies is a disputed point.

Antirabic Serum.

In some institutes the use of an antirabic serum prepared by immunizing sheep or horses has been had recourse to either as a preliminary to the usual antirabic treatment being carried out or to sensitize the living vaccine. In 1902, when Director of the Pasteur Institute of India, Kasauli,⁴ I immunized two horses to a very high degree with rabies virus; they produced a serum which was highly rabicidal when mixed with living rabies virus. In a mixture of 1 part serum to 3 parts of a strong virus emulsion the virus was destroyed in a few minutes at room temperature; normal horse serum is devoid of this property. I used the serum hypodermically as a preliminary to the ordinary treatment in badly bitten and late cases, my object being to confer a passive immunity pending the acquirement of an active and more lasting immunity as the result of treatment. Preliminary treatment with antirabic serum was administered to 202 cases; but owing to the fact that the serum treatment was followed by ordinary treatment, it is difficult to say whether any real benefit was derived from the serum. In a number of the more severely bitten of these cases, most of them bitten by jackals, the serum was also injected into and around the wounds, with the object of utilizing its rabicidal effects on the virus locally; none of these cases developed hydrophobia; but here again the treatment which followed the serum may have been all that was required to save them. The subject is one which requires further investigation.

It will be noted that in the methods of treatment I have described a living virus is used. In the "dried cord" method a living virus is not used until after the commencement of treatment by a dead or attenuated virus; but in the "dilution" method, and in the method of drying the cords for a short time and preserving them in glycerin, a living virus is used from the outset.

It may be asked why, since in the use of any vaccine safety and efficiency are the objects kept in view, and when these objects can be attained by a dead vaccine, a living one should be employed.

We know that dead bacterial vaccines are safe and efficient in producing immunity in man and animals. No one would feel justified in using living streptococcus, staphylococcus, or plague vaccine on a human subject when dead vaccine would answer the same purpose. On the other hand, we know that a living typhoid or a living cholera vaccine could be used without any risk of conveying the disease to the person inoculated; yet for obvious reasons it would be very inconvenient, and possibly risky, to use these vaccines outside the laboratory where they had been prepared, and not at all convenient and practical in the laboratory, so it is now the custom to use them only after they have been killed and standardized.

Several workers have obtained evidence of the immunizing properties of dead rabies virus. Poor,⁵ recording his own experiments with rabies virus killed by heating, mentions that Ferri; as the result of his experiments, recommended the use of dead virus only, his plan being to kill the virus with carbolic acid, and store the emulsions for future use. He also mentions that Heller, in his work on protective inoculation against rabies (Jena, 1906), gave the experience of others in the use of virus killed in various ways—for example, heat and by glycerin, and his own experiments in the use of virus killed by grinding according to the methods of McAdyeen.

Dead Rabies Vaccine.

Early in 1910, when Director of the Central Research Institute of India, I took up the question of the preparation of a safe and efficient antirabic vaccine. A full and detailed account of my experiments on the effects of heat and carbolic acid on various dilutions of rabies virus, the preparation of a dead antirabic vaccine by killing the virus with carbolic acid, and the animal experiments upon which the claims for safety and efficiency are based, will be found in *Scientific Memoir No. 44*.⁶

Method of Preparation.

The vaccine is prepared from the fresh brain, medulla, and spinal cords of rabbits which have died from rabies after inoculation with "fixed" rabies virus. The material is finely ground down in 8 per cent. dilutions in sterile normal saline solution to which has been added 1 per cent. carbolic acid; it is then filtered into a sterile glass receptacle through fine muslin to remove any particles of fibrous tissue which may be present, and kept at a temperature of 37° C. for twenty-four hours. At the end of this period the virus is dead; it is now diluted with an equal volume of sterile normal saline solution, filled into suitable bottles (20 c.cm. bottles), capped with rubber caps and sealed with melted paraffin wax. Aseptic technique is observed throughout. On the preparation of a "brew" two tests are carried out—one for sterility and the other by inoculating a rabbit subdurally to prove that the virus is dead.

It will be noted that this method of preparation gives a 4 per cent. dilution of dead virus in 0.5 per cent. carbolic acid normal saline solution—a dilution suitable for treatment purposes, or which could be still further diluted if considered necessary.

This vaccine retains its immunizing properties unimpaired for months, three months at least, and probably for a much longer period, when kept in a moderately cool place and not exposed to the light.

In the preparation of a dead antirabic vaccine it is necessary to choose between two practical methods of killing the virus—namely, by heat or by carbolic acid or preparations of a somewhat similar nature. Carbolic acid is the method which produces least change in the vaccine material and interferes least with its keeping properties.⁷ The time required for weak solutions of carbolic acid to kill rabies virus depends on the dilution of the virus material and the temperature at which the mixtures (virus and carbolic acid) are kept.

One per cent. dilutions of rabies virus in a half per cent. carbolic acid normal saline solution remain alive and virulent for twenty days at room temperature, and are not killed in twenty-four hours at 37° C.

One per cent. dilutions of rabies virus in a one per cent. carbolic acid normal saline solution remain alive and virulent at room temperature for four days, but not for six days; whereas eight per cent. dilutions of the virus in a one per cent. carbolic normal saline solution are killed in twenty-four hours at 37° C.

The vaccine can be prepared in any well equipped bacteriological laboratory, and by any bacteriologist skilled in the technique of the preparation of bacterial vaccines. From such a laboratory it could be sent to various centres for treatment without running any risks of interfering with its efficiency, and where any medical man with a knowledge of the administration of bacterial vaccines could carry out the treatment of patients bitten by rabid animals.

In a country where rabies is prevalent the advantages of such a system in providing a safe and efficient vaccine are enormous. The expenses connected with the preparation of the vaccine and the provision of a few centres are small; long and costly journeys are avoided; and, most important of all, patients come under early treatment, and a treatment which is efficient and free from risks. Knowing that it is a dead vaccine we can dismiss any doubts as to the possibility of its producing the disease which it is intended to prevent. The proof of its efficiency has been established in India, where it has been in use since 1912.⁸

At the Pasteur Institute of India, Kasauli, between the years 1912 and 1916, a total of 22,519 persons were treated by carbolyzed vaccine, with 0.68 per cent. of failures. Of the 22,519 persons treated, 2,009 were Europeans, and these gave 0.19 per cent. of failures. These results must be looked upon as extremely good; they compare most favourably with the results obtained by any other method of antirabic treatment.

For a comparison of the results obtained by carbolyzed antirabic vaccine in India with the results obtained in

European countries by other methods of treatment the statistics of Europeans in India should be taken, and for the following reasons:

1. Native patients, owing to their thin and scanty clothing, are generally more severely bitten than Europeans, and much more liable to be bitten through the bare skin.

2. Jackal bites are more common in Indians than Europeans.

3. Many of the Indian patients waste valuable time before coming for treatment, whereas Europeans come early as a rule.

4. In only a few cases is cauterization attempted when an Indian is bitten, and, when it is, hardly ever is it early and efficiently carried out.

5. Many Indian patients arrive with neglected and suppurating wounds; in Europeans this is quite the exception. In the treatment of Europeans in India as compared with Indians the factors noted are a minor drawback, and the circumstances in which they are bitten and treated are fairly comparable to what takes place in a civilized European country.

(a) At the Pasteur Institute, Paris, between the years 1886 and 1918 a total of 39,721 persons received antirabic treatment (dried cord system), with 0.39 per cent. failures.⁹ In 1886 the failures were 0.94 per cent.; in 1887, 0.79 per cent.; in 1888, 0.55 per cent., and in 1894, 0.5 per cent. In three of the years, namely, 1908, 1912, and 1913, there were no failures, and in all the other years they were under 0.5 per cent., and in four instances under 0.2 per cent.

(b) At the Pasteur Institute of India, Kasauli, between the years 1912 and 1916, a total of 2,009 Europeans received antirabic treatment with carbolyzed antirabic vaccine, with 0.19 per cent. failures.¹⁰

Of these 2,009 patients, 400 were treated in 1912, with no failures; 448 in 1913, with 1 failure=0.24 per cent.; 461 in 1914, with 1 failure=0.21 per cent.; 322 in 1915, with no failures; and 378 in 1916, with 2 failures=0.52 per cent. I have not seen the Kasauli figures for 1917 and 1918, nor have I been able to procure the statistics from the Pasteur Institutes in Southern India and Burma, where carbolyzed vaccine is also in use, but the comparison I have drawn between the Paris and Kasauli results is quite sufficient to establish the efficiency of carbolyzed antirabic vaccine.

In the statistical figures of the Pasteur Institute, Paris, and of all other antirabic institutes, those who contract hydrophobia during treatment, or within a period of fifteen days of the last inoculation, are not reckoned as failures of treatment, owing to the fact that their nerve centres became invaded by the virus of the biting animal before treatment was completed and immunity established. This is the explanation given by Pasteur, and on it is based the necessity for early and efficient treatment (see Section IV).

Persons receiving antirabic treatment are inoculated daily, and for a period of from fifteen to eighteen or twenty-one days, according as to whether light, medium, or intensive treatment is considered necessary. Each case should be dealt with on its own merits. The points taken into consideration in determining a line of treatment for any given patient are: number of bites, depth and severity of bites; position of the bites—such as whether on the head, face, or neck, or through the exposed skin on any other part of the body; whether through the clothing; whether the wound was treated early and efficiently; the evidence to hand as to whether the animal which inflicted the bites was rabid; and, most important of all, the time which elapsed before the patient came for treatment.

It will be noted that a study of these points means an attempt to arrive at a conclusion as to the amount of virus implanted in the wound, the risks of infection, and the line of treatment indicated.

Antirabic treatment is now being carried out in England with carbolyzed antirabic vaccine prepared at the laboratories of the Ministry of Health and sent out to centres where treatment is given. Instructions accompany the vaccine giving all necessary details connected with its administration, and examples of light, medium, and intensive treatment.

XI. THE PREVENTION OF RABIES IN DOGS.

As this is a veterinary subject in the hands of competent veterinary authorities of the Ministry of Agriculture and Fisheries, who may be trusted to deal with it efficiently,

I need only mention that the outstanding points connected with prevention in a country like England are:

1. Application of the muzzling order for a sufficiently long period.
2. Restriction on the movement of dogs into or from scheduled areas when muzzling is applied locally; in the event of universal muzzling being applied it would still be necessary to restrict the movement of dogs.
3. A strict quarantine for a fixed period on the importation of all dogs from abroad.

On the continent of Europe the question is more difficult on account of neighbouring countries, but in the British Isles this difficulty does not arise.

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⁴ See Third and Fourth Reports of Pasteur Institute of India, Kasauli. ⁵ The Immunizing Properties of Killed Rabies Virus; *Collected Studies from the Research Department of the City of New York*, vol. iv, September, 1910. ⁶ Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India, No. 44: *On the Preparation of a Safe and Efficient Antirabic Vaccine*, by Sir David Semple, Director, Central Research Institute of India, 1911 (obtainable from agents in England for the sale of books published by the Government of India). ⁷ Semple and Matson: *On the Preparation and Keeping Properties of Antityphoid Vaccines*, *Lancet*, August 14th, 1909. ⁸ Sixteenth Annual Report of the Pasteur Institute of India, being the Report for 1916. ⁹ *Annales de l'Institut Pasteur*, Juillet, 1919. ¹⁰ Sixteenth Annual Report of the Pasteur Institute of India, Kasauli, being the Report for 1916.

ACUTE DIFFUSE PERITONITIS:

A SERIES OF TWENTY-ONE CONSECUTIVE CASES.

BY

BASIL HUGHES, D.S.O., F.R.C.S.,

MAJOR R.A.M.C.(T.F.).

THE peritoneal cavity is one large complex bursal sac containing, in addition to several diverticula, the hollow and solid abdominal viscera. The viscera, which are retroperitoneal, possess a liberal blood supply, particularly the intestine. The main diverticula or pouches are the recto-vesical, the kidney pouches, the retro-caecal, the retro-sigmoid, the hepatico-renal, and the pouches about the termination of the duodenum.

It would naturally be surmised that in infection these pouches would form suitable places for the development of sepsis, and eventually localized abscesses, but in reality they do not. The peritoneum, however, offers a large area for the absorption of toxins, and the rate of absorption is remarkably rapid, being greater in the upper half than in the lower. The lymphatics are very numerous, and eventually form the truncus lymphaticus intestinalis, which opens directly into the receptaculum chyli.

Peritonitis is initiated by access of virulent infection into the peritoneal cavity, the organisms being usually intestinal in origin. Peritonitis may be caused either by trauma or disease.

The war has provided abundant material for the study of this grave condition, and different observations and disappointments have suggested a method of treatment which has given most encouraging results in twenty-one consecutive cases.

When infection has gained access to the peritoneal cavity the first change is one of hyperaemia of and exudation into the subperitoneal tissue of the part around the infected focus. This is followed by the exudation of a fluid, which rapidly becomes turbid, into the peritoneal cavity in the neighbourhood of the infected focus. If the fluid be examined microscopically, it will be seen to contain large healthy staining endothelial cells, a few polymorphonuclear leucocytes, also staining well, but no bacteria. This can always be demonstrated in fluid present in a case of acutely inflamed appendix which has not perforated, and for which an early operation has been performed. Further, if the fluid be allowed to stand or be centrifuged, the cellular element will sink and leave a clear supernatant straw-coloured fluid. Cultures have in some instances shown the presence of staphylococci, but it is doubtful if these organisms did not come from the skin. The fluid, differing in no way from that secreted into a large joint after penetration by a septic foreign body, is highly protective in character, and at first possesses first-rate bactericidal powers. While this fluid is being secreted Nature is making a further effort to localize the diseased focus by the formation of adhesions.

When the gut is damaged, as in a gunshot wound, there is abundant proof that peristalsis is immediately arrested, and remains in abeyance so long as it is not further stimulated. In other words, extravasation of intestinal contents will be small in extent, especially if the patient be given morphine and kept quiet. Transport over rough ground or by motor is sufficient to start peristalsis anew and so increase extravasation, whereby a larger stream of infection gains access to the peritoneal cavity. It is, then, possible, though there is no direct proof, that in acute abdominal conditions other than gunshot wounds peristalsis is arrested or modified.

Should Nature fail in her attempt to localize the inflammatory focus, and should such failure be intensified by treatment—for example, the administration of an aperient for a pain in the stomach—then infection will certainly be disseminated, either slowly or rapidly, throughout the peritoneal cavity, and no factor is more potent in bringing this about than an active peristalsis. The whole surface, especially that clothing the intestine, becomes actively hyperaemic and swollen, it loses its lustre, protective fluid is poured out, lymph of a plastic nature is deposited on the gut binding together coils of small intestine, the flanks and pelvis contain turbid fluid, and the intestine rapidly becomes distended.

The next stage is an impairment of the vitality of the fluid poured out into the peritoneal cavity. The fluid is slowly converted into pus, and this is enhanced by the increasing intra-abdominal tension brought about by an ever-distending gut, which exerts a serious brake upon the circulation in the vessels of the mesentery. The rate of destruction of the vitality of the protective fluid depends upon the degree of intra-abdominal tension, the virulence of the infection, and the patient's general resistance.

Though the fluid at this stage may often be referred to as pus, it is only partially pus; it is a question of degree, and degree in this respect is a highly important question. It is possible to gauge this degree clinically to some extent by the severity of the symptoms of toxæmia.

It seems that the presence of many plastic adhesions binding together coils of small intestine is of good omen and indicative of a high degree of resistance. At this particular stage complete resolution may take place with treatment. On the other hand, if the protective fluid dies it forms pabulum for the bacteria present, and it eventually becomes pus. Septic absorption under these conditions becomes extreme, and finally death follows from toxæmia.

There seems to be little doubt that "peristalsis plays a large part in the dissemination of septic material from any one focus throughout the peritoneal cavity."

Symptoms.

Early symptoms are due to Nature's method of coping with the disease. As soon as infection has reached the peritoneal cavity, a splint is applied in the form of a rigid abdominal muscle. There is pain and tenderness coinciding with the hyperaemic condition of the part of the peritoneum affected, and later there is a definite mass to be felt which is formed by adhesions, adherent omentum, and the diseased part of the gut. As the condition progresses the tenderness becomes more general, the whole abdominal wall is now rigid, distension sets in, and vomiting commences. Constipation is absolute, there is no passage of flatus, the urine is diminished in amount and often passed with difficulty. Vomiting increases in frequency, the patient rapidly becomes dehydrated, there is hiccough and a typical abdominal facies, the tongue is dry and coated, sordes appear on the lips and teeth, vomiting later becomes coffee-ground, the pulse steadily becomes more rapid and thready, and finally the patient dies of toxæmia.

Vomiting which increases in frequency has in the case of gunshot wounds proved to be due to an ever-increasing extravasation of intestinal contents into the peritoneal cavity. Vomiting which continues after forty-eight hours and which is biliary in character is toxic, and is Nature's attempt at excretion. Vomiting of the coffee-ground variety denotes a very grave degree of toxæmia and is of very serious import.

Nature in her attempt to make good is bound to fail unless helped artificially, as she can make no provision for the fluid lost by vomiting.

Complications.

The only complication to be feared, apart from toxæmia, localized abscesses, and the like, is intestinal obstruction. This may be a later complication, and becomes evident by a change in the character of the vomit.

Treatment.

Many authorities have advised treatment on the following lines:

- (1) Removal of the cause at the earliest possible moment.
- (2) Drainage of the peritoneal cavity after performing lavage or no.
- (3) Abolition of the distension by means of graduated doses of calomel, subcutaneous injections of pituitrin or eserine, turpentine enemata, artificially emptying the distended bowel, and the like.
- (4) Control, if possible, of the vomiting by various drugs or stomach lavage.
- (5) Administration of saline, either subcutaneously or rectally, and stimulants.
- (6) Suitable nourishment.

On (1) all are agreed, but this should be performed with the minimum of disturbance to the gut and the peritoneum generally.

(2) Can the peritoneal cavity be drained, and if so, what is drained away? *Post-mortem* examinations performed both during the war and before (and such examinations during war time have followed very soon after death) show that a drainage tube is shut off like any other foreign body from the general peritoneal cavity within a few hours of insertion. "The degree in which adhesions are thrown out is a very important measure of the degree of the patient's vitality."

If, then, protective adhesions are being thrown out around drainage tubes, what are we attempting to drain away? A protective fluid of first-rate vitality; in other words, we are attempting to defeat Nature. Provided a case of general peritonitis can receive surgical help early, it is quite sufficient to mop out carefully any obvious pouches in the region of the area of operation with dry sterile swabs and to abandon all forms of drainage.

Should the fluid be frankly purulent, and consequently no peritoneal reaction present in the form of adhesions or deposition of lymph, then drainage may be resorted to, but this type of case is invariably hopeless from the beginning. It is very unwise to disturb any lymph that may be deposited upon the gut or attempt to unravel coils of small intestine that are matted together, for the procedure only increases shock and opens up fresh areas for absorption. It must be remembered that matting together of the intestine reduces the area for absorption to a minimum.

No good can ensue from peritoneal lavage, for it amounts to washing away a fluid that is highly valuable at this stage, and however carefully performed it aids the spread of infection. It is quite sufficient in the way of drainage to leave a small tube or glove drain down to the primary focus of infection, to be removed at the end of forty-eight hours. This drainage, however, is not always necessary.

(3) What is the significance of a distended intestine? The gut with its serous coat is in a condition of acute inflammation. Its musculature is rendered incompetent partly as an effect of toxæmia and inflammation, partly as a result of distension with gas formed by abnormal fermentation taking place within its lumen, again the result of general toxæmia. Would one suggest to a patient, who was suffering with acute cellulitis of both legs, that he should get up and run about in order to effect a cure? Why then adopt such remedies as calomel, pituitrin, eserine and the like as a means of treating an acutely inflamed gut? Moreover, such treatment by stimulating peristalsis will further disseminate infection and increase toxæmia. There can only be one rational treatment at this stage, and that is rest. It is difficult to understand the significance of the intestinal contents at this particular juncture. They may exert some useful function, they may not. It is sufficient to say that no apparent harm has resulted from leaving them there, and consequently enterostomy and artificially emptying the distended gut has not been practised in any of this series of cases.

The only method of splinting an inflamed gut is by administering morphine and atropine; $\frac{1}{4}$ grain of the former drug is given every eight hours, and $\frac{1}{150}$ grain of the latter drug every twelve hours. The pupils must

be carefully watched, and as soon as constriction shows itself the dose should be decreased to $\frac{1}{4}$ grain every twelve hours, and this is usually called for at the end of forty-eight hours. Administration of these drugs is continued until flatus is passed and the patient has ceased vomiting; over the series of cases in question this invariably occurred at the end of the fourth or fifth day. It has been suggested that the administration of morphine hinders phagocytosis. If this is true, it does not do so to such a degree, when given to the extent recommended above, as to jeopardize the patient's chances, and clinically this treatment has proved to be sound practice.

(4) Vomiting is a symptom of diffuse peritonitis, and is a method of eliminating toxin. Why devise means for checking it? The character of the vomit is important, and affords a clue to the prognosis. Thus, biliary vomiting which gradually gets clearer is of good omen. Coffee-ground vomiting denotes a more severe degree of toxæmia, and is serious. Should the nature of the vomit change from coffee-ground to the biliary type (which it did in three cases of this series), then the prognosis is good. If, on the other hand, the vomit becomes faecal, this denotes intestinal obstruction and further operation is called for. This latter complication occurred in two cases of the series and both recovered; in both cases many adhesions were present, and obstruction had occurred at the ileo-caecal junction. Vomiting at this stage is not so distressing as many would imagine, and the stomach appears to empty itself both easily and painlessly. Vomiting, then, should be encouraged.

(5) Continuous vomiting rapidly dehydrates a patient. To make good the loss of fluid and to aid in a speedy dilution of toxins normal saline is employed. This is run in slowly and continuously beneath the skin. The drip is so regulated that undue collection of fluid in the tissues round the needles is avoided. Nine to ten pints can be given in twenty-four hours; the supply at this rate is maintained for forty-eight hours. Swelling of the feet or waterlogging of the lungs must be guarded against. Should the patient be intolerant of fluid given subcutaneously it may be given continuously by the rectum, but the subcutaneous method is that recommended. At the end of forty-eight hours the patient needs less fluid, and it may be reduced to five pints in the twenty-four hours. The supply of saline should be maintained, until vomiting has ceased. These patients have tolerated continuous subcutaneous saline well when under the influence of morphine.

Copious drinks of water containing sodium bicarbonate and sodium citrate are given by the mouth, and by these means two ends are attained—first, the stomach is washed out without undue distress to the patient; and secondly, a diuretic action is obtained, probably through absorption of some of the citrate not vomited. At the end of forty-eight hours the patient begins to pass large quantities of urine, and with this is associated an amelioration in symptoms, for the vomiting becomes less frequent, the vomit clearer in colour, and the patient feels better. Stimulants have not been employed.

As soon as the vomiting has ceased administration of saline is withheld. The inflammatory condition is now subsiding, but on no account should purgatives be given. Flatus is now passed, and generally an offensive liquid stool. Bismuth and compound tincture of camphor can be given with benefit as soon as the vomiting has ceased.

(6) For the first forty-eight hours no nourishment is required; saline is all that is necessary. On the third and fourth day glucose is given by the rectum. As soon as the vomiting has ceased, Brand's essence and albumen water sweetened with glucose may be given in small quantities frequently and regularly. Water may be administered freely. At the end of a week milk and soda water, raw eggs, and a little custard may be given, and from this date the diet may gradually be increased. Patients at this stage are often very hungry, but a full meal should not be allowed, as it causes distress and distension. On the tenth or twelfth day castor-oil may be given, and from this date all anxiety is usually at an end.

One case from twenty-one consecutive cases of diffuse peritonitis may be quoted here; space, unfortunately, does not permit of more.

Pte. M., 6th S.L.I., admitted to 39 Stationary Hospital on January 29th, 1919, with the diagnosis of influenza. The symptoms were persistent vomiting of a greenish material, face

sunken, looking very toxic and slightly jaundiced, abdomen not moving with respiration and legs drawn up. No passage of flatus for thirty-six hours, small quantities of high-coloured urine passed with difficulty. Maximum tenderness in right lower abdominal quadrant; a tender mass could be felt per rectum on the right side, and the recto-vesical pouch felt full. Pulse 110, thready; temperature 102.8°.

Laparotomy performed through right rectus. A gangrenous perforated appendix which was hanging into the pelvis was removed. The pelvis was full of a very offensive fluid and a concretion was found free in the fluid. Diffuse peritonitis was well established; the intestine was acutely inflamed and distended; large patches of lymph were present on the small intestine, whose coils were matted together. The pelvis was mopped dry, but the remainder of the peritoneal cavity was not touched. A small drain was left for forty-eight hours down to the bottom of the recto-vesical pouch. The abdomen was closed in three layers.

Subsequent History.—Biliary vomiting continued for three days. No passage of flatus until the third night. A very offensive liquid stool passed naturally on the fourth day. The patient developed bronchopneumonia, but the abdominal condition remained satisfactory. Distension had entirely gone at the end of the eighth day. Tube removed at the end of forty-eight hours. Despite the pneumonia the patient made a very satisfactory recovery.

Treatment.—Continuous subcutaneous saline up to the third day, copious drinks of water containing bicarbonate and citrate, glucose per rectum. Morphine gr. 4 8-hourly, atropine gr. 10 12-hourly for forty-eight hours, and discontinued after the end of the third day. No aperient until the ninth day. Very light diet up to the ninth day, when diet was gradually increased.

SUMMARY OF CASES.

Briefly the series of twenty-one cases is as follows:

The cause of the condition was due to appendix abscess in 6, perforated gastric ulcer in 1, penetrating wounds of the abdomen in 8, intestinal obstruction with gangrene of the gut in 3, intestinal obstruction with perforation of the gut in 1, pneumococcal in 2.

There was one death—a case of intestinal obstruction with gangrene of the gut. Most noticeable in this case was the absence of any healthy reaction of the peritoneum; clinically it was a very severe example of general toxæmia.

The two cases of pneumococcal peritonitis both showed symptoms of subacute intestinal obstruction. Median laparotomy was performed and the obstruction freed.

One case of appendicitis and two of penetrating abdominal wounds were associated with coffee-ground vomiting. One case of appendicitis and one of a gunshot wound developed intestinal obstruction requiring further operation. In both there was a healthy peritoneal reaction in the form of plastic adhesions and fluid, and both survived the necessary operation. One case (appendix) developed a faecal fistula which subsequently closed.

In only one of the cases was the peritoneal fluid frankly purulent, and in all but this one lymph and plastic adhesions were present. In no case was an attempt made to drain or wash the peritoneal cavity; nothing was disturbed beyond the necessary area of operation. No case proceeded to the formation of localized abscesses in the peritoneal cavity.

All (with the exception of the one death) ran almost identically the same course, in that vomiting ceased on the fourth or fifth day, and flatus was passed about this period. Distension subsided in all by the end of the tenth day; in some cases it was earlier.

The urinary outflow (a very important factor) at first diminished, increased rapidly after forty-eight hours, and with this was noticed a change in the character of the vomit and improvement in the patient's general condition.

Treatment in all cases was identical, and has already been detailed in the text. All the patients were nursed in a very slightly elevated position with a bolster placed beneath the knees.

DR. WILLIAM H. WELCH has presented to the College of Physicians of Philadelphia the first account of vaccination published in the United States. The author was Benjamin Waterhouse, the first professor of the theory and practice of medicine in the University of Harvard. He states that he had received the virus from England, and forthwith vaccinated his own children. To prove that immunity had been established he afterwards took the children to the Boston small-pox hospital, where they were inoculated with small-pox virus taken directly from a patient in the hospital. Finding that no effect followed the procedure, Waterhouse exclaimed, "One such fact is worth a thousand arguments."

FIFTEEN CASES OF LIVER ABSCESS:

AN ANALYSIS OF SYMPTOMS AND TREATMENT.

BY

PHILIP TALBOT, M.B., F.R.C.S.ENG.,

HONORARY SURGEON DISTRICT INFIRMARY, ASHTON-UNDER-LYNE.

THE reports of the Medical Research Committee on the prevalence of infection with the *Entamoeba histolytica* or its cysts, not only among troops returning from Mesopotamia and the Eastern Mediterranean, but also among members of the civilian population who have never been out of England, will increase the interest taken in the complications traceable to this parasite.

Of 450 non-dysenteric soldiers in the Liverpool Tropical Hospital, Professor Warrington Yorke found that 7.8 per cent. were infected. MacAdam and Keelan, after examining over 2,000 men at Deolali, India, estimated that at least 33 per cent. of the troops returning from Mesopotamia were carriers of the entamoeba or its cysts. The men thus infected may be potential cases of dysentery or liver abscess.

In Mesopotamia cases of liver abscess were not confined to the hot season, but developed also in the winter months, when the temperature approximated to that of the English spring months.

To diagnose the first case of liver abscess seen is not easy. A well known manual of tropical diseases gives a list of between twenty and thirty signs and symptoms which may occur in this condition. The following analysis of the signs, symptoms, and treatment of fifteen cases of proved liver abscess which came under my treatment in fifteen months at Baghdad is an attempt to indicate the relative value of these signs, symptoms, and treatment, and may be of assistance to practitioners who have not had an opportunity of seeing these cases.

Analysis of Signs and Symptoms.

History of dysentery was present in 6 out of 15 cases. This is not of much value in diagnosis, as such a large proportion of the troops were carriers of entamoeba without having had any signs of dysentery.

Pyrexia was present in every case; it was continuous in 9 cases and remittent in 5. The temperature rarely rose above 102.4°. In 2 cases the pyrexia associated with the abscess formation commenced one week after the end of an attack of dysentery. In its early stages the pyrexia of liver abscess is frequently mistaken for that of malaria or enteric group. Rigors were present in 6 cases and heavy cold sweats in 12. They occurred at 9 to 10 p.m. and during the night.

Pallor was present in 12 cases, and was usually very marked. Slight jaundice was present in one case only.

Wasting was present in 14 cases. This appears to come on very rapidly when pus has formed and sweats are occurring.

Pain.—Local pain in the form of a tender spot on palpation over the liver was present in 14 cases. This fairly constant sign was useful in localizing the position of the abscess. The most common site of the tender spot was in the intercostal spaces over the liver in the axillary line. In these cases the abscess was usually found in the posterior part of the right lobe of the liver. If the tender spot was below the ribs on the right side the abscess was nearer the front of the right lobe. One patient with an abscess in the left lobe had a tender spot in the epigastrium. Referred pain was present in 8 cases, chiefly in the right shoulder. Three of the patients in whom the pain in the right shoulder was unusually severe afterwards developed lung complications involving and extending through the diaphragm. The diaphragm and the skin over the right shoulder are supplied by the fourth cervical nerve.

Increase of Liver Dullness.—Every case showed a general enlargement of the liver. In one case where the abscess was near the front of the right lobe a rounded mass could be felt below the ribs in front. At the back of the chest it was difficult to determine the upper level of dullness owing to the impaired note at the right base caused by the lung complications which were present in most cases. Examination with the fluorescent screen confirmed the enlargement of the liver.

Local bulging was present in nine cases, and when present was a valuable sign. When the bulging is lateral it is seen best by arranging the patient straight in his bed in a good light, and observing from the foot of the bed. In a few cases the bulging was forwards.

Epigastric varicosity was not present in any case.

Lung complications were present in 13 cases. In 12 they were confined to the right base and afforded a diagnostic sign of value. The signs observed were: Basal crepitations in 7 cases; basal pneumonia in 4 cases; pleuritic friction sound in 3 cases. In one case from which 5 oz. of pus had been withdrawn, an abscess (probably a second one) burst into the base of the right lung five days later. Ten ounces of brownish pus were coughed up in twenty-four hours, the expectoration became bile-stained on the third day, gradually diminished, and the patient made a good recovery.

Decubitus.—No characteristic position was observed.

Leucocytosis.—In fourteen of these cases a white blood count was made, and a polymorphonuclear leucocytosis was found in every case. The average white count was 18,600.

Rigidity of the right rectus abdominis was observed in about half the cases.

From the above analysis it will be seen that there were seven outstanding diagnostic signs present in this series:

1. General enlargement of the liver ...	15
2. Pyrexia continuous or remittent ...	15
3. Leucocytosis ...	14*
4. A local tender spot over the liver ...	14
5. Signs of irritation at base of right lung ...	13
6. Rapid wasting ...	14
7. Heavy sweats ...	12

The other signs and symptoms of value are:

Local bulging ...	9
Pallor ...	12
Rigors ...	6
Referred pain in right shoulder ...	8
Rigidity of right rectus.	

* One not examined.

Treatment.

Four of the early cases were treated by open operation and drainage by tube. Two of these were drained through incisions in the epigastrium, the exposed area of liver being packed round with gauze and the abscess opened by sinus forceps. In both these cases the *Entamoeba histolytica* was found in the discharge from the tube on the third day, although not found in the pus removed at the operation; evidently the organism was liberated during the breaking down of the abscess wall.

The other 2 cases were treated by drainage through the chest wall. After localizing the abscess by means of a glass syringe (20 c.cm.) and needle, the needle was left *in situ* and 2½ in. of the tenth rib were excised in the axillary line. The diaphragm was incised below the level of the pleura, the edges being sutured to the intercostal muscles. After packing gauze round the area of liver exposed a pair of sinus forceps was passed into the abscess cavity guided by the needle. A drainage tube was then passed into the abscess and sutured to the chest wall. One of these cases died suddenly during the night following the operation.

Pathologist's Post-mortem Report.

Dysenteric ulceration of appendix, caecum, and large intestine. One large abscess cavity in right lobe of liver drained by the tube and a second smaller one which had not been found by the exploring needle.

An *ante-mortem* clot was found in the right ventricle and commencement of the pulmonary artery.

The remaining 11 cases were all treated by aspiration with an ordinary 20 c.cm. glass syringe and needle with a fairly large bore, which was passed in various directions into the liver until the abscess was found.

I found the syringe to be more convenient than the aspirator, and the needle, being of smaller diameter, probably did less damage to the liver tissue; where pus had definitely formed I found no difficulty in withdrawing it. When the pus was found, as much as could readily be obtained was withdrawn, the syringe being detached from the needle, emptied, and used again as long as any pus could be withdrawn.

In seven of the eleven cases I injected 10 grains of quinine hydrochloride in 1 oz. of water into the abscess cavity. I do not know whether it did any good, as the

four cases in which quinine was not injected did as well as the seven cases with quinine.

Personally, I think it better not to inject anything into the abscess cavity for two reasons: first, because the contents of the abscess are usually sterile, and, secondly, because a low pressure in the abscess cavity encourages the flow of lymph containing emetine.

After aspiration every patient was given a course of hypodermic injections of emetine hydrochloride, 1 grain daily for one week and then on alternate days until 12 or 14 grains had been given. Whenever possible each patient was given 1 grain of emetine a few hours before operation, so that the first serum to flush the walls of the abscess should be carrying emetine.

The action of emetine in these cases of liver abscess appears to be as specific in its action as that of quinine in malaria. In addition to the fifteen cases of proved liver abscess I saw seven or eight cases of hepatitis following dysentery, some of which were probably in an early suppurative stage and which cleared up rapidly with emetine.

There were multiple abscesses in three cases. The average quantity of pus was 8½ oz. The greatest quantity in any case was 30 oz. In colour the pus was yellow in eleven cases and grey in three cases. The classical chocolate-coloured pus was seen in one case only; it was noticed that the yellow pus rapidly became much darker when exposed to the air. The pus was found to be sterile in eight cases, to contain *Entamoeba histolytica* in three cases, staphylococcus in three cases, and *B. coli* and *B. pyocyaneus* in one case each.

Results.

Fourteen out of the fifteen cases recovered completely. One case died as already described.

In my opinion the majority of these cases can be treated successfully by aspiration with an ordinary 20 c.cm. glass serum syringe. It does not appear to be necessary even to withdraw all the pus. Once the tension in the abscess cavity is relieved, the emetine-carrying plasma can pass through the walls of the abscess cavity and exert its lethal effect on the army of amoebae present there. After aspiration the temperature usually drops to normal at once, the liver rapidly diminishes in size, and convalescence is rapid.

Open operation with a drainage tube in the liver substance—that is, one end in a constantly moving delicate organ and the other in the more or less rigid chest wall—would seem to be physiologically unsound. In the type of case met with in Mesopotamia I think that open operation can only be necessary in exceptional cases.

From what I have read of tropical abscess in India, the type met with in Mesopotamia appears to be of a more acute type, to have a more toxic effect on the patient, and to be more frequently multiple.

THE TREATMENT OF UTERINE FIBROIDS BY X RAYS.

By J. DELPRATT HARRIS, M.D., M.R.C.S.,

CONSULTING SURGEON AND SENIOR HONORARY SURGEON IN CHARGE
OF THE ELECTRICAL DEPARTMENT, ROYAL DEVON AND EXETER
HOSPITAL; LATE RADIOGRAPHER TO FIVE SECTIONS
OF V.A. HOSPITALS, EXETER.

ALTHOUGH the value of x rays in the treatment of uterine fibroids has been known since 1911, principally through the writings of Professor Bordier and Professor Gauss, it does not appear to have gripped general attention; but their researches and those of many others since have placed the treatment, more especially of bleeding fibroids, on a very firm basis, and the use of x rays is the treatment of choice for intramural fibroids. It is very useful also in intrauterine fibroids, though the success is less marked; in subperitoneal fibroids the method is least satisfactory, though, perhaps, not quite useless.

Professor Gauss of Freiburg instituted a very drastic method in one sitting. He advocated many "points of entry" over the two ovaries and uterine tumour, from the front of the abdomen, then turning the patient on her face he administered the x rays through the sciatic notches and thinner portions of sacrum, the object being not to injure the skin. To this purpose he used a very heavy current,

well filtered by plates of aluminium, but with a small diaphragm, whilst the whole course of treatment was accomplished in one day, occupying several hours.

Professor Bordier of Lyons practises a less hurried method. He gives a series of cycles, each consisting of nine sittings. Thus he would give a sitting to the right ovary, one to the left ovary, and one centrally over the uterus. This is repeated three times, making nine exhibitions of x rays to the uterus and appendages. These exhibitions may be arranged according to the convenience of the patient; two may be given on the same day, or one may be given on alternate days. In an average case there is after the first cycle of nine exhibitions a slight increase of the flow of blood at the next period.

Twenty-one days after the first cycle a second is given, and when the next period is occurring the haemorrhage is usually less. A third and then fourth "cycle" is given, and by this time there is usually distinct lessening of the size of the tumour, and the periods have ceased. In many cases, the menopause having been established, flushing of the face with faint feelings often occur, as is usual. It is seldom that the cycles need be persisted in after the sixth.

Dr. Bordier himself urges that this treatment should never be made use of to determine the diagnosis, which should be made by every means first; and the cycle treatment should be used for fibromyomata only, and perhaps haemorrhagic metritis.

For ordinary cases in England, where this treatment can be followed out with no excessive fatigue or expense, the "cycle" treatment is convenient, but it is well to remember that there is great latitude in the mode of administration.

A series of four cases was published in the *Archives of the Roentgen Ray* by myself in 1914. I have now a further series of eighteen cases which seem to emphasize the value of the treatment which renders unnecessary a serious and mutilating operation.

On looking over the notes of my cases I found them so much alike that I propose to record only one or two typical cases.

CASE I.

A lady, aged 49, was referred to me for uterine myoma, reaching half-way to the umbilicus with outgrowths, one of which pressed on the rectum. The patient was a person of education, a church organist, who much wished to be able to carry on her work. She found herself growing weaker and weaker and had symptoms of obstruction of the bowels. The surgeon under whose care she was proposed colotomy, finding the rectum so obstructed by fibroid outgrowths, but it was determined before operating to give the x rays a trial. Owing to the urgency of the symptoms the rays were not administered in the usual three places only, for some of the sittings were given from either side of the sacrum. At the third cycle she expressed herself as feeling much better and relieved of the symptoms of obstruction. This patient had seven cycles, and although examined many times no growths could be felt. She was reported two years later as feeling quite well and able to carry out her duties as organist.

Apart from relief of urgent symptoms such as obstruction of the bowels, almost every patient expresses herself as feeling better. This is difficult to explain, but at least seems to show that x rays given in therapeutic doses do no harm to the general system.

CASE II.

Mrs. L. C., aged 47, was a case of uterine myoma in which haemorrhage was a marked feature. A hard mass could be felt in the uterus on vaginal examination, and was palpable also above the pubes. During the second cycle the patient found that the haemorrhage had ceased. During the third cycle she was examined by the surgeon who had referred her to me. He reported that the mass in the anterior part of the uterus was scarcely palpable. During the fourth cycle the lump had shrunk notably. She also complained of "flushes and fumes," and said she was getting stout and fat. When she was discharged cured after the sixth cycle it was noted that the lump could not be felt above the pubes, and there was only a little tenderness on deep pressure. Menstruation had not returned.

It seems, therefore, that we have a means of hastening the climacteric period with the usual symptoms of that period. As it has been found intramural fibromata sometimes ceased to trouble after the climacteric cessation of menstruation, so with this artificial establishment of the menopause such fibromyomata shrink and cease to bleed. The nearer the patient is to the natural climacteric period,

the more successful is this form of treatment and the speedier.

In young subjects time should not be wasted on a bleeding myoma. Operative surgery is the right course. At the Brighton meeting of the British Medical Association I asked Professor Gauss whether in procuring such a rapid absorption of material he had observed any toxic symptoms, for such certainly do occur in splenomegaly; but he said he had not.

Two contraindications only of this form of treatment need be considered. It is not applicable to women below the age of 30 or 35, nor to those who have the sub-peritoneal form of myoma.

This treatment has one other advantage, for a rest of twenty-one days is advisable between the cycles, and during this period the patient's family doctor can watch the case and attend to her general health.

The eighteen cases may be epitomized as follows:

1. Mrs. A. D., 45. Small intramural myoma, barely palpable suprapubically. After five cycles it became no longer palpable. Discharged cured.
2. Mrs. H. C., 49. Large myoma reaching to umbilicus. Received six cycles, when, tumour having shrunk slightly, hysterectomy was carried out successfully.
3. Mrs. E. B., 34. Small myoma discovered during parturition. Haemorrhagic type. Tumour much shrunk, haemorrhage ceased; discharged after five cycles cured.
4. Mrs. A. S., 49. Uterine myomata reaching half-way to umbilicus. Case reported above. Ending in cure after seven cycles.
5. Mrs. M. B., 38. Uterine myoma, haemorrhagic type. After seven cycles was discharged cured.
6. Mrs. L. C., 47. Uterine myoma, haemorrhagic type, reported above. After six cycles was discharged cured.
7. Mrs. E. T., 46. Intramural myoma, haemorrhagic type. Haemorrhage ceased after three cycles. After four cycles was discharged cured.
8. Mrs. S. D., 56. Large, broad, hard swelling, haemorrhagic type. Swelling occupied the whole of lower half of abdomen. Haemorrhage ceased after two cycles. Patient looked and felt better, but tumour did not shrink materially, and the haemorrhage not having recurred, was, after six cycles, discharged benefited.
9. Mrs. E. H., 42. Uterine myoma, reaching half-way to umbilicus. Haemorrhage slight. After three cycles shrinking occurred, and was barely palpable after six cycles above pubes. Was then discharged cured.
10. Mrs. A. C., 50. Large haemorrhagic myoma, round in shape, barely reaching lower edge of umbilicus. At the end of three cycles haemorrhage much reduced and tumour shrunk to one inch below the umbilicus. At the end of six cycles further shrinking was reported to two-thirds between umbilicus and pubes. She was discharged much benefited and haemorrhage ceased.
11. Mrs. E. H., 48. Myoma, haemorrhagic type. Much lessened in amount after two cycles, and ceased after four. After six she ceased attendance, saying she was cured.
12. Mrs. C. C., 42. Myoma central, and palpable above pubes. This latter ceased after the second cycle. She was persuaded to continue the treatment to the fourth cycle, when she was discharged cured.
13. Mrs. E. T., 40. Precisely similar case to No. 12. Received six cycles, but the monthly periods became normal in quantity and remained so. She was discharged cured.
14. Mrs. C. M., 40. Sent as a case of fibroid enlargement of uterus. It may have been a case of haemorrhagic metritis. She had been curetted twice, with very slight improvement. Received three cycles, when, feeling and appearing quite well, she discharged herself as cured.
15. Mrs. S. S., 33. Small myoma with anteverted uterus. Haemorrhagic type. This ceased during the second cycle. She received three cycles, when she was discharged cured.
16. Mrs. B. W., 37. Sent for fibromyoma extending to one inch below umbilicus. After seven cycles slight fullness just above pubes alone remains, felt only on deep pressure. Discharged cured.
17. Mrs. M. W., 53. Fibromyoma, haemorrhagic type. Besides outlying lumps, the uterus itself reaches to two inches above umbilicus. After the second cycle, haemorrhage and also menstruation ceased. At the fourth cycle the central lump extended nearly to umbilicus. She received seven cycles, when the central lump retired to pubes. The outlying lumps remained, but lower in abdomen.
18. Mrs. L. B., 55. Myoma, haemorrhagic type. Haemorrhage ceased during first cycle, and did not again recur. After four cycles uterus shrank to pubes. Received six cycles, when the menopause seemed established and flushings were frequent. She was discharged cured.

These eighteen cases—making, with the four I have already reported, twenty-two cases—do not exhaust my list, but they will suffice to draw attention to this mode of treatment, which should be widely known amongst the great body of general practitioners, for they can instruct their family patients, who would gladly undergo such

treatment, even if rather prolonged, in preference to a formidable operation from which they would naturally shrink.

Several of the cases are of three and four years' standing, yet none of those discharged cured have returned, and a few have written letters saying how well they still feel.

THE WORK OF A VENEREAL DISEASE CLINIC.

By OWEN L. RHYS, M.D.,

MEDICAL OFFICER TO KING EDWARD VII CLINIC, CARDIFF.

IN October, 1918, I published in the JOURNAL a short account of the first 500 cases attending the King Edward VII Hospital Clinic at Cardiff. I have now analysed a further 1,000 cases, and the figures may be of interest as showing the source of infection in 1,500 consecutive male patients.

	Prostitutes.	Amateurs.	Others.
First 500	279	183	38
Next 1,000	481	328	191
Totals	760	511	229

The amateur infections thus show an increased percentage in the last few months and the "other sources" a marked increase. Out of the 191 "other source" cases, 71 men definitely blame their wives, the bulk of the remainder denying connexion or being uncertain as to which of more than one woman infected them.

Some hundreds of the cases have recently been discharged from the services while suffering from, or having recently suffered from, venereal disease, and a very large percentage of these were infected in French licensed houses.

The "salvarsan substitute" used during the last twelve months has been novarsenobillon, given concentrated and always intravenously. I have seen no ill effect of any sort in the last 5,000 injections. Intramuscular injections of mercury have been little used, the bulk of the patients being colliers; as they work in a cramped position, these injections caused inconvenience.

The clinics have suffered from overcrowding, 80 or 90 cases sometimes attending at a time, and as all train fares are refunded, men attend from a large area.

I should like to add two facts which have struck me:

1. The small number of men infected while drunk. This is possibly owing to the difficulty of obtaining drink, but it rather does away with the argument that without drink few men would be infected.

2. The hopelessness of expecting men to take any preventive measures after running the risk. As I stated in my previous note, in two brigades in which every facility was provided no one availed himself of them. Since then, out of some hundreds of soldiers reporting at a certain dépôt, with venereal disease contracted in every theatre of war, I did not find one man who had used the appliances provided. In this civilian clinic, too, I do not recollect more than two or three men who had taken any precaution, and I have had one man on the books three times for separate infections.

As the bulk of the male population has served in the forces, it will apparently be the case that men who would take no trouble in units away from their homes, will surely not bring suspicion on themselves by visiting the suggested disinfecting stations in their own localities.

THE first congress of the association of French-speaking gynaecologists and obstetricians will be held at Brussels on September 25th, 26th, and 27th. The following subjects are proposed for discussion: Biological diagnosis of gestation, indications and technique of hysterectomy in the treatment of suppuration of the adnexa, early getting up of women after confinement and operation, operative treatment of cancer of uterus, the value of different incisions in laparotomy, gynaecology and obstetrics, protection of pregnant women and wet-nurses.

A CASE OF PRIMARY SARCOMA OF THE LIVER.

BY

J. S. MORROW, B.A., M.D., TEMP. MAJOR R.A.M.C.,
PHYSICIAN, ROYAL VICTORIA HOSPITAL, BELFAST; LATE IN CHARGE
MEDICAL DIVISION, QUEEN ALEXANDRA MILITARY HOSPITAL,
MILLBANK;

AND

W. H. MCKINSTRY, M.D., D.P.H., TEMP. CAPT. R.A.M.C.,
PATHOLOGIST, QUEEN ALEXANDRA MILITARY HOSPITAL, MILLBANK.

The following case is interesting on account of its rarity.

History.

A man, aged 42, was admitted to the hospital in a condition of advanced emaciation. He stated that his health had been good until about a year previous, when he began to feel pain in the stomach about half an hour after food, and had a constant sense of discomfort during the intervals between meals. Flatulence was a prominent feature, but there had never been any vomiting. There was no noteworthy constipation. There had been a steady progressive loss of weight.

Condition on Examination.

The abdomen was distended by a large smooth solid tumour, extending from the costal margin to the brim of the pelvis; at its lower edge a distinct fissure could be felt in the middle line. There was some bronchial catarrh, with a persistent irritating cough. The urine was normal. A blood count showed only a slight secondary anaemia (red cells, 4,000,000; haemoglobin, 70 per cent.), total white cells, 10,000, and differential white count normal. A Wassermann test was negative. The patient gradually sank, and died on the fourth day after admission.

Post-mortem Examination.

The body was greatly emaciated. There were no signs of injury, discoloration, jaundice, or external growth. The most noticeable feature was a bulging forwards of the upper part of the anterior abdominal wall. No enlarged subcutaneous veins were visible.

On opening the abdomen the liver was seen to have a mottled appearance and to be greatly enlarged, extending on both sides as low down as the iliac crests. The surface of the liver presented a large number of greyish-white areas of new growth, some of which were about the size of a pea, while others were larger, umbilicated, and slightly raised above the surface. The general "mottling" appeared to be due to the coalescence of these nodules, forming large greyish patches which were little, if at all, raised above the surface.

The great omentum was spread out and appeared to be normal. In the gastro-hepatic omentum, and in the mesentery, slightly enlarged lymphatic glands could be felt, and those about the head of the pancreas were particularly large and matted together. There was only a small amount of clear fluid in the abdomen. The stomach, pancreas, intestines, kidneys, and suprarenal bodies were thoroughly scrutinized, but nothing abnormal was found. The liver was easily removed from the body, being quite free from adhesions, and was found to weigh 14½ lb. and to measure 23 in. in transverse diameter. The gall bladder and bile ducts were free from growth.

The lungs showed numerous small whitish patches scattered over the surface. These were almost uniform in size, none of them being larger than a sago grain. The lungs were free from adhesions, and there was no effusion into the pleural cavity. The mediastinal glands were slightly enlarged. The heart and pericardium were normal. The head was not allowed to be examined.

Morbid Anatomy.

When the liver was incised no abscess or cystic growth could be found. The left lobe consisted almost entirely of a firm whitish growth, with the exception of a small seam of liver tissue running across the surface near the lower anterior border. The growth extended to the right beyond the middle line, and formed the greater part of the substance of the upper and anterior portions of the right lobe, penetrating backwards to within two inches of the posterior surface. Small nodules, separate from the main growth, were scattered about in the remainder of the liver substance. The liver tissue was friable, and pale and fatty in appearance.

Pieces of the liver and of the lungs and some of the enlarged lymphatic glands were excised, fixed and hardened in 10 per cent. formalin, and sections cut and stained in the usual way with haematoxylin and eosin. On microscopical examination the growths from each of the above tissues were found to present the same histological features, and the following description applies to the appearance of the sections made from the liver.

Histological Characters.

Microscopically the growth was seen to exhibit an alveolar structure—strands of fibrous tissue forming alveoli which enclosed groups or clusters of cells. The fibrous strands varied considerably in thickness, some consisting merely of a few fibres, while others formed well marked bundles. The cells enclosed within the alveoli showed great diversity in size, shape, and numbers. In most of the alveoli the predominating cell was rounded or polygonal, with abundant cytoplasm and a deeply staining round nucleus. Other alveoli showed a preponderance of small round cells with scanty cytoplasm.

A number of spindle-shaped cells could also be seen in most of the alveoli, mixed with the above types of cell. No fibrous tissue was observed between the cells which formed the clusters.

The blood vessels were rather scanty; ill formed and of a capillary type, and haemorrhages were present. The liver cells adjoining the margins of the tumour showed signs of degeneration. They stained badly, were granular, some were irregular and broken, and their nuclei were difficult to discern or altogether absent. Scattered among the liver cells in this region were numerous dark pigment granules and many well stained cells similar to those found in the tumour. These cells appeared to have advanced from the main growth along the blood channels; in fact, some of the vessels in cross section were seen to be packed with them.

The growth under consideration was undoubtedly malignant, and in view of the facts, first, that no evidence of a growth could be found, after a most careful search, in any of the other abdominal organs, and, secondly, of the enormous size of the growth in the liver, it may reasonably be inferred that the tumour was a *primary* growth in the liver. It is, of course, known that very large tumours in the liver may be secondary to quite small growths in other organs, but here, as already stated, no such growth could be found.

The determination of the precise nature of many malignant tumours of the liver is frequently difficult. In the present case, however, all who examined the sections of the growth were agreed that the microscopical characters were those of a mixed-cell sarcoma of an alveolar type.

Primary sarcoma of the liver is a decidedly rare growth, as the following brief summary of the literature shows. Hale-White, in 1890, recorded the fact that not a single case was met with at Guy's Hospital during the twenty years 1870-1889, both inclusive. Byrom Bramwell and Leith, in 1897, were only able to collect 25 cases, and they concluded that few of these could be regarded as true examples. Vecchi and Guerrini critically examined 45 published cases and accepted only 21 as being undoubtedly primary sarcoma of the liver. Pepere also tabulated a list of 45 cases, and Rolleston collected 32 cases in adults.

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THE OCCURRENCE OF CLUBBED FINGERS IN HEALTHY PERSONS AS A FAMILIAL PECULIARITY.

By F. PARKES WEBER, M.A., M.D., F.R.C.P.LOND.,
PRESIDENT OF THE ASSURANCE MEDICAL SOCIETY.

CLUBBING of the fingers is so well known as an acquired pathological condition, especially in connexion with disease of the thoracic viscera, that its occasional occurrence in healthy persons as a familial (and doubtless also congenital) peculiarity deserves some attention. I regard the following cases as having a peculiar interest from the life assurance aspect.

In the present year I had to examine two (twin) brothers, aged 25 years, for appointments and for life assurance. Both of them showed clubbing of the fingers in both hands. The toes were not affected in the same way. In one of them (A. M. K.) the thorax was not very well developed, but the peculiarity in the fingers was slightly less marked in him than in his rather better developed brother (W. H. K.). Both of them appeared free from any visceral disease. A. M. K. had been severely wounded in the left leg during the war, but had quite recovered (from the life assurance point of view). I regarded both lives as suitable for insurance at ordinary rates. An elder brother, aged 30 years, had the same peculiarity of the fingers I was informed, but I did not myself see him. They had no other brothers and no sisters. I am not aware if the father (who died at the age of about 56 years) had clubbing of the fingers, but the mother (still living) had not.

In November, 1918, I examined an apparently healthy young Irishman (M. J. R.), aged 25 years. The only special point to be noted in regard to his condition was that he had incurred nails, with clubbing of the *fingers and toes*, on both sides of the body. This he said he had

had ever since he could remember. It was an inherited peculiarity, not associated with any thoracic or other disease. His father and three of his brothers and one of his sisters were said all to show the same abnormality—at least as far as the fingers were concerned. It may be observed that Mr. M. J. R. had been accepted in 1909 and 1911 for life assurance at ordinary rates.

There is one published record of a familial peculiarity apparently of the same kind. Von Eiselsberg,¹ in 1911, described a congenital and familial condition of the terminal phalanges in a man aged 35 years, resembling clubbed fingers in appearance. One of his grandfathers, one uncle, and one sister were known to show the same condition, which von Eiselsberg suggested might be of "lymphangiomatous nature."

I would rather not use the term "lymphangiomatous" for such cases, but would suggest that some of the isolated cases of clubbing of fingers for which no cause can be ascertained may be of the same nature, even when a history of familial occurrence of the abnormality is not forthcoming. As far back as August, 1897, I met with a man, aged 46 years, who had had typical clubbing of all his fingers—not his toes—ever since he could remember. I found no cause for the clubbing. He had psoriasis, but it was of more recent date than the clubbing.² S. West³ mentioned the case of a woman, aged 50 years, who came under treatment because she had swallowed some ammonia by mistake. Both her fingers and toes were clubbed. No cause could be found for the clubbing, which was supposed to have commenced three to four weeks previously. If this really was so the case could hardly be placed under the present category. West likewise recorded clubbing of fingers and toes in an otherwise apparently healthy medical man aged 38 years. In a third case of clubbing he could also find no cause.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

OSSIFYING SARCOMA OF VASTUS EXTERNUS.

A. W., aged 14, when first seen on March 9th, 1918, stated that for six weeks he had had stiffness and almost continuous pain in the right thigh. About a week later he noticed a small swelling just above the middle of the thigh on the outer side, which grew rapidly. There was no history of injury. He was a fine, well set-up lad; he walked with the aid of a stick, keeping the right knee slightly flexed and the heel off the ground. There was a pyriform swelling just above the middle of the thigh on its antero-lateral aspect. It was 4 in. or 5 in. long and nearly 3 in. across its upper pole, tapering downwards. The skin over the tumour was somewhat discoloured, but was not fixed at any part. The tumour itself could be moved freely on the bone. No fluctuation could be made out. There was no enlargement of the inguinal glands, and palpation of the abdomen did not reveal any swelling therein. The heart and lungs, and the urine were normal. A diagnosis of sarcoma of muscle was made. Dr. J. N. Collins operated on March 21st; a short incision was made over the tumour, and some muscle fibres had to be divided before the bony nature of the growth was disclosed. It was decided to amputate the limb. Disarticulation at the hip-joint by the anterior racket method was performed. There was little bleeding, and the patient stood the operation well. The recovery was uneventful. Three days after the operation injections of Coley's fluid were commenced and continued for six weeks; the patient then left the hospital in good condition and with the wound practically healed.

The tumour was situated in the vastus externus muscle, and appeared to be limited to it, there being a definite layer of degenerated muscle fibres over it. The deep surface was smooth and somewhat flattened. On sawing through the tumour longitudinally it was seen to be composed of cancellous bony substance, with a fairly definite outline except at its upper and lower poles, where it was

softer, and seemed to merge into the surrounding muscle tissue. The muscle fibres in these regions were swollen and had a hyaline appearance. In the substance of the tumour were numerous cavities of irregular shapes and varying size, the largest being in the centre. They contained thick, viscid, dark-red mucoid material, evidently altered blood.

Mr. Lawford Knaggs, F.R.C.S., who kindly examined a microscopic section prepared from a piece of the growth near its upper pole, states that it "shows that there has been a new formation of bone from a connective tissue matrix. The bone is not in lamellae. Much of the muscle tissue has been removed, and its place taken by organizing connective tissue going on to bone formation. The tumour has evidently undergone myxoematous degeneration, hence the ragged open spaces. There are occasional well-marked spindle cells to be seen containing large nuclei, also myeloplques, such as we see in bone marrow. The picture is that of an ossifying sarcoma."

I saw the patient last on June 7th, looking perfectly well. There have been no signs of recurrence.

I wish to express my thanks to Dr. Collins for allowing me to record the case.

Peterborough.

K. C. JAIDKA, M.R.C.S.

PRIMARY CARCINOMA OF THE OVARY AT THE AGE OF 11.

THE following case presents features so unusual that it seems worthy of record: In March, 1919, I was asked by Captain B. A. W. Stone, M.B., R.A.M.C.(T.F.), to see in consultation a girl, aged 11, on account of an abdominal tumour recently discovered. It seems that the child was noticed by its mother to be apparently putting on flesh and getting stouter; this was considered to be a good sign, as she had been always somewhat delicate, and quite by chance Captain Stone, who happened to be attending another member of the family, examined the child.

She was pale but not at all wasted, and the general condition was good. The greater portion of the abdomen was found to be occupied by a large, slightly irregular, but smooth solid tumour, freely movable, and apparently arising from the pelvis. The tumour reached from the margin of the ribs in the left hypochondrium to the pubes. It was not tender nor did it give rise to any discomfort. No free fluid was made out to be present in the abdomen. Examination under an anaesthetic confirmed these observations. The child is one of five children, all normal and healthy. There is no history of malignant disease in the family on either the father's or the mother's side. Twelve months previously, however, a sudden increase in size of the breasts was noticed; it persisted for a time, and the normal character was then resumed. Careful examination of the child's chest revealed no abnormality at this time.

A provisional diagnosis of a teratoma of the ovary was made and operation advised. A few days subsequently, and shortly before operation, the child had irregular temperature, reaching as high as 101° F. Examination of the urine showed nothing abnormal.

On March 18th (anaesthetic C.E. mixture) the abdomen was opened by long median incision; a large solid tumour, smooth and slightly irregular but of generally rounded contour with very vascular pedicle, was found to be occupying the position of the left ovary. No adhesions were present, and its removal was unattended with any difficulty. No other abnormal condition was found, and the right ovary and the uterus were normal. No enlarged lymphatic glands were noticed. On incising the tumour it was found to be an encapsuled soft solid, and the pathological report showed the presence of carcinoma cells in a scanty stroma. The tumour weighed 2 lb. 14 oz., and was about 8 inches in its long diameter. It was presented to the Museum of the Royal College of Surgeons and accepted by Professor S. G. Shattock, who has reported upon it in the following terms:

It is remarkably uniform in structure, and presents no evidence whatever of being of a mixed or teratomatous kind. It is a carcinoma of spheroidal cells, mostly vacuolated and of conspicuous size in consequence. The stroma is infiltrated with lymphocytes.

The after-progress of the patient was uneventful; a rise of temperature to 104° F. the night after the operation being the only unfavourable symptom. The child is in

good health six months after the operation, and there is no evidence of any further spread of the disease.

C. A. S. RIDOUT, M.S., F.R.C.S.,

Major R.A.M.C.(T.F.); Assistant Surgeon to the
Royal Portsmouth Hospital.

BILHARZIASIS IN NATAL.

THE value of rest in the treatment of cystitis has long been recognized, and many cases of bilharziasis in South Africa have seemed to respond to medical treatment only when the patients have been resting in bed. It is difficult to see what influence bodily rest can have on the bilharzia parasites themselves, but there is no doubt that the symptoms of the disease are aggravated by excessive exertion, and the inflammation of the bladder wall, with the associated bacilluria, are materially affected by complete rest in bed.

Recently fatal cases of bilharziasis have occurred in South Africa, where the patients have died from the accumulation of numerous spine-pointed ova in the lungs and brain. In one of the cases the patient was being treated for phthisis, and the expectoration of a large mass of ova just before death was the first indication of the real cause of his condition. Some recent experiments by the Japanese indicate that the ova have a definite tendency to escape from the body more than that of other foreign substances, and the expectoration of the mass of ova indicates Nature's effort to afford exit for the eggs in the sputum. These fatal cases show that these parasitic affections are more serious than is commonly supposed in affected areas, and emphasize the need of destroying the parasites in the blood stream as well as preventing the accumulation of the eggs in the kidney and other parts of the body. In some instances the subsidence of the associated inflammation, following rest and urinary sedatives, is accompanied by the passage of renal calculi.

It is not uncommon to hear of the disease disappearing during an attack of enteric, and a patient of mine has reported almost complete disappearance of haematuria and renal colic following an attack of influenza. Several recently reported cures have also taken place during an attack of influenza. It is probable that the enteric and influenza toxæmia are lethal to the bilharzia worm.

I have heard patients undergoing the tartar emetic treatment state that their urine has been free from blood for the first time for two years. A married man reports that his urine had "never been clear for a day since seven years old; but now clear of blood for four days." Such testimonies indicate the efficacy of intravenous treatment by tartar emetic. However, I have noticed that the haematuria recurs when only small doses have been given and the patient refuses further treatment.

In private practice I have given up other forms of intravenous treatment in favour of that recommended by Dr. Christopherson (see *BRITISH MEDICAL JOURNAL*, December 14th, 1918), and use only a small hypodermic syringe and needle, inserted twice if necessary, for the larger doses. The solution must be made up fresh before each injection and suitable aseptic precautions adopted. With the antimonium tartrate solution one is sure to come across a rather sore arm sooner or later, and I always advise a patient to keep the seat of injection cold and damp for the first twenty-four hours after injection. So far I have not encountered any general symptoms from intravenous injections up to 2 grains of tartar emetic. Intramuscular injection of collosol antimonium, 1 c.cm. and 2 c.cm., cause little local reaction but a certain amount of general malaise lasting forty-eight hours, during which time the patients are best in bed.

Durban.

F. G. CAWSTON, M.D.Cantab.

DOUBLE DISLOCATION.

On August 31st I was called to see a boy, aged 12, who had fallen from a swing. The seat of the swing was 4 ft. from the ground and a rope was hanging from the seat. On getting off the swing the boy caught his feet in this rope and fell on his hands and dislocated both his elbows backwards.

I am recording this as I believe it is a rare accident to get a double dislocation. I reduced the dislocations by putting a roller bandage in the bend of the elbow and bending the forearm on it.

Bishops Waltham.

P. VERNON DODD, M.A., M.D.

Reviews.

THE PITUITARY.

DR. BLAIR BELL'S beautifully illustrated monograph, *The Pituitary*,¹ presents in a convenient form a useful and complete summary of what is known about the pituitary, and contains, in addition, a surprising amount of personal observations and experimental work. The latter was begun in 1906 in order to throw light on the relation of the gland to the female genital functions and to determine the physiological and therapeutical importance of its extracts, but was subsequently much extended in its scope. The term "hypophysis," used by some authors as synonymous with the pituitary as a whole, should be applied only to the anterior lobe and the pars intermedia or the parts derived from the buccal ectoderm. As no extract is made solely from these portions, the term "hypophysis" is, strictly speaking, erroneous.

The first part of the volume is devoted to the morphology of the gland, and is illustrated by sixty figures, mainly of the histological appearances in various animals. The puzzling microscopical details of the gland have attracted much investigation; in the pars anterior there are chromophil cells, some eosinophil, others basophil, and chromophobe cells tinged very lightly with basic dyes; some authorities consider that the three different types of cells have different functions, but the author's observations lead him to support the view that the apparently different types really represent the same cells in different stages of activity. He believes that the secretion of the pars intermedia and of the posterior lobe is taken up by the blood stream, and he disputes the hypothesis of Herring and the observations of Cushing and Goetsch to the effect that the secretion is discharged direct into the third ventricle and so into the cerebro-spinal fluid. In 1907, when investigating the effect of infundibulin on the uterus, Dr. Blair Bell found that it had a remarkable pressor effect on the smooth muscle of the alimentary canal, and since 1909 it has been much used to prevent and relieve the acute paralytic distension sometimes seen after operations; the contraindications to its use are cardiac affections, renal disease with high blood pressure, and intestinal suture.

In the second part of the monograph a full account is given of the author's experimental operations on the pituitary, and the results of the various forms of excision are compared with those obtained by Paulesco and Cushing. In many respects his results confirm theirs, but he was unable to verify the occurrence of "cachexia hypophyseopriva," regarded by Cushing as characteristic of complete, or almost complete, absence of the secretion of the pars anterior; and whereas Cushing found that partial removal of the pars anterior caused dystrophia adiposo genitalis, Dr. Blair Bell failed to produce this except by compression and separation of the infundibular stalk. The explanation of this discrepancy appears to be that though dystrophia adiposo genitalis is primarily due to insufficiency of the pars anterior, the only certain way of effecting this is to interfere with its blood supply. Dr. Blair Bell believes that the pituitary should be regarded as one organ and not as two, the secretory cells of the posterior lobe—the cells of the pars intermedia—being derived from the same source as those of the pars anterior. The removal of the pars posterior does not cause any symptoms, but its functional activity is regarded as dependent on that of the pars anterior.

The inter-relations between the pituitary and other ductless glands as illustrated by removal of the pituitary on the one hand, or of the thyroid, adrenals, or ovaries on the other, are considered, and a number of the author's experiments are described; he differs from Herring in finding that thyroidectomy is followed by definite changes in the pars anterior of the pituitary, but the evidence of increased activity is not found in all three parts of the pituitary at the same time; partial or complete removal of the pituitary, however, does not produce any definite alteration in the thyroid. In connexion with this difficult

subject of the inter-relations of the ductless glands, the suggestion is thrown out that the reason why physiologically active secretions of various organs, such as the ovary, the adrenal cortex, and the anterior lobe of the pituitary, have not been obtained and utilized therapeutically is because they do not produce their effects single-handed: they must either be activated by or combined with some other substance, as they are normally in the body, before they can give effect to any properties they may possess.

The symptoms of acromegaly primarily depend on an excessive secretion of the eosinophil or the active chromophobe cells of the anterior lobe (hyperhypophysism), but glycosuria may be due to interference with the function of the posterior lobe. Acromegaly produces a tendency to masculinism in women and to calcium retention, an essentially masculine characteristic. Hypopituitarism is clearly described and the surgical treatment fully dealt with. The last section of the work contains a wisely cautious account of the therapeutic uses of the pituitary extracts; much of the efficacy of continued pituitary medication appears to be due to the effect of infundibulin, and possibly of extract of the pars anterior, on calcium metabolism.

This monograph deserves the highest praise as a record of honest research and will be of immense use as a convenient source of reference, for it also contains the literature of the subject and is clearly written. It is a much easier book to read and obtain information from than is Cushing's monograph on *The Pituitary Body and its Disorders*, published in 1912, with which comparison is inevitable.

THE NERVOUS CHILD.

IN *The Nervous Child*² Dr. CAMERON makes a simple and thoughtful contribution to the study of disease in children which will commend itself to the general practitioner no less than to those consultants whose special province includes this subject. In general practice a man is often conscious of the baffling effects which nursery management has upon the treatment of sick children. Dr. Cameron gives a clear account, with numerous examples from his own experience, of both the working of suggestion and its end-results in the production of familiar ailments by the misguided care of parents and nurses.

The chapter on observation in the nursery is full of firsthand child-lore; for example:

The devices by which children will attract to themselves the attention of their elders, and which, if successful, are repeated with an almost insane persistence, take on the most varied forms. Sometimes the child persistently makes use of an expression or asks questions which produce a pleasant stir of shocked surprise and renewed reproofs and expostulations. One little boy shouted the word "stomachs!" with unwearied persistence for many weeks together.

What observer of his own or other people's children does not recognize this characteristic, which is capable of being unwisely magnified into a strife of wills with dire results?

The chapters on "Want of appetite and indigestion," "Want of sleep," "Other signs of neurosis," and "Enuresis," will perhaps most of all appeal to the thoughtful practitioner who has often not quite succeeded in analysing the faulty "atmosphere" of which he is conscious with sufficient clarity to give the advice he would desire. There are, of course, certain dangers in following too closely the advice to seek a functional explanation for most of the ailments of the nervous child. For instance, the mother of the nervous child is often the nervous mother; and an over-solemn lecture upon psychology and suggestion from a doctor of very serious habit may cause the mother such nervousness as to do her child more harm than good. Against the other and more obvious danger the author himself warns his readers, as, for example, under "Unexplained pyrexia":

That in nervous children the temperature may be very considerably elevated without our being able to detect much that is amiss does not of course make it any the less necessary to be careful to exclude organic disease. Pylitis, tuberculosis, and latent otitis media occur with nervous children as with others, and must not be overlooked.

The quiet sanity of Dr. Cameron's criticisms of German psychology in the chapter on education in sexual

¹ *The Pituitary. A Study of the Morphology, Physiology, Pathology, and Surgical Treatment of the Pituitary, together with an Account of the Therapeutic Uses of the Extracts made from this Organ.* By W. Blair Bell. London: Baillière, Tindall, and Cox. 1919. (Roy. 8vo, pp. 348; 190 figures. 30s. net.)

² *The Nervous Child.* By Hector Charles Cameron, M.A., M.D. Cantab., F.R.C.P. Lond., Physician to Guy's Hospital and Physician in charge of the Children's Department, Guy's Hospital. London: Henry Frowde, Oxford University Press; Hodder and Stoughton, Warwick Square, E.C. (Oxford Medical Publications). (Pp. 190+14. 6s.)

matters is characteristic of his treatment of the subject; and his continued refusal to see a whirlwind in every puff of air is well exemplified in the chapter on "Air swallowing, thigh rubbing, thumb sucking."

The Nervous Child is most readably written, free from the technicalities of psychologists and (except for the rather frequent appeal to "environment") of the child theorist; observation of real live children is shown in every page. The type is excellent and there is a good index. It is a book that once read will often be re-read as well as used for definite reference; a book to stimulate thought rather than to lay down rules, to add to the interest of the daily work, and to steady patience with the often difficult mothers of difficult children. To the doctor with the "better-class" practice the book will be most helpful; from it the experienced will find his observations crystallize, whilst he who is young in the gathering of observations will gather the better for what he reads therein. The practitioner who has to do with school children, with mother-craft and the like, will find it of absorbing interest.

MODERN METHODS OF EXAMINING THE HEART.

OUR attention has recently been drawn to a book by Dr. J. DE MEYER of Brussels,⁸ describing modern methods for examining the heart and vessels, published in 1914 just before the war. The various instruments that have been employed are carefully described without undue or wearisome detail, the principles on which they depend are set forth, and the facts their use has elicited are recounted, while their limitations and margin of error are critically examined. The book does not aim at establishing new theories or promulgating the individual opinions of the author; indeed, all the tracings given are reproduced from the works of other authors given in the bibliography at the end of the volume; but it does aim at presenting in a succinct form an account of all the methods of value which have been employed during recent years in investigating the circulation in living man other than the purely clinical methods of auscultation, percussion, and radiography. Since the description of these methods and the results attained by their use are at present scattered in numerous books, periodicals and transactions of societies, it seemed to the author desirable to collect into one volume the matter that has a common interest to the practitioner, the cardiologist, and the physiologist.

The book is divided into two parts, the first dealing with the peripheral circulation and the second with the heart itself. The first chapter of Part I is concerned with the arterial circulation; the various methods employed to estimate the arterial blood pressure are described and criticized, and figures are given of the more important apparatus; then sphygmography is dealt with in the same way, and afterwards the results furnished by the two methods in combination are considered. The absolute sphygmogram is described and explained, the quick and slow pulse and pulse tension discussed, and a short account is given of Martinet's views on the relation between pulse pressure and urinary output. The second and third chapters are devoted to the normal and abnormal venous circulation and the capillary circulation respectively, while the fourth chapter deals with plethysmography, the state of the vessels and the determination of the rapidity of the circulation of the blood. In Part II the methods of cardiac examination are first reviewed; very brief notes on percussion and orthodiagraphy are followed by descriptions of the various methods of graphically recording the heart sounds and murmurs, then cardiograms, or apex tracings are discussed, and pneumocardiograms and rectal tracings mentioned. Oesophagocardiography and electrocardiography are fully dealt with, and the methods of determining the viscosity of the blood and the factors which influence it are described, a few pages being devoted to Martinet's sphygmoviscometry. The author then deals in detail with the motor phenomena of the heart, a lucid account of the essential facts in the anatomy, embryology and physiology being followed by a fairly exhaustive description of the various irregularities, and an account of

the systematic examination of the different parts of the heart. The book finishes with a long chapter devoted to a review of the methods which have been proposed for estimating the effective and real work performed by the heart and by the pulse. There is a good index and a full bibliography; one of the features which adds greatly to the usefulness of the work is that all through the text there are constant numbered references, frequently with notes as to the actual page, to the original papers referred to.

It seems to us that the author has fully succeeded in the task he set himself. The grouping together in one volume of all the modern methods of clinical examination of the heart and vessels has great advantages. The style is lucid, and the book contains a careful and on the whole accurate account of the state of knowledge at the date of its publication; the various criticisms of methods and results are judicious and helpful. There need be no hesitation in recommending it to all interested in cardiac medicine. We know of no one other work that covers exactly the same ground.

POPULAR ANATOMY.

The Human Skeleton: An Interpretation,⁴ by Professor H. E. WALTER, differs considerably from the generality of books on the subject. Its author is primarily a biologist and not an anatomist, and, as might therefore be anticipated, references to the morphological side of the subject abound, references made more intelligible and permissible by the definition of the "skeleton" as "any supporting tissue"—notochordal, connective, cartilaginous, or osseous. Further, among what are called "external skeletal trimmings," skin, scales, teeth, nails, and hair are included. By the time, however, the reader has progressed through one-fourth of the book he will have left behind him all such "trimmings," as well as unexpected references in a work on the human skeleton to protozoa, mollusca and annelida, and will meet with a more orthodox consideration of the subject.

While it is not quite clear for what class in the community the book is primarily intended, probably it will appeal most to the intelligent layman, particularly if he has obtained at school a general, if elementary, knowledge of biological science. If this be the intention, the work may be welcomed as one of the earliest examples of those books, which will in the future surely increase in numbers, designed to give to the members of the general public an interest in the structure of their own bodies. To the student of biology or anatomy the book may afford a welcome relief from the more stolid works on the subject.

It is written in a colloquial style, with no little disregard for the value of words and the laws of composition. We find a chapter entitled "The handy hand and the makeshift foot" and a paragraph headed "The anthropology of the hair"; we find finger-nails referred to as "digital tips," and we occasionally meet such a sentence as this: "Rotation of the hand, which is gained through the way that radius and ulna are hung from the humerus, is present only in a slight degree in the foot." These blemishes are, however, relatively few and of quite minor consequence in comparison with such important features of the book as accuracy, originality, and, above all, interest. The illustrations are numerous, judiciously selected, and admirably reproduced.

NOTES ON BOOKS.

LIEUT.-COLONEL J. H. NEIL'S small work on *Field Ambulance Organization and Administration*⁵ is a mine of information, especially upon the subject of administration, and contains a wealth of deposit from "D.M.S. Instructions." Unfortunately the reader must be a vigorous miner in order to gain what he seeks. If the aim is to furnish a handbook and to embody the lessons of the war, the book has one serious failing, for the general principles and the lessons learnt which should stand good for all wars lie beneath a burden of information of which much belongs essentially to war in an enclosed country with its bases

⁸ *Les Méthodes Modernes d'Examen du Cœur et des Vaisseaux. Méthodes, Techniques, Documents Graphiques.* By Dr. J. de Meyer, Agrégé à la Faculté de Médecine de l'Université libre de Bruxelles. Paris: J. B. Baillière et Fils. 1914. (Med. 8vo, pp. 537; 261 figures.)

⁴ *The Human Skeleton: An Interpretation.* By Professor H. E. Walter, Associate Professor of Biology, Brown University. New York: The Macmillan Company. 1918. (Cr. 8vo, pp. xv + 214; 175 figures. 10s. net.)

⁵ *Field Ambulance Organization and Administration.* By Lieut.-Colonel Jas. Hardie Neil, N.Z.M.C., late Officer Commanding No. 3 New Zealand Field Ambulance. With diagrams. London: H. K. Lewis and Co. 1919. (4s. 6d.)

near home. The remarkable minuteness of detail in the departments of the quartermaster and of orderly room clerical work (to take two examples) would leave upon the mind of the field ambulance officer of the future a somewhat confused impression of what is a matter of first principles and what of detail arising therefrom. The numerous examples of standing orders for almost every conceivable branch of internal organization and administration will be found useful for instructional purposes. The chapter on field ambulance work during active operations is, perhaps, the least satisfactory, and suggests (as is probably the case, since the preface is dated October, 1918) that the field medical lessons of mobile warfare, as learnt in the final advance, have not been incorporated. This work of patient collection has been written amidst the difficulties of interrupted authorship on active service. The printing is good and the book fits handily into the pocket of a service dress jacket.

The Nerves of the Human Body,⁶ by the late Professor HUGHES, has now been revised and enlarged by Mr. C. R. WHITTAKER. The book provides, within the small compass of seventy-six pages, a clear and accurate description of the various cranial and spinal nerves as well as of the sympathetic system and its "functional distribution." The information conveyed is arranged in a more or less tabulated form and the "old" nomenclature is retained. The only omission we can discover, and one which we think students of clinical medicine and surgery will particularly deplore, is that, while the various cutaneous areas supplied by the nerves of the upper and lower limbs are outlined, no precise indication is given as to the areas supplied by the various spinal nerves. The book is distinguished from others of its class by its possession of illustrations; these are, however, so severely schematic in character as at times to raise a doubt whether they can have any value save for examination purposes. The book is one which can be commended to those who wish to revise their knowledge of the subject and to whom the larger textbooks are for the time being inaccessible.

⁶ *Hughes's Nerves of the Human Body*. By Chas. R. Whittaker, F.R.C.S.E., F.R.S.E. Second edition. Edinburgh: E. and S. Livingstone. 1918. (Demy 8vo, pp. 76; 12 plates. 3s. 6d. net.)

INCOME TAX.

MEDICAL WOMEN IN R.A.M.C. WORK.

OUR attention has been called to what appears to amount to a substantial injustice on medical women serving with the R.A.M.C., in that, although they are to all intents and purposes working under conditions similar to those in which commissioned officers of the R.A.M.C. work, yet the fact that they are not paid by the War Office as commissioned officers is held by the Inland Revenue Department to bar their right to the reduced rates of income tax applying to pay for "service of a military or naval character in connexion with the present war for which payment is made out of money provided by Parliament." The source of the money is indisputable, and we should have thought that it was almost as clear that the service was of a "military or naval character."

The fact is, the definitive phrase is too vague for the purpose for which it was intended. Presumably it would not be construed by the Courts to cover the case of a clerk in the Ministry of Munitions or a weekly wage earner working as a riveter in a Government dockyard; but where is the line to be drawn? A local practitioner commissioned as an R.A.M.C. officer automatically received the benefit of the special rate, even though he might be engaged for a substantial portion of his time in keeping his private practice from falling to pieces, and a medical woman employed the whole of her time on military hospital work has equitably at least as much claim to a similar advantage. The natural solution of the whole difficulty would have been to grant commissions to medical women—at any rate where whole-time service was required; but the repeated efforts of the British Medical Association and the Medical Women's Federation, both by memorandum and by deputation, have failed so far to obtain that measure of justice from the War Office.

Assuming that the statutory phrase is not to be construed in a sense so wide as to be nonsense, the department appears to draw the line according to whether or not the service subjects the worker to full military discipline as distinct from damages for breach of a civil contract—or so we gather from such information as we have

been able to glean from replies to communications on the subject. The advantage of such a line of demarcation is that it is reasonably unambiguous; the disadvantage is that its results are unreasonably divorced from the common-sense view of the facts. We suggest that it should not be beyond the ability or beneath the dignity of the department to adopt a different construction which would not withhold the "service" rate from medical women doing whole-time service in war hospitals under contract with the War Office.

MEDICAL SOCIETIES IN THE ARMY.

THE externals of outward calm and peaceful surroundings usually associated with the meetings of learned societies were commonly lacking at the gatherings of medical societies of the armies in France, for they were held in diverse structures—the Tarrant hut of a casualty clearing station, a partially demolished factory, or some school from which the customary occupants had been evicted. But noisy as the surroundings might be, from traffic over the pavé or artillery fire, the amicable feelings within, where each participator was concerned solely with relating his own observations and opinions, and not with "crabbing" some other speaker, were such as are sometimes lacking at home.

To many who served out there the memory of these meetings will remain very delightful, and there is no doubt that they fostered clinical enthusiasm and did much to spread information. The first society to hold regular meetings was, we believe, formed at Rouen early in 1915, and owed much of its inception and success to Major-General (then Colonel) Bruce Skinner, C.B., C.M.G., D.D.M.S., and to Sir Berkeley Moynihan, the consulting surgeon at that base. Shortly afterwards, when General Skinner became D.D.M.S. of the Third Corps, he started a Corps Medical Society (June, 1915), and this was, we believe, the first society to meet in the forward area. It continued its meetings at fairly regular intervals until just before the Somme fighting in 1916; after that it was not found possible to revive it owing to the constant changes in the formation of the corps. But during the year it existed many useful subjects were discussed, and some of the papers read before the society were published. The membership consisted of field ambulance and regimental medical officers, with occasional visitors from neighbouring casualty clearing stations. The discussions dealt mainly with front-line problems, such as trench fever, trench feet, trench nephritis, surgery in a field ambulance, the ideal regimental aid post, abdominal wounds. Probably the first public discussion on trench fever ever held took place at one of these meetings, at which also the long-continued type without any marked pyrexia was first described. Nor will the members forget Sir Wilmot Herringham's clear exposition of the incidence of trench nephritis, or Sir Cuthbert Wallace's plea for early surgery in the abdominal wound, when the necessity for rapid evacuation of these cases was first brought home with personal emphasis to a group of medical officers concerned in such work.

With the growth of the armies and the constant moving of divisions it became impossible to carry on corps societies, and the Second Army, with Major-General R. Porter, C.B., its D.M.S., started the first Army Medical Society in the late autumn of 1916. The Fifth and Fourth Armies rapidly followed suit. Naturally such societies had far larger audiences, and it was no uncommon thing for 200 medical officers to meet. The subjects were more diversified, as the work of the casualty clearing station had by this time greatly developed, and many interesting discussions centred round this. The treatment of wounds of special regions—the head, the chest, the abdomen, the knee-joint—always were fruitful in promoting keen debate, as also the effects of gassing, the dysenteries, and other war diseases. Attention to minor maladies, which yet caused enormous wastage—scabies, impetigo, night blindness, etc.—was not overlooked. In selecting subjects for the programme efforts were made to avoid administrative topics, on which discussion by junior officers in the presence of many administrative officers of higher rank was felt to be unwise, and to confine the meetings to matters of purely clinical and professional interest. In this way the fullest debate could take place without any difficulties arising, and when at times a critic did arise to castigate the administrators, the

latter were always ready to regard the meeting as one consisting of brother medical practitioners, and not senior and junior officers.

In the Third Army, the ruling idea was that the greatest good would be obtained from small gatherings at a large number of centres at which officers could come into personal contact with each other. In addition to the corps schools and occasional large meetings for discussion of big subjects, clinical meetings were held at most of the casualty clearing stations to which medical officers from the forward areas were invited, so that, when possible, they could see the cases which they had sent down, and hold informal discussions regarding the early treatment which should be adopted. In this army a special committee was appointed to stimulate and control the investigation and treatment of shock. Under its direction several very well attended meetings were held, at which progress was reported and suggestions made as to the lines along which further improvements and investigations might be made. When opportunity offered, officers from the forward areas were detailed to spend two or three weeks at special casualty clearing stations in order to perfect themselves in the technique of blood transfusion, gum infusion, applications of special splints, and so forth. In addition, the consultant surgeon of the army gave short lectures from time to time to divisional medical officers assembled at one of the divisional dressing stations. Medical officers of all ranks were encouraged to pay visits to neighbouring units in order to see what was being done. In these various ways a spirit of collaboration and friendly competition was fostered, with very beneficial results to the sick and wounded. Small pamphlets dealing with the general work of the regimental medical officer, with the treatment of wounded in advanced areas, and with operative treatment at the casualty clearing stations were issued from time to time. Before big battles recommendations by the consultant surgeon as to surgical work were issued to casualty clearing stations, and, after the battles, statistical reports and critical remarks on the work done in the different units were circulated. All these arrangements had their origin or sanction from the indefatigable and highly popular D.M.S. of the army, Sir J. Murray Irwin, whose interest and helpfulness in professional matters were greatly appreciated by all who came in contact with him.

Simultaneously with the advent of the army societies the base societies became more active, and an "interchange of pulpits" was sometimes arranged between base and front, the better to unify different points of view. The Boulogne Base Society probably had the record attendance in 1918, when Lieut.-General Sir Charles Burtchael lectured on man power. Apart from stimulating professional interest, the societies did useful work in bringing together men who were working in different zones. The regimental medical officer, the field ambulance officer, and the casualty clearing station officer thus met and learnt each other's point of view, and a feeling so often present that the man in the unit behind was having an easier time than his colleague further forward, or was hypercritical of his methods, was in this way lessened if not abolished.

The knowledge gained, the friendships cemented, and the welcome opportunity of talking pure "shop," not to mention the tea served by the sisters when the meeting took place at a casualty clearing station, combine to form a memory which will be lasting with many.

THE SPECIAL RESERVE OF OFFICERS, R.A.M.C.

[FROM A CORRESPONDENT.]

THE Special Reserve of Officers, R.A.M.C., exists to furnish a supply of adequately trained medical officers to complete the war establishment of medical units of the Expeditionary Force. It is an essential feature of their conditions of service that they shall be ready at a moment's notice to join their war units and proceed forthwith to the sphere of operations.

The Special Reserve of Officers, R.A.M.C., is capable of presenting certain conditions more nearly approaching the ideal than is possible in the case of other arms of the service. For to a medical officer some seven-tenths of his value lies in his practical ability as a doctor.

Before the war the training laid down consisted of

(1) three months' probationary training at the dépôt, followed by examination and (if satisfactory) confirmation in the rank of lieutenant; and (2) after three and a half years' service and after a month's training with an approved regular unit and examination, promotion to captain. Officers were eligible for promotion to the rank of major after twelve years' service, but the conditions were not laid down.

It is evident that the public has the right to demand that this Special Reserve of Officers, who are to be ready for war at a moment's notice, should be kept at a high level of military medical proficiency. The type of doctor that is needed is the general practitioner.

Let us examine the conditions of service. In the first place, it must not be forgotten that before the war the auxiliary forces were obtained from patriotic enthusiasts who foresaw war. They were ready to make sacrifices in the national interest because they themselves saw the need, and also because they realized that the bulk of the nation could not see it.

In return, then, for a retaining fee of £20 a year and a sum of £50 paid on mobilization, the R.A.M.C. officer "proceeded forthwith," and in most cases probably lost his practice, and with it his total capital in some instances. It cannot be helped, probably. These officers must be ready at a moment's notice. It should be possible for the Territorial Force officers to have at least a fortnight to make some arrangements in any future war, but a reserve of adequately trained medical officers ready to join their war units at a moment's notice is an absolute necessity. For this necessity the Special Reserve of Officers exists.

The general practitioner of the future will not, and, indeed, after what we have learnt, should not be expected to serve on the old terms. If the public are to have this reserve, two things are needful, and one is the safeguarding of the public from paying for those who are not fit for war at a moment's notice, whilst the other is a more adequate remuneration for the officer.

The war must have impressed upon all who have served the absolute necessity for a continuous and merciless weeding out of the incapable, the unfit, and the unsuitable if the filling of the higher ranks with dead material is to be avoided and paralysis of the service prevented. No officer should be promoted on account of seniority alone. He must be fit to perform all the duties of the higher rank.

Provided that the public is safeguarded from paying in peace time for a reserve of officers unfit for their functions in war, that public should not grudge adequate remuneration for those who maintain their proficiency. Twenty pounds a year is not a sufficient "retaining fee," nor £50 a sufficient "disturbance fee."

With adequate safeguards to ensure proficiency, it is submitted that the scale shown below is a fair one:

A. Annual Gratuity:		£
Lieutenants	...	20
Captains of less than 7 years' service	...	30
Captains of more than 7 years but less than 10 years' service	...	40
Captains of more than 10 years' service	...	50
Majors	...	60
Majors of more than 3 years' service as such	...	70
Lieut.-colonels	...	80
Lieut.-colonels of more than 3 years' service as such	...	90
Colonels	...	100
B. Gratuity on Mobilization:		
1. Under 7 years' service	...	100
2. Over 7 and under 14 years' service	...	200
3. Over 14 years' service	...	300
C. Promotion above the rank of major to be by selection after such trainings and examinations as may be laid down, and independent of seniority.		

In order to safeguard the public it should be necessary that an officer be recommended as "fit for promotion in every respect"—moral, physique, training, knowledge; and the medical examination should not be as against a standard in books, but after a test of reasonable endurance.

Provision might be made for officers above the rank of captain who have specialized to transfer to the Territorial Force for service with a general or stationary hospital, but the Special Reserve officer must be capable of performing any duty of his rank which may be required of him.

We have heard a good deal of criticism of an administration which failed to employ the members of the host

of specialists in their proper spheres, but the great demand in war is for the man who can be set to any task in field ambulance or in regimental or administrative duties, and it is amongst this class that the greatest war wastage must occur. They must be ready at a moment's notice, and the Special Reserve must furnish them; in the first instance, to complete the war establishments of the medical units in the regular divisions of the Expeditionary Force; later, for advancement in the divisions of conscripted troops raised by Act of Parliament after the declaration of war.

The labourer must be worthy of his hire, and the hire of the labourer.

AN ANTE-NATAL CLINIC.

In view of the increasing interest in ante-natal work, Dr. Robert A. Hendry, prematernity officer of the Liverpool Maternity Hospital, sends us the following account of a morning's work at a clinic.

In April, 1916, the Liverpool Maternity Hospital increased the scope of the ante-natal work by opening a series of clinics in conjunction with the Health Committee of the Liverpool Corporation. The clinic is held twice a month at the Corporation Milk Dépôt, 52, Earle Road. On June 17th, 1919, early in the fourth year after its foundation, thirty patients attended.

Twelve were first attendances; seven were referred by midwives, one by the assistant in the milk dépôt, and four on recommendations of former patients; five may be described as "major" cases, seven as "minor."

Two patients, brought by midwives, had contracted pelvis; one woman had a small round pelvis with a diagonal conjugate of 3½ in., and had had a Caesarean section after two stillbirths. She wished to know if an "induction wouldn't do"; much time was required to explain that the decision between induction and Caesarean section depended mainly on the size of the baby in the later weeks. Appropriate means have been taken to keep in touch with her. The other patient had a small round pelvis, diagonal conjugate 4½ in.; her first child was stillborn, the second pregnancy ended in abortion at 6 months; she will remain under supervision in case induction becomes advisable.

Two women reported "slight shows" early in pregnancy; no abnormal features were noted on examination; they were advised as to conduct, etc., and to get the midwife to call in a medical practitioner at home if there were any further bleeding, no matter how slight. From one woman, whose last five pregnancies had terminated prematurely, the infants living only a few hours or days, blood was taken for the Wassermann test, since reported "slightly positive."

From the fifth "major" case, a swab of the profuse vaginal discharge was taken; examination showed that gonococci were not present. Instructions were given, and a bandage was supplied for varicose veins.

Of the seven "minor" cases, two desired to know the period of gestation—one, aged 42, had had no pregnancies for eleven years, "quickenings" roused her suspicion that it was not the "change"; she was found to be five months pregnant. Two cases of varicose veins, and one each of backache, vomiting and nerves, and prolapse of vaginal walls, comprised the remaining minor cases. Eight of the twelve required treatment for constipation and flatulence. Of the eighteen old cases—four had attended in former pregnancies; one now convalescent after pleurisy, had had albuminuria and oedema two years ago, urine now normal; two had minor discomforts (flatulence, constipation, and backache) and varicose veins. The fourth "return case" attended first in May, 1917; she had four children living out of the first five born alive; the last four children were stillborn; the Wassermann reaction was positive; galyl and mercury and chalk were prescribed. A healthy girl of over average size, born January, 1918, continues to thrive. In March, 1918, the Wassermann reaction was negative. In May, 1919, an assistant inspector of midwives was asked to get her to report at the clinic; she attended on May 20th and reported menstrual irregularity and an abortion (?) during the last year and amenorrhoea since March 29th; the Wassermann reaction was negative. On June 17th she reported a flooding two weeks previously, and declined vaginal examination.

Two other patients gave positive Wassermann reactions—the one, after two pregnancies, both abortions, nine and four years ago, was three months pregnant; the other had one living child—the second, the first and third were premature and survived only a few weeks, the fourth was stillborn; she has been under treatment since October, 1918; a healthy girl was born November 25th, and is now thriving.

It may be stated here that these patients decline to attend at the venereal disease clinics.

One patient gave a history of repeated abortions, and another of three premature births, of which one was stillborn and two survived a few hours; the Wassermann reaction was negative in both these cases.

A primigravida with a small round pelvis, conjugate diameter 3½ in., now seven months pregnant, is under observation for decision between induction and Caesarean section.

A 5-gravida, with mitral stenosis and some cardiac embarrassment, six months pregnant, was advised to enter the Rest Home.

A 4-gravida, who had been sent into the Maternity Hospital with cystitis, was reported almost well. She was referred here in the first instance by a midwife, but wished to go into the hospital for her confinement, as she was so comfortable. She was told that her midwife would arrange this for her (in which case the midwife receives the fee).

Thriving twin boys, three weeks old, about six pounds each in weight, were brought up for inspection by a mother; she was advised to attend at the Infant Welfare Centre.

The remaining six patients included four cases of flatulence and constipation; one was neurotic, and the fourth was an anaemic primigravida who desired to enter the hospital for her confinement.

Little comment is required on such a morning's work. As a routine, the urine of each patient is examined once a month, blood is taken for the Wassermann test where there is a history of abortions, stillbirths, etc., and swabs of vaginal discharge in cases of leucorrhoea.

It is only fair to state that the clinic on this day was slightly more interesting than usual; it is not the largest ante-natal clinic in Liverpool—in the same week 80 patients (20 new and 60 old) attended at another clinic.

The majority of complaints are what I have described as "minor"; constipation, flatulence, vomiting, backache, varicose veins, etc., are much commoner than contracted pelvis, albuminuria, and syphilis; from the patient's point of view they cause much greater discomfort.

It is sometimes objected that there is too much "pills and petting" at the clinics. Both are necessary—in moderation, of course—the former to relieve the minor troubles, the latter to persuade the "major" cases to attend regularly in spite of the repeated necessary examinations, injections (grey oil), etc.

ROYAL MEDICAL BENEVOLENT FUND.

At the last meeting of the Committee held on August 12th thirty cases were considered and £308 10s. voted to twenty-seven of the applicants. The following is a summary of some of the cases relieved:

Daughter, aged 47, of M.D.Lond. who died in 1873. Lives with two elder sisters, one of whom receives help from the Fund. Has £15 per annum from dividends. Used to take in pupils, but now wishes to commence a school, and asks for help towards books, stationery, etc. Voted £12 10s.

M.R.C.S.Eng., aged 44. Was in a serious motor accident in June, 1918; is still suffering from head injury and loss of memory, is quite unable to work, and has had to sell his practice. Receives £24 pension from Poor Law and £6 6s. a month from the Medical Sickness Society. Rent and rates £57 15s. 6d. Has three children; the eldest girl is at home, and the two other children are at school. Voted £50.

Widow, aged 60, of L.R.C.P.Edin. who died in 1902. Is at present doing domestic work at 9s. a week, but she suffers from ill health, and was in the infirmary for a greater part of last summer. Has one daughter, who acts as a children's nurse and receives £26 a year. Relieved six times, £50. Voted £12 in twelve instalments.

Daughter, aged 64, of L.F.P.S.Glasg. who died in 1883. Is unable to work owing to ill health. Only income £15 from the Scottish Indigent Women's Fund. Pays £10 a year rent. Relieved eleven times, £116. Voted £18 in twelve instalments.

Daughter, aged 38, of M.D.Dubl. who died in 1884. Lives with her mother, who receives a pension of £50 per annum. Suffers from ill health and is unable to earn her own living. Relieved thirteen times, £120. Voted £10 in two instalments.

Widow, aged 63, of L.R.C.P. and S.Glasg. who died in 1902. Was left unprovided for with two children, who are now working and pay their mother £1 a week each, and applicant receives about £12 a year by needlework. Relieved thirteen times, £142. Voted £5.

Daughter, aged 68, of M.R.C.S.Eng. who died in 1881. Receives £6 a year from dividends, and £52 a year from friends. Lost all her money through the failure of an Australian bank. Suffers from ill health. Relieved six times, £72. Voted £12 in twelve instalments.

Subscriptions may be sent to the Acting Honorary Treasurer, Dr. Samuel West, at 11, Chandos Street, Cavendish Square, London, W.1.

The Royal Medical Benevolent Fund Guild is overwhelmed, in these days of exorbitant prices for clothing and household necessities, with applications for coats and skirts for ladies and girls holding secretarial posts and suits for working boys. The Guild appeals for second-hand clothes and household articles for the benefit of the widows and children who, in happier times, would not have needed assistance. The gifts should be sent to the Secretary of the Guild, 43, Bolsover Street, W.1.

British Medical Journal.

SATURDAY, SEPTEMBER 20TH, 1919.

INFLUENZA IN LONDON.

DR. W. H. HAMER'S report¹ to the County Council on the three waves of influenza is, as might have been anticipated, an interesting contribution to the literature of epidemiology.

Deaths in London certified as caused by influenza numbered 894 in the summer of 1918, in the autumn 11,336, and in the winter 3,278. Paying attention to excess mortality from other causes, it seems probable that the first wave destroyed some 1,750, the second about 16,000, and the third about 5,000 lives. Although in the 1890 pandemic the incidence upon ages 20 to 45 was relatively heavier than in 1847-48, the course of the disease after 1890 did not prepare us for the enormous toll of young adult lives taken in 1918. In the County of London 23 per cent. of the total mortality in the third quarter of 1918 was borne by the age group 15-25 amongst females, 15 per cent. being the proportion for males; 19 and 12 per cent. are the corresponding proportions in the last quarter of 1918. In females more than half and in males nearly half the total mortality was experienced by persons aged 15-45. These figures refer only to deaths certified under influenza.

In this report Dr. Hamer develops the epidemiological hypothesis advanced by him in the Milroy lectures of 1906 and defended in a recent contribution to the *Proceedings* of the Royal Society of Medicine (Section of Epidemiology and State Medicine). Dr. Hamer's hypothesis may be summarized in the following way: Although presenting varied clinical forms, influenza as an epidemic or pandemic disease has a unity which can be recognized through centuries; great outbursts of disease, sometimes fatal, sometimes not, which received different names—the Sweat, the New Fever, the New Ague, etc.—were all instances of epidemic or pandemic influenza. If the antecedents of these outbursts are examined it will be found that each great epidemic was encompassed by a cloud of smaller epidemics, other "new" and "mysterious" fevers, which often exhibited signs and symptoms referable to the nervous system. Influenza is attended by satellites or, to change the metaphor, preceded by heralds whose tabards most spectators cannot blazon. It follows that the recent association in time of cerebro-spinal fever, poliomyelitis, and influenza has been misunderstood; it was not casual, but an ordered sequence. From this hypothesis, based upon a historical induction, Dr. Hamer deduces conclusions not likely to be welcome to the bacteriologists, who, however, must by now be hardened to the jet of icy water which arises from the epidemiological fountain on Savoy Hill.

Dr. Hamer's hypothesis rests, we think, upon two propositions. The first is that the identification of the variously named outbreaks with influenza is just; the second, that, admitting the identification of the major outbreaks, the intercurrents are really linked with them by a causal nexus. With respect to the former proposition, we see that on the first page of

his new report Dr. Hamer roundly asserts that the sweat of 1485 was one of the earliest influenzas in history, and on p. 11 writes that the five English sweats "were undoubtedly influenzas." We have good literary authority for the proposition that "what I tell you three times is true," and Dr. Hamer has made the identification more than three times. Yet we do not feel confident that sufficient new light has been thrown on the historical question to convert what was in 1906 an arguable proposition into an undoubted fact. Of the historical epidemiologists who considered the point—using the same sources of information as Dr. Hamer—Haeser came, perhaps, nearest to his position, and Haeser merely says: "The English sweat must be regarded as an absolutely special disease (*durchaus eigenthümliche Krankheit*). Nevertheless, its affinity to influenza, which it resembles in rapidity and universality but not in the direction of its spreading, is unmistakable." We do not, therefore, find the identity of the English sweat and influenza either undoubted or unmistakable.

However, let us waive the point, admit the identification, and pass to the second proposition, of a non-fortuitous relation between the obscure nervous precursors and the influenzal outbreak—that is, that a mutating *materies morbi* is the connecting link. From Dr. Hamer's table, published in his Milroy lectures and referred to in the present report, it would appear that in two of the five sweats (1528 and 1551) there is no suggestion of any previous "encephalitis"; can we really infer more than that prior to any great epidemic sickness, anomalous illnesses may be seen, perhaps indicative of a generally low state of resistance to any infection? Sydenham begins his account of the epidemic constitution of 1666 by remarking that an "epidemic (continued fever) appeared which was wholly different in character from the continued fevers that prevailed during the preceding constitution," and goes on to refer to the intensity of the pain in the head and the severe vomiting. What was the nature of this disease? Are we sure that the mysterious nervous satellites do really revolve round the influenzal planet? Ought not other heavenly bodies to be considered?

Lastly, there is in this method of research the danger that, just as one remembers dreams which came true and forgets the others, annals of the circumstances attendant upon great epidemics are much more complete than those of less exciting times; statistically our experience is not a random sample of associations between diseases; the record is defective.

We must not, however, take leave of Dr. Hamer without expressing our sense of the value attaching to his work. Dr. Hamer has never swerved from the true faith that there is really a science of epidemiology which is not a mere subdivision of statistics, bacteriology, or medical history, although the methods of all three disciplines are needed by the epidemiologist. This has not been a popular faith, and it may be that Dr. Hamer has contracted some of the intellectual peculiarities of a minority, but we think that he will not always be in a minority.

TEETH AND THE NATION.

NAPOLÉON said that an army moved upon its belly, and it may be added that its motor members are its teeth. Bully beef and hard tack require good grinders, and the lack of them cannot be made up by an improvised Ministry of Munitions. What is true of war is true also of peace. The health of the nation lies in good digestion, and there is no good digestion (save in

¹ *Influenza—Report by the County Medical Officer of Health. Published for the London County Council by P. S. King and Son, Ltd. London, 1919.*

babes) where there are no teeth. Yet many of the people are toothless, and it is no wonder that the call of the insured patient upon his doctor is heavy.

Of recent years there has been a growing call for more and better dental treatment. There is no section of the medical profession which has not certified the necessity. The physician tells of progressive alimentary troubles, the throat surgeon of lymphoid growths and defective breathing, the eye surgeon of grave cyclitis and loss of vision, and all aver that the source of these troubles is a foul mouth and bad teeth. Finally, the war and the examination of recruits revealed a sorry tale of low categories due to defective teeth. Attention, so far, has been rightly centred upon the care of the teeth of the children, and to this end there has been a considerable extension of conservative surgery in the school clinics. But at the recent Conference of Local Medical and Panel Committees it was unanimously resolved that the additional services to the panel service should as early as possible be made to include dental treatment.

The general conditions of dental work have been under consideration by a special committee of the British Dental Association, which has issued a report dated July 1st outlining a scheme to provide: (1) Dental treatment for expectant mothers and for children up to 5 years of age; (2) inspection and treatment of all children of school age; (3) treatment for all adults whether entitled to National Insurance benefit or not; (4) dental treatment as an essential element in the cure of tuberculosis and venereal disease. The Committee recommended the establishment of a Dental Section of the Ministry of Health under a dental director. Uniform control would permit of the establishment of central dental clinics by local health authorities, where, by suitable arrangement and at different hours, the treatment of the first three of the above mentioned classes would be possible by the same staff. It is suggested that the staff should for the main part consist of permanent officers with the help, if necessary, of part-time officers, and that the various types of work should be well distributed so as to relieve the strain at present felt by the school dental surgeon who has to deal with children all his time. There should be suitable female assistance at each clinic and the services of an anaesthetist should be available. The clinics should be grouped round central laboratories where the necessary mechanical work such as the provision of dentures could be performed.

Pending the formation of such a National Dental Service the report recommends that efforts should be made to meet immediate requirements by the extension of the system of factory clinics established by the owners of large works, by public support of similar schemes established by members of the dental profession in various parts of the country, and by establishing in certain of the large industrial areas experimental clinics working on the lines laid down in the report. It is thought that the capital outlay required to carry out these suggestions would not be great.

The British Dental Association is to be congratulated upon its report. It is a fitting response to the recommendation of the Departmental Committee on the Dentists Act, which reads:

"In conclusion, we wish to state very strongly that in our opinion the State cannot afford to allow the health of the workers of the nation to be continuously undermined by dental neglect. Steps should be taken without delay to recognize dentistry as one of the chief, if not the chief, means for preventing ill health, and every possible means should be employed for enlightening the public as to the need for conservative

treatment of diseased teeth. The dental profession should be regarded as one of the outposts of preventive medicine, and as such encouraged and assisted by the State. Treatment should be rendered available for all needing it."

The report of the British Dental Association shows how this recommendation could be translated into action. It is greatly to be hoped that at this period of national reconstruction the Ministry of Health will give heed to the voice of the expert and make a beginning in organizing dental treatment. May there be no repetition of the dilatoriness which so long delayed similar provision for our naval and military forces during the war, in the manner described by Mr. Montagu E. Hopson in his presidential address to the British Dental Association. With one point alone the report does not deal—namely, the provision of a sufficient personnel for the service. The report suggests a scheme of payment for services rendered, both on a whole-time and a part-time basis; but would these rates be likely to attract a sufficient supply of trained dentists to the service? The work would be honourable, but the pay moderate, and we are inclined to doubt if it would stimulate the expenditure of four years of time and much money on the preparatory training. A father might deem it better to put his son or daughter into some service that made a smaller demand on his pocket and was more easily approached. The needs of the situation may render necessary some such scheme for the development of the personnel of a national dental service as is now employed in the training of teachers for the educational service.

THE PREVENTION OF ANAPHYLACTIC SHOCK.

IN an important communication to the Académie des Sciences, Richet, Brodin, and Saint-Girons¹ make the following statement: "If three weeks after a preliminary (sensitizing) injection of horse plasma into a dog we give the same dog another (assaulting) injection of 50 c.c.m. of the same horse plasma, the anaphylactic reaction, *which never fails*, is abrupt, sudden, and intense. Diarrhoea, almost haemorrhagic intestinal congestion, rectal tenesmus, vomiting, dilatation of the pupils, lowering of the arterial pressure, absolute motor paralysis, asphyxiated respiration, feeble cardiac contractions, and a weak pulse are the phenomena that result. Usually death occurs in two or three hours, sometimes even in a few minutes. If instead of injecting the plasma alone we inject the same quantity of plasma diluted with nine times its volume of isotonic salt solution, practically nothing happens. At the most there is slight diarrhoea and rectal tenesmus with faint parietic disturbances in the muscular function, but quite rapidly, in a quarter to half an hour, these pass off, and the animal recovers without any difficulty. It is not the mere dilution of the plasma that prevents the explosion of the assaulting injection, for if we substitute for the isotonic salt an isotonic solution of glucose, or a 0.4 per cent. solution of sodium chloride or distilled water, anaphylactic phenomena are produced almost as intense as if plasma alone had been used, and death occurs in the majority of these cases. Similarly, if we dilute the plasma with five instead of nine volumes of isotonic salt solution, the same explosive phenomena are called forth. Again, if the salt solution be injected first and the plasma afterwards, the anaphylactic shock is not avoided, whether the salt be injected forty-eight hours previously or even immediately beforehand. The reason probably is that the sodium chloride is so very rapidly eliminated in the urine: even in half a minute there is an increase in the

¹ C. R. de l'Académie des Sciences, July 7th, 1919.

salt content of the urine. If, however, large quantities of salt are injected the body is saturated with it, and the excess persists for some time. The injection of 75 c.cm. of a 20 per cent. solution of salt half an hour before the injection of the plasma into a dog prevented the occurrence of anaphylaxis. It would thus seem that the sodium chloride had a protective action against the assaulting injection. It was found that 3.6 grams of salt when mixed with the plasma had this protective effect, much smaller quantities being inefficacious. If the injection of salt is given before the injection of plasma very much larger quantities, impossible to calculate, would be required, since the elimination of the salt takes place with extreme rapidity. It would appear, then, as if the sodium chloride impregnated the nerve cells and rendered them immune to the anaphylactic poison." The authors connect this phenomenon with facts that Richet demonstrated several years ago on hyperchloridization. He showed that deprivation of sodium chloride rendered the organism much more sensitive to the toxic or therapeutic action of potassium bromide, whilst Lesné and Ch. Richet, jun., showed that the addition of a strong dose of sodium chloride rendered the body much less sensitive to the action of poisons. If the nerve cells are protected by strong doses of salt against the anaphylactic reaction, it is probably because they are saturated with the salt and have thus become less capable of fixing other poisons on their protoplasm. Richet and his collaborators think that it is permissible to hope that a new method of immunization has been discovered which is almost comparable with anti-anaphylaxis, although not identical with what follows the injection of very minute doses of the assaulting substance. It is probable that this immunizing action of large doses of sodium chloride is general, and that it is not peculiar either to the dog or to horse plasma. When there is a lack of salt the cells more readily fix the poisons, and when there is an excess the fixation is rendered difficult.

MALARIA IN MALAYA.

THE Malaria Advisory Board of the Federated Malay States appointed in November, 1911, to advise the Government as to a general campaign against malaria in the Federated Malay States, published a special report in 1914 covering the period down to the end of the year 1913. In a report issued recently the Board states that thorough drainage was attempted in many places. To be useful as a measure against malaria all land in a drained area must normally be perfectly dry at the surface, and be rapidly freed from water even after heavy falls of rain; drainage water must flow with a fair velocity in channels free from obstruction; and all bodies of still water must be of some depth and be entirely free from vegetation. Under-drainage is essential only in so far as it is needed to satisfy these requirements. The results obtained at Kuala Lumpur in an area completely drained are a conclusive proof of the soundness of the method, and, in so far at least as populous towns are concerned, of its being the best method in the light of present knowledge. No drainage scheme has yet had a fair demonstration, they say, unaffected by some avoidable factor unfavourable to it. The disadvantages of the method are that it demands a degree of competent and close technical supervision not yet generally available. Drainage, if well constructed, is, however, simple to maintain. Oiling of mosquito breeding places is still being carried out in many instances, but the committee does not express any definite opinion on the relative efficiency and economy of this and similar methods used in the Federated Malay States. Dr. Strickland strongly advocates the encouragement of dense natural growth in ravines as the most suitable method of preventing or reducing malaria in the hilly country of the Malay States. His observations go to show that in most hill jungle no malaria-carrying anopheles exist, and that the preservation of jungle land

in ravines and swamp in hilly land, or the encouragement of dense natural growth where the jungle does not exist, are important antimalarial measures; but he would not apply this to coastal jungle other than mangrove forests. The Board has these points under investigation, and as far as can be stated at present the method appears to offer advantages in dealing with certain classes of districts. The Board believes that malaria is the great natural obstacle to the economical and humane development of the Malay States, and equally concerns all classes of the community. That it will yield to a suitable campaign cannot be doubted, and the progress already made is a sufficient guarantee.

THE PHILOSOPHY OF MUSIC.

COLONEL KENNETH MACLEOD has published an interesting essay¹ on what he calls "musical thought," in which he contends that music is not a limited art, but a universal attribute of material energy and an essential attribute of organized vitality. We are not sure that we rightly apprehend his meaning; but if the proposition is intended to imply that the musical sense is universal in living beings, we think it too sweeping. Even among men of the highest intellectual culture and of the keenest sensibility to other forms of artistic expression, many have no music in themselves and are not moved by concourse of sweet sounds. Dr. Johnson thought music "of all noises the least disagreeable," a sentiment somewhat differently expressed by Théophile Gautier, who described it as the most expensive of all noises. Some, like Bottom—that precursor of the Futurists—who claimed that he had a reasonable good ear in music, might cry, "Let us have the tongs and the bones." Colonel Macleod discusses the effects and influence of music. He says its influence on lower animals is seen in the response of snakes to the charmers, in the dancing bear, and in other instances. Who does not know the passage in Job on the warhorse? "He saith among the trumpets, Ha, ha; and he smelleth the battle afar off, the thunder of the captains, and the shouting." In man the power of music to revive flagging energies, to sustain failing courage, and to inspire heroic deeds is well recognized. Robert Burton gives the pith of the matter in one sentence of his *Anatomy of Melancholy*: "Labouring men that sing to their work can tell us much, and so can soldiers when they go to fight, whom terror of death cannot so much affright as the sound of trumpet, drum, fife, and such-like music animates." In all stages of human evolution rhythmical sound has been used to rouse the spirit of man in war and in worship, rejoicing and mourning. Savages dance themselves into warlike rage by the throbbing of their big drums. Many of the psalms are battle songs, and ages later stirred Cromwell's Puritan soldiers to deeds of daring. Tyrtaeus fired the Lacedaemonians in their struggle with the Massenians, and his warlike airs were played as long as the Spartan republic endured. Carlyle says of the "Marseillaise" that the sound of it "will make the blood tingle in men's veins and whole armies and assemblages will sing it, with eyes weeping and burning, with hearts defiant of Death, Despot and Devil." That most famous of war songs played a great part in the recent struggle of nations. In the American civil war "Marching through Georgia" and "John Brown's Body" stimulated men to effort and endurance, and "Tipperary" proved a help to soldiers in France and Flanders. Colonel Macleod refers to Stephen Graham's description of the march of a Highland regiment across the Rhine: the men tramped through forest and marsh wet to the skin, footsore and tired almost to exhaustion, but heartened by the skirl of the bagpipes. Napoleon when crossing the Alps made the bands play when the guns had to be dragged over difficult places. At Waterloo the Old Guard was played into action in its last hopeless charge. Some years ago

¹ *Caledonian Medical Journal*, May, 1919.

certain sapient persons in France did away with bands and even with drums in the army; but this ill-considered ordinance had soon to be repealed. That the music is not a mere matter of beating time has recently been shown by some experiments, which proved that soldiers march in better time without any musical accompaniment. Much has been written of the healing power of music in some mental disorders, and of its influence in soothing pain. Among those who have written on it are Jean L. Desessarts, Dean of the Medical Faculty of Paris, who presented a memoir on the curative power of music in 1803; and in 1895, before the same learned body¹ M. Ferrand read a paper on the physiology of music. Some twenty years ago the late Frederick Kill Harford, Minor Canon of Westminster, founded the St. Cecilia Guild to test the therapeutic influence of music. The movement had the approval of Sir Andrew Clark and other well-known members of the medical profession, and experiments were made in the London Temperance Hospital which gave fair promise of success; but the Guild came to grief, and, as far as we know, nothing has since been done in this country to organize research on music as a healing agent. In Columbia University, New York, courses of "musico-therapy" have recently been established in which the indications for specific instruments in the treatment of shell-shock neuroses are studied. It would be easy to collect a large body of testimony from ancient and modern writers to the power of music, but that of Bacon seems specially apposite. He says: "The genius of music and medicine are alike. The function of the physician is to tune the lyre of the human body so that it shall give forth sweet and harmonious sounds."

THE DURATION OF NORMAL CONVALESCENCE.

From an analysis of the notes of 5,000 soldiers treated in a convalescent camp in France, Bridgman² brings forward the results of what is believed to be the first attempt to determine the proper length of convalescence by physical tests. The underlying principle of the camp was to retrain soldiers by physical exercises in order that they should on their return to the front be both physically and mentally fit. On admission the stripped patients were physically examined, and were placed in one of three grades, promotion through which depended on ability to carry out the work and play of the particular group without bad symptoms, the drills being watched by medical officers. The results of this scheme were extremely satisfactory, as subsequent inquiry showed that more than 99 per cent. of men discharged to full duty, and not killed, wounded, or gassed, had remained there, and that those re-classed to lower categories were doing the work of their grade. By this means the neurasthenia, anxiety neuroses, and effort syndrome which often follow return to the strains of life after a short interval from an acute infection or operation may be prevented. The striking point about the periods of convalescence shown to be necessary by Bridgman's observations is that they are so much longer than those generally accepted in ordinary practice. The possibility that even a subconscious desire on the part of the American "doughboy" to remain out of the fighting line could have protracted convalescence was considered unlikely to apply to more than a very small percentage. In ordinary life most patients with tonsillitis or sinusitis are out of bed and back at their daily work in seven to ten days, whereas these young soldiers who were previously in the best physical condition did not regain their normal strength for five weeks from the onset. An average attack of mumps requires a period of five weeks, pneumonia more than eight, and scarlet fever more than eleven weeks; operation for piles necessitates six and a half, and for herniotomy

seven weeks' convalescence. These results raise the uneasy feeling that we are often unconsciously taking risks, not only with our patients but also with ourselves, and that tuberculosis or cardiac disease may date from an infection followed by too short a respite from work.

THE MEDICAL DEFENCE UNION.

THE annual report of the Medical Defence Union for 1918, which has just been issued, shows that there was no falling off in the activities of this useful organization during the last phase of the war. As might indeed have been expected, the many problems of demobilization and resettlement have increased the work of the Union, and there is every prospect that under the changing conditions of medical practice the importance of belonging to a defensive organization of this kind will be recognized more than ever before. The council takes this opportunity of recording its deep regret at the loss sustained by the death of Dr. A. G. Bateman, and its appreciation of his untiring services on behalf of the Union and the medical profession. "Probably no one was better acquainted with the customs, conventions, and traditions of medical practice, or with the rights, liberties, privileges, duties, and ethical obligations of medical men in their relation with each other and with the public." This tribute will, we feel sure, be endorsed by every medical practitioner who had knowledge of Dr. Bateman and his work. It must be a source of satisfaction to the Medical Defence Union, whose work dovetails in with that of the British Medical Association at so many points, to have as Dr. Bateman's successor Dr. James Neal, whose special qualifications for the post are familiar to so many members of the Association. Dr. Bateman was a valued member of the Central Ethical Committee of the British Medical Association, and our readers will be glad to know that Dr. Neal has been appointed a member of that Committee. The report before us gives a brief account of the varied work of the Union during the past year. Difficulties in connexion with the National Insurance Acts, it says, have been as numerous as ever, and have afforded evidence in many instances of the utterly impossible position in which medical practitioners are placed under the present system. Mr. W. E. Hempson, the solicitor to the Union, in his account of legal business, says that the trend of the work of the Union during the past two years has been less in the direction of litigation than towards composing matters of professional difference arising out of the altered circumstances brought about by war conditions. But he ventures the opinion that now that national affairs have assumed more normal shape a recrudescence of litigation is to be looked for in the near future. Mr. Hempson's statement as to the present immunities of unqualified practice might well be noted by members of Parliament who think that the law protects the public against this form of imposture.

SCIENTIFIC AND INDUSTRIAL RESEARCH.

THE fourth annual report of the Committee of the Privy Council for Scientific and Industrial Research¹ has just been issued; it covers the period from August 1st, 1918, to July 31st, 1919. Earl Curzon of Kedleston, the Lord President, records that during the past year the work of the Department of Scientific and Industrial Research has steadily grown in usefulness and in amount. The passage from war to peace, he says, reveals more and more clearly as it proceeds the need for the sympathetic encouragement and organization of research in every sphere of national life. Encouraging progress is recorded in several directions. Thus a marked change is observed to be taking place in the attitude of industry towards scientific research; both masters and men are beginning to recognize its vital importance. Something also has been done to increase the number of trained research workers, the demand for

¹ *Bull. de l'Acad. de Méd.*, No. 32, 1903.

² E. W. Bridgman, *Arch. Int. Méd.*, Chicago, 1919, xxiv, 65-69.

¹ Cmd. 320. H.M. Stationery Office. Price 6d. net.

whose services rose rapidly not only in industries, but also in the universities and Government departments. The report of the Advisory Council, signed by the administrative chairman, Sir William McCormick, describes in greater detail the various branches of the Department's work. The work of the Food Investigation Board grew enormously during the year. The field to be covered is so large and the range of scientific knowledge so wide, that only a complex organization could hope to deal with the problems effectively. The Board accordingly set up six committees to deal respectively with fish preservation, engineering, meat preservation, fruit and vegetables, oils and fats, and canned foods; and these committees have in turn appointed seven special committees. The therapeutic uses of oxygen, shown by recent practice to be capable of very great extension, are being actively investigated by the Medical Research Committee in close co-operation with the Oxygen Research Committee of the Department. The Industrial Fatigue Research Board was established jointly by the Medical Research Committee and the Department, the former being responsible for administration. The demands made upon the Board have far exceeded all anticipation, while industrial unrest, believed by many to be closely related to present ignorance of the laws of fatigue and the best modes of applying them in practice, has emphasized the importance of this branch of research.

RABBIT HOT AND RABBIT COLD.

THE German troops occupied Ghent from October, 1914, to November, 1918, and from January, 1915, to July, 1916, Professor Heymans was allowed to work in his pharmacological laboratory there. During this period he investigated the effects of heat and cold, hyperthermy and hypothermy, on the mammalian organism, using a new method whereby the heat or cold were applied directly to the circulating blood of the experimental animals, and he has recently published an account of his experiments, and the conclusion he draws from them, in book form.¹ The great majority of the hundreds of animals he used were rabbits; the new experimental method consisted in forming a communication between the carotid artery and jugular vein in the neck, warming or cooling the blood in a water bath as it passed from one vessel to the other through a special cannula. The normal rectal temperature of the rabbit is from 38.5° to 39.5° C.; it was found that a rectal temperature higher than 43° C. was fatal in a few minutes, and that death from cold would follow if the rectal temperature fell below 18° or 20° C. The blood itself was not appreciably injured at temperatures of 47° to 49° C., but fatal haemolysis set in at 50° to 53° C., with a marked eosinophilia (30 to 40 per cent.); the heart and lungs worked well at 43° to 44° C., and Professor Heymans concluded that death from hyperpyrexia comes through the brain, while death from cold is due to failure of the heart and respiratory muscles to carry on. In the fatal hyperpyrexia produced by warming the blood he found that the temperature of the body fell as soon as death occurred and the experiment ceased; there was no further rise in this temperature *post mortem*. At high temperatures the heart beats regularly, forcibly, and rapidly; at low temperatures—in one case with an intracardiac temperature of 22.3° C.—the blood pressure fell and the pulse became infrequent, anacrotic, and irregular. Between 30° and 42° C., however, there was little or no change in the blood pressure; the output of the heart increased steadily as the rectal temperature rose; and the respirations might increase from the normal 50 or thereabouts to 150, 300, or even 420 per minute, with only a small increase in the amount of CO₂ expired, though here considerable variations were found in accordance with the

greater or less muscular exertions made by the experimental animal. In general, the output of CO₂ doubled between 32° and 42° C. If the brain only and not the rest of the body were supplied with heated blood the respirations quickened enormously, but the rate of the heart beat was actually slowed. As for the kidneys, it appeared that they were unaffected by high temperatures; but glycosuria was seen when the rectal temperature fell to 34° or 35° C., disappearing when the temperature rose again to the normal. Many interesting observations and points for discussion will be found in the account of these experiments, for which there is no room in a brief notice such as this. Professor Heymans at the end of the work gives an interesting analysis of the similarities and differences presented by hyperthermia such as he produced and fever. He notes that in fever the animal organism makes no effort to combat the rise of temperature by augmenting its peripheral circulation, as it did in his experiments; and he concludes that the stability of the normal temperature is the resultant of the antihypothermic and antihyperthermic tonus. In normal conditions, the antihypothermic tonus, like the vasoconstrictor mechanism, is alone active, the antihyperthermic tonus, like the vasodilator mechanism, being normally inactive. Fever is thus to the normally stable temperature as vascular spasm is to the normal vascular tone.

GENERAL LEONARD WOOD.

It is announced that General Leonard Wood has been nominated as Republican candidate for the presidency of the United States. This remarkable man is, like M. Clemenceau, a member of the medical profession. A sketch of his career has already been given in these columns, but the story of his rise from the position of an obscure practitioner to be one of the commanding officers of the United States Army is so romantic that it may be told in fuller detail. General Wood's father was a country doctor and a veteran of the civil war. His distinguished son was born at Westchester, New Hampshire, on October 9th, 1860, but his boyhood was spent at Cape Cod. His first thought was to enter the navy, but his father wished him to follow his own profession. Accordingly, in 1880, young Wood became a student at Harvard, where he earned his living with the help of a scholarship supplemented by tutorial work. At the age of 24 he began practice in a Boston slum. A year later he passed the examination for the army medical service, coming out second in a batch of fifty-nine. As there was no vacancy in the regular army he entered as a contract surgeon in the war against the Apaches that had just broken out. He was in the thick of the Geronimo campaign in the South West, the fiercest of all the Indian wars. The troops were mounted, and Wood had no experience of riding. He was given an unbroken broncho, but he quickly mastered his steed, and on the first day rode thirty-nine miles through the roughest part of Arizona. He became lieutenant in command of troops of the fighting line, and for his gallantry received the highest reward given by the American Government. Wood, like his fast friend Roosevelt, was a noted athlete, and won fame as a football player. When Grover Cleveland was president he became the White House physician, and he continued in that office with him and afterwards with McKinley. At the time of the outbreak of the war with Spain Wood had nearly made up his mind to leave the army and try his fortune on a sheep ranch in New Mexico. The war brought him his chance. Roosevelt was offered the command of a regiment of rough riders; he refused to be colonel, but agreed to serve as lieutenant-colonel under Wood. Wood drew up the plans for raising the men, and in three weeks the rough riders were formed. A month after landing in Cuba he became a brigadier-general, and two months later he was Governor of

¹ *Iso-hyper- et hypothermisation des mammifères par calorification et frigorification du sang de la circulation carotido-jugulaire anastomosée.* Par le Professeur J. F. Heymans. (8vo, pp. 216, with 29 figures.) Brussels: H. Lamertin; and Paris: O. Doin. 1919.

Santiago. Before the close of the year he was a major-general though not yet thirty-eight. As Governor he organized the administration of the young republic, established schools and courts of justice, stamped out yellow fever, and left the island cleansed and healthy. When Roosevelt became president Wood was sent to the Philippines, where for a year and a half he fought Moros through woods, swamps, mountains, and jungles; during all that time he was almost continually under fire. From the rulership of the province of Mindanao he went to Manila to become commander of the department of the Philippines, where he established law and order. All this was accomplished in three years. In 1903 he became a major-general, and in 1908 he was appointed Commander of the Eastern Department. He became Chief of the Staff of the United States army in 1910, and resolutely set himself to break the bonds of red tape. He preached the necessity of preparedness in season and out of season, especially urging the military training of boys in schools. In 1914 he went back to the command of the Eastern Department, and, when the National Guard was called up, out of the disorder of the Mexican situation he evolved a system and handled men and supplies with the utmost efficiency. General Wood held a high command in the recent war. He was wounded at the beginning of last year by the bursting of a gun during a test in France, but he is still an active force in his own country.

THE SERUM DIAGNOSIS OF BILHARZIASIS.

MAJOR N. HAMILTON FAIRLEY, of the Australian Army Medical Service,¹ brings forward good evidence for the belief that the harmful effects on the tissues produced by bilharzial parasites and their ova are principally due to the toxin excreted by them rather than to their merely mechanical action. In man naturally infected as well as in experimentally infected monkeys this is shown in two ways—there is an eosinophile leucocytosis and a corresponding increase in the eosinophile myelocytes in the bone marrow, and the serum shows the presence of immune bodies called forth to neutralize the bilharzia toxins. Major Fairley has succeeded in producing an antigen which is capable of demonstrating by the complement deviation reaction the presence of bilharzial infections. The antigen is an alcoholic extract of the infected livers of either of the snails *Planorbis boissyi* or *Bullinus dybowskyi*, which are the intermediary hosts of *Bilharzia mansoni* and *B. haematobia* respectively. Both antigens give the specific reaction, no matter which of the parasites is present in man, thus showing how closely allied the two species are. Extracts of the normal livers of *P. boissyi*, or of livers infected with another cercaria, failed to give the reaction, nor were pseudo-positive reactions obtained in protozoal, malarial, syphilitic, or other infections. The reaction would thus seem to be a true Bordet-Gengou phenomenon. It was found that positive results were obtained in 89 per cent. of patients whose infection was of not more than two years' duration, and in 74 per cent. of the more chronic cases. As a general rule the greater the degree of eosinophilia the stronger was the complement deviation reaction. Several hundreds of serums were tested. The method of Major Fairley has considerable diagnostic value in the early stages of the disease before localizing symptoms have developed, or in the later stages where the small numbers of ova in the dejecta escape detection. In several cases bilharziasis was first detected by the method and subsequently confirmed by cystoscopic examination or by the finding of the ova in the stools. The author also suggests that it might be found very useful in determining the endemic index of bilharziasis in the Nile Valley if such a scheme were ever undertaken, and, on the analogy of the Wassermann reaction, in estimating the results of any proposed intravenous medication.

¹ Journ. Roy. Army Med. Corps, June, 1919.

THE NERVOUS SYSTEM IN PERNICIOUS ANAEMIA

THE term "subacute combined sclerosis" is applied to cord degenerations which commence as small isolated plaques, as a rule in the posterior columns, and by their confluence and the secondary degenerations following them ultimately produce a diffuse and extensive disintegration of the white matter. The causative factors are very varied; in fact, almost any chronic intoxication may be responsible. Within the last two or three years definite destructive lesions have been found in the brain also. Large as is the list of diseases productive of these lesions, yet it is a striking fact that pernicious anaemia furnishes about a third of all the cases. From clinical examination various estimations have been made of the frequency of involvement of the central nervous system in cases of pernicious anaemia; the highest estimation hitherto has been 50 per cent. Woltmann (*Minnesota Medicine*, August, 1919) has examined at the Mayo Clinic 282 cases of undoubted and otherwise uncomplicated cases of pernicious anaemia since 1916; of these, 150 cases were subjected to a detailed neurological examination, and no less than 80.6 per cent. presented indisputable evidence of destruction of the nervous parenchyma. Doubtless this high estimation is to be accounted for by the refinements of neurological technique within recent years. Subjectively some form of paraesthesia, such as numbness and tingling, was rarely missing; sensations of cold—local or general—burning sensation, stinging pains in the limbs, girdle pain, cramping of the calves, disturbances of smell, taste, or hearing, and inability to control the arms or legs, were a few of the subjective symptoms, and were often the means of inducing the patients to seek medical advice. Objectively the most striking disturbances were found in the pathologically altered reflexes, for example, the tendo Achillis and Babinski reflexes; the disturbance of deep sensibility, particularly of vibration and joint sensibility, was a specially marked feature, being found in 92 per cent. of cases. Superficial sensibility was found definitely impaired in over 42 per cent., being usually most evident over the legs and buttocks. Woltmann considers that an examination of the nervous system is of inestimable value as an adjunct in differentiating pernicious anaemia from other types of anaemia, and that it often forms an easy way out of a most perplexing situation.

THE INDIAN MEDICAL SERVICE.

THE Naval and Military Committee of the British Medical Association, at its meeting on September 16th, considered various criticisms of the new rates of pay for the Indian Medical Service which have been put forward by present members of that service. The Committee decided to seek an early interview with the Secretary of State for India, in order to ascertain the full effect of recent Army Instructions (India), and also bring to his notice the further points which have been raised.

WE propose to resume the *Epitome of Current Medical Literature*, which was suspended during the later part of the war, and the first issue will be published with the *JOURNAL* of September 27th. The *Epitome* is intended to supply the needs of those in general practice who have not access to many other medical journals. It is not proposed to make abstracts from all articles appearing but merely to select those which would seem to be of interest to those who are not specialists.

WE much regret to announce the death of Dr. Guthrie Rankin, consulting physician to the Dreadnought and Royal Waterloo Hospitals.

THE BRITISH ASSOCIATION MEETING AT BOURNEMOUTH.

THE annual meetings of the British Association for the Advancement of Science, interrupted for two years by the war, were resumed last week at Bournemouth. It is interesting to observe that the leading daily newspapers now devote considerable space to the reports of papers and discussions. The work done by scientists during the war and the promised revelation of their secret endeavours undoubtedly stimulated curiosity, but it is to be hoped that the interest excited will follow their work in times of peace. However catholic one's taste may be it is impossible to do more than select a paper here and there, as the time-table permits, and endeavour to follow the subjects. Few of the papers dealt with medical science.

Racial Types of Man.

On the first day of the congress Professor Arthur Keith, president of the Anthropological Section, delivered a most interesting address on the "Differentiation of mankind into racial types." Starting with a description of the racial characteristics of the Mongol, negro, and Caucasian or European, he unfolded the thesis that these differentiations depended on the functional development of the endocrine glands. Abnormality, tumour, or disordered action of the pituitary gland was associated with acromegaly, gigantism, eunuchoid condition of the body, or dwarfism. Physiologically the conclusion seemed justified that the pituitary was one of the main parts in the machinery of regulation of growth, and that it was directly concerned in determining stature, cast of features, texture of skin, and character of hair—all of which were marks of race. The Caucasian type showed the greatest predominance of the pituitary; the sharp face, strong superciliary ridges, prominent chin, bulk of body, and height of stature could best be explained in terms of hypophyseal function. The interstitial gland of the testicles evidently played a part in bringing about the robust manifestations of the male characters, and this sexual differentiation was more emphatic in the Caucasian than in the Mongol or negro types. The evidence of loss of suprarenal gland function, as shown in Addison's disease, led to the inference that at least part of the function of these glands was concerned with the clearing away of pigment, and to their action we might attribute the fairness of skin in the European. Again, malignant growth of the adrenals in children produced a premature sexual maturity with all its bodily characteristics, and a similar result followed disease of the pineal gland. The thyroid gland was perhaps the most important of all the organs of internal secretion from the anthropological point of view. Apart from its immediate function in manufacturing a substance which regulated the rate of combustion of the tissues, and which could be correlated with the selection and survival of human races, it had remoter morphogenetic effects on growth and the shaping of racial characters. Cretinism, myxoedema, achondroplasia, and mongolianism, were evidences of characters induced by the thyroid gland changes of disease, and the racial characteristics normally corresponding were dependent on the physiological action of thyroid secretion. The endocrine glands thus possessed a growth-controlling mechanism, and the respective parts played by each in their relation to the rest of the economy were dominated by hormones, which, according to the nature of the recipients on which they acted, brought about the endless variety in the relative development of racial and individual features.

Protein Metabolism.

The president of the Physiological Section, Professor D. Noël Paton, communicated a paper on "Protein metabolism," in which he traced the gradual development of our knowledge of the chemistry of the proteins, their part in the processes of growth and repair, and the specific action of their products of disintegration. Covering a wide field and compressing the many accounts of physiological and chemical observations to the utmost possible, the lecturer made his paper difficult of abstracting but did not rob it of its great interest. His pleasing introduction and still more eloquent peroration were a delight to all his listeners. In the same section, too, Dr. Waller gave a demonstration of an apparatus which

recorded the emotional responses to various stimuli; fear, happiness, even curiosity on the part of the subject produced their responses on the moving point of light of the apparatus.

In the Subsection of Psychology Dr. W. Brown spoke of his experiences of hypnosis and mental analysis in the treatment of shell shock and other nervous maladies in soldiers. The recovery of lost memory, of loss of speech or hearing, and the restoration of the normal state in cases of extreme nervousness and hysteria, were some of the successes of hypnotic treatment.

HONOURS.

A SPECIAL Supplement to the *London Gazette*, dated September 9th, contains a list of awards for services rendered in connexion with military operations. The following medical officers are included:

C.I.E.

Lieut.-Colonels: J. B. Jameson, I.M.S. (ret.), S. J. Rennie, R.A.M.C. (ret.), and J. W. Watson, I.M.S., Major Leonard Hirsch, I.M.S., and Captain J. B. Hanafin, I.M.S.

C.S.I.

Colonel A. E. Tate, C.M.G., A.M.S.

C.B.E. (Military Division).

Major and Brevet Lieut.-Colonel (temporary Colonel) F. A. Fleming, C.I.E., I.M.S.

O.B.E. (Military Division).

Lieut.-Colonels: P. St. Clair More, I.M.S., J. J. Whitworth Prescott, D.S.O., R.A.M.C.

Major (temporary Lieut.-Colonel) J. K. S. Fleming, I.M.S.

Majors: G. D. Franklin, I.M.S., A. T. Frost, R.A.M.C., D. P. Johnstone, R.A.M.C., T. W. Minty, I.M.S., R. B. Nicholson, M.C., I.M.S., H. W. Pierpoint, I.M.S.

Captains (temporary Majors): A. F. Babonau, I.M.S., F. R. Coppinger, R.A.M.C., J. R. D. Webb, I.M.S.

Captains: W. A. Frost, R.A.M.C., T. B. Heaton, R.A.M.C. (S.R.), C. H. Smith, I.M.S.

Temporary Captains: James Cairns, R.A.M.C. (T.F.), S. K. Engineer, I.M.S.

M.B.E. (Military Division).

Lieutenant (temporary Captain) P. X. Godinho, I.M.S.

Military Cross.

Captain R. R. M. Porter and temporary Lieutenant Mahomed Nawaz, I.M.S.

To be Brevet Lieutenant-Colonel.

Major N. W. Mackworth, I.M.S.

To be Brevet Major.

Captain (temporary Lieutenant-Colonel) J. V. Macdonald, M.C., I.M.S.

Captains (temporary Majors) E. E. Doyle and M. A. Rahman, I.M.S., C. Ryles, R.A.M.C., W. R. Stewart, I.M.S.

Captain J. A. A. Kernahan, I.M.S.

A special Supplement to the *London Gazette*, dated September 12th, announces the following appointments to the Order of the British Empire for services rendered during the war:

O.B.E. (Military Division).

Surgeon Commanders: G. E. Duncan, A. Gaskell, C.B., and H. W. Gordon-Green, R.N.

Surgeon Lieutenant A. G. L. Reade, R.N.V.R.

FOREIGN DECORATIONS.

THE following decorations have been conferred by the King of the Belgians for distinguished services rendered during the war:

Croix de Guerre.—Lieut.-Colonels (temporary Colonels): O. W. A. Elsner, C.B.E., D.S.O., and Langford N. Lloyd, C.M.G., D.S.O., R.A.M.C. Lieut.-Colonel G. J. Houghton, D.S.O., R.A.M.C. Major and Brevet Lieut.-Colonel (temporary Lieut.-Colonel) F. D. G. Howell, D.S.O., M.C., R.A.M.C. Captain and Brevet Major (acting Lieut.-Colonel) F. R. Laing, R.A.M.C. Captains (acting Lieut.-Colonels): J. M. A. Costello, M.C., R.A.M.C. (T.F.), John Rowe, M.C., R.A.M.C. Captains (acting Majors): J. D. Fiddes, M.C., R.A.M.C. (T.F.), H. A. Rowell, M.C., R.A.M.C. Temporary Captains (acting Majors): W. S. S. Berry, O.B.E., M.C., W. S. Danks, T. Ferguson, James Jack, M.C., and H. C. Watson, M.C., R.A.M.C. Captains: L. A. Dingley, R.A.M.C. (T.F.), Ivor R. Hudleston, D.S.O., R.A.M.C., Harold Seddon, R.A.M.C. (T.F.). Temporary Captains: G. E. Lindsay, M.C., C. W. B. Littlejohn, J. B. Mason, and J. C. Robb, R.A.M.C. Lieutenant (acting Major) L. S. C. Roche, M.C., R.A.M.C.

The French Government has conferred upon Dr. Gregory Lamb O'Neill the decoration of Officier de l'Instruction

Publique, in recognition of his valuable services rendered to the French community in New South Wales.

The President of the United States of America has conferred the Distinguished Service Medal upon Surgeon Vice Admiral Sir William H. Norman, K.C.B., R.N.

The President of the Portuguese Republic has appointed Surgeon Commander Percy H. Brogden, R.N., to be a Commander of the Military Order of Avis.

India.

INFLUENZA PRECAUTIONARY MEASURES IN MADRAS.

At the instance of the Health Officer to the Corporation of Madras a special meeting of medical practitioners was held recently at the Medical College Hall. Lieutenant-Colonel C. Donovan, I.M.S., presided. The meeting was called to consider and combat the recrudescence of influenza in the city. The two waves of influenza in 1918 claimed a toll of 60.3 persons per mille, and now the city is passing through a third wave. It is regrettable that there were not in Madras many independent leagues or voluntary agencies as in Bombay and Calcutta. The chairman said that it had been decided that educative propaganda in the city was indispensable. Another essential thing was to avoid congestion. Hospitals should be opened by the corporation, which should allot large sums of money for the purpose, but as the corporation was poor the Government should come to its aid.

DEATHS FROM PLAGUE.

The following interesting table has been published, showing monthly mortality from plague recorded in India in 1918-19 as compared with the monthly mean for twenty years:

Months.	1918-19.	Mean for 20 Years.
July	3,972	5,934
August	6,174	12,340
September	6,945	21,607
October	7,632	27,750
November	4,697	27,481
December	3,205	35,808
January	7,629	51,549
February	12,872	64,875
March	15,069	101,100
April	10,221	99,436
May	6,104	54,656
June	1,182	10,259
Totals	85,700	512,711

Mortality per mille of population: 0.28.

Previous lowest: 0.42 in 1898-99 and 0.43 in 1908-9.

Previous highest: 4.51 in 1904-5.

The previous lowest mortality recorded in period July 1st to June 30th of following year was 119,045 in 1898-99; the previous highest mortality was 1,328,249 in 1904-5.

INDIA AND EAST AFRICA.

In a recent report referring to the East African campaign the Commander-in-Chief in India affords an insight into the climatic conditions with which the troops were faced. "The campaign," he writes, "had been a long and trying one, and disease had throughout taken a heavier toll than enemy's bullets. Although the strength of the Indian contingent had never reached fifteen thousand, and casualties in action had been comparatively few, over three times that number were sent from India during the course of the campaign."

COLUMBIA UNIVERSITY, New York, is about to establish a system of compulsory supervision of the health of its undergraduates. They will be examined physically on entering, and if necessary helped to get the best treatment. Each student will be further examined once a year, and will be required to learn at least two outdoor and two indoor sports.

Correspondence.

"THE CULT OF INDIVIDUALISM."

SIR.—The many inaccuracies and misstatements contained in the communication from Dr. E. R. Fothergill, published in your last issue, must be our excuse for requesting space for a brief reply. Seeing that no issue exists between the British Medical Association and the Federation of Medical and Allied Societies (late Medical Parliamentary Committee), of the former of which we are also members, we are not concerned with the defence of the body we represent.

In the first place we do not subscribe to the wholesale condemnation of the Association contained in the fourth paragraph of your contributor's letter. We cannot agree that the British Medical Association "is now recognized by all departments in the State as the mouthpiece of the profession," much as we would wish it to be; apart from the fact that the *Medical Directory* contains the names of twice the number of medical men that the membership of the Association embraces, there are several other professional bodies that the Government departments consult direct. The policy of the Federation can in no way be construed as making for rivalry with the Association; the aims of the former are definite in extent. It provides a permanent "round table" at which representative doctors, of all shades of opinion and engaged in all branches of medical work, may meet and confer with one another and with the representatives of lay bodies whose activities are ancillary to medicine; it aims at obtaining support for the profession from a much larger section of the public than any purely medical body can hope to obtain; it constitutes a "reference library" on matters affecting the public health, and by being in a position to supply information to the profession and the public, on the one side, and to those guiding legislation, on the other, it is truly a "liaison committee." Thus in place of overlapping and confusion in policy the Federation offers a real prospect of unity in thought and action.

Dr. Fothergill has a great deal to say regarding schisms in the ranks of the profession; it will therefore interest him to know that the three bodies he mentions and whose existence he deplures are amongst those who have taken part in the formation of the Federation, so that already far greater unity exists than was the case prior to the formation of the Medical Parliamentary Committee. It will be time enough to discuss the objection raised regarding individual subscriptions when the Federation asks for them.

It would be well if Dr. Fothergill could understand that there are others besides himself who are working disinterestedly for the good of the profession and the community.—We are, etc.,

MALCOLM MORRIS,
Chairman.

CHARLES BUTTAR,
Honorary Secretary.

N. HOWARD MUMERY,
Organizing Secretary.

The British Federation of Medical and Allied Societies,
20, Hanover Square, W., Sept. 15th.

SIR,—I was highly interested in the letter from Dr. E. Rowland Fothergill in your issue of the 13th instant, to which for some curious and obscure reason he has given the title of "The Cult of Individualism," although it is difficult to understand how a tendency to create associations whose object, according to Dr. Fothergill, is to promote "greater union in the profession" can be regarded as evidence of individualism. This, however, is by the way, and there is no one who is interested in medico-politics and in the common good of the profession and of the community who can withhold sympathy from the desire expressed by Dr. Fothergill for the promotion of union in the medico-political activities of the profession and the elimination of schism.

Does Dr. Fothergill's appeal, however, to the individual members of the profession to withhold support from any other organization of the medical profession than the British Medical Association really help towards union, and still more help to secure from the profession the

maximum of interest in medico-politics possible to the profession? I doubt it.

So far as Dr. Fothergill deprecates the formation of new organizations whose activities and principles are identical with those of the old association (the British Medical Association) I am with him; but when a new association has been formed, with a new principle of organization which the British Medical Association will not or cannot subscribe to, and he appeals to individual members of the profession to withhold support from this new body, I join issue with him. Such a new organization has arisen in the Medico-Political Union, with the principle, new to the profession, that at least one organization of the profession should have the foundation of trade unionism; and for Dr. Fothergill to appeal to the individual members of the profession to withhold their support from it is not in the best interests of the profession. Indeed, so far as medico-political activity is concerned, it is suicidal.

Better far to have divided activities than the apathy towards medico-politics which existed so long as the British Medical Association was the sole organization to which, members of the medical profession could look to voice their interests. This apathy is now somewhat removed, and there is a considerable, and, I believe, an increasing, interest taken by members of the medical profession even in the activities of the British Medical Association; but this decrease in apathy and increase in interest has progressed *pari passu* with the increase in the activities of the Medico-Political Union.

Can the medical profession do without the leavening factor of the Medico-Political Union? I do not believe it. Can the British Medical Association again afford to be without the stimulating influence of the Medico-Political Union, even as an apparently opposing force? I doubt it. I do not believe that Dr. Fothergill himself would like to have the profession back in its condition of medico-political apathy of the time prior to the Insurance Acts.

The tragedy is that the activities of the two bodies, the British Medical Association and the Medico-Political Union, should be so largely exercised in mutual opposition, and the tragedy is all the greater in that it is unnecessary. There is every reason why their activities should be co-ordinated except one, and that is the jealousy of a few members of the old organization of the activities of the new. The rank and file of the profession are keenly desirous of such co-ordination, and I am constantly receiving letters from members of the profession asking if the two bodies cannot be got to work together.

I believe that this is not impossible, and if Dr. Fothergill would help towards this, I should be heartily with him; but when he appeals to individual members of the profession to support the one body and withhold support from the other I am against him. I rather would appeal to individual members of the medical profession that they should support the British Medical Association and the Medico-Political Union.

I apologize for the length of this letter, but I ask you to publish it, not because it gives my views, but because I believe it gives the views of a considerable and increasing number of the members of the medical profession. — I am, etc.,

York, Sept. 15th.

PETER MACDONALD.

INTRAVENOUS INJECTIONS OF GUM SOLUTIONS IN CHOLERA.

SIR,—In your issue of June 7th last Professor Bayliss advocates, with good reason in view of his valuable work on gum solutions in shock, that a trial should be made of their intravenous injection in cholera, with a view to obtaining a more prolonged maintenance of the blood pressure than sometimes follows the use of hypertonic salines. Last year Professor Bayliss kindly sent me a copy of his paper on gum solutions in shock, and in acknowledging it I informed him that I had previously read it and been so struck with the possibilities of the method being of great value in the very severe cases of cholera which repeatedly collapse and are sometimes lost, in spite of hypertonic salines, that I had lost no time in trying it, but unfortunately with very disappointing results. This letter apparently did not reach Professor Bayliss, probably on account of "enemy action."

With one exception, the cases in which I tried the gum solution were rather below the average severity, as is

commonly the case in the rainy season, when the trial took place; yet several were lost which I should have expected to have recovered under hypertonic salines. Still more striking was the fact that instead of the great relief, often resulting in sleep before the hypertonic saline injection is finished, the gum solutions were followed by increasing distress, difficulty of breathing and cyanosis, which soon compelled me to abandon their use. In view of the shortness of my trial I decided not to publish my results at once, in the hope that others might be more successful, but I have now learnt that my friend Lieut.-Colonel A. Leventon, I.M.S., has extensively tried gum solutions in accordance with Professor Bayliss's method at the Campbell Medical School Hospital, Calcutta, where well over one thousand cases have been treated in the first half of this year; and Colonel Leventon has authorized me to state that with various strengths of the purest gum arabic up to 7 per cent. his results have been in entire agreement with mine, and he has also had to abandon the method. He, too, noted the same distress and cyanosis which I saw, and the unexpected loss of not very serious cases under the treatment; clearly indicating that gum solutions do not meet the physiological needs of cholera cases.

I confess that this failure has been a great disappointment to me, but I believe the explanation to be that the gum solutions lead to the retention in the circulation of the deadly cholera toxins, which are absorbed from the bowel in increasing quantities with the restoration of the circulation by intravenous injections of large quantities of salt solution, with or without gum, but which are usually sufficiently rapidly re-excreted through the kidneys and bowels after hypertonic saline to avoid dangerous accumulation in the blood. The fact that I found salines made up with freshly distilled water produced febrile reactions, indicating that the fever was due to toxin absorption, lends support to this view.

There is still room for considerable improvement in the treatment of the most severe toxic cases of cholera, but the hopes which Professor Bayliss's researches in shock led me to expect from gum solutions in cholera have been disappointed. I have for long thought that the most promising line of advance is the use of anticholeraic serums, such as those formerly made by Salimbeni in Paris and Schurupow in Russia, but which I have not yet been able to obtain facilities for making in Calcutta owing to the war. Perhaps one of the hill laboratories of India could take up this important line of work and send the serum to be tested in Calcutta in addition to my system of treating cholera.—I am, etc.,

Calcutta, Aug. 9th.

LEONARD ROGERS.

DISORDERED ACTION OF THE HEART.

SIR,—In his interesting paper on this subject in your issue of September 13th Dr. Venning provides tables the significance of which is not clear; I refer to Tables VI and VII, headed respectively "Causation" and "Varieties of Infection causing D.A.H." At first sight Table VII seems to record the percentage frequency of certain antecedent conditions among men suffering from D.A.H., which would be valueless without a statistical control based upon, say, a random sample of the military population. For example, scarlet fever provides in the last six-monthly period 2.2 per cent. of the causative infections (themselves 22.4 per cent. of the total); so that the incidence of scarlet fever as an antecedent is 0.49 per cent.—surely less than its incidence among the ordinary population.

The table probably represents the writer's judgement as to causes, and he tells us that by far the greater number shown in it were infections in civil life. One would like to know how many of the cases were due to such infections, how long after infection the symptoms appeared, and what are the grounds for regarding the infection as the cause of the D.A.H.

Dr. Venning rightly concludes that the mental and physical strain of warfare is the chief cause of the symptoms, but credits to it only some 30 per cent. of the cases, and though "neurosis before enlistment" provides a respectable percentage of causes, yet "neurosis after enlistment," which is only too common, receives no statistical acknowledgement.

My experience differs from that of Dr. Venning in so

far as I have seen these men only at a later stage of the condition, and I venture to trouble you with some remarks upon the etiology of D.A.H. which have no pretensions to numerical exactitude:

1. Many cases have occurred early in home service and under conditions where physical strain was unimportant. Others develop long after the strain has ceased.
2. As precedent diseases one often finds those, such as "gastritis," "myalgia," "laryngitis," etc., which are known to be in the army usually synonyms for a "neurosis."
3. Gas poisoning, so often regarded as the cause of D.A.H., is also the stated cause of many psychoneuroses.
4. Patients suffering from "neurasthenia" or "shell shock" frequently present the symptoms of D.A.H., which are, in fact, the usual accompaniment of the "anxiety state."
5. Cases of D.A.H. nearly always present nervous symptoms; headache, tremor of the hands, ready sweating, disturbed sleep, and jumpiness at slight noises are the commonest and mildest, though other symptoms may be so prominent that the case should be placed among the group mentioned in the last paragraph.
6. Many cases of D.A.H. do not tend to recovery even with months of easy conditions in civil life and when the physical signs are slight.

I must admit surprise at the number of cases with a history of rheumatic fever—about 10 per cent. of the total—that Dr. Venning has seen, and suspect the existence of a group which does not come under the notice of one whose observations are chiefly directed to the neuroses and psychoneuroses.

With this reservation I make so bold as to express the opinion that the syndrome known as D.A.H., which now incapacitates thousands of men, is a manifestation of emotional disturbance and not a result of infection. Emotion may interfere with the function of the central nervous system at any level; at the highest level it produces the psychoneuroses, which may show themselves by disordered motor activity or remain confined to the sphere of thought and feeling; at the lowest it disturbs the autonomic nervous system and affects the secretory and cardiac activities. This is shown clinically by the association with anxiety states of an "irritable heart," with slight enlargement of the thyroid, and von Graefe's sign. I dislike the word "neurosis," but would admit its application to symptoms, including D.A.H., caused by interference from emotional causes at this lower level of the central nervous system.

The practical importance of this view is immediate. The original cause of emotion may have vanished; but when a man believes he is suffering from "heart disease" a fresh source is opened out from which he derives new fears. His fears maintain the symptoms and the symptoms maintain his fears.

Anyone who, like myself, has become inclined to shirk the task of explaining to these men that they have no disease of the heart will appreciate the need of this point of view being emphasized.—I am, etc.,

Loughton, Sept. 15th.

MILLAIS CULPIN.

STIFF KNEE IN RELATION TO COMPOUND FRACTURE OF THE FEMUR.

SIR,—Permit me to comment upon the article by Captain C. Beresford Alexander, R.A.M.C.(T), in your issue of September 13th, on the pathology and treatment of stiff knee in relation to compound fracture of the femur.

He begins by stating that, apart from the fibrous or bony ankylosis of the knee following compound fracture of the femur when the fracture is into the joint or when there has been prolonged suppuration near the joint, there is another class of stiff knee which follows compound fracture of the shaft of the femur which is due to a shortened condition of the quadriceps muscle.

So far I am in entire agreement, but when he proceeds to explain this shortening by attributing it to sepsis and disuse I at once join issue, for whether or not such a case will have a stiff knee by the time bony union occurs depends upon the method of treatment adopted.

If it be treated in a straight Thomas knee bed splint, with strapping extension applied to the skin of the leg, a stiff knee will result, due to the injurious effect of the prolonged and continuous strain upon the passive quadriceps. If it be treated in the modified Thomas knee bed splint, with added lower half devised by Watkin-Williams and with extension applied directly to the lower femoral fragment with Pearson's ice-tongs, the knee-joint can be flexed

to a right angle and the quadriceps exercised daily without in any way interfering with the extension, which is still exerted in the line of the thigh, with the result that when bony union is firm almost complete range of voluntary movement is present in the knee, it never having been lost.

That sepsis is not the cause of the condition is proved by the fact that when a simple fracture of the femur is treated by the first named method, a stiff knee results.

I am informed that at the Alder Hey Hospital, the first—the old method—is in constant use, while the second—the new method—is not held in much favour. If this be true, it may account for the omission from Captain Beresford Alexander's article of any expression of regret or surprise at the occurrence of this stiffness; perhaps, indeed, he meets it in every case.

On the other hand, in the hospitals where the new method has been adopted the occurrence of stiffness is regarded almost as a disgrace.

Minor points which call for criticism in the article are:

1. The statement "that some degree of (knee) joint infection must occur in all cases of compound fracture (of the femur)." Will Captain Beresford Alexander explain why a compound fracture of the upper third of the shaft must cause it?

2. The advice to flex the stiff joint under gas. This is an unsatisfactory anaesthetic for the manipulation of stiff joints, and its use is liable to result in "rupture of the quadriceps, injury to the patellar ligament and capsule of the joint, or even fracture of the patella," accidents which Captain Beresford Alexander is careful to warn us against. Why not use chloroform and ether and take our time over it, with the patient completely relaxed, applying exactly as much force as we wish without the annoyance or danger of sudden powerful muscular efforts on the part of the patient?

The prevention and treatment of stiff knee is of such great importance to the owner of a fractured femur that I hope you will open your columns to a discussion upon it.—I am, etc.,

London, W., Sept. 13th.

PAUL BERNARD ROTH.

THE TEACHING OF MIDWIFERY.

SIR,—The chief fact which emerges from the Report of the Committee on the Teaching of Gynaecology is that practical midwifery is badly taught. Of this there can be no doubt, and although lack of clinical facilities may be an important factor, there is another to which attention should be directed. It is an anomaly that whilst the teaching of medicine and surgery is conducted by men whose practical experience of their subject is large, the teaching of practical midwifery is performed by men whose practical acquaintance with their subject is small. It would be interesting to know how many labours the average teacher of midwifery in London has personally conducted. I am sure the number is small, and in no case comparable to the thousands which stand to the credit of many general practitioners. If further evidence is needed of this assertion, it can be found in the textbooks of midwifery. A perusal of almost any one of these will convince an experienced man that most of the methods advocated are those of an academical tradition rather than begotten of a large practical experience.

The conditions under which the vast majority of children are born are what they are, and such they will remain for several generations, and what is wanted is a meticulous teaching—by men who are practically acquainted with these conditions—of the very best way to turn them to the safety and comfort of the patient. To shave and prepare an expectant mother as for a serious abdominal operation, to surround her, at the appropriate time, with three superior beings clad in aseptic raiment and wearing sterilized rubber gloves, who will superintend with sedulous care the expulsion of that impertinent foreign body, the newborn baby—this is, no doubt, a charming spectacle, but it bears as much relation to the practice of midwifery as Utopia to the United States.—I am, etc.,

Wanstead Park, Sept. 14th.

A. CAMPBELL STARK.

THE MILEAGE FUND.

SIR,—From inquiries that I have received it would appear desirable to state once more as clearly as possible what is the present state of the mileage question—so far at least as I understand it.

Two main principles were laid down by the Insurance Acts Committee for the constitution of the travelling or mileage fund:

1. That practitioners were to have extra remuneration for the extra time and money expended in visiting country patients, over and above what is involved in attending patients in towns and is covered by the ordinary capitation fee.

2. That this extra remuneration is under ordinary circumstances to be for patients more than two miles from the practitioner's house.

These two principles have been accepted (in the alarmingly obscure language, it is true, to which all Government officials seem addicted, but I am assured without any *arrière pensée*) in a letter from the Ministry of Health addressed to the Medical Secretary.

It has been agreed that the distribution of the mileage fund constituted upon these principles to the different areas should be worked out by a committee consisting of Government officials and members of the Insurance Acts Committee (exactly half of which, happily, are rural practitioners) and presided over by a neutral chairman nominated by the committee—namely, Sir Woodburn Kirby, past president of the Society of Accountants.

As regards the assessment of the fund, "so calculated as to take reasonable account both of the time occupied and of the expenditure incurred," to quote the words of the Ministry, it was tacitly assumed that the data in the hands of the Ministry of Health and of the British Medical Association would be placed before this committee in order that an agreement should be come to as to its amount; and though it does not appear upon the formal terms of reference, "the Minister proposes to invite the committee to examine all relevant data and memoranda bearing on the subject, and to give him the benefit of their advice and assistance in the matter."

The sum offered by the Government will be nearly as important to rural practitioners as the capitation fee will be to the profession as a whole. It is true that its non-acceptance by rural practitioners need not involve a general strike—such practitioners might refuse to go on the panel for patients beyond a certain distance only—but the inconvenience which such refusal would cause to the insured public, as well as the trouble which would devolve upon the profession in organizing a medical service on its own terms to meet the needs of these people, would be so great that every effort will be made, I am sure, by both sides to come to an agreement.

As has been long ago pointed out, the data for distribution of the sum agreed upon and for the assessment of this sum are for the most part identical, but one or two preliminary points may be mentioned.

1. As regards assessment, it must not be forgotten that in past discussions the extra hardships and responsibilities of the country doctors as compared with the townsmen have not been denied, but it has been agreed that these should be recognized, not by a difference in the general capitation fee as between the two classes of practitioners, but by allowing a generous travelling fund to the rural doctor.

2. The determination of the money value of the time spent in travelling obviously raises the question of what may be considered to be a reasonable annual income for a professional man working for ordinary hours a week, and this will have to be agreed upon.

3. For assessment, and probably distribution also, it will probably be necessary to divide up the practices throughout the kingdom into certain classes according to their character, such as (1) town practices with country surroundings, (2) country practices in residential districts, (3) village practices in agricultural districts, (4) moorland practices, and perhaps others; the number of each class will have to be estimated, and data collected from a sufficient number of samples to justify conclusions for the whole.

Bearing both assessment and distribution in mind as regards the actual expenses incurred, there are at least four main lines by which the problem of the travelling fund can be approached:

1. The average annual "stable expenses" (to use the old heading) of a practice (outside two miles) can be ascertained and the proportion which attaches to insurance practice determined. This might be decided in at least two ways—by finding (a) the proportion which the number of insured persons in a

district bears to the general population, or (b) the proportion which the insurance fees bear to the gross income of the practice.

2. The cost of travel per mile, whether by motor, horse, or otherwise, might be arrived at, and the distance of each insured person from the practitioner's residence and the average number of visits paid per year being known, an estimate made of the cost per person. This is the unit system adopted by many committees for distributing the old Special Mileage Fund.

3. The average total number of miles travelled per annum for all patients and the average total number of visits paid to all patients in a practice might be ascertained, and the average number of "miles per visit" being thus known, the amount to be paid for each insured person on the doctor's list could be determined.

4. Sample practices or districts could be marked out on a map, and the sparsity of population, number of miles of good roads, distribution of the villages and population, position of the doctor's residence and other factors being taken into account, practices could be classified according to the general expenses of travel, and each class could be assigned a definite additional capitation fee, or a lump sum per annum to cover expenses.

Each of these methods has advantages, whether of accuracy, practicability, facility, or the saving of book-keeping, and it seems clear that each will have to be explored to some extent if only to check the others. Clearly this is going to take any committee a considerable time, and it is probable that the inquiry may have to be prolonged over this autumn and the final arrangements made retrospective.

It would not be proper to endeavour to anticipate the sum necessary "to take reasonable account both of the time occupied and the expenditure incurred by country doctors"; it will be a large one, much larger, I think, than has been anticipated either by the former Insurance Commissioners or by the Insurance Acts Committee or by the country practitioners themselves who have not kept accurate accounts of their expenditure or gone closely into the figures of their practices. Of one thing I am sure—those of us who have wide practices have been accepting distant patients at a dead loss from the very commencement of the Act, and by postponing a resettlement till the end of the war have been consciously or unconsciously taxing ourselves for the benefit of the community to a very considerable extent.

Would it be too much to ask the Government to cancel the doles they have granted towards insurance practice expenses for 1919 and to make any arrangement come to as to the travelling fund applicable to this the first year of peace?—I am, etc.,

Weyhill, Hants, Sept. 9th.

J. P. WILLIAMS-FREEMAN.

FLAT-FOOT.

SIR,—Lieut.-Colonel Henry Smith tells us, in the JOURNAL of September 13th, that the leg muscles "are merely intended by Nature to move the ankle-joints and the joints of the tarsus"; and that "the cause of the evil in flat-foot is to be found in the skeleton." Thirty years ago I wrote, as a motto for the title-page of my book, *The Human Foot*:—"Muscles, in effecting the functions, support the structure and influence the form." Ever since I have been insisting that muscular action forms the plantar arch and will restore it when destroyed. Will some one who speaks with authority tell us what is the teaching of surgical science?—I am, etc.,

Gloucester, Sept. 14th.

T. S. ELLIS.

EARLY MENTAL HOMES.

SIR,—It was recently stated, in answer to a question in the House of Commons, that the provision of convalescent homes for early uncertifiable mental cases (without detention and on a purely hospital basis) would be a matter coming within the province of the new health authority. It is admitted that such homes or sanatoriums would be a great boon in intercepting cases (especially those occurring among ex-soldiers) which would otherwise be relegated to asylums.

The Lunacy Board (see its annual reports) has long desired the institution of "reception houses" under its wing, where early cases could be detained, say, for six months without certification—that is, without any judicial investigation or appeal, but solely on one medical authority—a proposal which might evidently lend itself to serious abuse.

A bill with this object, entitled the "Mental Treatment Bill," was introduced by the Home Office in May, 1915, but had to be withdrawn, the House of Commons regarding it as an annulling of the safeguards of the Lunacy Act and an infringement of the rights of the individual. From recent indications it would appear that a similar bill is now again in contemplation.

The Lunacy Board has, however, no jurisdiction over uncertified and uncertifiable persons, and in order that cases in the very early and most curable stages should be induced to enter these homes voluntarily (as they would enter a hospital) it is essential that the homes should have no connexion with lunacy, else they will be regarded as "half-way houses" to asylums, and shunned by the very people for whom they are intended. Public money, if sunk in them, will be for the most part entirely wasted.

It is a mistake to think that legislation is needed for the provision of sanatoriums which do not involve detention. The Public Health Act, 1875, has already conferred on borough councils the power to run hospitals, and similar powers could be readily extended to the London County Council and other county councils.

The cheering and hopeful atmosphere produced by the fact that the terms both of admission and stay are voluntary is in itself a most important factor in recovery. Section 315 of the Lunacy Act is a salutary safeguard, which should be strengthened and not annulled. It is not the existence of legal safeguards which causes "stigma," but the fact of being subjected to detention.

It is in the interest of the public that every case to which restraint is applied should be carefully investigated under judicial procedure, and that every case proved to be "dangerous and unfit to be at large" (see Section 74) should be judicially certified. No trivial or uncertifiable case ought to be subjected by any underhand method to detention.—I am, etc.,

London, W., Aug. 22nd.

S. E. WHITE, M.B., B.Sc.

NEW NAVAL RATES OF PAY.

SIR,—I am in entire agreement with the letter of "M.O." in regard to the new pensions for naval medical officers. All medical officers of 50 or over are badly let down by the new scheme. The pension, which was looked upon as "deferred pay," was always the most attractive feature in our service. Medical officers used to have a rather better pension than other naval officers. The new scheme rates up pensions of all officers, excepting those of senior medical officers, which are relatively lowered.

A man of 40 or less has time, perhaps, to save a little money under the new scheme of pay, and has also time to make plans for going at 50, when he may still be young enough to take up practice, but to the older man there is no such opportunity. It is very hard, after serving for twenty-five years and going through the war and having for one's whole service looked forward to an adequate pension (pre-war about £550) as a certainty, suddenly to find one's pension reduced by £200, for certainly the new pension of £600 is not worth more than £350 at the present cost of living. If pension represents deferred pay, why is not the extra 5s. a day professional allowance also included in the pension?

I entirely agree with your correspondent that the words "maximum retired pay £600" should be removed from the Admiralty Order in dealing with the present list, for all medical officers of over 40 years of age, and this I consider only a bare act of justice.—I am, etc.,

August 30th.

ANOTHER M.O.

PAY OF THE R.A.F.M.S.

SIR,—It was announced last July that the pay of the R.A.F. Medical Service would be the same as for the R.A.M.C. This latter has now been published, and I should like to inquire why a medical officer who has had to spend between £1,000 and £2,000 on his medical education should be paid 3s. a day as a lieutenant and 4s. a day as a captain less than the corresponding ranks in the R.A.F. who can receive commissions direct from school, without five years of special training. Their extra pay cannot be "flying risk" pay, as medical officers, together with all other officers in the R.A.F. (except quartermasters), will have to learn to fly as one of the conditions of being granted a permanent commission.—I am, etc.,

September 15th.

CAPT. R.A.F.M.S.

REMUNERATION FOR 1920.

SIR,—I have received from the Secretary to the Kent Local Medical Committee a most interesting communication enclosing a reprint of a circular dealing with remuneration for 1920 issued by the British Medical Association.

In this reprint it is stated that the British Medical Association have information (which is presumably considered satisfactory since it is circulated to Panel Committees) that "the collected figures for attendances on discharged disabled service men show that an additional capitation fee of 2½d. would have covered the insurance risk on all these men."

This figure is submitted without further explanation and, according to Dr. Cox in your present issue, was "supplied by the Government." To the poor panel practitioner this sort of talk is profoundly disquieting. He knows well enough that the number of persons paid for under "special arrangements applicable to discharged soldiers, etc.," is but a small fraction of those actually treated for war disabilities or actually in receipt of temporary or permanent pensions. He also knows that many practitioners, sickened with the interminable delays of payment, have not troubled to avail themselves of payment by special arrangements. To do so one has first to train the patient into the ways of obtaining blue cards, then to obtain his signature to this, that, and the other form, and finally to choose the appropriate moment for filling in and submitting one's own account. Even then the payment is made less 10 per cent. More inflation, I suppose. From my own experience I doubt if 2½d. would cover the cost of stamps and notepaper used in connexion with these patients.

There are other interesting points in the reprint referred to. Thus, we are exhorted not to demand payment "out of proportion to the responsibility undertaken." This we can hardly do until we know what the responsibility is to be, and, since M. 25 is strictly unofficial and quite uninspired, we have as yet no idea what is to be asked of us.

Again, we are to ask only such a sum "as will not result in sums being paid to practitioners materially larger than those which would be required by alternative modes of remuneration." What are these other modes, and what would they cost? Perhaps we should prefer them if only we had some idea what they are.

Further, the sum asked is to be such as can be shown to be reasonable by a Health Minister addressing the House of Commons—a body which thinks it "reasonable" to cut down notification fees and abolish reports on factory accidents. Surely our aim is to be adequately paid for work done, and, failing that, to refuse to do it. Why, then, bow down to the sense of reasonableness of the House of Commons, in which the Health Minister's voice will be hardly audible above the sound of members congenially employed in the task of grinding their own axes or those of their constituents?

The same document tells us that as we shall have to give more time to each patient, we shall naturally have fewer on our lists. It is hard to see how any such consideration can reduce the numbers of insured persons (recently augmented by the inclusion of a new class) or increase those of panel practitioners. Yet one of these two must happen before the numbers on our lists are materially diminished.

One need say no more. The document is typical of a committee which despises the intelligence of the practitioner and cares but little what nonsense he is asked to consider, if only he can be persuaded to be quiet and leave the mighty on their seats. If the practitioner should venture to speak, a few gibes at the pestilential atmosphere of Kent are considered sufficient reply. Kent by no means stands alone, but, even if it did, history affords more than one warning against taking the county too lightly. But the eyes of the Insurance Committee are closed as their mouths are most assuredly open. Ichabod! —I am, etc.,

Sevenoaks, Sept. 13th.

GORDON WARD.

THE FEE FOR A POST-MORTEM.

SIR,—By Act of Parliament a coroner may summons a medical witness to give evidence at an inquest, for which a fee of one guinea is paid; he may also order the witness to make a *post-mortem* examination, for which a fee of one guinea is also paid. If the medical witness

refuses he is liable to a penalty. The whole profession is aware of these facts; the British Medical Association is aware of these facts, and yet no attempt has been made by the Association to obtain a fee for these services commensurate with the risks to the doctor or their importance to the public. There is no need to point out to readers of the JOURNAL what these risks are, and the performance of a *post-mortem* examination, even under ideal conditions, is at best a loathsome and dangerous job. Taking into account the present value of money, it would not be too much to say that a fee of five guineas would barely represent an adequate amount of remuneration for this service. My reason for writing this letter, however, is to ascertain if possible why the British Medical Association—which presumably exists for the protection and promotion of our interests—has taken no steps for the repeal of those antiquated Acts of Parliament (William IV and Victoria) which fixed the fee at one guinea. The resentment of medical men against coroners' fees is very strong. Will the British Medical Association act quickly in this matter, or will it be necessary for some of us to become law-breakers by refusing to carry out the orders of the coroner and thus force the Association to demand redress?—I am, etc.,

Radcliffe, Sept. 14th.

I. FLACK.

* * The Association in its evidence before the Departmental Committee on Coroners' Law in 1910 drew attention to the inadequate scale of fees for this work and supported the contention as strongly as it could. The Committee reported in favour of giving discretion to the coroner to pay expert fees. Several attempts were made before the war to induce the Government to bring in the necessary legislation, but without success. There has been no opportunity since the war, but the Parliamentary Committee of the Association is arranging to meet the Committee of Medical Members of Parliament to discuss future action.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

SIR,—Quite recently the Minister of Pensions, in answer to a question in the House of Commons as to whether the salaries offered for the posts of Deputy Commissioners of Medical Services under the Ministry of Pensions were sufficient to attract medical "men of the highest ability," stated that these salaries sufficed to attract "men of standing and capacity." He further stated that the salaries varied from £650 to £800 a year. This is a typical parliamentary reply. With one or two exceptions the salaries are £700, with no added Civil Servants' bonus and no apparent provision for improvement in scale. Further, they are not pensionable like other Civil Service appointments, and there is no fixity of tenure. £700 a year, one sapient Treasury official is understood to have said, is as much as any medical man is worth!

Now the duties of a D.C.M.S. under the Ministry of Pensions are varied, and are becoming increasingly responsible, and the personal qualifications needed to fulfil these duties efficiently are not slight. They include discretion in the selection of members of boards and the tactful handling of those boards. He is responsible for the assessment of the pensioner, and to his lot falls the adjustment of conflicting views on the part of the members. He has at the outset to establish a sympathetic atmosphere between the pensioner and the Board—many of these men come up in a suspicious frame of mind. He has to establish good relationship and co-operation with the Local War Pensions Committee, and has to deal with an increasing burden of administrative duties in connexion with the Ministry and his regional head quarters. Added to this the D.C.M.S. has to be a highly qualified man and must be professionally in touch with modern methods of diagnosis. He is either in control of a county area or a large town. The work is physically and mentally fatiguing and tends to become very monotonous.

The Service is bound to suffer if the responsibilities of the D.C.M.S. are not recognized by an adequate salary increasing in definite ratio to a maximum, and it is not surprising to hear that several capable men have, in so uncertain a prospect, resigned office. No doubt medical men can be got to fill any such vacancies, but in the end the quality of the work done and the Service are bound to suffer.—I am, etc.,

September 7th.

Z.

SIR,—The letter written by Dr. S. J. Ross expresses views continually brought up by doctors who did not serve during the war. Those who did tell a different story.

He states that "the serving men in this area explained that army service was a holiday compared with general practice, and that a large proportion of their work might have been done by clerks"! This statement is certainly true in some cases; but would Dr. Ross prefer this relative holiday at army rates of pay or the rich financial fruits of a practice as busy as that he describes? With regard to the second part of the statement, does he prefer clerical work to medicine and surgery? If so, he made a mistake in the choice of his profession.

The majority of men in single practice who joined the army have been very hard hit, not only during their absence on service, but by the loss of goodwill. If the man who stayed at home will look at his books, he will notice an extraordinary increase in his takings since the war began. The man who went notices the converse. The inference is obvious.—I am, etc.,

Bournemouth, Aug. 26th.

A. B. ROOKE.

SIR,—It is a pity that the deputation to the Minister of Pensions, reported in the SUPPLEMENT of September 13th, did not include under a *seventh point* the great discontent which is prevalent among the members at the absurd irregularity of the sessions. A man with a practice is seriously inconvenienced, and a man without a practice, like myself, is hopelessly placed. It is quite impossible to get other work to fit in. To have a few sessions in the forenoon one week, and the following week to have them in the afternoon, and perhaps even on different days, is most annoying. No one except a doctor would submit to it. Many, of course, have gone, the others grumble and remain, and the worst of it is that those who are to blame also remain.—I am, etc.,

September 16th.

GALLERY.

Medico-Legal.

"BEAT HAND" UNDER THE WORKMEN'S COMPENSATION ACTS.

IN our issue of February 2nd, 1918, we dealt with a question raised by a reader as to whether under the Workmen's Compensation Acts there was any difference in procedure between miners and other industrial workers suffering from "beat hand" (subcutaneous cellulitis of the hand). We then stated that inasmuch as this disease was scheduled to the Act for miners, miners and miners only were enabled to take advantage of the procedure under Section 8 of the Workmen's Compensation Act, 1906, under which workers suffering from certain scheduled industrial diseases acquire a *prima facie* right to compensation on obtaining the certificate of the certifying surgeon, and any other worker suffering from this disease must go before the county court judge in the ordinary way and establish to the latter's satisfaction that his condition is the result of an accident arising out of and in the course of his employment.

Subsequently, on October 29th, 1918, this very point came before the Court of Appeal in the case of *Wilson v. Blyth Shipping and Dry Docks Company, Ltd.*, to which our attention has recently been directed by a correspondent. From the report which has just been published it appears that the workman, Wilson, had been employed by the Blyth Shipping Company as a riveter's "holder up," his work consisting of knocking rivets into holes and holding them against the hammering of the riveter. He became affected with "beat hand" and procured a certificate to that effect from the certifying surgeon appointed under the Factory and Workshops Act, 1901. In the proceedings which the man commenced in the county court his employers denied liability on the ground that not being a miner his disease was not scheduled as an industrial disease under Section 8 of the Workmen's Compensation Act, 1906.

Section 8, Subsection (i), of that Act provides that where the certifying surgeon appointed under the Factory and Workshops Act certifies that the workman is suffering from a scheduled disease, and the disease is due to the nature of any employment in which he was engaged during the twelve months previous to his disablement, he shall be entitled to compensation as if the disease were a personal injury by accident arising out of and in the course of his employment. By Subsection (ii) of the same section it is further provided that if the workman at or immediately before the date of disablement was employed in any process mentioned in the second column of the schedule, and the disease contracted is the disease set opposite such

process, the disease shall be deemed to have been due to the nature of that employment unless the employer proves to the contrary.

The county court judge upon these subsections held that Subsection (ii) conferred an additional benefit upon certain trades, but that Subsection (i) was of universal application, and accordingly made an award in the man's favour. His employers appealed to the Court of Appeal, where, in delivering judgement dismissing the appeal, the Master of the Rolls said, "In my judgement the description of the disease is not limited to its occurrence in persons engaged in a particular process. The only object of referring to the process is because, in the case of a workman suffering from the disease and engaged in that process, the disease is to be deemed to have been due to the nature of that employment unless the employer proves to the contrary."

The case is one of some practical importance to the profession as showing that a certifying surgeon under the Factory Act should look to the nature of the disease from which a workman is suffering, and that if it is one which has been scheduled to the Workmen's Compensation Act, the nature of the workman's employment is immaterial so far as the surgeon is concerned.

Obituary.

THOMAS PICKERING PICK, F.R.C.S.Eng.,

Consulting Surgeon to St. George's Hospital; His Majesty's Inspector of Anatomy in England and Wales.

By the death on September 6th, in his 79th year, of Mr. Pick there has passed away one of the old school of hospital surgeons, who was a great figure in the surgery of the metropolis thirty and more years ago. Mr. Pick was born in 1841, the son of the late Thomas Pickering Pick of Liverpool, merchant. Coming up to London in 1857 he attended the courses of study at the Royal Institution, and entered St. George's Hospital in the winter session of that year. At this time the hospital occupied a very good educational position in London, and the surgical staff comprised such great surgeons as Caesar Hawkins, Tatum, Prescott Hewett, and George David Pollock, while Mr. Timothy Holmes was curator and surgical registrar.

Pick took the usual double qualification of his day, the M.R.C.S.Eng. and the L.S.A. In 1862, was house-surgeon in 1863, and proceeded to the F.R.C.S.Eng. in 1866. He was surgical registrar and demonstrator of anatomy from 1864 to 1866, and curator of the museum 1866-69. In 1869 he was elected assistant surgeon to the hospital, and in 1878 surgeon. He held this office for the full period of twenty years, and became consulting surgeon in 1898. Other hospitals with which he was connected were the Belgrave Hospital and the Victoria Hospital for Children, and he was also consulting surgeon to the Home for Incurables in Maida Vale.

Pick's connexion with the Royal College of Surgeons was a long and honourable one; he examined in anatomy for many years, and continued to be a member of the Court of Examiners till 1894, in which year he was Hunterian Professor. He also rose to the dignified position of Vice-President of the College. As author and editor Pick wrote a good deal; he edited *Gray's Anatomy*, tenth to fourteenth editions, single-handed, succeeding his old friend Timothy Holmes, and he continued to edit this famous book in conjunction with Professor Howden until recently. He also edited *Holmes's Principles and Practice of Surgery*, and was the author of a small handbook on fractures and dislocations, and a manual of surgery.

For many years he was Inspector of Anatomy in England and Wales. Mr. Pick retired in 1900, and lived at Great Bookham; two of his sons entered the profession, the younger of whom is a surgeon lieutenant commander, R.N.

ARCHIBALD HENRY HOGARTH, M.A., M.D., B.Ch.Oxon.,

Major, Queen's Own Oxfordshire Hussars; Medical Officer of Health for Buckinghamshire.

We greatly regret to record the death, on September 5th, at Quainton, near Aylesbury, of Dr. Archibald Hogarth, medical officer of health and school medical officer for the county of Buckingham, and examiner in public health at the University of Oxford.

Archibald Henry Hogarth was born at Oxford in 1877. He went from Westminster School to Christ Church, Oxford, with a classical exhibition in 1896. From Oxford he went to St. Bartholomew's Hospital, where his outstanding abilities and character were recognized by all. After obtaining the English Conjoint diplomas and

graduating M.B. and B.Ch.Oxon. in 1904, he became house-physician to Dr. Samuel Gee, and edited the *St. Bartholomew's Hospital Journal* for two years. A most indefatigable worker, he never spared himself, and almost seemed to have the capacity of being in two places at once. He acted for some time as assistant medical officer to the Port of London, and, turning his attention to housing, he presented comprehensive reports to the Mansion House Committee on Housing, of which for some time he acted as secretary. His M.D. thesis in 1908 was entitled "The present position of the housing problem in and around London." Soon after leaving St. Bartholomew's he joined the London County Council educational staff, and worked with much energy to establish legislation on school hygiene; he made his mark with an authoritative book on the medical inspection of schools, published in 1909. Later, on the institution of a county medical officership for Buckinghamshire, he developed the various sanitary schemes throughout that county and adapted them to rural districts, particularly in regard to the dental care of children, cleanliness, maternity and infant welfare, and the control of venereal disease. He was an admirable organizer, and inspired all who came in touch with him with something of his enthusiasm and progressive spirit.

Whilst an undergraduate he served during the South African war with the Queen's Own Oxfordshire Hussars, and gained the D.C.M. Again, on the outbreak of war, he was mobilized with his regiment and went to France in September, 1914, as regimental surgeon. He took part in the first battle of Ypres, and remained on the Western front through the first winter of the war, but was invalided home with pleurisy in the spring of 1915. He went back to France in the following August, and spent a second winter there, holding the post of D.A.D.M.S. He was promoted major in July, 1916, and on his return to England he was appointed sanitary officer to the Southern Command. In the early part of 1917 he was sent to Switzerland to report on the condition of interned British prisoners of war. He was transferred to the medical branch of the Royal Flying Corps in April, 1918, and spent the summer visiting aviation centres. Last October he went on a special mission to inspect the naval air stations in the Aegean, but when he arrived influenza was raging in the islands. He took charge of the medical arrangements during the epidemic, and worked day and night. In recognition of his services in the Eastern Mediterranean he was awarded the O.B.E. During the voyage home he contracted Vincent's angina, from the effects of which he never recovered.

In public health administration and in all other matters Hogarth collected his information and facts carefully, and examined questions with thoroughness and scientific method. He was firmly convinced of the importance of appointing local practitioners as district medical officers of health or school medical officers, and the conferences he held with the district medical officers of the county were valuable in many ways. All who were associated with him in his work had a high regard and affection for him. In preparing a scheme or framing a policy he discussed each point with the officer at the head of the department concerned and weighed every aspect of the matter under consideration. Hogarth had a great contempt for shams or pretence. Having made up his mind, he went forward in his own single-minded, strenuous way. Thus he accomplished much in a short life, and whether in peace or war he always fought the good fight. The singular charm and sincerity of his character were felt by all who knew him. His untimely death is a loss to medicine and more especially to the public health service.

Dr. Hogarth in 1915 married Margaret Macdonald, M.B.Aberd., formerly medical inspector of schools under the London County Council. Deep sympathy is felt with his widow and only son.

THE news of the death of JOHN CAHILL, M.D., F.R.C.S.Eng., on September 6th, at Pinckney's Green will have come as a shock to a large circle of friends. He had been in indifferent health for the past year or more, and the death of his only son, Captain J. Archibald Cahill, M.C., in action was a very great blow to him. Dr. Cahill was the son of the late Thomas Cahill, M.D., of 9, Albert

Terrace (now 88, Knightsbridge). He was born in 1857, and was educated at Beaumont College and St. George's Hospital. He took the "Colleges" in 1881 and the F.R.C.S.Eng. in 1884, and, having held the usual junior appointments at St. George's, he began private practice at 12, Seville Street, Lowndes Square, where he remained for the rest of his life. In 1897 Dr. Cahill proceeded to the M.D.Dunelm. He was for a time surgeon to the Hospital of St. John and St. Elizabeth, and during the war he acted as temporary assistant physician at St. George's Hospital. Doubtless the strain of this extra work was very great, but he refused to give it up, and continued to see the out-patients on his days until this summer. Dr. Cahill was also a member of the Egyptian Government Medical Commission (London Board), and he was a governor and for many years a member of the House Committee of St. George's Hospital, at the meetings of which body he was a very regular attendant; he was a good man of business, an effective speaker, and his arguments always carried weight.

MR. SKENE KEITH, M.B., F.R.C.S.Edin., died on August 19th, after a week's illness, of pneumonia contracted in the course of his work. Mr. Keith, although not much in the public ken, had achieved great success as an operating gynaecologist. His death, coming so soon after that of his brother George, who succumbed to the same malady last December when on active service at Bordighera, is a loss to the profession as well as to the many friends who knew and loved him. Both brothers had inherited the diagnostic acumen and manual dexterity of their father, the late Dr. Thomas Keith, one of the pioneers in ovariectomy. It is many years ago that Mr. Skene Keith published his first hundred cases of ovariectomy with a mortality of rather less than 3 per cent., and his success grew as time went on. He came to London while still a young man, and was appointed on the staff of the Samaritan Hospital, but he resigned his post and returned to Edinburgh to assist his father, though ultimately both father and son came to London and practised in Charles Street, Berkeley Square. Mr. Keith published an excellent treatise on *Gynaecological Operations*, and another on *Abdominal Surgery* in collaboration with his brother, Dr. George Keith.

COLONEL HUGH CHAMPNEYS THURSTON, C.B., C.M.G., R.A.M.C. (ret.), died at St. Margaret's, Babbacombe, Devon, on August 17th, aged 57. He was born at Thornbury, Gloucestershire, on March 14th, 1862, educated at St. Bartholomew's Hospital, took the M.R.C.S. and L.R.C.P.Lond. in 1884, and entered the R.A.M.C. as surgeon on February 5th, 1887. He became major on February 5th, 1899, lieutenant-colonel on June 13th, 1911, and colonel on March 1st, 1915, retiring after the end of the war on March 1st, 1919. He served in Burma in 1891, with the Wuntho Field Force, receiving the Indian frontier medal with a clasp, and throughout the South African war, 1899-1902, receiving the King's and Queen's medals and also the C.M.G. He served during the European war, and received the C.B. on June 4th, 1917.

SURGEON-LIEUT.-COLONEL RICHARD FRANCIS TOBIN, R.A.M.C. (ret.), died recently in Dublin, aged 76. He was born on July 28th, 1843, educated in the schools of the Royal College of Surgeons, Ireland, and the Catholic University, Dublin, and took the L.K.Q.C.P.I. and L.R.C.S.I. in 1864, also subsequently the M.R.C.P.I. and F.R.C.S.I. in 1882. He entered the army as assistant surgeon in 1865 and retired with an honorary step as brigade surgeon on July 29th, 1885. In the old regimental days he served in the Royal Artillery, and for the last few years of his service was assistant professor of military surgery in the Army Medical School at Netley. He served in the Sudan expedition of 1885, at and in front of Suakin, receiving the medal with a clasp and the Khedive's bronze star. After twenty years' service in the army he started on a new career, which was to last over thirty years, in civil life in Dublin, where, soon after his retirement, he was appointed surgeon to St. Vincent's Hospital. He was also a Fellow of the Royal Academy of Medicine, Ireland, member of the governing body of the Catholic University School of Medicine, secretary to the Board of Superintendence of

Dublin Hospitals, and H.M.'s inspector of anatomy for Ireland and surgeon in ordinary to H.E. the Lord Lieutenant. He had also been examiner in surgery to the Royal College of Surgeons, Ireland, and president of the Irish Medical Association. He was the author of *A Synopsis of Surgery* and of many contributions to the medical press, including "The Surgery of the Suakin Expedition," in the *Transactions of the Royal Irish Academy of Medicine*, vol. iv. His only son, Captain Patrick Tobin of the Dublin Fusiliers, was killed at Suvla Bay in 1915. Whether in the army, or in civil life, few men have ever been more universally and deservedly popular with all around him than was Dick Tobin.

MAJOR EDMOND WILLIAM ST. VINCENT RYAN, R.A.M.C. (T.F.), died recently from illness contracted on active service. He was educated at Queen's College, Cork, and at Dublin, took the Scottish triple qualification in 1888, and, after filling the post of senior clinical assistant at the Royal Westminster Ophthalmic Hospital, went into practice at Wandsworth Common. He served in the South African war as surgeon-captain in the City Imperial Volunteer Mounted Infantry, was present in the operations in Cape Colony and in the actions at Paardeberg, Driefontein, Johannesburg, Diamond Hill, and Wittebergen, receiving the Queen's medal with six clasps, and also the freedom of the City of London, and the honorary rank of captain in the army from December 1st, 1900. Before the war he was medical officer, instructor, and lecturer to the Volunteer Ambulance School of Instruction and a member of the Territorial Medical Association. He held a commission in the R.A.M.C. (T.F.) as major in the First City of London Field Ambulance, dated January 9th, 1909, and had been senior medical officer of the Public Schools Brigade.

DR. MENDEL FREEDMAN, of Whitechapel, died on August 15th, at the age of 52. Born in Russia in 1867, he obtained a medical degree at the Kieff University in 1894, and practised in Russian towns and villages till 1905, when he emigrated to England. He obtained the Scottish Conjoint diplomas in 1910, and began practice in Whitechapel Road, where he continued until his death. During the war, after the conclusion of the Anglo-Russian Military Convention, he was chairman of the Russian Medical Board, where he did a great deal of hard work. His practice was mainly amongst the poor of East London, towards whom his attitude was one of consistent idealism. Countless times he declined to take fees from poor patients, and worked incessantly to relieve the sufferings of others without regard for his own health. He died of heart failure at his surgery.

DR. ALBERT GOUGET, professor of pathology and general therapeutics in the University of Paris, was recently run over by an automobile and so severely injured that he died a few days later. He had been appointed to the chair only two months before. Dr. PAOLO DE AGOSTINI, surgeon to the Ospedale Maggiore, Milan, was recently killed in a motor accident. It is reported from Geneva that Dr. LINDMANN, editor of the *Münchener medizinische Wochenschrift*, was among the hostages recently executed by the Spartist revolutionaries. Dr. NIKOLAUS BERENP, professor of children's diseases in the University of Budapest, was killed recently during an attempt to overthrow the Soviet Government in the Hungarian capital.

PROFESSOR LUIGI LUCIANI, the distinguished Italian physiologist, died on June 23rd. He was born at Ascoli, Pieno in 1840, and studied medicine at Naples and Bologna, where he graduated in 1868. From 1872 to 1874 he worked at Leipzig under Ludwig. From 1875 to 1880 he taught general pathology at Parma. He was professor of physiology at Siena from 1880 to 1882, at Florence from 1882 to 1893, and at Rome from 1893 to 1917. He was for two terms of five years a member of the Superior Council of Education; in 1905 he was made a senator, and for two years was rector of the University of Rome. He was a member of most of the principal medical and scientific societies of Europe—the Medical Academy of Rome, the Royal Academies of Turin and Naples, the Leopold-

Caroline Academy, the Royal Medical Academy of Belgium, the Neurological Society of London, the Medical Society of Vienna, the Academies of Science of Göttingen and Amsterdam. A distinction which he especially prized was the Fellowship of our Royal Society. His research work dealt mainly with the heart, the cerebral cortex, the cerebellum, and the physiology of fasting. His treatise on human physiology, now in its fifth edition, has been translated into English, German, and Spanish. He was a great teacher, and from his laboratories have come many of the men holding chairs of physiology, pharmacology, and neurology in the universities of Italy.

DR. HIPPOLYTE BERNHEIM, who died recently, was born at Mulhouse in Alsace in 1840, and studied at Strasbourg, where he became agrégé in 1869. He was appointed professor of clinical medicine at Nancy in 1879, where, under the influence of Antoine Liébaux, he took up the study of hypnotism and suggestion. His views and experience were embodied in his works *De la Suggestion et de ses applications à la thérapeutique*, published in 1886, and *Hypnotisme, suggestion et psychothérapie*, which appeared in 1891; a third edition was published in 1901. He was also the author of *Leçons de clinique médicale* (1877), *L'hystérie* (1913), and *Automatisme et Suggestion*, which appeared in 1918. Bernheim was the chief of the Nancy school, the cardinal doctrine of which was suggestion as opposed to hypnotism, of which the *Par. Salpêtrière* was for long the sacred shrine with Charcot as its high priest. Bernheim has been called the father of psychotherapy.

PROFESSOR AUGUSTE TAMBURINI, one of the leading psychiatrists in Italy, has died at the age of 71. In 1876 he was appointed director of the asylum for the insane at Voghera and had charge of the clinic of mental diseases in the University of Pavia. In the following year he became director of the asylum at Reggio and professor of psychiatry and neurology at Modena. He held these posts till 1905. During that period he made Reggio the principal centre of psychiatric teaching in Italy. Under his direction the *Revista Sperimentale di Freniatria* became one of the leading organs of the speciality; among his collaborators were Golgi, Luciani, Morselli, and Lombroso. In 1905 Tamburini was called to the chair of mental diseases in the University of Rome. He was for twenty-four years president of the Società Freniatrica.

The Services.

ARMY MEDICAL SERVICE.

NEW RATES OF PAY FOR REGULAR OFFICERS.

ON September 13th a Royal Warrant was issued by the War Office as an Army Order, announcing the new rates of pay, half pay, and retired pay for officers of the regular army. The new rates and conditions take effect as regards pay, half pay, and allowances from July 1st, 1919, and as regards retired pay from April 1st, 1919. The new rates are granted in consideration of the present high cost of living, and will be subject after five years to revision either upwards or downwards to an extent not exceeding 20 per cent. according as the cost of living rises or falls. After July 1st, 1924, a further revision may take place every three years.

Where transfer from the old rates of pay and allowances to the new rates involves loss of emoluments the officer may continue in receipt of the old rates until by promotion or otherwise the new rates equal or exceed the old. The new rates will not be taken into account in assessing gratuities under Article 497, Pay Warrant; under the Royal Warrant, February 10th, 1919; or in accordance with the terms of any special contract in connexion with service during the great war. Where dependent upon rates of pay these gratuities will be calculated on the rates in force before July 1st, 1919.

For all officers drawing the rates of pay and allowances laid down in the new Warrant the army of occupation bonus is abolished, while as from January 1st next children's allowance will be abolished for all officers, whether drawing the new or the old rates. The existing rates and condition for additional, extra-duty, and working pay, charge pay, and specialist pay will continue for the present, but are subject to early revision. The rates of command pay hitherto in force are, in general, doubled.

RATES OF PAY.

Army Medical Department.

Director-General, Army Medical Service: £2,500 per annum, including all allowances except field and travelling.
Deputy Director-General, Army Medical Service: £4 15s. 1d. a day.
Deputy Director of Pathology or Hygiene: £3 10s. a day.
Assistant Director-General or Assistant Director, Army Medical Service: Pay or rank (Colonel or lower) plus 2s. 9d. a day.
Deputy Assistant Director-General: Pay or rank (Major) plus

Army Medical Service.

	Per diem.
Major-General	£ 4 10
Colonel	3 5 0
Lieut.-Colonel	2 10 0
Lieut.-Colonel, after 20 years' total service	2 12 6
Lieut.-Colonel, after 25 years' total service	2 15 0
Major	1 15 0
Major, after 15 years' total service	2 0 0
Captain	1 10 0
Captain, after 5 years' total service	1 12 6
Captain, after 10 years' total service	1 15 0
Captain, holding higher brevet rank, in addition	0 2 6
Lieutenant	1 0 0
<i>Dental Surgeons—</i>	
Major	1 13 0
Major, after 15 years' total service	1 16 0
Captain	1 3 6
Captain, after 5 years' total service	1 6 0
Captain, after 10 years' total service	1 7 6
Lieutenant	0 18 0

The rates shown for officers of the R.A.M.C. and for dental surgeons will not apply to those in receipt of special rates of pay under contract. Officers serving under contract who are granted the pay and allowances of their rank while holding certain specified appointments will be eligible to draw the rates provided in the new Warrant.

HALF PAY.

The rules as to the conditions of issue of half pay will remain as at present. The rates are as follows:

Substantive Rank when placed on Half Pay.	Per diem.
Major-General	£ 2 5 0
Colonel	1 9 6
Lieut.-Colonel	1 3 9
Lieut.-Colonel, after 3 years as such	1 7 6
Major	0 15 9
Major, after 5 years as such	0 18 6
Captain	0 11 9
Captain, after 15 years' total service	0 13 0
Captain, holding higher brevet rank, in addition	0 1 0
Lieutenant	0 8 0
Lieutenant, after 7 years' total service	0 9 6

RETIRED PAY.

Retired pay will consist of two parts: (a) A service element based on the officer's total service; (b) a rank element for the rank from which the officer retires. An officer with less than fifteen complete years of service is not eligible for retired pay; but an officer with ten and less than fifteen years' commissioned service may retire with a gratuity of £100 for each completed year of such service. The scale of retired pay for the Army Medical Service will be as follows:

- (a) Service element—£150 a year after 15 years' service, with an increment of £15 a year for each completed year over 15.
(b) Rank element:

Rank from which retired.	After completing one year's service in the rank.	After completing each additional year's service.	Maximum rank element.
Major	£ 12	£ 12	£ 120
Lieut.-Colonel	150	30	240
Colonel	250	50	390
Major-General	440	50	540
Lieut.-General	590	50	640

The above rates of retired pay, subject to a maximum total for each rank, will be payable as from April 1st, 1919, to all permanent regular officers who, being otherwise entitled, have given paid military service to the satisfaction of the Army Council during the war. Temporary rank held during the great war, followed by substantive promotion to that rank, will count as service in the rank towards retired pay. The existing regulations as to counting of service, the age or service at which voluntary retirement is allowed, and the conditions for compulsory retirement will remain as at present.

In an Army Council Instruction on the new Warrant it is notified that the following emoluments of officers are in all cases subject to income tax:—Pay, corps pay, engineer pay, additional pay and extra-duty pay, children's allowance, furniture allowance. Income tax on service emoluments will continue to be charged at service rates for the current income-tax year; after that date the rates will be those applicable to the rest of the community, in the absence of special legislation to the contrary.

With regard to officers of the Special Reserve and Territorial Force, it is notified that in the absence of special instructions

Table of Total Emoluments.

Rank.	Pay.	Rations.	Servant.	Married.			Unmarried.		Total per Annum.	
				Lodging.	Fuel and Light (average)	Furniture Allowance.	Lodging.	Fuel and Light (average)	Married.	Un-married.
	£ s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	£	£
Lieutenant	1 0 0	2 1	2 0	3 6	1 0	2 0	2 3	0 10	558	495
Captain	1 5 0	2 1	2 0	4 6	2 0	2 0	3 0	1 2	685	622
Captain, after 5 years	1 7 6	2 1	2 0	4 6	2 0	2 0	3 0	1 2	731	652
Captain, after 10 years	1 10 0	2 1	2 0	4 6	2 0	2 0	3 0	1 2	777	698
Major	1 15 0	2 1	2 0	4 6	2 0	2 0	4 0	1 7	868	815
Major, after 15 years	2 0 0	2 1	2 0	4 6	2 0	2 0	4 0	1 7	959	907
Lieut.-Colonel	2 10 0	2 1	2 0	4 6	2 0	2 0	4 6	1 7	1,142	1,098
Lieut.-Colonel, after 20 years	2 12 6	2 1	2 0	4 6	2 0	2 0	4 6	1 7	1,187	1,144
Lieut.-Colonel, after 25 years	2 15 0	2 1	2 0	4 6	2 0	2 0	4 6	1 7	1,233	1,189
Colonel	3 5 0	2 1	2 0	5 6	2 10	2 0	5 6	1 10	1,449	1,395
Major-General	4 10 0	2 1	4 0	11 0	3 7	2 0	11 0	2 7	2,056	2,001

Charge pay (2s. 6d. to 10s. per diem) and specialist's pay (2s. 6d. per diem) in addition for a considerable percentage of officers (from £45 to £180 per annum additional).

the present rules as to the counting of service towards increases of pay continue to apply, and reference is given to Army Order 286 of 1914, which provides that only mobilized service counts.

Every endeavour will be made to expedite adjustment of pay due under the new Warrant, but considerable administrative complications arise, and some delay is inevitable. The pay for October, 1919, will be issuable at the new rates in every case, but the adjustment of arrears from July 1st, 1919, will take some time.

TOTAL EMOLUMENTS.

As an appendix to the Warrant tables are given for the purpose of showing approximately the total emoluments issuable at present under the new scheme; they refer to officers serving at home and not occupying Government quarters or drawing rations in kind. The totals are published for the convenience of officers, and must not be regarded as the authority for any of the rates laid down in the Warrant and Regulations. A married officer is defined as one who is or has been married, and is 30 years of age or over; but all officers serving on September 13th, 1919, who were then or had then been married, irrespective of age, are eligible for the allowances as "married." As already stated, children's allowance will be given until the end of the year, in addition to the emoluments shown. An outfit allowance will be given on first appointment to a permanent regular commission; the amount will be announced shortly. The above is the table of the total emoluments for the various officer ranks of the R.A.M.C. and Army Medical Service.

Medical News.

THE Right Hon. Sir Auckland Geddes, K.C.B., M.D., President of the Board of Trade, will distribute the prizes at Charing Cross Hospital medical school on Wednesday, October 1st. The ceremony will take place in the outpatients' hall, at 3.30 p.m., and a reception will be held afterwards at the school, when the laboratories, museum, and library will be open to inspection.

THE Guy's Hospital biennial dinner will take place at the Connaught Rooms on Tuesday, October 28th, at 7 p.m., with Dr. Lauriston Shaw in the chair. Old students who have not received an invitation to the dinner are asked to communicate with Mr. F. T. Steward, 98, Portland Place, London, W.1.

THE old students' dinner of the Westminster Hospital will be held on Thursday, October 2nd, at 7.30 p.m., in the Imperial Restaurant, Regent Street. The honorary secretary is Mr. Rupert Farrant, 51, Harley Street, W.1.

THE old students' dinner of University College Hospital will be held on Friday, October 3rd, in the Imperial Restaurant, Regent Street, with Sir J. Rose Bradford, K.C.M.G., C.B., in the chair. The honorary secretary is Dr. A. M. H. Gray, 30, New Cavendish Street.

THE seventy-eighth session at the School of Pharmacy of the Pharmaceutical Society of Great Britain will open on Wednesday, October 1st, at 3 p.m., when the Pereira medal will be presented, and Mr. W. J. Uglov Woolcock, M.P., will give the inaugural address.

THE annual dinner of past and present students of the Charing Cross Hospital Medical School, which has been in abeyance for the past five years owing to the war, will be held in the Adelaide Gallery, Gatti's Restaurant, on Wednesday, October 1st, at 7.30 p.m., with Colonel William Hunter, C.B., A.M.S., in the chair. Old students are cordially invited, and are asked to send a note of their intentions to the Deau.

R.A.M.C. TEMPORARY COMMISSIONS.

As stated in our last issue, the War Office has revised the terms and conditions for temporary commissions in the Royal Army Medical Corps.

Candidates who have served before will be commissioned in their previous rank. Lieutenants who have completed one year's satisfactory service as such will be commissioned as captains. Those who have not served previously will be commissioned as lieutenants. The period of engagement will be for six months, and the contract will not be terminable by either party prior to the expiration of that period except for misconduct, inefficiency, or medical unfitness.

Pay will be at the rate of: Lieutenants £600 per annum, captains £650 per annum, and in addition the following will be issuable: (1) Pay at the rate of £50 per annum when serving elsewhere than in Europe. (2) Rations or an allowance in lieu thereof (present rate 2s. 1d. per diem). (3) Specialist or charge pay when holding a position for which the issue of such is authorized. (4) Officers holding higher acting or substantive rank than that of captain will, if desirous, be granted the pay and allowances of their rank. Kit and outfit allowance will be issued to candidates who have not previously received such allowance.

All candidates must be fit for general service or garrison duty abroad, and must undergo a medical examination prior to being accepted. Applications should be addressed to the Secretary, War Office, Cornwall House, Stamford Street, S.E.1.

THE Right Hon. Christopher Addison, M.D., M.P., Minister of Health, will give the introductory address at the opening of the winter session of the London (Royal Free Hospital) School of Medicine for Women on Wednesday, October 1st, at 3 p.m.

THE annual dinner of the staff and past and present students of the Royal Dental Hospital of London will be held at the Connaught Rooms on Saturday, November 22nd, at 7 o'clock. Sir Harry Baldwin will take the chair.

THE opening of the winter session at St. Mary's Hospital Medical School will take place on Wednesday, October 1st, at 3 o'clock. The prizes will be distributed by Lieutenant-General Sir John Goodwin, K.C.B., Director-General Army Medical Service.

THE University Court of St. Andrews on September 12th appointed Mr. James Fairlie Gemmill, M.A., M.D., D.Sc., to the vacant chair of natural history in University College, Dundee.

DR. A. J. CAMPBELL of Uley, Gloucestershire, was recently presented with a testimonial on the occasion of his retirement from the chairmanship of the Panel Committee for the county of Gloucester.

SEVERAL months ago we recorded the holding of a medical conference at Cannes, called by the Committee of Red Cross Societies to formulate an extended programme of Red Cross activities for the improvement of health, the prevention of disease, and the mitigation of suffering throughout the world. To carry out the programme drafted by the Committee with the approval of the Governments of Great Britain, France, Italy, Japan, and the United States, a League of Red Cross Societies was organized in Paris on May 5th. The League publishes from its head quarters at Geneva a *Bulletin*, of which the second number is devoted to the proceedings of the conference at Cannes, and gives the main resolutions adopted by the delegates. The full reports of the various sections may be obtained from the League of the Red Cross Societies, Geneva, Switzerland. The president of the conference was Professor Roux, and the secretary Dr.

Emmett Holt. The chairmen of the sections were: Dr. Ducey (venereal diseases); Sir Arthur Newsholme (child welfare); Dr. Calmette (tuberculosis); Professor Laveran (malaria); Miss Julia Stimson (nursing); Dr. Hermann Biggs (preventive medicine). The delegates from Great Britain attending the conference were: Colonel S. L. Cummins, A.M.S., Brevet Colonel L. W. Harrison, R.A.M.C., Dr. E. C. Hort, Professor Henry Kenwood, Dr. F. Truby King, Sir John Lumsden, Dr. Kay Menzies, Sir Arthur Newsholme, Sir Robert Philip, and Sir Ronald Ross. The League of Red Cross Societies formed as a result of the conference has as the chairman of its board of governors Mr. Henry P. Davison, of the American Red Cross, and the Director-General is Sir David Henderson. The conference recommended the establishment of a bureau of health—a central organization operating mainly through national Red Cross societies, whose aim it would be to strengthen, aid, and co-operate with other voluntary organizations and national health and relief agencies; also to assist in the establishment of Red Cross societies in countries where none now exist.

AN American hospital is to be established in Havana to meet the needs of the large Anglo-Saxon colony in Cuba. The approximate cost of the site and buildings is estimated at £60,000, half of which amount has already been raised.

IN a debate in the French Senate on a proposal to establish sanatoriums, it was stated that 25,000 French soldiers had died of tuberculosis during the war, while 120,000 men were exempted from service because of the disease.

THE reorganization on modern lines of the Persian Government Hospital, Teheran, has been entrusted jointly to Dr. A. R. Neligan, Physician to the British Legation, and Dr. Joseph Scott, Medical Superintendent of the Indo-European Telegraph Department, Teheran.

THE medical department of the United States army is preparing plans for the construction of an air ambulance capable of carrying two to fifteen patients.

STATISTICS compiled by the New York Metropolitan Life Insurance Company show that 450,000 deaths occurred in the United States from influenza during the recent epidemic. More men died than women and the highest mortality was among wage-earners, especially those belonging to the poorest class.

AN interallied medical mission has gone to Warsaw, at the request of the Polish Government, to study the problem of typhoid fever and other contagious and epidemic diseases which are at present rife in Poland. The mission has been organized by the League of Red Cross Societies. The head is Colonel Hugh S. Cumming, representing the United States Health Service, and the other members are Professor Aldo Castellani of the London School of Tropical Medicine, Dr. G. S. Buchanan of the Local Government Board, and Dr. Visbecq, principal physician of the French Health Service.

IN the recent elections to the Spanish Senate Dr. Nicolas Rodriguez Abaytua was returned by the Academy of Medicine; Dr. Luis Ortega Morejon by the University of Madrid; Dr. Ricardo Royo Villanova by the University of Zaragoza; Dr. Rodolfo del Castillo Ruiz by the district of Albacete, and Dr. Luis Fatás by that of Huesca.

AN Institute of Biochemistry is to be founded in Milan. Its creation is due to a benefaction by Dr. Rizzi, formerly physician to the Ospedale Maggiore, who bequeathed £12,000 for the purpose.

THE report on the work of the Central Midwives Board for Scotland for the year ended March 31st, 1919, has now been issued as a parliamentary White Paper. During the year there were held twenty board and committee meetings. The number of midwives enrolled was 281, of whom 216 were enrolled after passing the Board's examination. The total enrolments to date are 3,591, and the number of practising midwives is about 1,560. There are ten institutions in Scotland at which midwives may be trained, and these are approved annually subject to inspection. During the year seven midwives were cited before the Board under its penal powers to answer charges of malpractice, negligence, or misconduct. In the result three names were removed from the roll. A number of cases of minor offences were dealt with by a warning sent through the M.O.H. Arrangements are now in full working order with the Central Midwives Board for Ireland—and latterly with that for England on its obtaining the amending Act—whereby the reciprocity clause in the Scottish Act is given full effect: thus a nurse who has passed any of the examinations of these boards can be allowed to practise in any country on payment of an enrolment fee.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitology, Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Mediscera, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

COLOUR CHANGES IN FRUIT.

"M.D." asks what is the explanation of the fact that the colour of many fruits alters in cooking. Thus the jam made from green gooseberries is nearly always red, but greengages retain their colour when converted into jam. Stewed pears usually have a brown or red colour, while apples generally retain their colour.

* * The strong coloration which takes place, sometimes very rapidly, in cut or macerated fruit is conditioned by the presence of oxidases, bodies of the enzyme class, which act as carriers of atmospheric oxygen to other oxidizable substances, often of a tannoid nature. A good example is given by the rapid browning of a sliced apple, or of the expressed juice of some white grapes. In the case of the apple the oxidases, when they occur, are present throughout the fruit, but apples from certain countries contain but little. In the grape the oxidases are confined to the inner layer of the skin and the vascular bundles. The banana is rich in oxidases, and colours very readily, and especially on cooking. Heating, if not carried too far, intensifies the action, but oxidases are as a rule destroyed at temperatures below boiling water, so that in the case of jam the coloration is probably produced in the earlier stages of heating. This oxidase-coloration, modified by the natural colour of the extractives of the coloured part of the fruit (which may in themselves be altered by the fruit acids), probably accounts for the cases cited by "M.D." The natural colour of the greengage, as he says, is retained in the jam, and this particular fruit would most likely be found to contain little or no oxidase if tested by the benzidine-hydrogen peroxide method. It is an interesting subject, on which comparatively little work has been done.

STAMMERING.

"A.C." desires instructions for carrying out at home the best method of treatment for stammering, and inquires whether nerve tonics are of any use.

HYPERIDROSIS.

DR. HENRY WALDO (Clifton) writes to recommend to "Sudor" the late Radcliffe Crocker's suggestion, to give a level teaspoonful of precipitated sulphur in milk twice a day. Where it purges too much it may be combined with astringents, as in the following: Pulv. cretæ co. 5vj, pulv. cinnam. co. 5ij, sulphur. præcipit. 3j; a teaspoonful to be taken twice a day.

DR. CHRISTOPHER KEMPSTER (London) writes: "Sudor" requires a remedy for a patient who suffers from hyperidrosis of the face and head. Hyperidrosis, which is usually considered beneath the serious consideration of the physician, is one of life's worries, and not only is a disagreeable annoyance to its victim but is often a serious social bar on account of its associated odour, and when situated in the axillæ, its disgusting and destroying effect upon ladies' clothing, and in those cases where it takes the form known as "bromidrosis," it is a disgusting disease, nauseating to those around and wrecking to the mental and physical wellbeing of the sufferer. It is surprising, when one considers the discomfort and danger of the wearing of perpetually saturated clothing, that a more serious view is not taken of the complaint by the medical profession, especially when an effective and easy remedy is at hand. During the past years I have followed the line of treatment first introduced by Howard Prie in the use of raves and have not yet met with a case which has not successfully responded to its influence. Whether the complaint be at the axillæ, groins, hands, feet, head, face, or

elsewhere, and whether it be of the simple or of the fetid variety, a carefully conducted course of x irradiations will cure it. In the case of the head and face especial care must, of course, be taken on account of the depilatory action of the rays, which must be carefully guarded against.

PAIN IN ARTHRITIS OF SPINE.

"SPES" writes: I have a patient with rheumatoid arthritis of the spine who suffers severe pain which I can only relieve by morphine injections. Everything else tried has failed to alleviate it. Can anyone who has had similar cases give me any help by suggestions?

LETTERS, NOTES, ETC.

EARLY MORNING QUININE.

CAPTAIN W. ROUS KEMP, R.A.F.M.S., writes: Quinine for malaria should always be administered in the early hours of the morning. Between 5 a.m. and 6 a.m. is the best time, as it is most important to anticipate "sporulation," which always produces its symptoms during the heat of the day. Quinine when absorbed into the system causes an unknown antitoxin to be produced in the blood stream, which hinders or even actually prevents sporulation taking place; hence the necessity of producing this effect in the body as early as possible. The above treatment I have always adopted in cases of malaria, and found the results most beneficial; 10 grains of quinine in powder for a single dose, swallowed by drinking a cup of tea, is easily managed by the patient. As no authority on malaria states at what time during the twenty-four quinine should be administered, I consider from my own observation that this anticipation of the fever by early morning treatment would be of some value.

ALCOHOL AND VENEREAL DISEASE.

CAPTAIN J. R. HOWITT, R.A.M.C., in the course of a letter written from Egypt, says: I was delighted to read in the JOURNAL of August 2nd a letter from Fleet Surgeon W. E. Home, R.N., on the relation of alcohol to venereal disease, for I am certain that the former is in a very large number of cases, if not in the majority, the precursor of the latter evil. The effect of alcohol in excess upon the stomach, liver, and other organs of the body is well recognized by all, but probably its effect upon the mind is less generally emphasized. Alcohol acts in three directions upon the mind, (1) perversion of judgement, (2) weakening of the will power, and (3) aphrodisiac. Could any better agent be devised to pave the way before the fall? I understand that alcohol is the means most frequently employed by procurers in this traffic both to entice men and in securing women. Alcohol is, then, the great ally of venereal disease. Any effort, therefore, to eradicate the evils of venereal disease and immorality from our midst will indeed prove to be barren unless together with it the campaign is equally urged against the evil of intemperance. We hear much to-day of "prophylaxis" to prevent venereal disease, but it is not uncommon to find a patient who, though fully instructed, was too incapable or indifferent at the time, because of drink, to worry about such uninteresting details. Prophylaxis in the true sense of the term must go deeper down than merely the issuing of "E.T. outfits"; it must prevent the possibility of a man becoming intoxicated and so open to every snare. Now is the opportunity for all who hold the interests of their country at heart to use their influence in favour of prohibition.

PARTURITION AT ADVANCED AGE.

DR. G. BRYCE (Birmingham) writes: A patient of mine, aged 49 years and 7 months, has been delivered of a living child. The extraordinary fact in the case is that the woman ceased to menstruate five years ago. She naturally did not expect to have more children. There has been an interval of twelve years since her previous confinement. This case illustrates the difficulty one has in fixing the period when pregnancy could not take place. Women over 45 years of age, when menstrual periods become irregular, are often anxious to know whether they can become pregnant. The case indicates that our opinion should be very guarded. The relation between menstruation and pregnancy is a very interesting subject, which still requires investigation. Dr. P. H. Walker in your issue of August 2nd states that he has known of one woman who never menstruated though she had children, but he does not mention how many. I have known of several women who have had three consecutive normal labours without menstruating after the first pregnancy. But I have never known another case where a woman has ceased to menstruate when over 44 years of age and has given birth to a child several years after. It would be interesting to know whether many other cases are on record.

** The late Dr. F. J. Smith published in the BRITISH MEDICAL JOURNAL of March 10th, 1917, an inquiry as to the oldest age of parturition. Several cases at ages over 49 were related; but Dr. E. R. F. Mason of Gomersal reported (BRITISH MEDICAL JOURNAL, March 31st, 1917, p. 442) one in which it appeared, from entries in a local church register, that the woman was over 51. She was born on February 13th, 1820, and her eleventh child on April 21st, 1871. She died in March, 1900.

HOME HOSPITAL ESTABLISHMENTS AND WAR MEDALS.

"IGNORED" writes: I wish to call attention to the gross unfairness of laying down a geographical qualification for the 1914-15 Star, General Service and Victory Medals—at all events, as regards the medical establishments. This decision is contrary to precedent. The hospitals in this country have, equally with those in France, been associated with the fighting forces. They have taken wounded practically direct from the battlefields—Americans, Belgians, Chinese, French, Serbians, beside the British and Dominion troops; yet, having performed these services to our allies, we alone of all the allied forces are not to have the Allies Medal. Elderly medical men in the R.A.M.C., whether Reserve, Special Reserve, or Territorial, were called up in August, 1914. Often this entailed the abandonment of private practices and serious financial loss. We have been in charge of, or performing important services in, large general hospitals and their auxiliaries, or in the military hospitals and training camps, and we have been kept in this country because we could not be replaced. We have been overwhelmed with work which has been absolutely essential, yet we have not been considered to be entitled to the medals because we have not crossed the Channel. It is sought to justify this discrimination by excluding this country from the list of "war areas." But we who, by the exigencies of the service, were retained here have been declared to be "on active service," and have drawn "field allowances." Hitherto the necessary corollary to such conditions has been the issue of the medal granted for the campaign. It is suggested that hospital and medical services rendered in this country should be recognized by the issue of the General Service Medal, without the clasps which will no doubt be granted for service in particular battles or war areas; and that the Victory Medal should be given with date clasps. Any other distribution is most unfair to those who have formed the personnel of the hospitals and medical establishments in this country. With the exception of a few commandants, the V.A.D. workers have been ignored. Practically all of us are now returning to civil life, with absolutely nothing to indicate that our services have been appreciated, or that we have done our duty in accordance with the orders of the higher authorities; but I am confident that I speak for my medical colleagues when I say that we desire no decorations which are not shared by the whole male and female personnel who have so nobly sacrificed themselves to tend and succour the sick and wounded in the hospitals of this country—services which have been absolutely indispensable to the victory of the Allies, and which are universally recognized as reflecting the utmost credit and honour upon all concerned.

RECORD CARDS.

DR. THOS. M. CALLENDER (Sidcup) writes: Dr. Adam Fox (p. 291) emphasizes the uselessness of keeping these cards for patients who are able to work, but he seems to think it might be useful to keep these cards for patients who through illness are unfit to work. Personally, I fail to see any point in the general practitioner keeping record cards at all. In cases of patients suffering from illnesses unfitting them for work we give certificates weekly for their approved societies, stating the malady from which they suffer. The State could surely by arrangement with the societies get any information regarding these patients which would be useful from a statistical standpoint with a great saving of expense and labour. If the State insists on record cards being kept, I would suggest that each patient be provided with a card with his or her name stamped upon it, and this could be presented to the medical man in cases of illness to get the nature and duration of illness endorsed on it. At the end of each year the patient should send the card, if used, to the central authority or approved society.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 43, 47, 48, 49, 50, and 51 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 44, 45, and 46.

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THE EPIDEMIOLOGICAL POINT OF VIEW.

BY

MAJOR GREENWOOD,

MEDICAL OFFICER, MINISTRY OF HEALTH; FORMERLY STATISTICIAN
TO THE LISTER INSTITUTE OF PREVENTIVE MEDICINE.

THE material of the epidemiologist is not peculiar to him: like the clinician and the pathologist he devotes himself to the study of disease in its varied forms; all see the same objects, but they see them from different points of view. If we wished to study the architecture and topography of this city of Cambridge we could adopt one of three courses. We might go through the streets and colleges with a guide; we might select some representative building for special study; or we might obtain a bird's-eye view of all from an aeroplane. Each method has its advantages and disadvantages. The first must be preferred if it is most important to us to learn how to go quickly from one part of the city to another, and to recognize what we see in passing; the second gives a mastery and appreciation of intimate detail; the third brings out the inter relations of different parts. In medicine, the first method is that of the practising clinician; the second that of the scientific pathologist; the third that of the epidemiologist. The science of general medicine should integrate results obtained by the several methods.

The epidemiologist is therefore an observer from the mountain top, concerned with disease as a mass phenomenon; his business is not with individuals but with aggregates. He seeks to define the relations of these aggregates, the general arrangement of the streets in the cities of the plain, but is not concerned with details.

This point of view was once adopted by all physicians, and some have accordingly argued that the duty of an epidemiologist is to take Hippocrates as his guide, and to seek intellectual salvation amid the classical writers. But there are objections to this theory. When there are no paths down from the mountain to the cities of the plain, the inhabitant of the mountain must content himself with distant views. If Hippocrates had had a modern equipment he might still have preferred the method he actually adopted; but he might not have done so; he had no choice.

There is also a practical difficulty in attempting to adopt the classical standpoint—the danger of finding in ancient writings what is not there. Let me give an example. In the third book of the *Epidemics* the following passage occurs:

"Hermocrates, who lived by the new Wall, was seized with fever. He began to have pain in the head and loin; an empty distention of the hypochondrium; the tongue at first was parched; deafness at the commencement; there was no sleep; not very thirsty; urine thick and red, when allowed to stand it did not subside; alvine discharges very dry, and not scanty."

And so forth; the patient died on the twenty-seventh day. Insert a few records of pulse and temperature and you will have a story to be paralleled in many thousands of clinical note-books. But the text is classical, and here is the comment—not from *Tristram Shandy*, but from the translation of Ramazzini's pioneer treatise *de Morbis Artificum*, made by Dr. Johnson's friend and schoolfellow, Dr. James:

"Hippocrates gives us the famous history of Hermocrates, who was seized with a mortal fever upon lying by a new Wall. And though *Fallesius*, following Galen's footsteps, alledges, that the new Wall had no relation to the cause of the Disease; yet *Epiphanius Ferdinandus* and *Mercurialis* are justly of the opinion that Hippocrates mentioned the new Wall with an intention to point out the Cause of the Disease, there being nothing more dangerous than to live in a House newly built with Lime: Witness the sad Experience of many, who have thereupon died either of Suffocation, or of a Fever accompanied with a Deafness or Stumor, as happened to *Hermocrates*, who died on the 27th Day. My Lord *Verulam*, says *Jovinian* the Emperor, entched his Death by staying too long in a Room, the Walls whereof had been newly washed or done over with Lime."

We need not smile at this with confidence in our superior virtue; most people can find in the classics what they are looking for, and it is not only the eighteenth century which affords medical parallels to Sir Edward Coke's invention of *Magna Charta* and Sir Henry Spelman's

introduction of the Feudal System into England. It is easy for anyone to assert that his epidemiological principles are those of Hippocrates, because Hippocrates's epidemiological doctrine, contained in a few short treatises incorporating much clinical description, is expressed in such general language that anyone may make of it pretty much what he pleases. The real value to the epidemiologist of a study of Hippocrates is not the provision of a key to all the mythologies, but that general quickening of the intelligence which great literature produces.

"With regard to diseases, the circumstances from which we form a judgement of them are—by attending to the general nature of all, and the particular nature of each individual, to the disease, the patient, and the applications, to the person who applies them, as that makes a difference for better or for worse, to the whole constitution of the season, and particularly to the state of the heavens, and the nature of each country, to the patient's habits, regimen, and pursuits." (*Epidemics*, I, 10.)

Such a passage as that—and I choose it almost at random—helps us to free ourselves from the narrowness of mere technicality, but it can hardly do more. I do not think a detailed examination of epidemiological teaching before the days of Sydenham a suitable introduction to the subject of these lectures.

When we come to Sydenham the case is altered. No doubt Sydenham has been over-praised, and neither the Ciceronian periods which obscure his meaning nor the uncharitable tone of his comments upon brother practitioners conciliate the favour of a modern student; yet Sydenham has claims to special consideration.

The ancient observers were not upon a mountain top of their own choice; Sydenham was. He could not have employed the technical methods of our time; the paths down to the plain were few and rough; but they existed. He was the contemporary of great pathological anatomists; he might have attended the meetings of the Royal Society. It was of his own motion that pathological anatomy was excluded from his works, and that such pathological discussions as we do find there were perfunctory and traditional, containing hardly anything beyond the reach of Dr. Caius. In our own generation Dr. Charles Creighton adopted an attitude of detachment from the current interests of his bacteriological contemporaries; nobody who derived his impressions of late nineteenth century medical thought from the *History of Epidemics in Britain* would suppose that any serious minded man attached importance to bacteriology. Sydenham's indifference to the science of the seventeenth century was as complete; he comes before us as the exponent of a medical, an epidemiological philosophy, the nature of which we must discuss because it has greatly influenced subsequent writers and retains a measure of importance.

Sydenham contributed both to the practice and the theory of epidemiology; he was both a technician and a philosopher. As a technician he particularized the generalities of the passage I quoted from Hippocrates. He laid it down that personal knowledge of the facts was the pre-requisite of epidemiological theory, and he became the first great modern annalist of epidemics. In this respect, as a technician, he was not original, and followed the general lines of the authors of the Coan school. But he modified their technique—not always with advantage—and his annals contain fewer descriptions of individual cases; to use my metaphor again, he did not focus his telescope upon particular houses in the city of the plain, but embraced wide prospects in his view. The induction based upon his technical researches were three. While admitting a specificity, a breeding true to type, in diseases he thought that each specific disease underwent a long period evolution, rising, declining, and falling; he illustrated this argument from the history of small-pox in Europe and leprosy in England, and predicted that diseases paramount in his time would run their course and give place to others "*de quibus nos ne minimum quidem huiusmodi valemus*." This doctrine of secular variation is no longer controverted; modern epidemiologists are busied with the subtle problem of how secular change is produced. Are the periods of decline definitive? Is the metaphor of a declining empire or of an animal species tending to extinction just? Or is the apparently definitive decline of such diseases as plague or scarlet fever merely the trough of a periodic wave, the swing of the secular pendulum being very long? These are unanswered questions still; we are

* An introduction to a course of lectures on epidemiology delivered in the Cambridge Medical School, July, 1919.

† James's translation of Ramazzini on "the Diseases of Tradesmen," London, 1746, p. 186.

only now slowly and painfully constructing the technical apparatus required to answer them.

The second great contribution of Sydenham was to the study of short period movements in the prevalence of diseases—the seasonal variations of epidemics. Without being a pioneer, he first made the influence of meteorological conditions upon the prevalence of disease familiar by means of well selected illustrations, and, as in the last mentioned case, the duty of modern epidemiologists has been confined to the accumulation of details and the discussion of mechanisms.

The third contribution of the English Hippocrates to our subject is harder to explain; I refer to the theory of epidemic constitutions. The doctrine, which has been rendered almost mystical by the glosses and extensions of later authors, seems to have amounted to this: Although different acute diseases are specific in origin, they tend to vary in their clinical manifestations from time to time and to vary together; the common type changes, but different specific forms converge towards the fashionable type; much as specifically distinct butterflies and moths come to resemble externally a common form (mimicry). This convergence to a particular type of all diseases prevalent during a particular cycle of years is the work of unknown terrestrial causes and the general resultant is called the epidemic constitution.

To make the not on clearer, let me exaggerate a little. Epistaxis and cardiac arrhythmia may and do occur in many specifically distinct acute diseases. If at one period all affected by influenza, typhoid, lobar pneumonia, measles, etc., were to suffer from nose bleeding, and in another cycle of years the same diseases were all associated clinically with cardiac arrhythmia, we should say that in the former period the epidemic constitution was one of epistaxis and in the latter cardiac.

Actually Sydenham did not use so clear cut a nomenclature, but christened the constitution with the name of the specific disease which most nearly united the complex of symptoms to which other diseases then raging clinically converged. Hence he speaks of a pestilential constitution, a variolous constitution, and so forth. But, notwithstanding some inconsistencies in his statements, it seems clear that he did not suppose all diseases prevalent under a variolous constitution to be more or less disguised small-pox, but that, owing to the prevailing constitution, other diseases took on themselves the character of the particular small-pox which was then observed. The truth of this doctrine is certainly not universally admitted, but the importance of determining whether it is true or false is great. Translated into modern terminology, it means that in estimating the total effects produced upon morbidity and mortality by diseases, the non specific secondary invaders are as important as the specific causes. The camp followers of an army may do more damage than the regular soldiers, and the same camp followers may ravage in the wake of different armies; shall we get rid of desolation merely by internment or killing particular armies? To Sydenham belongs the credit of suggesting this difficult and rather disheartening question, which still remains unanswered.

These remarks may help you to estimate the personal success of Sydenham. His positive achievements in epidemiology may not have been great; the map of the country he prepared from his hilltop observations was neither detailed nor accurate, but he did suggest a method, an instrument to be used in epidemiological cartography, for he was the first modern field epidemiologist, a remote and collateral ancestor of Simon, Budd, the investigators of the Local Government Board, and of the great municipal departments of preventive medicine in the last fifty years.

But the spiritual descent has been indirect. Sydenham did not found any school of epidemiology in his lifetime, and his immediate successors failed to grasp the real significance of his teaching. Some, indeed—for instance, Huxham and Wintringham—were excellent analysts; Pringle was something more, but, on the whole, the influence of Sydenham upon eighteenth century thought was not good. As a German historian has remarked, the contemner of fine-spun theories was the literary original of a system of speculation which in the writings of some—particularly the members of the Montpellier faculty—lacked little of the ingenuity of scholasticism,

and was not more leavened by contact with objective data.

The reason of this sterility is that Sydenham's inductions outran his data; not enough material had been assembled to justify the conclusions. Sydenham himself knew this; his less acute imitators forgot it. Hence it comes about that a much humbler contemporary of Sydenham, one who was neither a medical man nor, in our modern sense, a scientific man, influenced the subsequent progress of epidemiology more directly and more favourably than did the illustrious physician.

This contemporary was John Graunt, citizen and draper, of London, whose *Natural and Political Observations upon the Bills of Mortality* appeared in 1662.

The direct value of Graunt's work was considerable; he was, indeed, the ancestor of vital statisticians. He first had the sagacity to perceive that important deductions might be made from the forbidding series of numerals which constituted, and still constitutes, a bill of mortality. His remark

"that there is much pleasure in deducing so many abstruse and unexpected inferences out of these poor despised Bills of Mortality; and in building upon that ground, which hath lain waste these eighty years. And there is pleasure in doing something new, though never so little, without pester the World with voluminous transcriptions"

is just. No doubt Graunt's statistical methods were primitive and his arithmetical accuracy at times suspect; but, almost 200 years before Quetelet, he recognized the constancy of statistical ratios involving mass phenomena; he first noticed the preponderance of male births* and the later equalization of the sexes; he first showed statistically that the rate of mortality was very high at early ages, and statistically demonstrated the contrast between urban and country rates of mortality.

These direct achievements, which proved that the statistical method was of value in epidemiology, were important. Still more important were the indirect results of Graunt's work. It is, as Dr. Hull pointed out, likely that Graunt's work had some influence upon Halley (both Graunt and Halley were Fellows of the Royal Society), the scientific founder of life assurance; it is certain that William Derham's *Physico-Theology* owed something to Graunt. From Derham's book the Prussian military chaplain, Johann Peter Süssmilch, learned of Graunt's paper, which stimulated him to write the *Göttliche Ordnung*, assumed by German historians to be the pioneer treatise on vital statistics, and, in truth, a powerful work upon which Malthus largely drew in the later editions of his essay on population. To the efforts of the political associates of Malthus we owe the foundation of the General Register Office. To the publications of the General Register Office epidemiologists rightly attach as much importance as did the Puritans to the Hebrew Scriptures.

The developments of the two scientific methods—that of statistics and that of clinical field observation—were not co-ordinated for generations. As the events of the great war have led to the co-operation of isolated investigators now, the evil effects upon the public health which were by-products of the industrial revolution so far touched the national conscience then, that the state was forced to encourage co-operative investigation. Before the close of the eighteenth century such writers as Percival, whose famous memorandum was submitted to the Manchester Board of Health in 1796,† pointed out the need of investigation, and within fifty years contact had been established between the exponents of field and statistical epidemiology.

To the younger student of to-day the epoch of medical history which is of most importance is that covering the first fifty years of Queen Victoria's reign; it comprises the main period of activity of Farr and Simon, the greatest exponents of the statistical and field methods which must

* Professor Gini (*Il Sesso*, Milan, 1908, p. 28), while reserving priority in this matter to his countryman Giovanni Villani, pays the following graceful compliment to Graunt: "Il merito di averne posta in evidenza la regolarità, attraverso lo spazio ed il tempo, e di averlo reso popolare alla scienza, che doveva poi occuparsene così di frequente, spetta tutto allo scrittore inglese." Graunt's writings are reprinted, with good notes, in Professor Hull's edition of the *Economic Writings of Sir William Petty* (Cambridge, 1899).

† Reprinted on p. 495 of *Select Documents of English Economic History*, edited by Bland, Brown and Tawney (London, 1915).

be employed by an epidemiologist.* I have no time to describe in detail any of the achievements of these great investigators, but may attempt to characterize the spirit in which they worked. These men were not mere highly expert technicians; they knew that the mountain-top observer could not rely upon the telescope alone or upon the camera alone. Farr did not think that epidemiology was but a branch of mathematics; Simon did not look upon it as a mere blend of unsystematic botany and history. They fully realized that the song was of the man as well as of the arms; that the conditions of human life—both, as we now say, environmental and eugenic—were quite as important to the epidemiologist as the *materies morbi*.

Although since the days of Farr and Simon the technical methods at the disposal of the epidemiologist have been greatly improved, there has not been a corresponding improvement in the general quality of epidemiological work. There are two reasons for this: Those in official positions giving scope for epidemiological work have been increasingly burdened with administrative duties and less unfettered in their choice of subjects; the private investigator has either become enamoured of the pure technique, more interested in the fashioning of tools than in the shaping of material, or has been tempted to abandon epidemiology for the dazzling prospects of research in bacteriology and pathology. The result is that, while some epidemiological work is tendentious, some exclusively mathematical, some a mere padding of bacteriological papers, hardly any can bear comparison not merely with Farr's or Simon's, but with that of their pupils.

The science and art of medicine cannot be developed harmoniously if the epidemiological point of view is neglected; there is still much to be learned which only the epidemiological method can teach. It is our duty to continue the work of those who went before. From the Delectable Mountains the pilgrims could not indeed gaze steadfastly through the "perspective glass" towards the city, but yet "they thought they saw something like the gate and also some of the glory of the place."

AN EXPERIMENTAL INVESTIGATION OF CERTAIN MATERIALS USED FOR NERVE SUTURE†

BY

PERCY SARGENT, C.M.G., D.S.O., F.R.C.S.,
TEMPORARY LIEUT.-COLONEL R.A.M.C.,

AND

J. G. GREENFIELD, M.B., M.R.C.P.,
TEMPORARY CAPTAIN R.A.M.C.

(From the Research Laboratory established by the Medical Research Committee at the Tooting Special Military Surgical Hospital.)

1919 [With Special Plate.]

THE investigation here recorded was undertaken with a view to ascertaining which of the many materials in general use as nerve sutures was least likely to produce harmful reaction in the delicate tissue of nerve.

It had previously been noted in the histological examination of a large number of lesions of nerves due to gunshot wounds that the presence of any foreign body in the substance of the nerve was liable to produce great hyperplasia both of the connective tissue and of the neurilemma cells, and that with this there was usually associated poverty in axons and in myelin sheaths. This was observed especially in association with hard unabsorbable foreign bodies such as particles of bone or of metal. In these cases it is probable that regeneration of the nerve was further retarded by the presence of sepsis. But at a later stage, when there was no histological evidence of sepsis, it appeared to be still impossible for young axis cylinders to penetrate the neuroma thus formed

in sufficient numbers to restore the function of the nerve. It seemed, therefore, important to ascertain what amount of reaction to the various suture materials in common use took place within a nerve, and the nature of this reaction. For if a suture causes much reaction around it, and especially if it causes proliferation of the connective tissue elements, it may constitute a considerable hindrance to the regeneration of the nerve.

It must be confessed that, in spite of much careful work on the subject, especially by the French neurologists, our knowledge of the exact changes which take place in a nerve after suture is still somewhat indefinite, especially as regards the part taken by the neurilemma cells and the connective tissue elements. It seems to be clearly enough established that finger-like prolongations of the neurilemma sheath spread out into the intervening tissue from both ends of a divided nerve. As regards the proximal end it is probable that this takes place independently and in advance of the axis cylinders. These outgrowths penetrate the intervening tissue along the lines of least resistance, and, when dense fibrous tissue is present, either make their way around it or penetrate it by separation of its bundles and planes. In such a case a number of the outgrowths may find it increasingly difficult to force a passage until they may be unable to proceed further. Where some easily penetrated tissue, such as granulation tissue, intervenes, they pass through it readily enough, branching repeatedly, and giving rise to a small plexiform neuroma. The new nerve fibrils passing along the channels thus made are scattered and separated, so that they run at first in bundles of two or three; later, more numerous fibrils run down alongside the first, until a rope-like bundle of twenty or more interlacing fibrils passes down the neurilemma pathway. These bundles of fibrils become collected more densely together when they reach the old neurilemma sheaths of the distal nerve segment, and in them run straight to their termination.

The reactions of the neurilemma and connective tissue in the distal segment are similar in every respect, and result in the formation of a nerveless "neuroma."

Any suture passed through a nerve gives rise to tissue reactions, whose effect is to put an obstacle in the path of the axonic downgrowth; the degree of such hindrance will vary with the thickness, absorbability, and irritative character of the suture material. It is upon these criteria that such materials must be judged.

METHODS OF INVESTIGATION.

Our investigations were chiefly directed to the second and third of these points, as it is clear that the thickness of the suture must depend upon its tensile strength and may have to be varied in accordance with local conditions, such as the size of the nerve and the strain to be sustained. It was considered best, having regard to the small size of the nerves on which the investigation was carried out, as well as to the question of rate of absorption, to use as far as possible a series of sutures of the same thickness—namely, 00.

The sciatic nerves of rabbits were chosen, as being easily accessible, and providing a large enough nerve to make sure that the suture actually transfixed a nerve bundle. The nerve was exposed close to its point of emergence from the pelvis by cutting through the gluteus muscle. The largest bundle present (usually the internal popliteal) was transfixed by a fine needle and the suture brought through it and tied firmly but not tightly. After a period of twenty-one days or longer the animal was sacrificed and the nerve removed and examined. For the examination van Gieson's method for celloidin sections was used, as it gives a good general picture of the cellular reaction both in the connective tissue and the neurilemma sheath, as well as of the axis cylinders. The gastrocnemius group of muscles was also examined, but as the amount of paralysis which resulted from the suture depended on so many factors—for example, tension of the suture, amount of nerve implicated, etc.—the results of this examination are not included in this paper. In most cases this paralysis was slight and transient.

DETAILS OF EXPERIMENTS.

Experiment I.

Rabbit (21 days). June 14th, 1918 (ether anaesthesia): Right sciatic, 30 day chronic gut, No. 00. Left sciatic, Stiles's linen

* Farr's epidemiological writings have not been reprinted in full, but the student will find copious selections in the memorial volume edited for the Sanitary Institute by Mr. Noel Humphreys (London, 1885). An excellent example for the student of the spirit and methods of Simon and his school is afforded by Greenhow's report on the different prevalences of certain diseases in different districts in England and Simon's prefatory essay (printed for the Stationery Office, London, 1858).

† Report to the Medical Research Committee.

thread, No. 160. July 5th, 1918: Nerves examined and removed. Right sciatic considerably thickened and pieces of suture seen sticking out of it. Left sciatic showed only slight diffuse thickening at the site of the suture.

Microscopic Examination.

Right Sciatic (Fig. 1).—The site of the suture is shown by a rounded area inside a thin fibrous capsule. It is composed of two zones, the outer of which measures about one-third of the radius, but is thicker in some places than in others. This zone is composed of epithelioid cells of varying size, most of them oval, others more spindle-shaped, and of connective tissue cells and fibres, which run between the epithelioid cells. In addition to these there is a large number of giant cells, varying from 50 to 100 microns in size, either with very few nuclei arranged round the edge, or with clumps of nuclei near the periphery. Some of these cells show inclusions of dead cells, but for the most part their cytoplasm is uniform and granular. This zone is extremely vascular, with numerous capillary vessels lying between the connective tissue fibres. Internal to this zone is a solid mass of cellular debris, mainly composed of pus cells along with a few macrophage cells, some of which contain fragments of catgut as inclusions. This area is completely avascular and shows no connective tissue fibres. Fairly thick pieces of the suture remain unabsorbed. As it approaches the nodule thus formed, the nerve becomes much more vascular, and the cells of the connective tissue and the neurilemma sheath increased in number, so that its characteristic appearance is completely lost.

Left Sciatic (Fig. 2).—The suture has been to a small degree absorbed, but the site remains as a hole in the tissue out of which the suture has fallen in the process of sectioning, but numerous fragments of thread are seen all round the edge of the cavity in contact with the epithelioid cells which line it. In addition, small oblong pieces are seen in vacuoles in large giant cells even at some distance from the edge of the cavity. There is a slight attempt at encapsulation, but while the fibrous tissue is increased in amount it is very irregularly arranged, and the large giant cells are seen lying among its fibres.

The edge of the cavity is composed of oval epithelioid cells with large clear nuclei, and in no place is there any small-celled infiltration. The giant cells nearest the edge of the cavity have a considerable number of darkly staining nuclei, which are packed so closely together as to give the appearance of a solid black mass. The epithelioid tissue is extremely vascular, with minute capillary vessels lying between the cells. The nerve, on reaching this area, breaks up into a neuroma, and it is extremely difficult to distinguish this neuroma tissue from the epithelioid tissue, into which it seems to merge. There appears to be no doubt that both the epithelioid cells and the giant cells are formed from cells of the neurilemma sheath.

Experiment II.

Rabbit (21 days). June 25th, 1918 (ether anaesthesia): Right sciatic, Stiles's fine linen thread, No. 160, waxed with Horsley's bone wax. (Nerve cut.) Left sciatic, no suture. July 18th, 1918: Rabbit killed and nerve examined and removed. It showed a slight neuroma at the site of the suture.

Microscopic Examination.

Right Sciatic (Fig. 3).—The reaction around the suture is partly on the part of the sheath shells, but there is very much more fibrous tissue formation than in Experiment I. By van Gieson's method pink staining fibres are seen separating all the epithelioid cells. On the other hand, it does not seem as if all the reaction were fibroblastic, as the nerve is seen to run close up to the suture, and new fibres run round the area of the stitch hole. The zone of reaction has about the same width—that is, three times the diameter—as the stitch hole. The suture is partially absorbed by giant cells similar to those in Experiment I. These are, however, for the most part smaller and more regularly rounded than in that case, and the nuclei vary in number, the cells lying close to the cavity having a dense mass of nuclei in one or both poles, while the more peripherally situated giant cells have a sparser zone of pale-staining nuclei around the periphery.

The nerve itself shows a considerable amount of connective tissue hyperplasia, which may be due to its having been sectioned.

Experiment III.

Rabbit (21 days). July 5th, 1918 (ether anaesthesia): Right sciatic, Japanese silk, No. 00. Left sciatic, Japanese silk, No. 00, waxed. July 26th, 1918: Rabbit killed and sciatic nerves removed. Left nerve found to be considerably more swollen than the right.

Microscopic Examination.

Right Sciatic (Fig. 4).—The suture is very little absorbed, and is surrounded by a fairly dense cellular zone, which is, however, rather narrow. The innermost layer is mainly composed of oval cells with large pale-staining oval nuclei, but among these are several degenerated cells showing karyorrhexis. In this zone, and for the most part lying right on the edge of the cavity, there are fairly large giant cells with multiple nuclei placed centrally. Outside this is a zone of concentric fibrous cells, some of which give the pink staining of connective tissue while others resemble sheath cells. Around this is neuroma formation, with a considerable amount of connective tissue hyperplasia. The nerve breaks up into a neuroma at a considerable distance from the suture, and has commenced to form new axis cylinders in this neuroma.

Left Sciatic (Fig. 5).—The reaction on this side is very similar, except that (1) there are more degenerated cells in relation to the particles of silk, (2) the innermost zone of mononuclear and giant cells is more clearly separated by a layer of fibroblastic cells from the nerve tissue. The changes in the nerve itself are similar, but there is not a great deal of connective tissue hyperplasia. The peripheral portion of the nerve has undergone considerable degeneration, and what axis cylinders are present are swollen and irregular.

Experiment IV.

Rabbit (21 days). August 2nd, 1918 (ether anaesthesia): Right sciatic, fine "Japanese gut." Left sciatic, 00 "30-day tanned gut." August 23rd: Rabbit killed. Right sciatic, very little change in the nerve. Left sciatic, a definite lump is present in the nerve at the site of ligature.

Microscopic Examination.

Right Sciatic (Fig. 6).—The suture is very little absorbed, and is surrounded by a fairly diffuse zone of round-celled and fibroblastic reaction. Close to the suture and running up between the fibres are small cells, most of which have degenerated nuclei. The zone of reaction appears to be chiefly formed by connective tissue elements. A type of cell which is very abundant is a small rounded cell, with a relatively small darkly staining nucleus somewhat eccentrically placed. These appear to be an early stage of fibroblasts. A few giant cells are present, formed of a closely packed bunch of nuclei, with little clear cytoplasm. Between the fibres of connective tissue are many cells with large vesicular nuclei, which are probably cells derived from the neurilemma sheath. The distal part of the nerve shows very considerable degeneration, and there seems to be little tendency of the nerve bundles to sweep round the area of the suture, as in the thread sutures (Rabbit 2).

Left Sciatic (Fig. 7).—The suture is scarcely at all absorbed and is observed lying in its place surrounded by an area of reaction formed as follows:

1. Actually lying in contact with the suture and running up between its planes are numerous degenerated polymorphonuclear leucocytes.
 2. Outside this is an area of small and medium sized round cells and fibroblasts, with early formation of connective tissue fibres.
 3. Outside this are more fully formed connective tissue fibres enclosing in their meshes numerous cells with large vesicular nuclei. This zone separates the suture area from the nerve bundles which run into and are lost in this zone.
- No giant cells are seen. The zone of reaction is only slightly wider on the left side than on the right.

Experiment V.

Rabbit (2 days). August 2nd, 1918 (ether anaesthesia): Right sciatic, "20-day chromic gut, No. 00." Left sciatic, "plain iodized gut, No. 00." August 4th, 1918: Rabbit died. Autopsy: wounds clean; slight collapse of right lung and congestion of both.

Microscopic Examination.

Right Sciatic (Fig. 8).—The suture is seen lying firmly embedded in the nerve trunk, surrounded in one place with a dense zone of degenerated leucocytes. Elsewhere the reaction is less, but in the neighbouring tissues very numerous polymorphonuclear cells, many of them degenerated, have made their appearance. There is a small haemorrhage in one place, and in another place two adjoining bundles of nerve fibres have been constricted by the ligature and show the early changes of nerve degeneration—swelling and fragmentation of the axis cylinder, and breaking up of the myelin without any change of the neurilemma sheath.

Left Sciatic.—On this side the suture is surrounded on all sides by a dense mass of small round cells, and the number of polymorphonuclear leucocytes which are present in all the neighbouring tissues is much greater than on the right side, otherwise the appearances are identical.

As this operation was carried out with the same aseptic precautions as the others, and in view of the constant absence of sepsis in them, it seems likely that the zone of degenerated polymorphonuclear cells is due to the irritating action of the chemicals used in the preparation of the sutures, and is comparable to the layer of degenerated polymorphonuclear cells seen close to sutures of the same nature in other experiments.

Experiment VI.

Rabbit (25 days). August 9th, 1918 (ether anaesthesia): Right sciatic, 20-day chromic gut, No. 0. Left sciatic, plain iodized catgut, No. 00. September 3rd, 1918: Rabbit killed. On the right side there is a very slight degree of fibrosis of the whole thickness of the nerve at the site of the lesion. Considerable paralysis and wasting of muscles below it, with trophic sore on heel. On the left side slight neuroma on a branch of the sciatic only. Main nerve healthy.

Microscopic Examination.

Right Sciatic (Fig. 9).—The suture is completely absorbed, but its position is evidenced by a circle of densely packed small round cells. Around this are very numerous fairly small giant cells, with clear or granular yellowish-pink cytoplasm and a few peripherally placed nuclei, and with these fairly numerous

PERCY SARGENT AND J. G. GREENFIELD: MATERIALS USED FOR NERVE SUTURE.

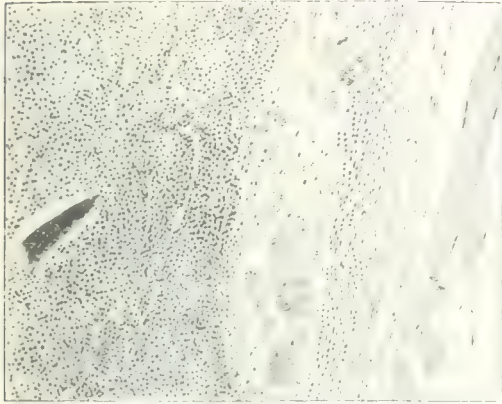


FIG. 1.—Rabbit 1, R. (30 day chronic gut; 21 days.) To left, inner zone of polymorphonuclear and macrophage cells surrounding fragments of catgut; outer zone of fibroblasts and epithelioid cells, with a few giant cells. (Drawn under camera lucida with Zeiss obj. 4 mm., oc. No. 4 compens.)

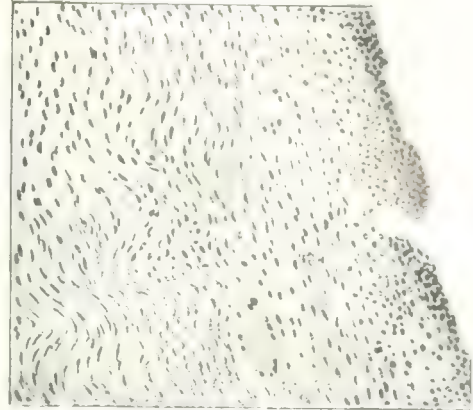


FIG. 3.—Rabbit 2, R. (Waxed linen thread; 21 days.) There is a thin zone of fibroblastic reaction next to the suture, but most of the reaction is from the sheath cells. Note two giant cells, one of which contains a vacuole. All the sutures except a few filaments, which are attached to the edge, have fallen out of this section. (Drawn with camera lucida with Zeiss No. 4 compens. ocular, 4 mm. obj.)

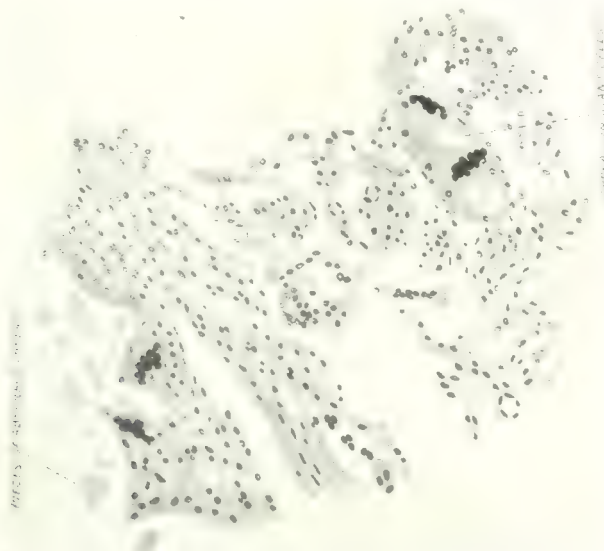


FIG. 2.—Rabbit 1, L. (Linen thread, 21 days.) The reaction is chiefly on the part of the sheath cells. Note the numerous giant cells and the complete absence of small round-celled infiltration. (Drawn with camera lucida with Zeiss 4 mm. obj., No. 4 compens. ocular.)

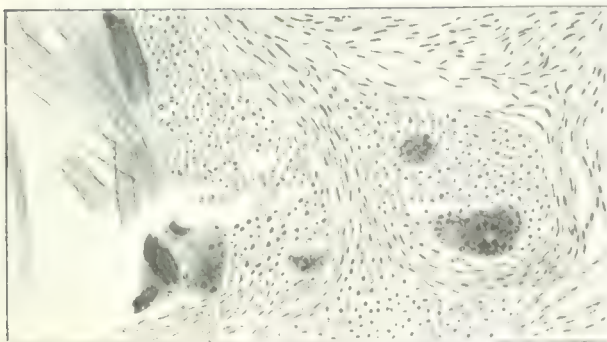


FIG. 4.—Rabbit 3, R. (No. 00 Japanese silk; 21 days.) Reaction mainly from sheath cells. Many giant cells are present, some at a distance from the suture. (Drawn under camera lucida with Zeiss 4 mm. obj., No. 4 compens. ocular.)

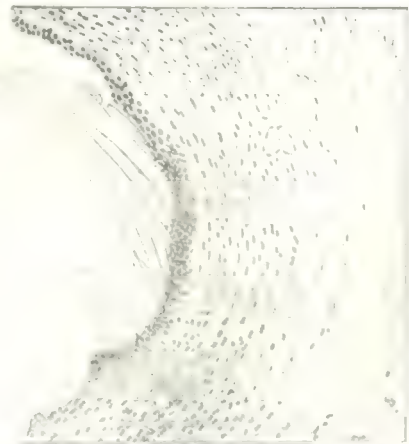


FIG. 5.—Rabbit 3, L. (Japanese silk (waxed); 21 days.) Zone of fibroblastic reaction, which is fairly vascular. A few giant cells are present, but are not shown in this field. (Drawn under camera lucida with Zeiss 4 mm. obj., No. 4 compens. ocular.)

PERCY SARGENT AND J. G. GREENFIELD: MATERIALS USED FOR NERVE SUTURE.

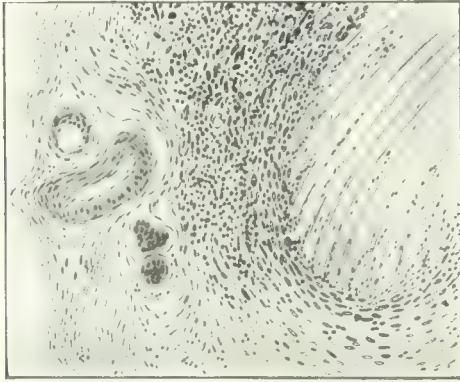


FIG. 6.—Rabbit 4, R. (Japanese silkworm gut; 21 days.) The reaction is fairly extensive. It is partly from the sheath cells and partly fibroblastic. The suture is incompletely absorbed. (Drawn with camera lucida with Zeiss 4 mm. obj., No. 4 compens. ocular.)

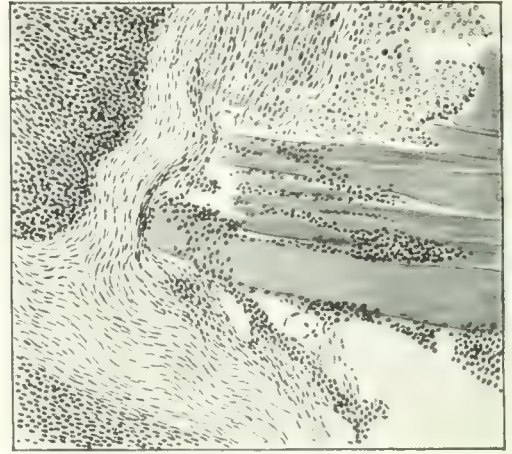


FIG. 7.—Rabbit 4, L. (30 day tanned gut, No. 00.) Fairly intense fibroblastic reaction as well as sheath cell reaction. Polymorphonuclear leucocytes are present running between the planes of the catgut. (Drawn under camera lucida with Zeiss 4 mm. obj., No. 4 compens. ocular.)

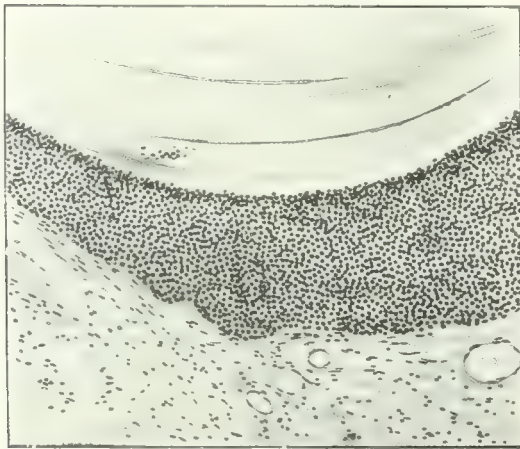


FIG. 8.—Rabbit 5, R. (Second day after suture with chromic gut.) Early reaction of small round cells around suture, due to chemical irritation. (Drawn by camera lucida with Zeiss 4 mm. obj., No. 4 compens. ocular.)

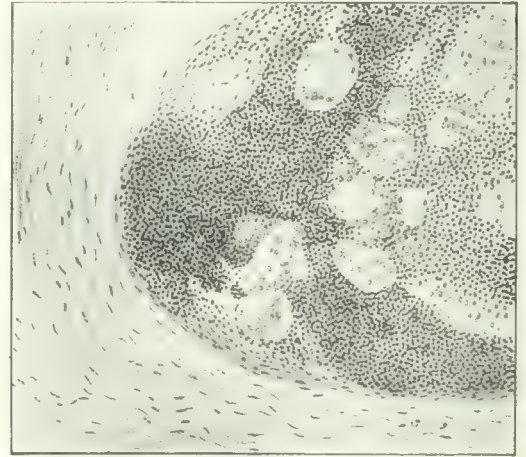


FIG. 9.—Rabbit 6, R. (20 day chromic gut; 25 days.) Position of suture shown by an area of densely packed small round cells, among which are many giant cells. To the left are seen many fibroblasts, and young connective tissue. (Drawn under camera lucida with Zeiss 4 mm. obj., No. 4 compens. ocular.)

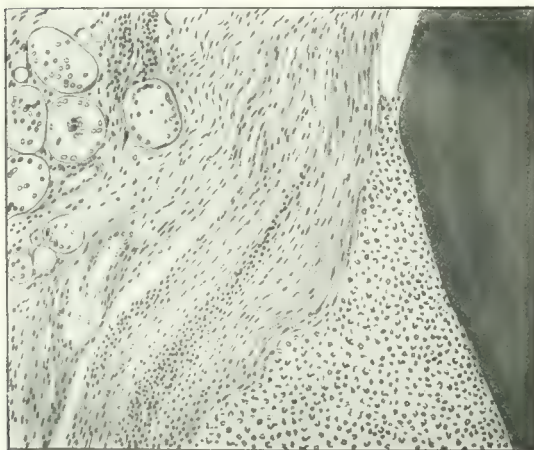


FIG. 10.—Rabbit 6, L. (25 days; plain iodized gut.) Ligature separated by a zone of polymorphonuclear leucocytes from an area of newly formed tissue in which both connective tissue and neurilemma elements are represented. Numerous giant cells are present. (Drawn under camera lucida with 6 mm. obj., No. 4 compens. ocular.)

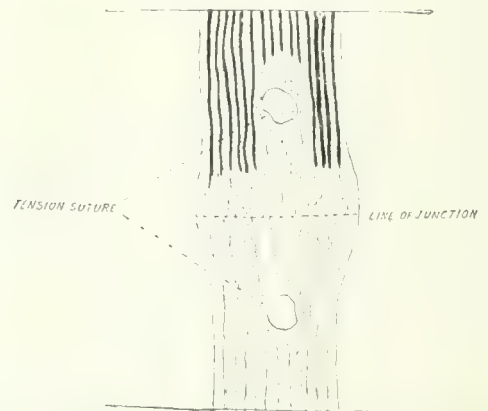


FIG. 11.—Diagrammatic sketch of the regeneration of a nerve whose ends are approximated by a tension suture.

G. E. RENNIE AND O. LATHAM: COMBINED SCLEROSIS WITH HETEROTOPIA OF THE CORD.

PLATE I.

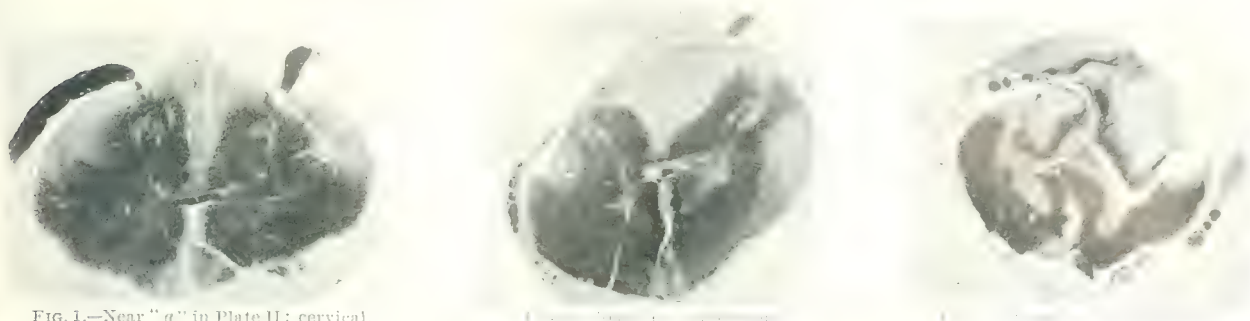


FIG. 1.—Near "a" in Plate II; cervical.

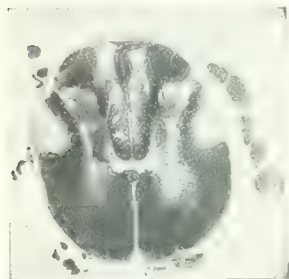


FIG. 4.—Near "f" or "g"; lumbar.



FIG. 5.—Near "b" or

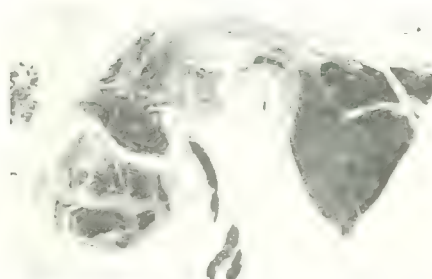


FIG. 6.—Near "b" and "c"; between them.

PLATE II.

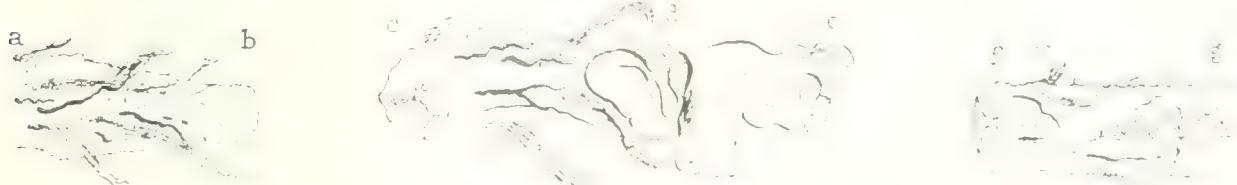


FIG. 1.—Drawing of cord, natural size, showing levels examined and position of abnormalities. a, Middle cervical. b, Lower cervical. c, Upper middle dorsal. d, Area apparently injured. e, Lower dorsal, with heterotopia. f and g, Upper and lower lumbar.

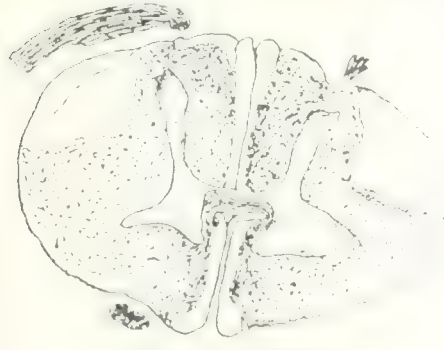


FIG. 2.—Near "a"; cervical.

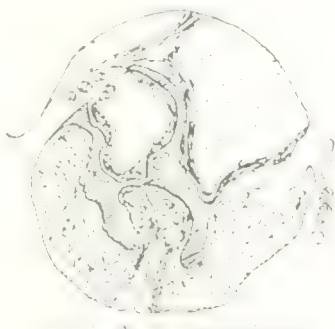


FIG. 3.—Near "b"; lumbar.



FIG. 4.—Near "c"; between lumbar and cervical.

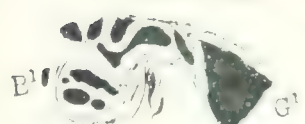


FIG. 5.—Between "f" and "g"; lumbar.



FIG. 6.—Near "d"; lumbar.

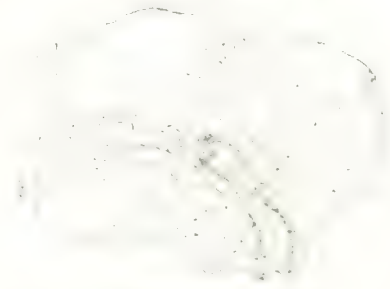
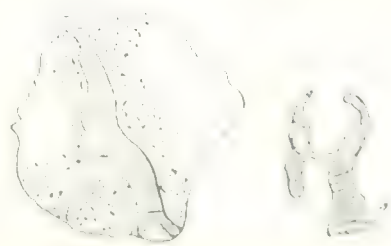


FIG. 7.—Near "e"; lumbar.



FIG. 8.—Near "f"; lumbar.



FIGS. 8 AND 9.—Near "g"; lumbar.



FIGS. 10 AND 11.—Near "a"; cervical.



FIGS. 11 AND 12.—Rusch-Marchi preparations of the lumbar and cervical levels.

J. GRANT ANDREW: DIAPHRAGMATIC HERNIA OF THE ENTIRE STOMACH AND GREAT OMENTUM.



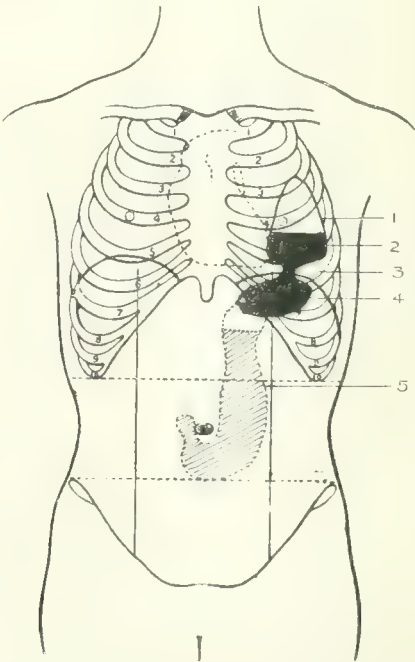
FIG. A.



FIG. B.



FIG. C.



1, Cardiac end of the stomach filled with air.
2, Upper level of the opaque meal. 3, Diaphragm.
4, Pyloric end of the stomach still in the abdomen.
5, Position of the normal stomach.

small fibroblastic cells and young connective tissue fibres. This area is marked off from the nerve bundles by a definite zone of well-formed fibrous tissue.

Left Sciatic (Fig. 10).—The suture is almost completely absorbed. Next to it and in the first few layers are numerous polymorphonuclear cells, but the majority of the reaction is undertaken by large ovoid cells with pale-staining nuclei, probably derived from the neurilemma sheath, and a few fibroblastic cells. The formation of fibrous tissue is only moderate in amount. One or two large giant cells with a ring of peripherally placed nuclei are seen in the outer part of the reaction in the fibrous tissue zone, and similar cells in various stages of disintegration can be seen making their way along the lymphatic channels. Some of these giant cells contain red blood corpuscles in their cytoplasm.

Experiment VII.

Rabbit (81 days). September 23rd, 1918 (ether anaesthesia): Right sciatic, plain sterilized catgut, No. 0. Left sciatic, 30 day chromic gut, No. 00. Rabbit killed, November 12th, 1918. In both nerves the bulb of reaction is small, and in the right almost imperceptible.

Microscopic Examination.

Right Sciatic.—The suture has been entirely absorbed and no trace remains except a neuroma in the nerve, and a few degenerated giant cells in process of disintegration. There is increased fibrosis at the site of the suture but no sign of small round cells, etc. Some of the nerve bundles of the peripheral part of the nerve show complete absence of axis cylinders and myelin, and increase in the number of the neurilemma sheath cells as well as of the fibrous tissue elements.

Left Sciatic.—The suture is only partially absorbed, and is surrounded by a very extensive zone formed internally of polymorphonuclear and small mononuclear cells, packed very closely together, along with a considerable admixture of fibroblastic cells. This zone, which is of an intense blue colour, runs out into the tissues for some distance, passing along lines of least resistance—for example, between nerve bundles. This zone gradually passes, when followed outwards, into a more purely fibroblastic zone, and in some places there is fairly fully-formed connective tissue. The neighbouring muscles and nerves are involved in this fibroblastic reaction.

Experiment VIII.

Rabbit (67 days). September 6th, 1918 (ether anaesthesia): Right sciatic, fine "Japanese gut." Left sciatic, Stiles's fine linen thread, waxed, No. 160. November 12th, 1918: Rabbit killed. The right sciatic showed a definite thickening at the site of the suture. The left showed very little abnormality.

Microscopic Examination.

Right Sciatic.—There is no trace of the suture except in an area of fibrosis and cellular increase with neuroma formation in the neighbouring nerves.

Left Sciatic.—The suture is almost completely unabsorbed and the reaction around it corresponds in almost every particular to that in Rabbit 2. Internally is a zone of cells derived from the neurilemma sheath with only a small admixture of fibrous tissue cells. Outside this is a zone characterized by large clear giant cells, some showing vacuoles, and more definite fibrous tissue. Everywhere there is a complete absence of small round cells, and very little degeneration even of the innermost layer of cells. The peripheral segment of the nerve shows fairly complete degeneration.

Experiment IX.

Rabbit (52 days). September 10th, 1918 (ether anaesthesia): Right sciatic, Japanese silk, No. 00. Left sciatic, 30-day chromic gut, No. 00. November 1st, 1918: Rabbit killed. Right sciatic showed very slight change, only very slight increase of hardness at one point. Left sciatic showed a definite hard thickening, and was slightly adherent to surrounding tissues.

Microscopic Examination.

Right Sciatic.—The suture is almost completely absorbed, its site being evidenced by an oval collection of small round cells, and large giant cells with a few pale nuclei which are digesting the remaining fragments of silk. Some degenerated cells are also present in one part of the area where the fragments of silk are more numerous. Around this zone is a ring of fibrous tissue, the lymph spaces between the fibres of which are packed with small round cells. The peripheral part of the nerve shows very considerable degeneration, droplets of fat being still present in large quantities, but many axis cylinders remain.

Left Sciatic.—The suture is almost completely absorbed. Its place is filled with an area of fibrous tissue and fibroblastic cells, with collections in one or two places of small round cells, packed closely together. In the fibrous tissue area there are still a number of degenerate polymorphonuclear cells. The nerve bundle which passes beside it, and the edge of which is involved in the reaction, shows very little degeneration in its peripheral segment.

DISCUSSION OF EXPERIMENTS.

It is clear from the histological appearances that there are two main types of tissue reaction in nerves, both of which are present to some degree in every case.

1. *Mesoblastic Cells.*—The early reaction is on the part of the mesoblastic cells. The circulating lymphocytes and hyaline cells—and, in the case of the more irritating suture materials, the polymorphonuclear leucocytes also—take a part in the reaction from its earliest stages. Very soon after there is a proliferation of the endothelial and fibroblastic cells. Both these reactions vary in amount according to the nature of the suture material, and seem to be specially abundant when the catgut employed has been prepared with chromic acid. They are very slight with plain linen thread and silk; but, when these materials have been waxed with Horsley's bone-wax, a narrow zone of mesoblastic reaction appears.

2. *Cells of the Neurilemma Sheath.*—The other form of reaction, that of the cells of the neurilemma sheath, comes on at a later date. It is probably inevitable, and due as much to the damage inflicted on the nerve as to the presence of a foreign body; but no doubt the suture stimulates the neuroma formation as well as leading to the appearance of the large giant cells which seem to arise from the cells of the neurilemma sheath. Such giant cells, with inclusions of suture material, were commonly found at some distance from the suture, and in some cases were seen filling the lymphatic spaces of the surrounding tissue. They thus appear to have some migratory powers, and their similarity in appearance and origin to the amoeboid giant cells of glial reaction in the central nervous system lends some support to this hypothesis. They seem to take a large part in the ultimate removal of the less easily absorbed suture materials.

Although the formation of a neuroma at the site of the suture is unavoidable whatever the material used, so long as any damage is done to nerve fibres, it will be of only limited extent if fibroblastic reaction is avoided; and it will be healthy neuroma tissue in the sense of being able to transmit useful functioning nerve fibres, if no lasting source of irritation is left—that is, if the suture is either completely or almost completely absorbed within a few weeks.

Comparison of the Suture Materials Used.

The naked-eye appearances of the nerves, when they were examined on removal from the body, gave evidence which very often conflicted with the microscopic appearances. But in some cases the evidence thus obtained was of value, especially when no abnormality or only a slight diffuse thickening of the nerve was seen.

This was the case with linen thread, unwaxed silk, and the material described as "Japanese silkworm gut." Where catgut was used in any form there was always a definite thickening of the nerve, least with plain sterilized gut, and most with chromic gut. Chromic gut (thirty-day) appeared macroscopically to be quite unabsorbed at the end of twenty-one days; after fifty-two days there was a definite hard thickening, adherent to surrounding tissues, and even after eighty days some thickening of the nerve remained.

Cell Reaction and Absorbability.

From the microscopic appearances it was possible to judge both the amount of fibroblastic reaction and the absorbability of the suture. The materials which caused least fibroblastic reaction were plain linen thread and silk, both of which, when waxed with Horsley's bone-wax, gave rise to more small-celled infiltration than when used plain. Of these two materials silk was the more readily absorbed, but this absorption was incomplete at the end of fifty-two days. With linen thread there was only a very partial absorption in the same period.

Next in point of reaction was "Japanese silkworm gut"; it gave rise to a slight but definite fibroblastic reaction, which settled down into a connective tissue scar at the end of sixty-seven days, when the ligature was completely absorbed. This material seems to be rather more readily absorbed than silk, but definitely more irritating.

Of the forms of catgut used, thirty-day chromic gut seemed relatively unabsorbable under the conditions of the experiment; on the other hand, twenty-day chromic gut was completely absorbed in twenty-one days. Iodized gut was almost completely absorbed in the same period. "Tanned gut" was quite unabsorbed. Both "twenty-day chromic gut" and "plain iodized gut" gave rise to a moderate amount of fibroblastic reaction only.

The disadvantages of any suture material are exaggerated when passed through the whole thickness of a

nerve in the form of a "tension suture." This will tend to produce an intraneural neuroma at a greater distance from the suture line both above and below; and an additional obstacle is placed in the pathway of the regenerating axons, more particularly when the suture material is one which causes much fibroblastic reaction. This is diagrammatically represented in Fig. 11.

CONCLUSIONS.

(1) While plain thread or silk sutures give rise to no irritation, they are relatively unabsorbable.

(2) "Plain sterilized" or "plain iodized gut" are of value by reason of their rapid absorbability, but their low degree of tensile strength and their slightly irritating nature counteract these advantages.

(3) "Japanese silkworm gut" has great tensile strength, and in rate of absorbability and the reaction which it causes holds a place midway between groups (1) and (2).

(4) Chemical antiseptics should be avoided in all suture materials.

In conclusion, we desire to express our gratitude to the Medical Research Committee, whose generosity in equipping and supporting the Research Laboratory have made this work possible, and to Lieut.-Colonel D. K. McDowell, C.M.G., whose interest and goodwill have greatly helped our endeavours to combine some research work with the routine duties of a busy hospital.

COMBINED SCLEROSIS WITH HETEROTOPIA OF THE SPINAL CORD.

BY

GEORGE E. RENNIE, M.D., F.R.C.P.LOND.,

SENIOR PHYSICIAN TO, AND LECTURER IN CLINICAL MEDICINE,
ROYAL PRINCE ALFRED HOSPITAL, SYDNEY;

AND

OLIVER LATHAM, M.B., CH.M.SYD.,

DIRECTOR OF THE PATHOLOGICAL LABORATORY, DEPARTMENT
OF LUNACY, NEW SOUTH WALES.

[With Special Plate.]

The following case, in which the diagnosis of disseminated sclerosis of the spinal type was made during life, presents many points of interest, especially in connexion with the existence of the congenital or developmental defect observed *post mortem*.

M. R., a married woman, was admitted to the Royal Prince Alfred Hospital under my care on April 29th, 1918, complaining of weakness of the legs and some numbness of the feet for about a year. There was nothing of note in her family history.

HISTORY.

She had always worked hard indoors; had been married seven years and had had two healthy children; no miscarriages or stillborn children. There was no history of alcoholism or of venereal disease.

She had had an attack of colitis two years previously, and had not felt well since then. One year ago she began to notice that her legs were getting weak and stiff at the joints; they always felt tired, but she had no pain in them. About the same time she noticed numbness in the soles of the feet. These symptoms became aggravated gradually until she completely lost all power of walking about one month before being admitted to hospital. For some weeks previous she had suffered much from indigestion and constipation, but there was no disturbance of the sphincters.

CONDITION ON ADMISSION.

She was thin but had a good colour. She had no pain or discomfort, and although unable to stand or walk she was quite cheerful, and expressed confidence in her ultimate recovery. The temperature was normal, pulse 116, respirations 24. Urine acid, specific gravity 1020, contained no albumin, sugar, or pus. She was intelligent, had a good memory, was not emotional, and slept well. Nothing abnormal was detected on examination of the cranium or spine. The cranial nerves were all normal. There was no weakness or stiffness in the arms, but all movements of the legs were impaired by marked spasticity, and she was quite unable to walk or stand, even with assistance. The only disturbance of sensation detected was some slight diminution in acuity of tactile sensation on the outer side of both thighs, and some hyperaesthesia on the soles of the feet. Wrist and elbow jerks were present, and equal on both sides but not exaggerated. Both knee-jerks were much exaggerated, and patella and ankle clonus were easily elicited on both sides. There was no disturbance of the sphincters and no trophic changes.

Examination of the blood showed the following result: Red cells, 3,356,000; leucocytes, 4,000; haemoglobin value, 44 per cent.; colour index, 0.65. Differential count of leucocytes: Neutrophile polymorphs, 73 per cent.; small lymphocytes, 13 per cent.; large and transitionals, 8 per cent.; eosinophils, 1 per cent.

Nothing abnormal was detected on examination of the heart, lungs, and abdomen. Lumbar puncture was performed on April 30th, and 35 c.cm. of clear fluid was obtained under pressure. This fluid was found to contain no cellular deposit, and the "Wassermann" reaction with the fluid undiluted and in dilutions of 1 in 2 and 1 in 5 was in each case negative. On the other hand, the "Wassermann" reaction with the blood was positive on the two occasions on which it was tested.

The patient thus presented the clinical picture of "paraplegia in extension," and there was nothing to indicate any immediate unfavourable change in her condition.

AFTER-HISTORY: DEATH.

On the night of May 3rd the patient suddenly became delirious and noisy, but could collect herself sufficiently to answer questions. She said she was very frightened, but could give no reason for being frightened. This state lasted for about an hour; but later in the evening she again became noisy, and passed through a similar but more severe and prolonged attack.

Next day she was strange in her manner and had delusions about the other patients; she was afraid of being sent away to a mental hospital. On May 5th she was very drowsy and objected to take any medicine. It was now noted that the extensor muscles were relaxed, that she preferred to lie with her legs flexed, and that they were spastic.

On May 8th it was noted that she had well-marked nystagmus and some weakness of the left external rectus muscle of the eye, but no other alteration in the cranial nerves could be detected. The bladder became distended and 30 oz. of urine had to be drawn off by catheter. The urine was clear and contained no albumin, sugar, blood, or pus. She also developed incontinence of the rectal sphincter.

On May 10th it was reported that she had had a quiet night and had passed urine voluntarily at midnight, the urine again being quite normal. At 6 a.m. she became unconscious, the bladder was distended and 32 oz. of urine drawn off by catheter contained a large amount of blood. She died the same day without recovering consciousness and with no material change in her condition except a sudden rise of temperature to 103° and pulse 166.

PATHOLOGICAL REPORT BY DR. LATHAM.

The spinal cord was examined at the Pathological Laboratory of the Lunacy Department of the New South Wales Government.

A. Macroscopic.

The material was received in 10 per cent. formalin, and on naked-eye examination, after dividing the dura mater longitudinally along the ventral surface, there was noted, besides conspicuous tortuous blood vessels, several alterations in the size and appearance of the cord at various levels.

For instance, between the middle and lower cervical regions a constriction appeared, so that the transverse diameter was quickly reduced from 12 to 9 mm., the vertical dimensions remaining the same; the cord again widened until the transverse measured 16 mm. (just above "c" in Fig. 1, Plate II). The constriction was really of greater degree, as may be seen in Fig. 2—a longitudinal section of the part.

About the seventh dorsal the cord had the appearance of having being nipped by a forceps at its removal, and a little lower down there appeared to be a condition of "heterotopia," around one of the posterior horns. As, however, the whole condition much resembled that obtaining in two cords recently described by one of us,¹ and considered to be due to congenital abnormalities, the parts were carefully embedded in celloidin, it having been ascertained that the tissue was exceedingly brittle and fragile. The upper cervical and all the lumbar and sacral regions appeared normal.

B. Microscopic.

The following staining methods were employed: (1) For myelin sheaths, Robertson's Heller's method after mordanting in Weigert's fluids; for degenerating myelin, Busch's modification of Marchi's method; for nerve cells, round-cell infiltration and organisms, Nissl's stain; for neuroglia, a modified van Gieson, using azofuchsin G; and for vascular conditions haematoxylin and eosin. Sections were made from the upper and lower lumbar, lower and middle dorsal, and cervical levels. The myelin stain at once revealed a system degeneration involving bilaterally Goll's and part of Burdach's fasciculi, the crossed and direct pyramidal (and probably part of the vestibulo-spinal and the rubro-spinal too), as well as the direct cerebellar tracts—that is, corresponding to the pathological entity known as Gowers's ataxic paraplegia. There was no evidence of any such lesion above or below these constrictions such as would suggest that these latter had produced a transverse myelitis. It was also easily apparent that the posterior and anterior spinal nerve roots and the root zones were intact. The pia arachnoid was normal; some large round cells with small nuclei chiefly over those parts of the cord which were sclerosed were by Busch's method shown to be compound granular cells, and could be traced right into the cord along the adventitial lymph spaces of the emerging blood vessels, and to be loaded with myelin; in the ventral fissure a few

small round cells were noted, but no general small round-cell infiltration of the pia arachnoid and adventitial sheaths of the blood vessels obtained, such as forms the typical picture of tabes. No pus cells were seen anywhere. Endarteritis obliterans was not observed, but the smallest blood vessels of the cord exhibited arterio-capillary fibrosis, which narrowed the lumen and thickened the outer coats. In the sclerosed parts the blood vessels were engorged and their lymph channels filled with compound granular cells. Occasionally numerous capillary haemorrhages were noted, and some of the sclerosed areas might well have been areas of softening. In these areas the nerve fibres showed a twisted course, with swollen spiral axis cylinders and dilated thinned ill-staining myelin sheaths, and these conditions, especially near the constrictions, indicated a state of things which must have had gradual onset during life. The Busch-Marchi method did not take very well, but nevertheless showed clearly the many degenerating fibres in the sclerosed areas, but did not show any further extension of the diseased process in these areas or any other ones, in marked contrast to the results we obtained in a case of Friedreich's ataxia in a young child recently described by me,² where the ordinary myelin stain showed extensive sclerosis of the posterior columns of long standing, while the Busch-Marchi method revealed a further but quite recent degeneration in the crossed pyramidalis, as well as the periphery of the cord, from one posterior horn ventrally right round and including the ventral fissure to the other posterior horn. In the case I now describe the degeneration stopped short and did not involve Gowers's antero-lateral tract nor the more anterior tracts till the inner part of the vestibulo-spinal was reached.

The neuroglial elements were readily seen round the central canal and sclerosed areas, but were brittle, and where there were many haemorrhages were granular or scarcely seen.

The anterior cornual cells stained well and, save for a fair amount of pigment, must be accounted normal; Clark's column cells similarly were functional, but were somewhat obscured by a rather abnormal development of tangle skeins of fine medullated fibres which were found just here.

Appearance Noted at the Different Levels, Heller-Pal Stain.

The mid-cervical shows the tract of Goll sclerosed right to the commissure as well as the posterior edge of Burdach's; also the cortico-spinal, rubro-spinal, vestibulo-spinal, and cortico-spinal ventralis.

The lower cervical shows the first constriction. No regular tracts nor grey matter can be made out, but numerous dilated myelin sheaths and capillary haemorrhages. In tangential section it may be seen in Plate II, Fig. 2, at "B1."

The upper and middle dorsal levels show the greatest involvement of the posterior fasciculi with many capillary haemorrhages in the cortico-spinal tracts and near one posterior horn the commencement of that heterotopia which is such a marked feature of the next section.

Lower Dorsal.—The tracts posterior to the commissure are altogether disturbed by a peculiar displacement of apparently one cortico-spinal and spino-cerebellar tract which form a cap over the posterior spinal nerve roots. The other side of the cord is also affected and the anterior horns quite dissimilar (Fig. 9, Plate II). Clark's column cells are here well marked. Other sections near this level show even greater abnormalities (best understood by examining the accompanying diagrams).

The lumbar regions simply reveal system degenerations involving the fasciculi of Goll (leaving the septal area free), and the cortico-spinal tracts.

It must be mentioned that where the abnormalities are most marked was found most evidences of haemorrhages, degenerative myelitis, and a sweeping bare of all but a few belated twisted swollen myelinated fibres associated with an absence of neuroglial framework.

In Fig. 11 and Fig. 12, Plate II, Busch-Marchi preparations of the lumbar and cervical levels show that although the sclerosed areas come out nearly bare of myelin fibres when examined after Pal's stain yet many of the fibres have only recently degenerated, and can still take on a Marchi reaction, although only poorly. From the greater number of affected fibres in the cortico-spinal tracts one might suggest these were last affected.

The Possible Etiology as Revealed by the Pathological Findings.

We have a cord showing a combined sclerosis of moderately recent causation. The complete absence of damage or any pathological condition in the posterior nerve roots seems to rule out a lymphogenous affection reaching the cord by the lymph system carrying toxins towards the cord.⁸

These reasons, together with the absence of small round cell infiltration of the pia arachnoid and non-involvement of the root zone, quite rule out tabes. The absence of any foci of pus cells or inflammatory reaction effectually dismisses the commoner infective conditions. No blood vessels were noted showing specific signs of syphilis, although many hold lues to be a common auxiliary in the etiology of fibro-hyaline degeneration of the short vessels

of the first layer of the cortex. No part of the affected area resembled a gumma. Many of the fibres affected came from cells in Clark's column which gave rise to those fibres—that is to say, only part of the neurone was affected, and that part the long intraspinal axon chiefly supplied by small arteries coming from the posterior and lateral pial blood vessels.

It would appear, then, that inasmuch as the condition was bilateral there was rather a blood condition, a deficiency rather than an irritative toxin, whereby we got a slow decaying rather than an inflammatory reaction of the myelin fibres as well as of the neuroglial framework, as evidenced by the brittleness of the sections, and the granular appearance and poor staining of the glia in certain areas. This would appear to support the contention of Marie Williamson⁴ and Campbell² that these conditions are due to some generalized blood condition which specially affects those tracts where the blood supply is likely to be relatively indifferent. In this connexion, however, it is difficult to account for the escape of Gowers's tract among others when the ventral cortico-spinal tracts were so badly affected.

In view of the *post-mortem* findings in the spinal cord, it is interesting to note that the patient's life could be divided into four periods: (1) A period of good health and activity with no evidence of any weakness or defect which could be ascribed to the heterotopia of the spinal cord. As this must have been a congenital condition we must conclude that it was in no way connected with the nervous symptoms subsequently manifested by the patient. (2) An attack of colitis, the cause of which was unknown, and after which she never recovered her usual health and strength. (3) The period of gradual onset of weakness in the legs and numbness in the feet, which progressed in the course of twelve months to complete paraplegia without any sphincter disturbance or any mental change. (4) The last period of life, extending over the last few days of life, in which there was the most marked change in her mental state—a condition of noisy delirium with obsessions and delusions being followed shortly by coma and death. There was also during this period a loss of sphincter control, and a change in type of the paraplegia from "paraplegia in extension" to "paraplegia in flexion," and the beginning of trophic changes—for I take it that the blood in the urine and the haemorrhagic condition of the bladder mucous membrane are to be regarded as evidence of a trophic change in the bladder—with sudden rise of temperature and death.

As has been said, the diagnosis made during life was disseminated sclerosis of the spinal type, and it was suggested that the cerebral symptoms manifested during the last few days of life were due to an extension of the same morbid process to the brain. A careful macroscopic examination of all parts of the brain failed to reveal any lesion either of a meningitic or parenchymatous character, and we can only conclude that these symptoms must have been due to some acute toxic process.

There was absolutely no history of any ataxy during any period of the disease; from the first and continuously onwards the only symptom was weakness and stiffness of the joints. Nor was there, on examination of the patient, any obvious disturbance of sensation or of the sphincters. In fact, clinically the case was one of pure "paraplegia in extension," which only changed in type during the last two or three days of life.

In the light of these facts it is difficult to correlate the clinical symptoms with the *post-mortem* findings. One would have expected to have had more definite symptoms due to the involvement of the posterior columns, but the more acute onset of the sphincter disturbance and the trophic (?) changes in the bladder, the relaxation of the spasticity of the extensor muscles, and the acute mental disturbance were probably due to the acute changes in the cord, that is, the haemorrhages and the more recent degeneration of the myelin which were most obvious in those parts of the cord which were the site of the heterotopia. And although the heterotopia must have been of congenital or developmental origin and apparently caused no symptoms until the onset of the signs of systemic degeneration, it is difficult to avoid the conclusion that in some way or other it was responsible—as a *locus resistens minoris*—for the more acute histological changes in the cord which manifested themselves in the change of

symptoms during the last period of life, and probably accelerated the patient's death.

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DIAPHRAGMATIC HERNIA OF THE ENTIRE STOMACH AND GREAT OMENTUM.

BY

J. GRANT ANDREW, M.B., C.M., F.R.F.P.S.G.,

VISITING SURGEON TO THE VICTORIA INFIRMARY, GLASGOW; FORMERLY
LIEUT.-COLONEL (TEMPORARY) R.A.M.C.(T.).

[With Special Plate.]

As this case is unique in respect that x-ray photographs are shown of the entire stomach in the left pleural cavity and after operation in the normal situation, it was thought worthy of publication. The history of the case is also interesting, showing the amount of unnecessary hardship inflicted upon a long-suffering and patient soldier by a failure to recognize the great diagnostic value of x-ray examination.

M. B., a rifleman, aged 22, was shot by a sniper about 7 p.m. on March 12th, 1917, while occupying a captured German trench. The bullet entered the left side of the chest behind and immediately below the twelfth rib, $2\frac{1}{2}$ in. from the middle line, and was extracted from under the skin on the following day at a point 2 in. below and 1 in. to the inner side of the left nipple line, a through-and-through wound. The bullet, as frequently happens, had turned round and was pointing base uppermost. No anaesthetic was given for its removal. Milk alone was given by the mouth at the casualty clearing station and was retained. From the casualty clearing station he was removed to a base hospital in Rouen, arriving in England on April 17th, 1917. Several months were passed in a general hospital and convalescent home before he was considered fit to return to his regimental dépôt, which he did about the middle of July. He complained at his dépôt that he suffered much pain after food of any description and that he was frequently sick. His statements were disregarded and he was given "medicine and duty." In spite of his complaints he was sent back to France on July 27th, that is, four months after receiving his wound. Every day while in France he suffered pain, and was totally unable to digest the ordinary army ration. He was told that he was "swinging the lead," and received little or no sympathy. He stuck it until he could stand it no longer, and he was carried down from the line too weak to go as a sitting case. He returned from France on December 28th, 1917, sent home as a case of gastritis. That label has been his undoing. He arrived at an auxiliary hospital in Scotland on December 31st, 1917. For seven or eight weeks he received treatment for gastritis, after which he spent thirteen weeks in a convalescent home, but without any improvement. A visiting medical officer to the convalescent home marked him as fit for discharge from the service, and for this purpose he was sent back to the hospital to which he had been sent on his return from France. Instead of giving him his discharge a medical board at this hospital gave him ten days' leave and marked him "duty." On the second day of his leave he reported sick, and was immediately admitted to the medical wards of the "mother hospital." Here also for weeks he was treated for gastritis, and was given medicine and milk diet. He was ultimately, on July 25th, 1918, fifteen months after being wounded, discharged from the service as a case of gastritis.

Not being one whit better, he consulted the local Pensions Committee; they sent him to a hospital for pensioners, and there he received the same line of treatment on the medical side of the house. After six weeks' residence in this hospital he was, to use his own term, "fed up," and he intentionally overstayed his leave, and was in consequence dismissed from the hospital.

On again consulting the local Pensions Committee he passed into my care on February 19th, 1919, for the first

time under the charge of a surgeon, and that was by inadvertence. On admission it was noted that his general condition was unsatisfactory. Examination revealed the existence of the scars in the left lower chest wall as before noted. The heart was slightly displaced towards the right, and was irregular in rhythm. The base of the left lung was dull to percussion, and the respiratory murmur was absent in the lower half of this lung, while rales were heard in the upper half in the greater part of the right lung.

His constant complaint, however, was that of pain immediately after or very shortly after food of any description, and a feeling of great distension. From the situation of the through-and-through wound, my opinion at this stage was that the condition might be one of hour-glass contraction of the stomach following perforation by the bullet.

The case was clearly one for examination by bismuth, and he was sent for a radiographic report. The entire stomach, as shown in the accompanying photographs taken by Major James R. Riddell, appeared to be above the diaphragm and in the left pleural cavity. Though his general condition was not good, if relief was to be obtained at all operation was an imperative necessity.

On March 25th, 1919, assisted by Captain Rimer, U.S., A.M.S., and by Captain James Maclean, R.A.M.C.(T.), as anaesthetist, the abdomen was opened by a transverse incision through the left rectus muscle. The transverse colon immediately presented itself. No stomach was visible. An additional vertical incision was necessary to get under the diaphragm. It was then seen by tracing up the bowel from the duodenum that the entire stomach and great omentum, as indicated in the x-ray picture, had disappeared and were on the other side of the diaphragm, the opening in the diaphragm being in the neighbourhood of and indistinguishable from that through which the oesophagus enters the abdomen. With considerable difficulty the stomach was drawn back into the abdomen. The omentum had contracted adhesion to everything it came into contact with, and probably to the under surface of the lung. Any attempt at traction caused haemorrhage, and a portion of the omentum so adherent that it was dangerous to remove was left in the pleural cavity. The opening in the diaphragm was closed by strong interrupted silk sutures. The stomach appeared thickened as if the wall had hypertrophied in the vain effort to pass the food on to the duodenum, but what was still more striking was the absence so far as one could see of any perforation or track of perforation by the bullet.

His recovery was naturally slow, but was not complicated in any way. The wounds healed primarily. When last seen by me, on May 20th, he stated that he was now completely free from sickness and from pain when food was taken. He was taking ordinary diet. The heart was normal in position and in rhythm. There is still some comparative dullness at the base of the left lung with diminished respiratory murmur, vocal fremitus, and vocal resonance.

Since the commencement of the war in 1914 several cases of a similar nature have been put on record, but no case, so far as I have been able to find out, has been published showing by x-ray the herniated stomach. In the *BRITISH MEDICAL JOURNAL* of April 19th, 1919, Sir James Barr, in writing on chest conditions, referred to a case of diaphragmatic hernia of the stomach successfully operated on by Captain Arthur J. Evans. Captain Evans has not yet published his case, but he kindly sent me a copy of the medical case sheet. The similarity of his case to mine is very striking, both in regard to history and the condition found on operation. Almost a year elapsed—eleven months—in Captain Evans's case before operation. Captain Evans writes: "The most interesting point about the case is how the patient ever managed to survive the most extraordinary trials he must have gone through before it was recognized that he was a serious case." Two years elapsed in my case, and the record, to say the least, is not one to be proud of. In both cases the entire stomach and omentum had passed into the left pleural cavity, and in both the difficulty lay in returning the omentum. The following articles may be referred to by those interested in the subject: "Notes on a case of traumatic hernia of the diaphragm proving fatal seven months after wound," by Captain C. P. Symonds, R.A.M.C., *Journal of the R.A.M.C.*, September, 1917; "La hernie

diaphragmatique étranglée consécutive aux plaies de guerre," by L. Bérard and Gh. Dunet, *Lyon chirurg.*, No. 5, xv, 39; "A case of diaphragmatic hernia following gunshot wound: attempt to bring about radical cure by extensive thoracoplasty," by David M. Greig, *Edinburgh Medical Journal*, June, 1919.

The following is the note given me by Major James R. Riddell, R.A.M.C.(T.):

The patient could only take part of the opaque meal and that with great difficulty. Skiascopic examination showed that three-quarters of the stomach was in the thorax. The portion remaining in the abdomen was joined to that above the diaphragm by a narrow passage. Practically all the opaque meal could be made to pass back into the chest cavity by laying the patient for a few seconds on his side and elevating the hips; the tone was poor and peristalsis was not made out. The upper limit of the stomach was about the level of the third rib in front.

In the diagram the dotted line shows the normal position of the stomach alongside the position of the patient's before operation.

Two of the skiagrams, A and B, were taken before and one, C, some weeks after the operation.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

FOREIGN BODY IN CAECUM SIMULATING APPENDICITIS.

On August 6th I was requested to visit C. K., aged 35 years, of weak intellect, who was suffering acute abdominal pain, especially in the right iliac fossa. The muscles were very rigid, and I suspected a perforation from a sloughing appendix. The patient was at once removed to the hospital, and, with the assistance of Dr. Cecil Richardson, I opened the abdomen by a para-rectal incision. Considerable trouble was caused by protrusion of small intestine on account of the muscular contraction, which could not be controlled by the anaesthetic. On exploring the caecal region a hard substance was felt which could only be a foreign body. It lay diagonally across the caecum and ascending colon, and had a sharp point which had perforated. The perforation was slightly enlarged and the foreign body extracted, proving to be a wire nail 3 in. long. The bowel was clamped, the perforated spot buried by a purse-string suture, and a reinforcing Lambert suture applied in the horizontal axis. The wound was healed on the tenth day, and there have been no further symptoms. C. K. does not seem inclined to give any information as to how or why he swallowed the nail, but one can hardly believe it was an accident.

J. B. PIKE, M.R.C.S.Eng.,
Honorary Surgeon, Loughborough Hospital.

THE INFECTIVITY OF SYPHILIS.

I VENTURE to suggest that the medical profession is not sufficiently alive to the danger of syphilis being transmitted in innocence and apparently also indirectly from one member of a household to another. During the last two years I have come across three instances of this.

1. A girl, aged 15, used to nurse a syphilitic infant that had been born to a young woman, to whom her mother had given hospitality while her sweetheart was with the colours. The girl got a chancre on her lower eyelid, with enlargement of glands, sore throat, and exanthem. A month or two later her mother showed typical secondary manifestations, with what appeared to be the primary lesion in the perineum, close to the anus. She had no lesion further forward; her husband was away (in France, I believe), and altogether I think it most unlikely that she had been unfaithful.

2. I attended for a miscarriage a woman who showed late secondary signs, and a little while afterwards she gave the disease to her husband in the ordinary way, when he was put on military duty nearer home. Shortly after that one of their family, a boy aged 5 or 6 years, got a primary sore on the outer side of his forearm. About six months later an older boy came up among my out-patients with rash, enlarged glands, etc. (like his younger brother), and a condyloma at the anus.

3. A year ago another family I know had a visitor staying with them (a woman, I fancy) who told them incidentally that she (or he) had been attending at a hospital in a neighbouring

city for injections into her blood of sheep's blood, as her (or his) blood was so poor! Presumably this individual had overheard some remarks on the technique of the Wassermann reaction. However this may be, the man of the house got a primary sore in the usual place, though, as I think, innocently and indirectly. He had a course of galyol and mercurial treatment, but failed to present himself again. About a month ago his wife came to see me with a faint scaly eruption, sore throat, and enlarged glands. She gave a positive Wassermann reaction. The husband had been cautioned as soon as seen, and I do not believe he had transgressed. Finally, within a week of the wife's coming to me, their 15-year-old daughter developed a sudden vulvitis. There was swelling and redness of the labia, and a row of three or four tiny non-indurated ulcers, with serous exudation only, and slight enlargement of the inguinal glands. A dose of novarsenobillon and of colloid mercury caused almost complete return to normal in a few days, but no spirochaetes were found.

For myself I cannot resist the conclusion that an infected vessel or w.c. seat has in some at least of these cases transmitted the virus. If this really is the explanation, an unmistakable warning should be given. All public closets ought to have the front and perhaps also the back part of the seat cut away, and every man, woman, and child should be taught to cover their own closet seats with paper during use, especially whenever there is the least possibility of its being used by a stranger.

W. REGINALD WILSON, M.A., M.B. B.C. Cantab.,
Honorary Surgeon (with charge of Venereal Department),
Doncaster Royal Infirmary.

CYCLIC VOMITING AND THE EFFECT OF SODIUM BICARBONATE IN ACETONAEMIA.

B. W., aged 5 years, was, without warning, taken sick with severe headache and vomiting on the morning of July 12th. The vomiting persisted, and two hours later he became "unconscious" according to his mother, and remained so until I was called in at 5 p.m. He tossed about the bed semi-conscious, occasionally putting his hands to the head as if in great pain; the pupils were widely dilated but reacted to light. The breath had a sweet odour as had the vomited matter. The temperature (rectal) was 100°, pulse 90, regular. There were no signs of meningitis such as Kernig's sign or head retraction, and examination of heart, lungs, and abdomen were negative. The bowels had been confined for two days.

Repeated doses of saline aperient were ordered at 9 p.m., and were taken throughout the night. On the following morning there was general improvement; the breathing was quiet and regular; the bowels were being freely opened; the patient was in a sleepy condition. A few hours later (5 p.m.) unconsciousness again ensued, followed by restless delirium and marked "air hunger" and relapse. The breath again had a noticeable sweetish odour. The urine showed the presence of acetone. At 6 p.m. sodium bicarbonate (solution 1 in 30) was introduced by a catheter into the stomach and into the rectum, and morphine gr. $\frac{1}{4}$ was given hypodermically at the same time. After 6 oz. of solution, corresponding to about 3ij of sodium bicarbonate, had been introduced at 8 p.m., the patient recovered consciousness sufficiently to drink the solution. He drank this liberally throughout the night, and afterwards fell into a quiet sleep, which was continued for several hours, and was followed by complete recovery of consciousness and cessation of vomiting during the day.

The remarkable features of this case are (a) the suddenness of onset of vomiting and delirium without apparent cause; (b) the remarkable effects of alkaline administration in bringing the child back to consciousness; (c) the lapse back to delirium and air hunger supervening on discontinuing the alkali; and (d) recovery on the further administration of large doses of sodium bicarbonate.

Southsea.

R. HAMER HODGES, M.B., B.S. Lond.

A CASE OF SUPERFETATION WITH COMPLICATIONS.

THE following case is of interest, perhaps especially on account of the very small size of the second fetus, and because of its grave and finally fatal complications.

About ten days ago I was called to a confinement attended by a midwife; on arrival I found a healthy looking female child, apparently full time, and born some one and a half hours previously, an empty bag of membranes, and yet another bag of membranes in which was a fetus of about three months' gestation, and showing no

signs of decomposition. The two cords from the child and fetus were passing into the vulva, for no placenta had yet been born. There seemed no sign of the natural birth of the placenta, so the patient was given light chloroform anaesthesia and, after the usual aseptic precautions, a gloved right hand was introduced into the uterus. The placenta was very adherent, but with difficulty was peeled off and withdrawn. It was then found that the cord of the fetus was not attached to this first placenta, and there was soon discovered the second placenta, but, unhappily, too, a contraction ring could be distinctly felt, above which the placenta was firmly adherent. Only after a great struggle was the placenta removed, and then only after it had been torn. As may be imagined, haemorrhage was severe, and was only controlled after the injection of pituitrin, followed by ergotin, in addition to hot douching and manual compression of the walls of the uterus. The patient was lying in the kitchen of a two-roomed cottage, housing eleven people, so that conditions were not ideal. However, one was able to get things to give some rectal saline and a coffee and port wine enema, and the patient rallied wonderfully.

Unhappily a slow form of sapraemia set in, and the great loss of blood lowered resisting powers almost to vanishing point, and the patient died with a very subnormal temperature about eight days later.

The interest in the case seems to be the question whether it was one of real superfetation; this seems to me to be doubtful owing to the great difference of age of the two fetuses; probably the explanation is a twin pregnancy with early death of one fetus without decomposition. I believe this is the most likely explanation of such cases. Another point is, what part the two placentae played in the formation of the contraction ring; and, finally, why the premature birth of the membranes of the live child?

Ross-on-Wye.

HAROLD O. LONG, M.R.C.S., L.R.C.P.

SEPARATION OF TIP OF NOSE WITH COMPLETE PRIMARY UNION.

ON August 15th a man was admitted to King Edward VII Hospital, Windsor. While grooming a restive horse a skylight fell down and, breaking, cut off the end of his nose. In addition to the tip, the part missing included about one-third of the left ala and two-thirds of the right ala, besides the lower part of the septum and a small portion of the upper lip. A messenger sent down to the stable succeeded in finding the missing part, and about an hour after the accident it was sutured into place.

Under a normal saline dressing primary union took place, and the resulting effect is very good. The case is recorded as I do not recollect seeing a similar one reported.

Windsor.

J. O. SKEVINGTON, F.R.C.S.

Rebels.

BE KIND TO YOUR OLD AGE.

THE recent death of a lady aged over 104½ years, the last survivor of a family of ten children averaging 90 years of age apiece at their deaths, affords a good example of the length of time the *memento mori* of birth may take in transmission to the members of long-lived families. How to secure the greatest length of life and how to enjoy its latter end to the greatest advantage are the main subjects of the fifth edition of the late Sir HERMANN WEBER's well known work on *The Prolongation of Life*,¹ a classic written as much for the lay as for the medical reader; this edition is introduced by a preface from the pen of Sir Clifford Allbutt. Sir Hermann Weber took a serious but far from despondent view of the responsibilities of one who wishes to make the most, the best, and the longest of his life, and described in detail the precautions to be taken and the many dangers to be avoided by those who aim at living in a healthy manner. Fresh air, well chosen exercises—and the best of these he found was walking—diet, housing, climate, and

general habits are all considered in turn; from his great experience and knowledge Sir Hermann was able at every juncture to draw lessons from which most of us may benefit, and if we may summarize his teaching in a phrase, that phrase would be, "Live the Spartan life." The vigour of every organ and the resisting power of the whole body are to be maintained by regular daily walks, rides, or other exercises, several hours a day are to be spent in the open air, and attention must be paid to ventilation of the home. Moderation in eating and drinking and all bodily enjoyments must be enforced; in particular, alcohol, he said, should be used as a medicine only, and is not necessary to healthy persons, and the entire liquor traffic should be controlled by the State. All possible steps should be taken to prevent disease—the common cold, for example—and to counteract any inherited tendency to disorders that may be present. Early to bed and early to rise, with no more than six or seven hours of sleep for the adult—or, exceptionally, eight hours—should be the rule, and a daily bath or cold rub and friction. From the mental and moral point of view equanimity and sympathy should be cultivated and all violent passions discountenanced. Sir Hermann Weber set a high standard, it is clear, but gave good reasons for his dicta, and he wrote with an earnestness that makes his personal style and autobiographical method highly convincing. The individual may do so much to prepare himself for old age and adapt his way of life to its gradually encircling restrictions, yet how comparatively rarely do we meet with due acquiescence therein! Here, at any rate, is a wise and soundly tempered volume, that should be read by everyone who contemplates growing old and would wear old age as a crown rather than a burden.

The other side of the shield, old age as a burden to self and others, is set out for medical readers at full length—from Alfred to Omaha, indeed, as has been said in America—by Dr. NASCHER, of New York.² Here the reader will find all details of the physiology, pathology, hygiene, and medico-legal relations of senility described in a truly practical manner, unencumbered with sentiment or undue sympathy for the victims of the disorders delineated. In his classification of the diseases met with in old age the author adopts a pathological basis, and divides them into five groups—as primary, secondary, preferential, modified, or uninfluenced by old age; as he says, the classification of diseases has not yet been placed on any sound foundation, and remains distressingly arbitrary. Dr. Nascher's text is dogmatic, and he has made free use of the works of specialists and others dealing with the maladies of the aged. Perusal of his pages leaves the reader gloomy and pessimistic, so long is the catalogue of senile ailments, so inevitable their incidence, so degrading their effect upon the individual, so unsympathetic is their reception by those who have to do with the invalid made to appear. Surely, one thinks, a little of the Rabbi ben Ezra touch might be communicated to the volume with advantage, in order to humanize it without impairing its value.

HUMAN INFECTION CARRIERS.

As the war, with the large amount of work on the carrier problem, has taken place since the appearance of Drs. Ledingham and Arkwright's monograph on this important subject, there is room for a book summarizing the more recent knowledge thus acquired; this is provided by Dr. C. E. SIMON's recent work on *Human Infection Carriers*,³ issued during the present year. The infections considered are cholera, diphtheria, plague, enteric, cerebro-spinal fever, bacillary dysentery, acute poliomyelitis, the pneumococcus, streptococcus, and influenza. The part played by carriers in the dissemination of disease was established by Koch in his investigations into the 1892-93 epidemic of cholera in Germany, and this disease is therefore considered first. The author, while admitting that practically it is not essential to distinguish between the two kinds

¹ *On Longevity and Means for the Prolongation of Life*. By Sir Hermann Weber, M.D., F.R.C.P. Edited by F. Parkes Weber, M.D., F.R.C.P. Fifth enlarged edition, revised and partly rewritten. London: Macmillan and Co. 1919. (Med. 8vo, pp. xxii+292. 12s. net.)

² *Geriatrics: The Diseases of Old Age and their Treatment*. By I. L. Nascher, M.D., Chief of Clinic Department of Internal Medicine, Mount Sinai Hospital Dispensary, New York, etc. Second edition, revised. London: Kegan Paul, Trench, Trübner, and Co., Ltd., 1919. (Med. 8vo, pp. xx+527; 50 plates containing 81 illustrations. 21s. net.)

³ *Human Infection Carriers: their Significance, Recognition, and Management*. By Charles E. Simon, B.A., M.D., Professor of Clinical Pathology in the University of Maryland School of Medicine, Philadelphia and New York: Lea and Febiger. 1919. (Demy 8vo, pp. 250; 5 figures. 2.25 dots.)

of carriers, suggests the term "active carriers" for those who have passed through an attack of the corresponding disease, and "passive carriers" for those in whom the organisms have played a purely passive part. It is interesting to note that before the carrier problem was recognized, the occurrence of Pfeiffer's *Bacillus influenzae* in persons other than those suffering from that infection was urged as an argument against its responsibility for influenza; in the light of our present knowledge these observations show that influenza carriers are common, and that their frequency in patients with other diseases, such as pulmonary tuberculosis and measles, indicates that these maladies create a specially favourable soil for the growth of the influenza bacillus.

It is urged that, as there is reason to believe that in a city of the size of New York there are 25,000 typhoid carriers, some regulation such as registration is essential in the public interest. With regard to the medical treatment of typhoid carriers a very pessimistic view is taken, though attention is called to good results reported by Lentz from fortoin (formalized coloin) in combination with extract of phytolacca (a laxative and cholagogue) and sodium bicarbonate. Vaccines are useless, but cholecystectomy promises better, and is preferable to mere drainage of the gall bladder, as the bacilli invade its walls. Universal prophylactic vaccination would theoretically stamp out the disease, and short of this would diminish the incidence of carriers in direct ratio to the number of the inoculated among those exposed to infection.

The recent work on poliomyelitis carriers is fully dealt with, and the probability of the frequency of carriers as compared with the number of actual cases is shown; this is connected with the relative insusceptibility to the disease, which has been estimated at 2 per cent. as compared with 90 per cent. in measles and 75 per cent. in whooping-cough. There is an interesting account of the camp septicæmia, due to a haemolytic streptococcus, which was responsible for such an appalling mortality in the military camps in America during the winter of 1917-18; the infection appears to have been introduced from without by healthy carriers among the recruits. In an appendix are the regulations enacted on the question of carriers by various states up to January 1st, 1918. The section on pneumococcal carriers is thoroughly up to date, and the monograph provides an admirable source of reference on the whole subject of carriers.

PNEUMONIA IN THE U.S.A. ARMY, 1917-18.

In a recently published monograph¹ of the Rockefeller Institute for medical research Dr. W. G. MACCALLUM has made an interesting summary of the bacteriological and pathological observations made in a number of cases of pneumonia, often following an outbreak of measles, in various United States army camps during the winter of 1917-18. Many types of lesion and bacterial infection were found in various combinations; the pneumococcus was generally associated with lobar pneumonia, the haemolytic streptococcus with either lobular pneumonia or interstitial bronchopneumonia, and these were the chief etiological agents. The bacillus of influenza was frequently found in the sputum, occasionally in the lungs and pleural fluid; it was always associated with the streptococcus, and Dr. MacCallum says that it was difficult to assign to it a predominant part in the causation of the pneumonia. He adds that there is still uncertainty as to the exact biological nature of the haemolytic streptococcus, of which several strains seem to have been isolated; indeed, in some camps numerous cases due to a non-haemolytic streptococcus were reported.

In practically all the cases of streptococcus infection he found a serofibrinous or fibrinopurulent pleurisy, sometimes persisting as an empyema after the disappearance of the earlier pulmonary lesions. In some of the camps independent epidemics of pneumonia arose without any preceding significant outbreak of measles. Describing the symptoms of the streptococcal pneumonia, the author remarks that it commonly began with a sore throat, fever, and cough; the physical signs in the chest were often

indefinite until evidence of fluid in the chest appeared. Delirium, sleeplessness, dyspnoea, and cyanosis were common.

Two main types of pulmonary lesion are described. The first, called interstitial pneumonia, is said to be essentially the result of infection of the bronchioles with large numbers of haemolytic streptococci, leading to great changes in their walls and the adjacent pulmonary tissue. Here are found patchy collapse, nodules of consolidation round the terminations of the bronchi, haemorrhages round these nodules, and extreme engorgement of the pulmonary blood vessels. The bronchial walls are intensely engorged with mononuclear cells, and thickened; in some cases the bronchial mucosa is necrosed. Masses of streptococci are to be found in the lumen of the air passages, but only a few in the alveoli. The pulmonary lymphatics are often distended with pus, and often thrombosed and conspicuous for their size and yellowish-white contents; they, too, are full of streptococci. The effusion of fluid into the infected pleural cavity takes place very rapidly and may cause complete collapse of the lung; greenish-brown at first, the fluid later becomes more distinctly purulent. Rapid organization of the inflammatory exudate is everywhere characteristic in both lung and pleura; there is, in fact, a great tendency to heal, and to limit the advance of the streptococci by the induration of the infected tissues. There is probably no general septicaemia until a few hours before death.

The second type of pulmonary lesion, described as lobular pneumonia, lacks the firm nodules of consolidation described above; instead there are patches of consolidation in which the alveoli are filled with blood, leucocytes, and enormous numbers of streptococci. No interstitial changes and no signs of resistance are seen, but widespread necrosis of pulmonary tissue. In some instances both varieties of pneumonia occur side by side.

In an addendum to his report Dr. MacCallum gives a brief and non-committal note on the subject of the influenza bacillus and its importance in these recent outbreaks of pneumonia, including that of last winter. He finds that Pfeiffer's influenza bacillus may occur in pure culture associated with the interstitial bronchopneumonia described above, except for the absence of empyema. Using Dr. Goodpasture's new stain for Gram-negative bacteria, combined with Weigert's stain for Gram-positive organisms, he has restudied his material and has found the microbe of influenza in the bronchioles or alveoli of one-third of his cases. His general conclusion is that interstitial pneumonia may be caused by various organisms, including the pneumococcus, streptococcus, and influenza bacillus; where the infection is, as often, mixed, it is difficult to assign to each its exact part in the process.

NOTES ON BOOKS.

THE fourteenth edition of HALLIBURTON'S *Handbook of Physiology*,² being the twenty-seventh edition of Kirkes' *Physiology*, which first saw the light in the year 1848, is, but for a few minor changes and an appendix on war diet, much the same as its predecessor. It is hard to find anything new to say about so old and well proved a friend of the medical student, to whom his "Halliburton" is, of course, invaluable. Perhaps room might be found in a later edition for the incorporation of some of the results of Krabbe's investigations into the structure and functions of the pineal gland. Needless to say, the book may be heartily commended to the attention of all students of physiology.

Dr. R. W. ALLEN'S *Practical Vaccine Therapy*³ is a book written for the general practitioner by an enthusiast in the general method of treatment advocated, and one who is a believer in the method of the Big Stick. Dr. Allen holds that many of those who give vaccine treatment employ doses of bacteria that are all too small; to quote a characteristic passage from his introduction: "Almost every writer upon the subject of vaccine treatment in this country but myself," he writes, "will even now tell you to immunize a patient against a pneumococcal cold or bronchitis with a dose of 25 to 50 million;

¹ *The Pathology of the Pneumonia in the United States Army Camps during the Winter of 1917-18*. By William G. MacCallum, M.D. Monographs of the Rockefeller Institute for Medical Research, No. 10, April 16th, 1919. New York: The Rockefeller Institute for Medical Research, 1919. (Sup. roy. 8vo, pp. 147; 53 plates, 1.50 dols.)

² *Handbook of Physiology*. By W. D. Halliburton, M.D., LL.D., F.R.C.P., F.R.S. (fourteenth edition, being the twenty-seventh edition of Kirkes' *Physiology*). London: John Murray, 1919. (Demy 8vo, pp. xix + 936; 581 figures, 3 coloured plates, 16s. net.)

³ *Practical Vaccine Treatment: For the General Practitioner*. By R. W. Allen, M.A., M.D., late Captain N.Z.M.C. London: H. K. Lewis, 1919. (Crown 8vo, pp. xiii + 308. 7s. 6d. net.)

for years I have employed autogenous doses of at least 500 million for the purpose, and lately Avery, Chickering, Cole, and Dochez in America, Lister in South Africa, and Borel in France, have shown upon large bodies of men that dosages of 4,000 million of each of at least six different strains, or a total of 24,000 million pneumococci, can be given with impunity, and are necessary, according to laboratory tests, for the production of high immunity in these cases." The book contains sixteen chapters dealing with the preparation and administration of vaccines in various conditions of disease, and at the end the author gives a number of questions put to him and the answers he would give thereto. It is clear that he has had a large experience with the methods he advocates, and his book, written in didactic style, may be recommended to those who feel that in the matter of vaccine therapy their weak knees require strengthening.

The first volume of the fifth edition of a textbook of bacteriology by Dr. W. KOLLE and Dr. H. HETSCH⁷ is a bulky work, and in the paper covered edition difficult to handle without detriment to the book. It is printed in clear English type and the frequent illustrations, while often needlessly diagrammatic, include one or two excellent microphotographs. The paper on which the book is printed is surprisingly good. There is no index, but possibly this will be remedied when Volume II is published. The authors themselves mention the disability under which they have worked, in having no access to the bibliography of the allied countries, and they might have been wiser to wait a little longer before placing this edition on the market. The chapters on the anaerobes and influenza are poor; in the former nothing has been done to advance this difficult subject from a teaching or any other point of view, and in the latter the recent experiences of the influenza epidemic are not taken advantage of. For the rest the work is painstaking, but to those who are not German-speaking, the many excellent British and American textbooks are more likely to appeal.

Dr. R. W. MACKENNA'S collection of twenty-five essays *Through a Tent Door*⁸ somewhere in France are reflections of a cultivated and widely read medical man, and somewhat recall the flowing style of Mr. A. C. Benson. The first chapter, dealing with nature's immensity and the infinitesimal insignificance of the individual, gives the volume its title, and is followed by an attractive account of his tent library, entitled "Margarine and café-au-lait," from the two wooden cases containing respectively his medical guides (not one of which he says is literature) and his favourite authors—Borrow, the Brownings, Stevenson, La Rochefoucauld, Voltaire, and various poets. "At the Sign of the Red Triangle" is a sympathetic account of the work done by the Y.M.C.A., and "Anaemia G.O.B." the initials signifying givers of blood, is a well written sketch. The book makes a pleasant holiday companion.

A general review of the trend of modern opinion as to the undoubted connexion between mind and medicine, mental processes and disease, with particular reference to the contributions of Freud thereto, is furnished by a lecture entitled *Mind and Medicine*⁹ delivered at Manchester in April last by Dr. W. H. R. RIVERS. It may be recommended to a wide circle of readers.

A book that may be strongly recommended to the attention of general readers and medical men alike is *Life and its Maintenance*,¹⁰ which consists of a series of fifteen essays on biological problems of the day, written by as many authors, each a specialist on the subject with which he or she deals. Strictly speaking, the book falls into the class of "war literature." But its subject matter is all of perennial, not temporary, importance; peace and the process of demobilization leave the interest of these essays as it was when they wore the uniform of military necessity. The subjects dealt with are: "The problem of food," "War bread and its constituents," "Vitamines in war-time diets," "Alcoholic and other beverages in war time," "The strategy of farming past and present," "The

possibilities of increased crop production," "Grass land and arable," "Spraying problems," "Birds and insects in relation to crops," "Co-operation in food supply," "The physiological aspects of flying," "The anaerobic treatment of wounds," "Substitution of raw materials, paper," "Industrial efficiency and fatigue," and "Fresh air and efficiency." These essays are excellently written and full of direct or indirect interest to all of us. We wish this symposium the success it deserves.

Dr. COURTENAY DUNN'S *Natural History of the Child*,¹¹ described by the author as a book for all sorts and conditions of men, women, and children, offers the reader a history of childhood in all its various aspects. It is an introduction to child study, based on the historical method, and consisting very largely of quotations from books, pamphlets, and papers of all conceivable sorts, the quotations having but one feature in common—namely, that they bear in some way on the characteristics, history, pains, or pleasures of childhood, nowadays or long ago. Constructed thus of snippets, the book may be opened at any page and read with interest by the omnivorous reader; the collection has been put together by the author with no little skill and discrimination, and he writes in a spirit of the utmost sympathy with his subject. It is impossible not to admire the industry that has collected so much information and employed it with so much originality.

The fact that HARTRIDGE'S *The Ophthalmoscope*¹² has reached its sixth edition is sufficient proof of its popularity. The new edition has been carefully revised and hardly needs any words of ours to commend it. Mr. Hartridge rightly devotes a good deal of space to the appearance of the normal fundus, pointing out that, though the beginner usually prefers to look at abnormalities, it is absolutely essential for him to have a clear idea as to what is the normal. The longer a man works at ophthalmic surgery the more frequently does he come across cases in which it is extremely difficult to say offhand whether the picture presented is normal or pathological. A student who has made himself master of this little book should feel reasonably competent to give an opinion on all the more ordinary fundus pictures; in the difficult cases it is often a question of frequent examinations and careful watching of the case before even he who considers himself an expert can decide.

¹¹ *The Natural History of the Child*. By Dr. Courtenay Dunn. London and Edinburgh: Sampson Low, Marston and Co., Ltd. 1919. (Post 8vo, pp. 319. 7s. 6d. net.)

¹² *The Ophthalmoscope*. By Gustavus Hartridge, F.R.C.S. Sixth edition. London: J. and A. Churchill. 1919. (Cr. 8vo, pp. viii + 152; 65 figures, 4 plates. 6s. 6d. net.)

BRITISH ASSOCIATION ANNUAL MEETING.

IN addition to the papers already noticed in the JOURNAL, attention may be directed to three other addresses at the British Association meeting in Bournemouth: "Industrial overstrain and unrest," by Dr. C. S. Myers, F.R.S., "Butter and margarine," by Professor W. D. Halliburton, F.R.S., and "A new theory of vision," by Sir Oliver Lodge, F.R.S.

Dr. C. S. MYERS spoke of the effect of monotonous application at light work for relatively long hours in producing a central nervous incapacity, which could be more serious than that caused by more strenuous muscular work for shorter hours. The fatigue of the higher centres was the warning sign of local exhaustion. In monotonous mental work the continual effort to repress incompatible mental processes led to a weakening of higher control and ultimately to signs of overstrain. To such causes could be attributed the manifestations of industrial unrest, slackness, irritability, and distrust. The war intensified the causes and rendered overstrain more aggravated. The lecturer discussed measures for preventing their recurrence. The hours of work and rest in different industries must be regulated according to the nature of the occupation, and the element of monotony should be counteracted by stimulating the interest of the worker in his work. There ought to be a whole-time industrial medical service of men specially trained in the conditions governing the workers' welfare, and such physicians should have executive as well as advisory powers. Sanatoriums and clinics should be established throughout the country for the treatment of cases of functional nervous disorder caused by overstrain.

Professor HALLIBURTON, comparing the food values of butter and of margarine, stated that the former contained

⁷ *Die Experimentelle Bakteriologie und die Infektionskrankheiten*. By Dr. W. Kolle and Dr. H. Hetsch. Fifth edition. Vienna and Berlin: Urban und Schwarzenberg. 1919. (Super roy. 8vo, pp. xvi + 660; 42 coloured plates and 135 illustrations. 35 marks; 30 marks paper backed.)

⁸ *Through a Tent Door*. By R. W. Mackenna, M.D., R.A.M.C. London: John Murray. 1919. (Pp. 310. 8s. net.)

⁹ *Mind and Medicine*. A lecture delivered in the John Rylands Library on April 9th, 1919. London: Longmans, Green, and Co. (Super roy. 8vo, pp. 23. 1s. net.)

¹⁰ *Life and its Maintenance*. A Symposium on Biological Problems of the Day. London, Glasgow, and Bombay: Blackie and Son, Ltd. 1919. (Cr. 8vo, pp. viii + 297. 5s. 1 et.)

those accessory food factors, often called vitamins, which were essential to continued well-being, and which were wanting in the latter. Along with Professor Noël Paton he had investigated the question of using fatty acids to augment the fat supply by diluting margarine, and from experiments on rats and on men they found that they could be so used. He suggested that the margarine manufacturers should make an effort to use butter fat or some animal fat containing vitamins.

Sir OLIVER LODGE, in outlining a possible theory of colour vision, said that no mechanism was known to exist in the retina capable of responding to the ethereal vibrations of light. Something electrical or chemical was necessary, and he suggested that there might be certain atoms in the retina, perhaps in the black pigment, which were stimulated to radio-activity by the impact of light waves, and that these atoms, when they received waves, accumulated energy of the right frequency and stimulated the nerve. He proposed to put a piece of retina on an electroscope, and, by subjecting it to coloured lights, to see if it shot off electrons which would excite the electroscope.

THE MORTALITY OF THE TUBERCULOUS AFTER SANATORIUM TREATMENT.

THE Medical Research Committee has issued a report by Dr. Noel Bardswell and Mr. John Thompson¹ on the after-histories of patients in the King Edward VII Sanatorium. One of the principal defects in reports upon sanatorium experience has been the large number of patients whom it has been impossible to trace, but Dr. Bardswell laid his plans so satisfactorily that only 3.5 per cent. of the patients discharged from the sanatorium from its foundation to 1914 remain unaccounted for, and the present study is based upon the record of seven years, covering the experience of 1,053 men and 654 women. The authors' principal object was to compare the mortality experienced by the patients with that of the general population, and they employed the actuarial method—first applied to such data by Palin Elderton and Perry, who analysed the Adirondack data—of contrasting the observed mortality with that which would have occurred had the patients died at the rates of English Life Table No. 8.

The general results are not very dissimilar to those reached by Elderton and Perry. Persons admitted in the incipient stage of the disease furnished five to six times as many deaths as would have occurred in an average sample of the population; moderately advanced cases gave a mortality ratio of 15 to 20; in advanced cases nearly forty times as many deaths occurred as were calculated on the life-table basis.

Dr. Bardswell and Mr. Thompson then pass to a series of detailed tabulations. They find that the smallest excess mortality is among those patients discharged when the disease appeared to be arrested, and remark that "the results just given suggest that so long as the patient, irrespective of his condition on admission, is making satisfactory progress, every encouragement and facility should be offered to extend the period of treatment, so that even if 'arrest' of the disease is improbable, except with prolonged treatment, the greatest improvement possible should be attained before he is discharged, in the hope that 'arrest' may follow as the result of after-care. The more residence in a sanatorium is prolonged, while further improvement is possible, the greater will be the economic return for the money and time thus expended."

A separate chapter is devoted to a comparison between the results of ordinary sanatorium treatment and sanatorium treatment combined with the use of tuberculin. The method of administration of tuberculin was that advocated by Bandler and Roepke, which approximates to the "reactionless" method of Sahli and Trudeau. The statistics reveal no appreciable effect for good or ill exerted by the injections.

An analysis of the data, paying attention to the method of onset of the disease, suggests that the mortality was lighter in those cases in which the chief initial symptom had been hæmoptysis than when the onset was more insidious. As might have been expected, disappearance of

tubercle bacilli from the sputum was correlated with a lower rate of after-mortality. A family history of phthisis did not appear to have any influence upon prognosis; "patients with a consumptive family history enjoy the same chance of recovery as those who have no such history."

It is evident that when the total number of observations available is less than two thousand, sub-tabulation speedily reaches classes so small that the variations from class to class may be within the range of likely random fluctuations: hence many of the authors' detailed conclusions will need verification. The broad result that the death rate of persons discharged from sanatoriums, even with the disease "arrested," is a good deal higher than the average death rate is not likely to be shaken. This does not mean that sanatorium treatment is valueless; to measure the value of sanatorium treatment we should need to compare the results with those found in a sample of patients drawn from the same social class as the sanatorium inmates and treated on different lines. No such records are, or are likely to be, available.

As to the effects of tuberculin, in view of the almost theological acrimony which has characterized controversies between exponents of different methods of administration, we think it well to quote, in conclusion, a paragraph from the introduction to the report contributed by the Medical Research Committee:

The authors describe their conclusions as to the value of tuberculin as being "distinctly disappointing," but it must be remembered that the negative results obtained here followed the administration of tuberculin by one selected method and system of dosage, and the only conclusion that can properly be drawn from the results now presented is that this method of treatment as practised in that manner at Midhurst did not give any evidence of its value.

PORTRAIT OF SIR CLIFFORD ALLBUTT.

WE publish below a further list of the names of subscribers to the Fund for presenting Sir Clifford Allbutt with his portrait. It will be seen that some subscriptions have recently been received from India, America, Australia and China. As it is intended shortly to close the Fund, the Treasurer requests all those who wish to take part in the presentation, but who have not yet notified their intention, to send their subscriptions without delay. The amount is limited to one guinea. Cheques and postal orders should be made payable to the "Sir Clifford Allbutt Presentation Fund," crossed London County, Westminster, and Parr's Bank, and addressed to the Treasurer of the British Medical Association, 429, Strand, London, W.C.2.

After the portrait in oils has been painted it is intended to commission a mezzotint engraving from it which subscribers to the Fund will be able to purchase for their own collections.

Professor Archibald Barr, LL.D. (Glasgow)
 Professor J. H. Cameron (Ottawa)
 Dr. E. Hayling Coleman (Wolverhampton)
 Major H. M. Cursetjee, I.M.S. (M.F.F.)
 Dr. H. V. Deakin (Lydney)
 Dr. George Dook (St. Louis)
 Dr. W. Douglas (Goudhurst)
 Professor Umberto Gabbi (Parma)
 Major D. L. Graham, I.M.S.
 Dr. T. Duncan Greenlees (Fordingbridge)
 Dr. W. Jobson Horne (London)
 Dr. H. Simpson Newland, D.S.O. (Adelaide)
 Major J. S. O'Neill, M.C., I.M.S.
 Recent Graduate
 Sir James Reid, Bt., G.C.V.O., K.C.B. (London)
 Lieut.-Colonel Sir Leonard Rogers, C.I.E., I.M.S. (Calcutta)
 Dr. C. H. Sedgwick (Weedon)
 Lieut.-Colonel R. Shore, I.M.S. (Udaipur)
 Dr. J. C. Teasdale (Retford)
 Dr. G. L. Tuck (Peking)
 Dr. J. Douglas C. White (Harrow-on-the-Hill)
 Dr. D. J. Gibb Wishart (Toronto)

ACCORDING to Dr. F. A. Miller, representative of the Rockefeller Foundation in Panama, from the time the investigation and systematic treatment of hookworm disease were instituted in that republic down to December, 1918, the number of persons examined was 86,525, of whom 68,768 underwent treatment.

¹ *Pulmonary Tuberculosis: Mortality After Sanatorium Treatment.* Report No. 35, Medical Research Committee. Stationery Office, 1919.

RABIES IN ENGLAND.

REPORT BY THE CHIEF VETERINARY OFFICER.

Owing to the recent outbreak of rabies in England more than usual interest attaches to the annual report for 1918 of the Chief Veterinary Officer of the Board of Agriculture and Fisheries.

Sir Stewart Stockman begins this section of his report with a brief account of the steps successfully taken during the sixteen years between 1902 and 1918 to prevent the reappearance of rabies in the United Kingdom.

Rabies was finally eradicated in 1902, and stringent measures as regards imported dogs had been passed by Parliament to enable the Board of Agriculture to guard against its introduction from without. All such measures, however, depend upon the ability of the preventive authorities to enforce them, and to a large extent at least on the disposition of the public to respect their provisions and their object. It was possible to reintroduce rabies only by importing an infected dog and letting it loose. A dog infected in the rabies sense, however, is not necessarily an animal showing outward symptoms of rabies, for a dog infected by the bite of another may not develop the disease for several months. The basic principle of regulations for the exclusion of rabies is to impose upon imported dogs a period of observation in quarantine which is sufficient to cover the usual extent of the latent period of the disease. This apparently simple method is unfaillingly effective, provided dog owners are prevented or refrain from smuggling in dogs in defiance of the regulations and their object.

For sixteen years these measures succeeded in preventing the reintroduction of rabies. Owing, however, to the extraordinary conditions arising out of the war, and partly to the fact that after prolonged unfamiliarity with the disease a section of the public failed, or refused, to realize the gravity to man and dog of introducing rabies into a clean country, the preventive measures broke down as regards the two main props upon which their effectiveness depended. The port authorities had to meet a very abnormal situation, in which their ordinary powers and facilities were greatly curtailed; this was accentuated by aerial traffic. The dog-importing public was also enormously increased and altered in character.

The first suspicious case of which the Board received notification and could inquire into fully was from Devonport; examination was completed on August 30th. The material was not fresh, but it was submitted to a series of expeditious tests for diagnosis instead of relying entirely on the older method, which takes from fourteen to thirty days. The results were highly suspicious of rabies. The problem, however, at that time was to ascertain not merely the diagnosis of rabies, but also whether the disease had re-invaded England. A veterinary inspector was sent down to report whether mysterious deaths of dogs had been taking place. As the result of his inquiry and the information acquired at the laboratory rabies was declared to exist on September 7th.

On September 9th an Order was issued prohibiting movement of dogs out of Cornwall and Devon and applying muzzling regulations to an area around Plymouth. Owing to the spread of disease the muzzling regulations were eventually applied to certain districts in the counties of Devon and Cornwall. The muzzling regulations through the remainder of these counties were less stringent. Owing to various obstacles there was considerable delay in the serious application of muzzling in practice, and its effective application did not obtain until the latter half of October.

Sir Stewart Stockman gives a table showing the incidence of the disease from August 24th to December 31st, 1918. The grand total during that period was 112 cases. A very notable decrease began in the monthly number of cases in the more congested Plymouth district almost immediately muzzling was effectively applied. Muzzling is admittedly very useful, though by no means wholly effective, in depriving a mad dog of its power to injure and inoculate others; but muzzling, without restrictions on movement, applied to infected areas would be ineffective in preventing the dissemination of rabies. When the Board of Agriculture took charge of the outbreak in Devon and Cornwall the position was serious owing to the length of time the disease had been lurking undiscovered. Two fortuitous circumstances, however, aided the operations: most of the cases were of the paralytic form, which greatly curtailed their wanderings and their ability to bite, and the majority of cases which ran elected to take a westerly direction, and by so doing came up against an effective sea barrier. Had it not been for these factors the situation might have been very much worse.

A special organization for expeditious diagnosis was set in motion at the laboratory, with the result that it became possible to give a definite diagnosis in as short a time as five hours after receipt of material, instead of from fourteen to thirty days as in former outbreaks.

The arrangements for seeking out human beings who had been bitten, and for their treatment, were carried out through the Local Government Board, as has been recorded in these columns. So far there have been no deaths from hydrophobia among the twenty-one persons sent for treatment.

After close inquiry it became clear that the original infection came from a rabid dog imported into England in defiance of the regulations, and that the infection was introduced at least as far back as the middle of May, 1918—that is, three and a half months before the first case was diagnosed. Evidence was obtained of some twenty dogs in the neighbourhood which had probably died from or been poisoned on account of rabies, their owners having stated that they had become vicious.

As is well known, rabid dogs incline to wander long distances from home, and some of these earlier cases sowed infection plentifully over a wide area of Devon and Cornwall. The position was further complicated by the difficulty of obtaining a sufficient supply of muzzles for some time after the Board of Agriculture took the disease in hand.

Much valuable information has been accumulated at the Board's laboratory as regards methods of quick and accurate diagnosis, and from the outbreak papers at the office regarding the epizootology of rabies. This information, however, would be incomplete without drawing upon cases which occurred in 1919, and Sir Stewart Stockman proposes to deal with this part of the subject later.

Some important information was forthcoming during the period under report on the incubation periods of those cases in which it was possible to establish the date of the infecting bite with reasonable accuracy; this is given in the following table:

Case.	Species.	Interval between Infection and Symptoms.	Month when Symptoms Appeared.	Remarks.
1	Dog	At least 24 days	October	—
2	"	34 days	October	—
3	"	79-85 days	November	—
4	"	65 days	November	Bitten by same dog as 1 and 2.
5	"	7½ months (in quarantine)	March (1919)	—
6	Bovine	22 days	December	All bitten by same dog.
7	"	23 "	"	
8	"	27 "	"	
9	"	27 "	"	
10	"	34 "	"	
11	"	84 "	February (1919)	

The chief veterinary officer closes this section of his report by giving some of the distances covered, as the crow flies, by infected dogs during their run. In one case it was 20 miles, but the dog was shot (while still going strong) because it bit a man; in another case 8 miles, when it was shot because it had bitten two men and seven dogs; in another case 20 miles, when it was shot; in another case 12 miles, when it was captured by a policeman whom it bit—it died in captivity; in another case 22 miles, when it was captured and shot for attacking ducks; in another case 30 miles, when it was shot while still going strong; in another case 12 miles, when, after biting 10 people, it returned to its home and died two days afterwards; in another case 30 miles, after which the dog died exhausted.

The Board of Agriculture announces that an outbreak of rabies was confirmed on September 19th, 1919, at Stebbing, near Dunmow, Essex. This outbreak has necessitated revision of the existing restrictions, and reconsideration of the modifications which the Board had in contemplation.

THE total number of students of medicine in the five universities of Switzerland in the winter session 1918-19 was 1,704. Bale had 230, including 19 women, of whom 3 were foreign; of the male students 34 were foreigners. Berne had 390, including 30 women, of whom 15 were foreign; of the men 125 were foreigners. Geneva had 317, including 62 women, of whom 47 were foreign; of the men 112 were foreigners. Lausanne had 244, of whom 22 were women, 8 of them foreign; of the men 52 were foreigners. Zürich had 523, of whom 101 were women, 8 of them foreign; of the men 95 were foreigners.

British Medical Journal.

SATURDAY, SEPTEMBER 27TH, 1919.

RECENT WORK ON JAUNDICE.

For several decades diseases of the liver have been of particular interest to the French school of medicine, and full justice to the advances this school has made is done by Dr. Brulé in his recent book on jaundice.¹ He argues that the classical explanation of the occurrence of icterus—namely, that there is a mechanical obstruction of the larger or smaller bile ducts, or of both—is not satisfactory; because, save in the presence of gall stones or when the ducts are occluded by new growths, the experience of the *post-mortem* room shows that such obstruction is not present and that the bile passages are actually patent. It was commonly supposed that an attack of catarrhal jaundice was due to an ascending cholangitis, the inflammation of the larger bile ducts causing obstruction to the passage of the bile, until, about thirty years ago, the presence of bacteria in the bile of experimental animals with septicaemia was observed. The notion was then developed that jaundice might be due to a descending cholangitis and the production of a mechanical inflammatory obstruction to the passage of the bile through the finer bile ducts. It is certain that in many cases of mild and severe jaundice in human beings the bile is infected with bacteria from the patient's blood, the infection of the latter being demonstrable by early blood cultures, and the bacteria being passed through the hepatic parenchyma into the bile. But will this inflammation of the finer bile ducts explain the occurrence of jaundice? Probably not, because the inflammation is often present without jaundice—in enteric fever and septicaemia, for example; the angiocholitis is present, but is not obliterating in degree, as theory demands, and occurs either with or without jaundice.

The infective origin of most cases of jaundice being nowadays admitted (excluding, of course, those due to gross obstruction of bile ducts), these considerations lead to the conclusions that the biliary retention must be due to a hepatitis rather than an angiocholitis, and that the defect of secretion must lie in the liver cells themselves. The greater part of Dr. Brulé's book is devoted to proving that this is so; and further that the various functions of the liver cells may be dissociated in hepatic disease, so that the biliary retention may involve only certain constituents of the bile or all of them. The recent work of the Japanese on icterohaemorrhagic spirochaetosis has shown that very severe jaundice may occur without any inflammation of either the larger or the smaller bile ducts, though the secreting cells of the liver exhibit inflammatory and degenerative lesions of all sorts. In the same way the bile passages are free from inflammation in the jaundice of alcoholic cirrhosis or Hanot's biliary hypertrophic cirrhosis, and in various forms of toxic jaundice (post-anaesthetic, phosphorus poisoning, etc.); hence the lesion causing the jaundice must be looked for higher

up, in the secreting cells of the liver rather than in the bile-ducts.

From the clinical point of view the bile salts and the bile pigments are the only two biliary substances that are of interest in cases of disordered function of the liver, whether with or without jaundice. For the presence of bile salts in the urine Hay's test with flowers of sulphur is still the best, and for practical purposes trustworthy, except with patients taking cubebs, copaiba, sandalwood oil, or turpentine by the mouth. Dr. Brulé draws attention to a test devised by himself and Lemierre in 1910 for judging indirectly how far the bile salts are reaching the intestine normally; this consists in studying the intestinal absorption of fat by examining the blood for ultramicroscopic particles, Raehlmann's haemoconia or blood dust. These particles appear in the blood an hour after a meal rich in fat, reach a maximum in from two to five hours, and then diminish gradually; they vanish altogether only after twenty-four hours of fat starvation, and do not appear after the ingestion of any food except fat of any sort. If the bile salts fail to reach the intestine the absorption of fat cannot take place; the absence of pancreatic juice here is indifferent. Hence examination of the blood with the ultramicroscope—a simple matter—will tell whether or not the bile salts are reaching the intestine. As for the bile pigments, Gmelin's classical but thoroughly bad test for their presence in the urine should be replaced by Grimbert's more complex method (precipitation with barium chloride, extraction with alcoholic hydrochloric acid, giving a green solution): the presence of bile pigments in the faeces and blood should also be tested for. Seeing that the bilirubin retained in the bodies of jaundiced patients is to some extent excreted as urobilin in the urine, it is important—and particularly so in mild cases of jaundice—to look for an increase in the normally small urinary excretion of this substance, which when found may be taken as evidence of a partial biliary retention.

Dr. Brulé devotes most of his book to proving the frequency with which the retention of the various biliary constituents in jaundice and hepatic disorders is dissociated or partial and not total. In haemolytic jaundice, for example, the bile salts continue to reach the intestine in normal amount. In some cases of catarrhal jaundice the bile pigments have been found to return to the bile some days before the bile salts, in others the pigments and salts returned together. Pruritus and bradycardia are particularly likely to occur when there is retention of the bile salts; in these cases, too, there is failure to absorb fatty foods. In alcoholic and biliary cirrhosis there may be attacks in which jaundice is absent but the bile salts are retained—a state of affairs comparable to that seen in many observed cases of convalescence after catarrhal jaundice. Similar dissociated jaundice has been reproduced in experimental animals, using either picric acid or a specific hepatocytotoxic serum to establish the jaundice. It is clear, Dr. Brulé argues, that the lesion must lie in the secreting cells of the liver and not in the bile ducts in all cases of dissociated biliary retention, with or without jaundice; and he has interesting chapters that cast a new light on the various problems of hepatic disease. As he says, the proven frequency of cases of dissociated biliary retention makes it impossible to hold any of the various obstructive theories of the occurrence of jaundice, whether the obstruction to the passage of the bile be held to take place in the larger bile ducts, the smaller bile ducts, the capillary bile ducts between the trabeculae of the cells in the hepatic lobules, or

¹ *Recherches récentes sur les ictères.* Par Dr. M. Brulé. Paris: Masson et Cie. 1919. (Post 8vo, pp. 182. 4 fr. 50 + 10 per cent.).

finally in an inspissation of the bile itself. To meet the argument that there should be a diminution in the activity of the liver cells in hepatic diseases generally, and that acholia or lessened production of bile should be the rule, he marshals the experimental evidence upon which are based our views on the preponderating part taken by the liver cells in the production of the various constituents of the bile. He concludes that many tissues of the body can and do convert haemoglobin into bilirubin; and argues, though without being able to produce any clear experimental evidence in favour of his view, that bile salts may be manufactured in the alimentary tract or elsewhere and arrive preformed at the level of the liver cells, and not be formed there exclusively. Were this so the liver cells would normally act as filters for the pigments and salts of the bile, rather than as laboratories for their manufacture; and so the occurrence of dissociated biliary retention would find an easy explanation whenever hepatic inflammation occurred and the normal activities of the liver cells were upset.

In many cases of jaundice, described as haemolytic, it is the blood that is at fault, and not primarily the liver. Haemolytic jaundice occurs in tuberculosis, syphilis, malaria, and various bacterial infections of the blood, for example, and here the blood serum contains haemoglobin or its derivative bilirubin in excess. Dr. Brulé argues that jaundice described as haemolytic is often really hepatic in origin, and due to the effect of the infection on the individual liver cells. In his chapter on jaundice due to obstruction of the bile ducts he points out that here the two chief constituents of the bile make their appearance in the urine together, and that the onset or such intermissions of the icterus as may appear are sudden and complete, without the gradations seen in other varieties of jaundice. In conclusion, he holds it as now proven that injury to the secretory cells of the liver is the common cause of jaundice, and that jaundice by obstruction of the bile ducts may be regarded as relatively infrequent.

SCHOOL MYOPIA.

THE very term "school myopia" implies the acceptance of a theory, made in Germany, that there is a type of short-sight engendered, or at any rate increased in degree, by school work. Cohn was one of the first to formulate this hypothesis, and although founded on very flimsy evidence it received wide and almost unquestioned acceptance. This myopia theory has almost become glorified into a Law of Nature, and has even influenced policy, in that in London and elsewhere we have myope schools in which a modified education is provided for short-sighted children with the object of inhibiting increase in their myopia. If the theory really is a law then there is every justification for the provision of such schools, and for restricting study by myopes. If, however, it should turn out that Cohn and his supporters are wrong, then it is quite unjustifiable to spoil the future of short-sighted children by depriving them of a normal course of study, and myopia schools should be employed solely for the education of the bad-sighted, to educate those who cannot see well enough to take advantage of the normal school course. The short-sighted are generally studious and take pleasure in books; they make useful citizens and are successful in every work of life in which good distant sight is not essential. If all young myopes are forced into the myope schools their future career of usefulness will be restricted, and they will

not be able to compete in the "brain market" as they do at present with conspicuous success.

The Cohn theory depends upon the fact that in schools myopia increases in incidence and degree from the lower forms upwards; it is, however, equally true that the disability increases in children who never see a school, and in adults long past school age. It has never been shown that the increase is greater or more rapid in school children than in those who do not attend school. It is said that engravers, dressmakers, and others who use their eyes for close vision over long periods furnish more myopes than the rest of mankind, and that urban populations are more affected than rural. The former statement is probably true, for myopes take more kindly to near work than do hypermetropes, and choose it in preference to other occupations. Again, dressmakers work long hours under bad hygienic conditions, and any factor which lowers the general tissue-tone must act equally upon the sclerotic coat, and tend to increase the tendency to short-sight.

The idea that urban populations furnish a larger proportion of myopes than rural is open to question, and even if true is no proof that urban conditions cause myopia; the studious myope naturally gravitates to a town. But is it a fact? Statistics show that high myopia with changes in the fundus is more common and more severe in rural districts, and the reason is not obscure. There is evidence that myopia is apt to be strongly hereditary, and among rural people close intermarriage is often common, so much so that a very few surnames may suffice for a village. The same is even more true of mining villages, in which marriages outside the mining class would seem to be discouraged. But even in the case of myopia of low and moderate degree it is very doubtful whether the supposed superiority of the village can be substantiated. Ernest Thompson, ophthalmic surgeon to the County of Lanark Education Authority, has just published an illuminating article upon the incidence of myopia in Lanarkshire.¹ The figures he gives are as follows: Urban districts 17 per cent., rural districts 20.5 per cent., mining, agricultural, manufacturing districts 26 per cent. We suggest that the reason why the mining and rural districts head the averages is the existence of hereditary defect fostered by intermarriage.

It cannot be said that there is any theory which explains the onset and increase of myopia. The facts are that myopia is due to stretching of the sclera with consequent elongation of the optical axis of the eye. The disease is often though not always hereditary, and there is a strong racial predisposition. It is very common in Germany and among the Jews, comparatively rare in the British Isles. It is found in most races—even among the Bedouin Arabs, who never read or go to school. High myopia occurs in young children below the school age, and it often affects one eye only. The last two facts seem to exclude the possibility that the cause is to be found in close work. Nor are any of the many theories which have been propounded to explain how near work stretches the sclera capable of scientific proof. It has been said that muscular action raises the intraocular tension and stretches the sclera. Unfortunately for this theory, in conditions of raised intraocular tension we do not get myopia, but cupping of the optic disc and buphthalmos. The hypothetical rise of tension during accommodation has never been determined by methods which cannot be destructively criticized. We believe that myopia is neither originated nor increased by near work.

¹ *British Journal of Ophthalmology*, July, 1919.

MALARIA IN ENGLAND.

VARIOUS reports and papers on malaria contracted in England in 1918 have been brought together for publication by the late Local Government Board,¹ in continuation of similar reports dealing with 1917, which appeared a year ago. Dr. G. S. Buchanan again gives a general review based mainly on the work done during the year by Lieut.-Colonel S. P. James, Adviser on Malaria to the department. One result of the inquiries made during 1918 was to bring to light more cases of malaria of indigenous origin than were reported last year. The total number of locally contracted cases notified or discovered since September, 1917, was 330, of which 38 were in the navy, 224 in the army, and 68 in the civil population. It is believed that 231 cases were contracted in 1917, and only 99 in 1918, but the latter figure will probably be increased by the detection of patients this year who contracted infection last autumn, but in whom the symptoms of the disease have not yet shown themselves. But, since there are no records for the first eight or nine months of 1917 of the seasonal incidence and prevalence of anopheline mosquitos and of other factors governing the incidence of malaria, a reply cannot be given to the question why the incidence of locally contracted cases in 1918 was so much lower than in the previous year. There are grounds, however, for thinking that although the strictly preventive measures undertaken in 1918 were only partially successful, the measures of control effectively stopped any epidemic spread of the disease. All the locally contracted cases so far reported in this country have been infections with the benign tertian parasite. Clinically the great majority of the English cases showed typical signs and symptoms of "tertian ague," with paroxysms coming on at or about the same time every other day. No death occurred. In all the cases infected in this country relapses have been less frequent and less severe than is usual in malaria contracted in the tropics. While cases of indigenous origin occurred in a number of widely separated places, only in Kent was there a considerable spread of the disease. In the army almost all the locally contracted cases were attributable to the presence near at hand of relapsing cases of malaria among soldiers returned from Eastern war areas. On the civil side also the sources of infection were usually relapsing cases among returned malarious soldiers. Of the three English anophelines, *maculipennis* is believed to have been responsible for all the cases investigated. There is reason to think that this species is present in nearly every rural district, and in or near almost every town in England. Owing to the cessation of hostilities the total number of malaria carriers transferred to England in 1919 will doubtless be greater than in any year of the war. Although great pains are taken by the War Office and other departments concerned to ensure that both before and after demobilization malarious soldiers get proper treatment, many are being demobilized who have recently had malarial parasites in their blood, and are therefore still liable to relapses. Since these men, instead of being concentrated under military supervision in mosquito-proof huts in limited areas, are now scattered throughout the country, each in his own home, Dr. Buchanan has good ground for holding that constant watchfulness and, when necessary, prompt action are needed to prevent the occurrence of new cases. He concludes his review with a short account of the measures already taken to prevent indigenous infection. Surgeon Captain Bassett-Smith reports on naval cases and Sir Ronald Ross on military cases of malaria contracted in England, while Lieut.-Colonels S. P. James and E. Wilkinson give a summary of civilian cases, and the former discusses the risk of spread of infection in relation to demobilization.

Mr. A. J. Grove, M.Sc., supplies a note on the prevalence and habits of anophelines in England; and, lastly, there are extracts from the pamphlet "Suggestions for the care of malaria patients," drawn up for the use of medical practitioners by Sir Ronald Ross and Colonel James. This publication will be of special interest to those who attended the discussion on malaria at the Clinical Meeting of the British Medical Association last April.

EDUCATIONAL EXCHANGE WITHIN THE EMPIRE.

Of the many practical lessons that the war has taught there are few of more importance than those which relate to education itself. Just as we have learnt that scientific methods are essential to the application of brute force in battle, so must we recognize that they are no less necessary as a driving force in peace time. But scientific methods can only be acquired by education, and there is urgent need for adequate teaching in all branches of industry at the present time. Within the army itself this need is being met by the establishment of classes for instruction in all the subjects, other than military, which may be of use to the young men who will shortly be returning to civilian life. A conference on the whole subject of education within the empire was held in June last under the leadership of the Chief of the Imperial General Staff. The official report¹ contains a verbatim record of the opinions, suggestions, and criticisms offered by a large number of fully representative speakers drawn from all parts of the British Empire. Mutual co-operation in teaching and examining may be said to have been the dominant note, and this would imply the maintenance of a uniform standard. The question of the interchange of degrees between one university and another did not meet with such general approval. Representatives of the old residential universities naturally regard the fixed period of residence as an essential preliminary to the granting of a degree. Oxford and Cambridge insisted upon residence within the university on the part of students or graduates who may have studied elsewhere, but in other respects were willing to co-operate in a scheme of interchange. Medical education was discussed from the post-graduation point of view only. In times past the average medical graduate had been content to take his home degree and to study special lines of practice under the guidance of well recognized teachers, either at home or abroad. Hitherto he has found in the French, German, and Austrian schools more facilities for concentrated study than in this country. As our columns have recently shown, serious efforts are now being made to remedy this state of things, and to make the vast clinical resources of our great towns, and more especially the metropolis, available for graduate study. Co-operation with schools of medicine in other parts of the empire should bring the best teaching in every branch of professional work within the reach of advanced students and graduates without regard to the question of degree-giving, which is a matter for the universities to deal with.

TUBERCULOSIS IN THE COUNTIES.

The annual reports issued by county tuberculosis officers continue to show advances in available accommodation and a fairly satisfactory return of success in treatment. In both respects, however, the figures are very far behind the hoped for minimum. In Hertfordshire Dr. Hyslop Thomson records a wider appreciation of the benefits of early treatment. The provision of open-air shelters for home use has proved of considerable value, but the problem of the advanced case remains as far from solution as ever. The spread of the disease will not be checked until health authorities "have the power to remove advanced cases of

¹ New Series, No. 123. H.M. Stationery Office, 1919. Price 1s. 6d. net.

¹ Imperial Education Conference. Convened by the Chief of the Imperial General Staff, 1919. Price 6d. net. H.M. Stationery Office.

tuberculosis when the conditions and circumstances of the patient prevent the carrying out of precautionary measures in the home." In Northamptonshire an endeavour has been made to restrict admission to the sanatoriums to early cases, but much difficulty has been found in persuading incipient consumptives that the time devoted to early treatment will in the longrun prove to have been time saved. The work is undertaken by a branch of the National Association and a fixed charge is made for sanatorium treatment. The report contains a copy of the regulations in force for the guidance of intending patients, the greater number of whom have obtained admission through county council or insurance channels. The difficulty of refusing such cases is obvious, even though the prospect of improvement is but small. The tendency to regard sanatoriums as asylums for troublesome cases should be rigidly combated, but the provision of village centres and farm colonies may in time to come relieve the sanatoriums from encroachment upon their proper function of restoring working capacity to the incipient case.

INFLUENCE OF WORKING HOURS AND OF VENTILATION UPON OUTPUT.

IN a report issued by the Industrial Fatigue Research Board,¹ Dr. H. M. Vernon reaches some interesting and important conclusions on the subject of output in the tinplate industry. The millmen engaged on this work not only have to perform extremely arduous physical labour, but they are exposed to fierce heat, and stream with perspiration soon after beginning. It would therefore be expected that shortening hours of labour might be followed by an improvement in output. Dr. Vernon found that on four hour shifts the hourly output was 11.5 per cent. greater than on eight hour shifts, and on six hour shifts 10 per cent. greater than on eight hour shifts. Hence in a six hour day a man would produce about 82½ per cent. of the quantity he could furnish in eight hours. As, however, the working week is shorter for six hour than for eight hour shifts, this comparison is somewhat too favourable to the six hour shift. Dr. Vernon also found that in ill-ventilated factories a much greater seasonal variation of output existed than in a well-ventilated mill, and he thinks that by the introduction of efficient ventilation the average hourly output in certain factories might well be increased by 12 per cent. or more. Consequently it is possible that in most factories the hourly output on six hour shifts might be made 20 per cent. better than that of the old eight hour systems. Even so, there would be a lessened output per man, but of course the utilization of the plant would be more perfect.

TOLSTOI'S PICTURES OF CONSUMPTION.

No reader of Tolstoi can fail to be struck by the degree to which his mind was clouded by the shadow of consumption. In youth he had seen the disease in his own family, and it seemed at one time as if he were doomed to share the fate of his two brothers. In 1852 he described himself as constitutionally delicate, though of strong frame. The climate of the Caucasus, where he then was, did not suit him. He had a troublesome cough, and was almost constantly confined to his room. In 1856, at Iasnaia-Poliana, he had a serious attack of bronchitis, from which he made an imperfect recovery, and the cough became chronic. In search of health he went to the Samara Government for a koumiss cure. In 1860 he was pronounced to be tuberculous, and a portrait taken at that time shows a typical consumptive very different from the rough-hewn moujik of later years. Although the progress of the disease was checked, it pursued him as a threatening spectre through the rest of his life. His portrayal of consumption makes us regret that clinical descriptions

drawn with such clearness of vision and such artistry of expression are so rare in literature. Shakespeare's picture of the signs of death from strangling in the Duke of Gloucester in the Second Part of *Henry VI*, the Lord Chief Justice's enumeration of the effects of alcohol as seen in Falstaff, Dame Quickly's account of the Fat Knight's death, and the poet's descriptions of various forms of madness, show an accuracy of observation of which there are few examples in medical books. In *Don Quixote* Cervantes has left a picture, limned with consummate art, of madness wrecking a noble mind. For many modern writers of fiction the problems of disease seem to have a morbid fascination. Zola's descriptions, made up of medleys of hastily gathered and ill understood facts, are coarse and ineffective. Even Conan Doyle, though a doctor of medicine, sometimes slips; while of most others we can only say *non ragioniam di lor*. Tolstoi had stood by the deathbed of his brothers Dimitri and Nicholas, and observed their agony with the sympathetic attention of one who believed that he would before long pass through the dark valley in his turn. He pictures the hair bedewed with sweat, the beautiful and serious eyes full of anxiety, and the skeleton-like hands, prominent shoulder-blades, ribs, and vertebrae. The illusion of speedy cure persisting to the last breath; the irritability with those ministering to him; the eager snatching at the slightest favourable symptom; the complaints, even when Death's dart is about to strike, that counsel had not been sought of some special oracle of medicine; the despairing prayers to ikons—have not all doctors witnessed the scene? Both brothers, though men full of the apostolic spirit and burning with love of their fellow men, had passed through a moral crisis, manifesting itself in a sudden lapse into the lowest debauchery. It is in *Anna Karenina* and *Three Deaths* that the most vivid pictures of consumption are given, while the *Private Journal* tells the story of Tolstoi's own life. The reader is made to see the disease in all its outward and visible aspects. The painfully realistic description of the death of Levine's brother in *Anna Karenina* was written under the impression left on Tolstoi by the death of his own brother Nicholas, which, as he says, disgusted him with goodness. In the real account he has softened the lines. Up to the very end, he says, Nicholas retained his strength of character and his power of will in spite of constant brandy drinking. He did everything to save those about him inconvenience. On the day of his death he dressed without help, and it was only nine hours before the end that he asked to be put to bed. He uttered no complaint, and expressed gratitude to every one. Leo Tolstoi himself went through a phase of moral eclipse similar to that which wrecked the lives of his brothers, but his stronger nature and loftier genius enabled him to emerge triumphantly into a brighter existence. Whatever may be thought of the practical value of his teaching he was a sower of ideas such as the world has seldom seen.

GLUT OF MEDICAL MEN IN GERMANY.

IN an editorial notice in *Aerztliche Mitteilungen* retired officers and other prospective students of medicine are warned of the state of congestion in the medical profession. This warning comes as a reply to the rumour that, since the November revolution, many young officers intend to leave the services and to study medicine in the belief that medical men can at any rate earn their daily bread. It is pointed out that even before the war there was a glut of doctors in Germany, and that the war has made matters rather worse than better. For during the war the medical profession was reduced by at most 3,100, whereas it was increased by about 6,500 newcomers, whose qualification as medical practitioners was hastened on account of the war. Further, the ranks of the private practitioners have

¹ *The Influence of Hours of Work and of Ventilation on Output in Tinplate Manufacture*. By M. H. Vernon, M.D. (Report No. 1, Industrial Fatigue Research Board). Stationery Office. 1919. Price 6d.

recently been recruited by many medical officers who have left the navy and army. Again, many German medical men have withdrawn from the occupied districts east and west and have settled in the interior. If this editorial statement be correct, and Germany lost about 3,100 medical men in the course of the war, it must have lost, roughly, 10 per cent. of its doctors; for in 1918 they numbered between 32,000 and 33,000.

THE HUNTERIAN SOCIETY.

THIS year marks the centenary of an old City medical society, the Hunterian Society. In common with most professional and scientific bodies its meetings were somewhat curtailed during the war, but the society now hopes to renew its full activity. The ordinary meetings will be held on the second and fourth Wednesdays of the month, from October to April, at 9 p.m., at the School of Oriental Languages (formerly the London Institution) in Finsbury Circus. An attractive programme has been arranged, beginning with an address by Professor Arthur Keith, F.R.S., to be delivered on October 8th in the Hall of the Society of Apothecaries. The centenary dinner will be held on October 22nd, when Sir Norman Moore, President of the Royal College of Physicians of London, will propose the health of the society. In January Dr. Leonard Hill will lecture on Hunter's influence on physiology, and in the following month Sir William Osler will deliver the Hunterian Oration. The President of the society is Dr. W. Langdon Brown, and Dr. F. Howard Humphris and Dr. R. L. Mackenzie Wallis are the Honorary Secretaries.

DISEASES OF THE AMAZON VALLEY.

IN 1916 Dr. A. H. Rice led an expedition to study the physical geography of the region about the Casiquiare Canal, a natural waterway between the Rio Negro and the Orinoco River, and the medical report¹ was drawn up by Professor W. T. Councilman and Dr. R. A. Lambert, from the School of Tropical Medicine, Harvard University. This solitary region is the most unchanged and unchanging part of the world, and has an unenviable reputation for its insect pests and its endemic diseases. The ants, though they do not convey any diseases, are the most ubiquitous; one, the *tucandera* or *conga*, is gigantic, an inch or more in length; its sting causes great pain and prostration, and multiple bites have proved fatal. There is, however, the compensation that the ants remove all faeces in a few hours, so that, in spite of the absence of privies in the villages, there is little evidence of soil pollution, and enteric fever is rare. Very troublesome are two biting flies—the *pium* and even more so the *micuims*, the latter being so small as to be only just visible to the naked eye. Chronic malaria is extremely prevalent in the Amazon valley, both in the cities and in the sparsely settled districts along the rivers. The Indians in the towns and villages on the river suffer from much the same diseases as the white population, but very little is known of the remote forest Indians. Dr. Rice found the Uaupes Indians curiously free from the most dreaded diseases of civilization, such as cancer, syphilis, tuberculosis, rheumatism, and appendicitis, but subject to malaria, eye diseases, influenza, and intestinal parasites. Ulcers were extremely common in whites in the hospitals of Pará, Manaus, and Iquitos; these ulcers have been thought to be due to leishmaniasis and to insect bites. Finally, the question whether or not the country is a possible or desirable place for the white man to live in is discussed, and it is clear that, as there is no population to furnish labour, there can be no possibility of the development of such a civilization as in India. The land is fascinating, but there is a great need for accurate informa-

tion on all points, and the country must be developed by a people willing to work and evolve slowly a civilization suitable to the environment.

THE NÉLATON PROBE.

IN a recent paper Warren recalls the origin of the Nélaton probe.¹ It was made at Nélaton's direction to detect a leaden rifle ball which he felt sure was lodged in the internal malleolus of Garibaldi. There had been a considerable difference of opinion as to whether the missile was retained or not. Partridge of Dublin, who was summoned, thought not; but a month later, in consultation with Pirogov and Nélaton, he changed his opinion. To make certain Nélaton had a probe constructed with a porcelain tip, and when this was introduced into the wound (by proxy) the lead marks on the tip were plainly visible. This was regarded at the time as a great triumph for French over British surgery. The ball was extracted, but the wound took many months to heal. Warren publishes an interesting photograph of Nélaton, a man of handsome features and distinguished bearing, standing at the bedside and holding the hand of Garibaldi.

TYPHUS IN POLAND.

WE have already announced that an Inter-Allied Medical Commission, consisting of Colonel H. S. Cumming, United States, chairman; Dr. G. S. Buchanan, Great Britain; Dr. Aldo Castellani, Italy; and Dr. Visbecq, France, were sent by the League of Red Cross Societies, at the request of the Polish Government, to investigate the typhus situation in Poland. The mission has now returned to Paris. According to a Reuter's message the epidemic has been very widespread and the number of deaths enormous. Fresh cases are constantly being introduced from the East by refugees, prisoners of war, and the repatriated. The Polish Minister of Public Health and the Army Medical Service are carrying on an active campaign against typhus. Personnel and supplies are insufficient, and the hospitals are lamentably deficient in sheets, blankets, drugs, and essential equipment. Not only typhus but relapsing fever, typhoid, and dysentery are prevalent, and the Commission fears that very severe epidemics will occur in the coming winter unless the most energetic measures are taken to deal with existing conditions in Poland, and to prevent the spread of typhus and other epidemics to Western Europe and America.

The seventh annual conference of the National Association for the Prevention of Tuberculosis will be held at the Central Hall, Westminster, on October 16th, 17th, and 18th. The subject for discussion by the conference will be the completion of tuberculosis schemes throughout the country in relation to (1) the Ministry of Health; (2) local authorities and insurance committees; (3) pensions boards and committees; (4) general practitioners; (5) Red Cross and other voluntary activities; (6) training of doctors and nurses. The opening address on October 16th will be given by Dr. Addison, Minister of Health, with Lord Glenconner in the chair.

¹ *Med. and Surg. Journ.*, 181, 1919, p. 235.

THE Home Secretary is about to appoint a whole-time vivisection inspector under the Cruelty to Animals Act, 1875. The appointment will be for a term of four years in the first instance, at a salary of £800 a year, together with war bonus on the Civil Service scale and travelling allowances at the usual rate. Candidates who possess the necessary scientific qualifications for the work should apply to the Private Secretary, Home Office, London, from whom further particulars may be obtained. Applications should be accompanied by one or two testimonials and particulars of the candidate's qualifications, and should reach the Home Office not later than October 10th.

¹ Medical Report of the Rice Expedition to Brazil. By W. T. Councilman, M.D., and R. A. Lambert, M.D. Cambridge, Mass.: Harvard University Press. (Med. 8vo, pp. 126; 35 figures. 5s. 6d. net.)

Ireland.

THE PUBLIC HEALTH COUNCIL.

THE Chief Secretary, as Minister of Health for Ireland, has nominated the following to be members of the Irish Public Health Council:

Dr. E. Coey Bigger, Medical Commissioner, Local Government Board, Chairman; Sir John W. Moore, President Royal Academy of Medicine of Ireland, Chairman of the Public Health Committee of the General Medical Council; Dr. R. J. Rowlette, nominated by the Irish Medical Committee; Dr. Alice Barry, Medical Superintendent Child Welfare Work Branch, Women's National Health Association, nominated by the Irish Medical Committee; the Countess of Kenmare, Chairman of the Advisory Council for Ireland of the Queen Victoria Jubilee Institute; Mrs. J. McMordie, member of the Tuberculosis Committee of the Belfast Corporation, member of the Belfast Insurance Committee; Sir James M. Gallagher, J.P., ex-Lord Mayor of Dublin, ex-Chairman of the Dublin Joint Hospital Board, member of the Dublin Tuberculosis and Insurance Committees; Mr. J. Ewing Johnston, M.B.E., President North of Ireland Veterinary Medical Association; Rev. P. Kerlin, C.C., Bellarina, Derry, nominated by the National Association of Insurance Committees (Ireland); Mr. John Drennan, representative of the Approved Insurance Societies.

In addition to the above nominated members the following persons are *ex officio* members of the Council:

The Vice-President and two other Commissioners of the Local Government Board, the Chairman and two other Irish Insurance Commissioners, the Registrar-General of Births, Deaths, and Marriages in Ireland. Major Geo. A. Harris, D.S.O., O.B.E., of the Local Government Board, has been appointed Secretary to the Council.

The offices of the Council will be at 33, St. Stephen's Green, North Dublin, but any communications before October 1st, 1919, should be addressed to the Secretary, Irish Public Health Council, Master of the Horse's House, Dublin Castle. The first meeting of the Council will be held on Thursday, October 2nd.

DYSENTERY OUTBREAK IN DUBLIN.

The City Medical Officer of Health for Dublin, in a recent communication to the press, states that the outbreak of dysentery is being successfully combated. A considerable decrease took place in the number of cases treated last week as compared with the two previous weeks. There are, however, a number of suspected, but undiagnosed, cases. Medical opinion inclines to the belief that the present outbreak in the city originated with some demobilized soldiers. In the early stages of the outbreak it gained considerable headway owing to the fact that its similarity to other diseases which usually occur at this period of the year left the people with a false sense of security. This disease is difficult to combat in cities like Dublin, where so many tenement houses exist. A few isolated cases have occurred through the city, but the virulence of the disease has so far practically centred in one area. The Medical Officer of Health draws attention to the danger of flies as carriers, and urges shopkeepers to take due precaution against the fly pest. He advises that as successful treatment depends largely on immediate attention being paid to early symptoms, cases should be reported to the medical authorities at once.

Scotland.

THE LATE PROFESSOR TRAIL.

THE death took place at Aberdeen, on September 18th, of Professor J. W. H. Trail, who had held the chair of botany in the University of Aberdeen for forty-two years. Professor Trail was born in 1851. He graduated M.A. with highest honours in natural sciences in 1870, and took the M.B. and C.M. degrees with highest honours in 1876, proceeding M.D. in 1879. After travelling in North Brazil as naturalist to an exploring expedition, he was appointed, at the early age of 26, to the regius professorship of botany at Aberdeen. He wrote much on botanical and

zoological subjects in scientific journals, and was a Fellow of the Royal Society and of the Linnean Society.

GLASGOW DINNER TO OVERSEAS MEDICAL OFFICERS.

We are glad to learn that the Divisions of the British Medical Association in the Glasgow area are full of energy at the present time, and that many new members have been added to the Association. A dinner has been arranged for November 4th, in the Grosvenor Restaurant, at which Sir Donald MacAlister, K.C.B., M.D., Principal of the University, has promised to preside. The guests of the evening will be the medical men (some 200 in number) who before the beginning of hostilities in 1914 were in practice in the Glasgow area and have served overseas. A representative committee has been formed from the Divisions of the Association in the Glasgow area, including the presidents and secretaries, so that the success of the venture is already assured. The active spirit of the project is, we believe, Dr. Kennedy Glen, honorary secretary of the Glasgow and West of Scotland Branch. During the war twelve of the Glasgow practitioners died on active service, and whatever funds are in hand after the dinner will be reserved for the purpose of erecting a suitable memorial to them.

APPOINTMENTS.

It is announced from Geneva that Dr. Leonard Findlay, physician to the Royal Hospital for Sick Children, Glasgow, has been appointed director of the Department for Child Welfare of the League of Red Cross Societies.

The Joint Selection Committee representing the Edinburgh Town Council and the managers of the Edinburgh Royal Infirmary have recommended Captain David Lees, D.S.O., M.D., F.R.C.S. Edin., for the post of clinical medical officer for Edinburgh under the venereal diseases scheme. Captain Lees is at present specialist in venereal diseases to the Derby County Council. There were thirteen applicants for the post at Edinburgh, which carries with it a salary of £750 a year.

Correspondence.

MUSIC THERAPY.

SIR,—I have read with interest the editorial in the BRITISH MEDICAL JOURNAL of September 20th on the philosophy of music. You refer to the fact that a "guild came to grief, and, as far as we know, nothing has since been done . . . to organize research on music as a healing agent." You then refer to the fact that in Columbia University, New York, courses of music therapy have recently been established in which the indications for specific instruments in the treatment of shell-shock neuroses are studied. May I be allowed to say that two years ago I started singing as a health restorative to the nervous system of soldiers convalescent from war neuroses, and through the energy and interest taken by the Countess Dowager of Carnarvon, "vocal therapy" for restoration of health through speech and song and correct breathing has received the widest support, and has already accomplished much. I should be obliged if you would allow me to bring this before the profession. The Vocal Therapy Fund is well deserving of support, and full particulars of the work and its aims can be obtained by application to the secretary, 32, Charles Street, Mayfair, W.1.—I am, etc.,

London, W., Sept. 19th.

FRED. W. MOTT.

* * Sir Frederick Mott encloses a leaflet setting out the aims of the Vocal Therapy Fund. The chairman is Sir Bryan Donkin, and medical members of the committee include Lieut.-Colonel Martin Flack, Dr. Dundas Grant, Sir F. W. Mott, Dr. C. S. Myers, and Dr. Jane Walker.

"THE CULT OF INDIVIDUALISM."

SIR,—Dr. Fothergill's letter in the JOURNAL of September 13th raises the all-important question for our profession as to whether we are to be recognized by Government departments as a united body who know what we want and mean to get it, or, on the other hand, a miscellaneous collection of unions or bodies each of which is bidding for the confidence and support of the members of

our profession, and each of which, if recognized by Government, may speak in a different voice regarding our aims and legitimate demands.

I am not contending that our British Medical Association constitution and methods are perfection and leave nothing to be desired; but at least we have in it a democratic body whose policy and condition of affairs can be directed by representatives, in the choosing of which each member can have a voice, and any sound idea for progress or reform emanating from any member can, with the consent of his immediate *confrères*, be sent forward to the Representative Meeting or Panel Conference. In fact, in the latter case the individual need not be a member, his only qualification being that of a panel practitioner; and here we come to the real crux of the matter, which is apathy.

It is easy to say, "Oh, the British Medical Association can't do anything for us; the men who really know what a general practitioner wants don't get elected to represent us, and if they do they don't get a chance, and the executive is too weak-kneed; they kowtow too much to Government," etc. But these very men will not realize that the remedy of electing the right man and galvanizing him into getting the chance is their own job, which in nineteen cases out of twenty they will not bother to exercise. A far better test of the British Medical Association in my opinion is to be sought from the lay public; and from acquaintanceship with Labour representatives on various public bodies I learn that we are looked upon as the strongest trade union in the world, and that they only wish that they had the power and cohesion we have. This opinion has been gained not once but many times in a part of the country well known as a strong and powerful trade union centre, and it is, I am convinced, the usual attitude with which we are regarded—surely an incentive to us to redouble our efforts to make our premier organizing body as powerful in numbers and enthusiasm as we are deemed to be.—I am, etc.,

J. ORTON,

Chairman, Warwick and Coventry
Panel Committee.

Coventry, Sept. 13th.

SIR,—The interesting letter of Dr. E. R. Fothergill might equally well have appeared under the title of "The Cult of Socialism," which illustrates the absurdity of the vulgar error that socialism and individualism form an antithesis to each other. There are many thousands of unconscious socialists at the present time, and many thousand conscious socialists who are well aware that they are strong individualists.

I am one of many who have welcomed the advent of the Federation of Medical and Allied Societies, because I think it may remove the scales from the eyes of many who think they differ when in reality they are in substantial agreement on the majority of points. A great deal of discord is produced by lack of knowledge, and unity can only be approached by free and friendly discussion to find out where we agree and where we still differ, for the position has altered much in the last few years, and is now rapidly changing.

As an example, current views regarding that section of medico-political thought with which I am connected may be cited; it has been accused of attempting to thrust a State medical service of bureaucratic type upon an uninformed nation and unwilling medical profession. It may relieve some to know that nothing is farther from our wishes; the majority of us hate such bureaucracy as holds sway at the present day as much as do those who declaim against it. Our object is to educate both public and profession as to the need for a complete and effective service, both preventive and curative, governed democratically in the interest of the nation by the laity and profession combined.

During the past seven years we have seen many of our original tenets pass into the law of the land, and others will undisputedly follow under the new Ministry of Health; it is no part of our programme to hasten unduly this natural sociological evolution, but rather to guide it aright so that it may be built upon stable, enduring lines. There are probably only two tenets in which we differ from the majority of the profession—first, that there should be no income limit imposed against recipients of benefits, and, secondly, that the personnel of the new service should be paid by salary.

On the other hand, there are a score of advances upon which the great majority of the profession and thinking public alike are united as desiderata of the future; why cannot we, then, under the auspices of the British Medical Association, unite in guiding the future of these new advances? If this could only be done it would give the profession a position and a prestige such as it never has possessed in the past.

The medical profession has never authoritatively guided the nation in matters of health administration, and this is what is wanted above all things at the present moment.

As examples of such matters I simply recount the following heads upon which the nation requires such united advice as the profession can give it, and upon which I am convinced there is less discord amongst us than most of those think who have not studied the subject deeply:

1. A public health service on national lines for the prevention of disease.
2. A service for the treatment of disease, to include not only manual workers but all the women and children.
3. A research service richly endowed, equipped, and manned to study causation, prevention, and cure of disease.
4. An increase and reorganization of hospitals, sanatoriums, and convalescent homes so that serious and infectious cases may all be properly isolated and adequately treated.

Most of the detailed objects at present lacking will be found capable of inclusion under one or other of these headings. Not one of the four is there at present which does not present obvious deficiencies or defects that can be remedied and cry out for attention.

The nation cannot be made healthy by Acts of Parliament or Orders in Council; its salvation lies in evolving such an organization that medical knowledge now available, or to come in the future, can be applied to remedy evils which we all recognize. If the medical profession will only awake to its duties and lead the nation onward, it need have little fear as to those material considerations which at present bear so hardly upon many of us because of the stress of the times.—I am, etc.,

BENJAMIN MOORE,

President, State Medical Service
Association.

London, N.W., Sept. 21st.

SIR,—Might I reply as follows to the two points in Dr. P. Macdonald's letter, a copy of which he kindly sent me in advance?

Individualism is not confined to units; it is also possible in groups, in families, in tribes, and in nations. Is it not another name for selfishness? I would like to draw his attention and that of your readers to the recent speech of Mr. G. N. Barnes, M.P., at Walworth, made subsequent to my previous letter to you; it is worthy of careful perusal and consideration by all members of our profession. Might I quote one paragraph from it?

Amid much that was discouraging there was now visible a new and more menacing danger in their midst. They were becoming accustomed to a struggle of organizations, which was worse than that of individuals, because the antisocial result would be more far-reaching and terrible. This was an age of organization, and if organizations were rightly used they would tend to equalize the chances of life. Organization was in itself a good thing, but it must be controlled by those who would consciously work for the common good. If organization were lopsided and governed only by materialistic and sectional considerations, then rival organizations could get a stranglehold on the community and every one would suffer, including the members of such organizations. That was the danger with which society was now confronted.

Dr. Macdonald's second point is that if a new medical organization should arise based on a new principle, then one should hesitate to condemn it. That would depend on the principle; and whilst one must recognize the good intentions and own to great sympathy with those who advocate trade union principles for the medical profession, one is bound to point out that the weak link in the interpretation of the principle is not the State (locally or centrally) when pressure has to be applied, but rather some few or more of the disloyal members of the medical profession itself who would at the last push be in a position—owing to the present economic conditions of medical practice—to flip their fingers at any attempt made to dictate to them how and in what manner they should conduct their professional activities, and who could count, unfortunately, on public sympathy in so doing. If that is so, then is not one justified in trying to dissuade groups of medical practitioners from relying on the application of a

principle to improve their position which can only result in disaster?

The honorary officers of the British Federation of Medical and Allied Societies—as was expected and anticipated in my letter in your issue of September 13th—use the well worn heresy that they cannot be considered a rival to the British Medical Association, and that they are not amongst those who condemn either the machine of the Association or those who control it. That being so, it would seem to be the time to ask those officers certain questions, the replies to which, in plain and unmistakable language, seem to be due to the Association and to the members of the numerous societies stated in their circular of July 30th, 1919, to approve of their federation.

Accepting the objects of the federation to be those outlined in that circular, and briefly referred to in their letter in your last issue, will they state—

(a) Which of these objects do they consider that the British Medical Association cannot carry into effect, and why?

(b) What is the power which they consider to be necessary in order to attain these objects; how do they propose to obtain that power; and when obtained, how do they propose to use it?

(c) Has not the Association that power at present? If not, can it not obtain that power; and, if not, why not?

These questions one would venture to put also to the officers of the many societies stated to have joined this federation, and in addition ask whether they consulted their constituents before joining the federation?

Whilst awaiting these replies it will be sufficient to add that, judging from many letters received, several of these societies' officers seem to be in the greatest confusion with regard to their position; others are already alarmed at the activities of the federation; whilst others frankly condemn the same as folly, and the body as a conglomerate and heterogeneous formation.

This letter being already too long, I must reply direct to numerous letters so far received.—I am, etc.,

Hove, Sept. 22nd.

E. ROWLAND FOTHERGILL.

THE TEACHING OF MIDWIFERY.

SIR,—I am not surprised that the report of the Committee on the Teaching of Gynaecology has called forth a letter from Dr. Stark. Long ago I drew attention to the same subject in the *BRITISH MEDICAL JOURNAL*, and to the absurd waste of clinical material at all the large hospitals. During forty years' experience I have found that 50 per cent. of women in labour require chloroform and assistance, either by the forceps or other means. Nevertheless, students are condemned, whilst attending their 20 cases, to sit still and render no assistance to the poor woman, nor call for assistance, unless there is some very grave complication, or unless the woman is thoroughly exhausted by a day or two of pain.

In my opinion, at every large hospital there should be at least four young qualified men in residence, to go in couples wherever the maternity assistant reports an abnormal case, or undue delay when the os is dilated or dilatable. One of these men could give chloroform and the other deliver the child in difficult cases, and let the maternity assistant put on the forceps and deliver in simple cases. In this way each student would see at least ten cases of forceps delivery or turning, and would not be sent out, as he is at present, to start practice with less practical instruction than a midwife.

Of course cases beyond the skill of the two outdoor assistants could be sent by ambulance into hospital, to be dealt with there by the assistant obstetric physician. The skilful application of the forceps, under chloroform, in every case where there is the slightest delay, not only saves the woman great and unnecessary pain, but she makes a better recovery. If the placenta is expressed immediately after delivery, or removed by the hand if expression fails, and the uterus is made to contract by firm pressure, *post-partum* haemorrhage never occurs. Not only so, but there is no absurd waste of time, as there is when a practitioner waits on nature, or adopts some feeble expedient like twilight sleep. In any ordinary case of chloroform and forceps the skilful practitioner need not spend more than half an hour at the patient's house.

I do not for a moment suggest that this saving of time would be justifiable unless the results both as regards mother and child were better than if nature were unassisted; but my experience is that the rapid method

gives much better results; and this is confirmed by the reports of younger men whom I have taught.—I am, etc.,
North Shields, Sept. 20th.

F. C. MEARS.

THE PREPARATION OF SODIUM MORRHUATE.

SIR,—In my paper on sodium morrhuate in tuberculosis, published in your issue of February 8th, 1919, I stated that the full details of its preparation, together with the reports of those who had tried it, would be published in an early number of a quarterly Indian medical journal. As after the lapse of over six months the publishers of the journal in question informed me that they had not received the manuscript and the date of publication is still uncertain, I seek the hospitality of your columns to record the following details of the method of preparation of the drug for the information of a number of correspondents who have asked for it.

Preparation of Sodium Morrhuate.

100 grams of cod liver oil, 20 grams of NaOH (dissolved in the same volume of water), and 200 c.cm. of rectified spirit are boiled on the water bath under a reflux condenser for about four hours. The solution is then mixed with a little water and exactly neutralized with dilute H_2SO_4 .

Some of the alcohol is then recovered and the solution mixed with nearly 200 grams of fairly large-grained sand (washed with HCl and water) and the whole quickly evaporated to dryness on the water bath.

The dry residue is then extracted with sulphuric ether in Soxhlet's apparatus (using ice water in the condenser) and the fatty acids liberated by a slight excess of the calculated quantity of dilute H_2SO_4 (say, a diluted solution of nearly 18 c.cm. of strong H_2SO_4 of sp. gr. 1.82).

The fatty acids liberated are washed several times with water to free from H_2SO_4 and then neutralized (using phenolphthalein as indicator) with a solution of pure NaOH, using much rectified spirit and as little water as possible. The neutral solution is quickly evaporated to dryness on the water bath.

I may take this opportunity of mentioning that several favourable reports have reached me since my paper was published of the use of sodium morrhuate in not too advanced phthisis as well as in gland and bone cases, including abdominal tuberculosis and caries of the spine.—I am, etc.,

Calcutta, Aug. 28th.

LEONARD ROGERS.

EARLY MENTAL HOMES.

SIR,—I am in agreement with Dr. White's letter in your issue of September 20th, but should like to go further than she does and suggest that even the title "Mental Homes" will prevent people from availing themselves of treatment when suffering from really early symptoms of mental disorder.

The public has decided for itself to term all early stages of mental disorder "Nerves," and is willing—more than that, anxious—to avail itself of treatment at recognized hospitals for nervous diseases. But the slightest suspicion that such an institution is for "mental cases," or is in any way, no matter how remote, connected with the asylum system, will cause it to be shunned by the very people for whom it is intended.

This may seem much ado about one word, but we must remember that a word is more than a word—it is a symbol, and if we use a symbol which conjures up to the minds of our patients or their relatives the dread phantom of insanity we thereby erect a very effective barrier between patient and early treatment.

As Dr. White remarks, when detention is not involved legislation is not required. Now, in the vast bulk of early cases for which a few—alas! too few—voluntary institutions are endeavouring to make provision, detention is certainly not required. Why, then, risk the success of the new movement by allowing it to become associated in fact or by word with the lunacy authorities?

The "Mental Treatment Bill" was wisely rejected, for its special provisions were calculated to defeat the ends it was intended to promote. If we wish to secure to the public the admittedly enormous advantage of really early treatment we must do so in a form which is not only free from danger of abuse, but is attractive rather than repellent to those whom we seek to benefit.

As I have argued elsewhere,¹ the term "hospital for nervous disorders" appears entirely acceptable to the public, and I venture to suggest the desirability of its

¹ *Lancet*, August 9th, 1919.

general adoption by the institutions now springing up in order to provide really early treatment.

I am convinced that if these institutions are to prove the success we desire, it is of fundamental importance that they should be entirely dissociated, both in word and deed, from lunacy and asylum.—I am, etc.,

Birmingham, Sept. 22nd.

ALFRED CARVER.

STIFF KNEE IN COMPOUND FRACTURE OF FEMUR.

SIR,—Captain Beresford Alexander's article (September 13th, p. 339) has a peculiar interest to me, as it so graphically describes an important but common sequela following the injury—unfortunately so common during the war.

Naturally, at a military convalescent hospital one only sees the result of the treatment in vogue at countless hospitals, and though I agree in the main with Captain Alexander's deduction, I would make the following suggestions:

First, much of the resulting periarticular adhesions might have been avoided had there only been less mechanical fixing of the limb on the usual Thomas or straight splint. By this I mean it is extremely rare to find in these cases any which have been treated by simple extension made upon the lower fragment. It is extremely easy to dogmatize, but of this I am certain, that had extension been made on the lower fragment, more or less flexion of the knee could have been used, massage commenced at a very early period, and the greater part of these periarticular adhesions dealt with from the start, and the mischief to the muscles minimized, and later a Bristow's coil used.

Secondly, the anaesthetic. In my opinion gas, except in slight cases, is contraindicated; its influence is too brief. The tendency is for the surgeon to do too much or too little under gas. I learnt that whilst a student at University College, London, when, being a light-weight, and supposed to be conversant with the methods of getting the judge's eye, I rode a great deal for a very celebrated bonesetter, and so saw much of the treatment in his extensive and lucrative practice. I soon realized that, though gas was excellent in cases of slight adhesions, much harm often resulted from the violence demanded in the brief period of gas anaesthesia. I have therefore never tackled firm or extensive adhesions, except under chloroform or ether, when the patient is completely anaesthetized and one can do any manipulation at leisure and intelligently.

Thirdly, in the actual treatment of these cases I invariably find they have been solely treated by faradism or galvanism, often in a most feeble way, and no ionic course attempted. Now, had ions been used with massage at an early period, many of these periarticular adhesions would not have become the organized masses we generally have to tackle, and until these adhesions are more or less absorbed satisfactory results cannot accrue from Bristow's coils.

As the hospitals are closing down we naturally get more chronic cases. I never see one without wishing that early flexion of the knee-joint had been employed with ionization.—I am, etc.,

Ashton-in-Makerfield, Sept. 20th.

P. BROOME-GILES.

THE FEE FOR A POST MORTEM.

SIR,—I am very pleased to see Dr. Flack's letter on this subject in the JOURNAL of September 20th.

I note the possibility of a meeting between the Parliamentary Committee of the Association and the Committee of Medical Members of Parliament on the subject. It would not be an inopportune moment to discuss the anomaly of no fees being paid for inquests and *post-mortem* examinations held on those who die in hospitals and similar institutions.

Whether it is fair or not that fees should be withheld in the case of hospitals where the staff gain some advantages, either through teaching, the prominence of their position, or the special opportunities they have in the matter of clinical experience, I express no opinion; but I feel sure when the Act was passed it was not intended to apply to the honorary staff of cottage hospitals and such-like institutions as it does at the present moment.

A letter to this effect, sent by me some years ago to the Home Secretary, received the answer that special legislation would be required in the matter and the Government did not then see their way to such action.—I am, etc.,

September 22nd.

J.P.

SIR,—Although the legal fee for performing a *post mortem* and giving evidence at the inquest is £2 2s., it must not be forgotten that the coroner's officer takes 2s., and the *post mortem* clerk 5s., so that the medical officer is left with £1 15s. and not £2 2s.—a handsome sum for what is more often than not a three hours' job.—I am, etc.,

London, N.W., Sept. 20th.

E. CLIMSON GREENWOOD.

RURAL PRACTITIONERS' REMUNERATION.

SIR,—I note with some concern the names of the committee to deal with rural practitioners' remuneration (SUPPLEMENT, September 13th). I have read with much interest the letter of Dr. Williams-Freeman on the mileage fund, in the JOURNAL of September 20th.

I note with amazement that there is no practitioner to represent the remote parts of the kingdom—(1) the Yorkshire moors, (2) the Fen district, (3) the Western counties. I have not noted whether there is to be a special grant to those remote districts, as in 1912. If so, and this grant is left to the doctors concerned and the grant is adequate, I am satisfied. If this be not so, I am not satisfied to leave my interests in the hands of this committee.

Unless men have worked in these remote districts they can have no possible conception of our difficulties.

They should know (1) the surface of our roads, (2) the gradients, (3) the density of population, (4) the distances often to be walked from our cars, (5) the climatic conditions.

In Devon and Somerset I have about 800 insured patients; 500 of these are over three miles from me, 200 are over seven miles, and 100 are over ten miles. Some years ago I walked over eighty miles in a week to see patients through snow-drifts. Once I rode through a track cut for me 18 ft. deep. I protest this is out of all proportion to seeing patients in an urban or semi-urban district.

I have, Sir, been more than once taken to task for asserting that the interests of the urban and rural practitioners are not synonymous. Well, they are not, and never can be until our remuneration is equitably adjusted. Now is the time.—I am, etc.,

Dulverton, Somerset, Sept. 22nd.

GEORGE F. SYDENHAM.

TEMPERATURE OF RABBITS.

SIR,—In the JOURNAL of September 20th, p. 390, you record experiments by Professor Heymans on a rabbit's temperature. He says that a rectal temperature of 43° C. was fatal in a few minutes.

As chairman of the executive of the Rabbit Commission in Australia I made some observations on the rabbit's temperature, and on one occasion found a rectal temperature over 45° C., and the animal lived at least a day. I do not know how much longer, as I left the Tintanalogy Station the next day.—I am, etc.,

W. CAMAC WILKINSON, M.D., F.R.C.P.

London, W., Sept. 24th.

NEURASTHENIA AND ANXIETY NEUROSES.

SIR,—On reading Sir William Hale-White's views on neurasthenia and anxiety neurosis, delivered at the South Midland Branch of the British Medical Association, one cannot help feeling perturbed as to the future teaching of the post-graduate course in London if such views pertain. Sir W. Hale-White's utterances are so very contrary to all those who have had to do with functional nervous diseases during the past few years, that one is forced to conclude his experience has been very limited, and yet a very limited experience should be sufficient to enable any one to differentiate clearly between neurasthenia and anxiety neurosis. It is all the more unfortunate, for Sir W. Hale-White occupies a prominent position, and his remarks are apt to take on an acceptance which, put into practice, would be detrimental to the patient.—I am, etc.,

A. KINSEY-MORGAN, M.D., M.R.C.P.

Bournemouth, Sept. 16th.

NEW NAVAL RATES OF PAY.

SIR,—If your correspondent "M.O.," whose letter was published in the JOURNAL of August 30th, will refer to the "Statement showing the Recommendations of the Committees in regard to the pay, half pay, retired pay, and allowances of officers of the Royal Navy and Royal Marines, with the decisions of the Government thereon," he will see that he is quite mistaken in saying that the right of a medical officer to retire with a gratuity has been abolished. This document can be obtained from any bookseller for 3d., and on page 4 the Committee recommends, "Systems of allowing medical officers to withdraw with a gratuity to remain in force and present rates to be maintained." This recommendation has been approved by the Admiralty.

Further, it is not essential for a medical officer to remain until the age of 50. Optional retirement at 40 is to be allowed for all ranks at Admiralty discretion, and at 43 a surgeon commander is qualified for the maximum retirement of £600, provided he has completed twenty-one years' service.

"M.O." says, "At present the retiring pay of a surgeon commander is, roughly, £550 a year," but he does not add that he has either to be 55 years of age or have completed thirty years' service in order to obtain it. The new regulations do not state that all medical officers drawing specialist allowance will be employed in shore appointments, and it is quite likely that they will not be.

Had your correspondent drawn attention to the decision that "no change is to be made in the present rates" of pensions and gratuities to widows and allowances for children, he would have had more reasonable ground for complaint. It is pitiable to think of the widow of an officer of perhaps thirty years' service trying to exist at the present time on a pension of £80 a year with an allowance of from £14 to £16 for each child, and the latter only up to the age of 18 in the case of boys.—I am, etc.,

September 17th.

S. C. R.

The Services.

RETIREMENT OF I.M.S. OFFICERS.

A ROYAL WARRANT dated June 13th, 1919, has been published by direction of the Governor-General of India in Council, amending the rules regarding the age of retirement of officers of the Indian Medical Service. The preamble states that with a view to furthering the efficiency of the Service the ages have been altered at which I.M.S. officers holding administrative appointments shall be placed on the retired list, subject to the safeguarding of the rights of officers now holding these appointments.

The Director-General will be placed on the retired list at 60 instead of as heretofore at 62; colonels, brevet colonels, and general officers at 57 instead of 60; provided that in any special case where it would appear to the Governor-General of India in Council to be for the good of the service that a general officer holding an administrative appointment should be continued in employment, he may be so continued for not more than one year.

The age at which lieutenant-colonels and majors will be placed on the retired list remains unaltered at 55.

A lieutenant-colonel who entered the service before April 1st, 1911, and who has been specially selected for increased pay under Article 8 of the Royal Warrant for the Indian Medical Service dated May 28th, 1913, may, if he attains the age of 55 years before he becomes entitled to the pension for 30 years' service, be retained until completion of such service. The Warrant dated May 28th, 1913, for the promotion and precedence of the Indian Medical Service, will be amended accordingly.

Consequent on the issue of the above Royal Warrant, it has been decided, with the approval of the Secretary of State for India—

(i) That the tenure of administrative appointments in the Indian Medical Service shall be four years, but officers will be eligible for reappointment up to the age limit for retirement;

(ii) That the rates of pension admissible to officers of administrative rank in the Indian Medical Service, in addition to the pension for length of service, shall be as follows:

Per annum.

Major-General, after 3 years' active service as such ...	£350
Major-General, after 1½ years' active service as such ...	£300
Colonel, after 4 years' active service as such ...	£250
Colonel, after 2 years' active service as such ...	£125

Officers at present holding administrative appointments will be allowed the option of electing to service under the new rules.

HONOURS.

A LIST of medical officers mentioned for war services was printed in the JOURNAL of September 13th, p. 357. The permanent naval rank (Surgeon Commander R.N. ret.) of Temporary Major G. E. Macleod, R.A.M.C., was omitted in the official War Office *communiqué*.

FOREIGN DECORATIONS.

The following decorations have been conferred by the King of Rumania for distinguished services rendered during the course of the recent campaign:

Order of the Star of Rumania (Grand Cross).—Chevalier: Temporary Captain Francis Charles Robbs, M.C., R.A.M.C.

Order of the Crown of Rumania.—Grand Officer: Major-Generals Alfred Percy Blenkinsop, C.B., C.M.G.; John Thomson, C.B., C.M.G. Officer: Captain Arthur Cecil Heys McCullagh, D.S.O., R.A.M.C.(T.F.). Chevalier: Captains Herbert Leslie Garson, O.B.E., M.C., R.A.M.C.(S.R.), Frederick Jefferson, R.A.M.C.(S.R.). Temporary Captain John Norman Lonsdale Thoseby, R.A.M.C.

Universities and Colleges.

UNIVERSITY OF LONDON.

COURSES of advanced lectures on physiology will be given during the forthcoming session by Dr. da Fano on the histology of the nervous system, at King's College; by Dr. E. Mellanby, on nutrition, at King's College for Women; by Professor A. D. Waller, on the energy balance of the human body, and electrical signs of emotive phenomena, at the Imperial College of Science and Technology; by Dr. J. W. Trevan, on the reaction of the blood and acidosis, at St. Bartholomew's Hospital; and by Dr. Pembrey and Dr. Ryffel, on the regulation of respiration, at Guy's Hospital.

Obituary.

GUTHRIE RANKIN, M.D.GLAS., F.R.C.P.LOND. AND EDIN.,
Consulting Physician to the Dreadnought and Royal Waterloo Hospitals.

WE announced with much regret last week the death of Dr. Guthrie Rankin, which took place on September 14th at Helford, Cornwall. He was the son of David Rankin of Kilmarnock, Ayrshire, and was born there in 1854. After studying medicine at the University of Glasgow he obtained the qualifications of the Scottish Colleges, and the M.B.Glas. degree with commendation in 1880. Two years later he proceeded M.D., and obtained the membership of the Royal College of Physicians of Edinburgh, becoming Fellow in 1891. In 1896, after he had begun practice in London as a consulting physician, he obtained the membership of the Royal College of Physicians of London, and was elected Fellow in 1908.

Dr. Guthrie Rankin was for several years examiner in medicine at Glasgow University, lecturer on medicine in the London School of Clinical Medicine, physician to the Dreadnought Hospital, Greenwich, and physician to the Royal Waterloo Hospital for Children and Women. His connexion with the Seamen's Hospital Society began in 1899, and he took a prominent part in the establishment of the London School of Clinical Medicine in 1905. He resigned the post of visiting physician to the Dreadnought Hospital in 1917, and was elected consulting physician to the Seamen's Hospital Society. Dr. Rankin's early experience of general practice served him in good stead as a consulting physician. He well knew the importance of common disorders, and his straightforward clinical lectures and papers on such subjects as duodenal ulcer, glycosuria, fatigue dyspepsia, broken sleep, and the highly-strung nervous system, which appeared from time to time in our columns, proved helpful and interesting to a wide medical audience. He was a clear and effective writer, a sound clinician, and a wise and practical adviser.

Lieut.-General Sir WILLIAM BABTIE, K.C.M.G., V.C., writes:

To many men and women the passing of Dr. Guthrie Rankin at his Cornish home has brought that personal sense of bereavement which is confined, as a rule, to the loss of near relatives and dear friends. It is just that: he was a dear friend.

The great gifts of sympathy and understanding were his in heaped measure, sympathy based on a kind heart and understanding on a deep knowledge of men. He was in the estimate of many the ideal physician, for his experience

was founded on long years of general practice; he knew the human constitution from the cradle to the grave, a knowledge fortified by wide reading, close observation and responsibility for the care of health in youth, maturity, and age. A kindly Scot from the land of Burns—of whom he was a fervent admirer—Rankin began his professional life in Scotland, and it is related that when a humble patient there was told that his doctor was going to settle in England he said, "Weel, I'll go too," and go he did, living for the rest of his life in the near neighbourhood of his trusted physician and friend.

His country work—it was before the days of motors—was excessive and culminated in a serious breakdown in health and at the end of a long illness he settled in London, determined to abandon general practice, and devote himself to medicine. Without influence—he was a Scottish graduate unconnected with any of the great London schools—he fought his way to a complete success. He was not a specialist, but there were few of the special branches of medicine which he did not know sufficiently well to be able to appraise, from the point of view of the general condition of his patient, the expert opinions of those whose assistance he was always careful to seek.

The need and the scope for physicians with Rankin's discriminating experience and training is great, for the discerning patient of to-day is too wise to be solely dependent upon methods whereby the sick man is apt to be lost sight of in a fevered study of the special developments of a general condition. Rankin's teaching was catholic and classic in its simplicity, and readers of his professional writings will recall the pleasure and profit they derived from his lectures and papers written without desire to parade learning, and with the sole purpose of being helpful to ailing men and women. And now after years of ill health and latterly of deep sorrow Guthrie Rankin has gone, following at a short interval his beloved helpmate, whose death broke his heart.

A colleague sends us the following appreciation:

Hundreds to-day are mourning Dr. Guthrie Rankin's death. He was beloved by all who were privileged to know him intimately, and worshipped by his many patients. With his, at times, brusque manner, his sense of honour and uprightness, his horror of charlatanism, and his tenderness of heart, he combined all the elements of a great physician and a lovable personality. His house alone testified how dear his patients held him, for on all sides were proofs of their appreciation. His work was his hobby, and he always gave his best. His charm of character will always remain as a dear memory and a sacred trust to the many who now pay him homage and respect.

THE LATE PROFESSOR ALEXANDER MACALISTER.—Dr. Charles F. Harford writes: I should like to add a few personal reminiscences of the life and work of the late Professor Alexander Macalister to those which have already appeared in the JOURNAL, as I was one of the earliest of our old professor's pupils at Cambridge. We were conscious at the time—and this is a remarkable fact—that this man who had recently been brought to Cambridge was making history, so far as the Cambridge medical school was concerned. It is no disparagement to the eminent scientific teachers who preceded Macalister, or who were his colleagues, to look upon him as the genius of the modern medical school at the university. In particular it involves no slight to that master of men, Sir George Humphry, who as a teacher of surgery was inimitable. There could hardly have been two men more dissimilar in their gifts and methods. I remember one incident when Humphry, on his way to his surgical class, passed through a room where Macalister was demonstrating some of his pet anatomical anomalies. I suppose that Humphry, with the look of mischief in his penetrating eyes, must have lingered for a moment to hear what was going on. Macalister turned to his predecessor and said, "Have you ever seen this abnormality? It only occurs once in every 200,000 cases," or words to that effect. The only answer as Humphry ran from the room stopping his ears was "Dreadful man!"

When "Mac," as we used to call him, took up his work, the dissecting-room accommodation and the anatomical department in general was carried on in hopelessly inadequate surroundings, and it was not long before a corrugated iron building was erected as a temporary

dissecting room, precursor of the splendid buildings which he was able to bring into existence later on. I had the honour to serve under him as one of a group of assistant demonstrators whom he gathered round him, and to know him was to love and honour him. With remarkable humility he possessed all round abilities which are not often combined in the person of one man. Leaving aside his great position as a scientific anatomist, as Professor Barclay-Smith has said, he was an expert in quite other spheres. I was told that at one time he would sometimes as a hobby answer the questions of a theological tripos paper before breakfast.

One of my later recollections of him which shows his interest in the work of his old students was the arrangement of a lecture which I was to deliver in his anatomical theatre to a university audience on the preservation of health in the tropics. The professor was keenly interested in all forms of foreign missionary enterprise, and encouraged those of us who were going abroad as medical missionaries. One cannot be too thankful for one's association with the Cambridge Medical School of the eighties with its distinguished and helpful teachers, but Macalister stands out as the most progressive of all, whose organizing ability has been a valuable asset to the university which it was his delight to serve.

MIDSHIPMAN ARTHUR WILFRID EDGEcombe, R.N., elder son of Dr. W. Edgecombe of Harrogate, was killed in the mining of H.M.S. *Verulam*, in the Gulf of Finland, on September 4th, aged 19.

Medical News.

DR. J. A. CARR has been appointed to the Commission of the Peace for the West Riding of the county of York.

DR. J. A. NIXON, C.M.G., has now completed his military duties and has returned from active service to resume work at the Bristol Royal Infirmary.

THE annual dinner of past and present students of St. Mary's Hospital Medical School will be held at the Connaught Rooms on Wednesday, October 1st, at 7 o'clock, with Sir Almoth Wright, K.B.E., F.R.S., in the chair.

THE opening of the winter session at King's College Hospital Medical School will take place on Wednesday, October 1st, at 3 o'clock, when Viscount Hambleden will preside, and the Right Hon. T. J. Macnamara, LL.D., Parliamentary Secretary to the Admiralty, will deliver the introductory address. Academic dress will be worn.

SIR ROBERT ARMSTRONG-JONES, C.B.E., M.D., will deliver four lectures on physics at Gresham College, Basinghall Street, E.C., on October 14th, 15th, 16th, and 17th, at 6 o'clock. The subject of the lectures will be the evolution of military medicine and surgery from ancient times and the medical lesson derived from the great war.

THE opening of the eighty-fifth winter session at the Middlesex Hospital Medical School will take place on Wednesday, October 1st, at 3 p.m. Sir John Bland Sutton, LL.D., F.R.C.S., will deliver an introductory address, and the prizes will be distributed by Surgeon Rear Admiral Sir Robert Hill, K.C.M.G., Director-General Royal Naval Medical Service. The annual dinner of past and present students will be held at the Holborn Restaurant on the same evening, at 7 o'clock, with Colonel the Earl of Athlone in the chair.

IN November, 1918, it was proposed to establish a permanent war memorial at Guy's Hospital in order to commemorate, not only the sacrifice of the many Guy's men who gave their lives for their country, but also the devotion of all those who have rendered professional services to the empire, whether at home or abroad. A representative committee of governors, members of the staffs, and past and present students was formed to collect funds and to carry out the wishes of subscribers as to the character of the memorial. The fund will be closed on September 30th, and a general meeting of subscribers will be held in October.

THE British Orthopaedic Association will hold its annual meeting on Friday, November 14th, at the rooms of the Medical Society of London, 11, Chandos Street, W.1. The President's address will be given at 10 a.m., and at 10.30 a discussion on osteoplastic amputations will be opened by the President, and continued by Mr. T. H. Openshaw, Mr. S. Alwyn Smith, Sir J. Lynn-Thomas, and Mr. F. M. Fitzmaurice-Kelly. Mr. W. H. Trethowan will read a paper on injuries of the crucial ligaments; and in the afternoon a discussion on birth paralysis will be

opened by Mr. H. A. T. Fairbank and Mr. Harry Platt, and Mr. A. S. B. Bankart will read a paper on the operative treatment of spastic paralyses. The association dinner will be held at 7.30 p.m. On November 15th hospital demonstrations will be arranged by London members, and Mr. D. McCrae Aitken will arrange a visit to the Country Hospital for Cripples at Pinner.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitology, Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Mediscera, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

ASTHMA POWDERS.

"ANTISPASMODIC" inquires the probable reason of the failure of an asthma powder to burn. It was compounded after sending for the drugs from England to a far country, and is the conventional mixture of approximately equal parts of datura, lobelia, black tea, and potassium nitrate, all carefully dried and reduced to different finenesses of pulverization and thoroughly mixed. Various proportions, including those given in *Whittle's Dictionary of Treatment*, have been used. He would be glad, not merely of a fresh formula, but of one from someone who has compounded a mixture and made it burn.

SCHOOLBOYS' WEIGHT.

DR. RICHARD HAMILTON (Parkstone) writes: I should be obliged if any medical officer of a large school could authoritatively confirm or deny the truth of the following statement as it applies to (1) day scholars; and (2) boarders:—"It is the rule rather than the exception for a boy to lose in weight during a school term, owing to the call on his nervous and physical energy entailed by both work and play."

INCOME TAX.

"J. C. T." inquires as to the effect of taking over an additional practice, the terms being that he should make periodic payments to the amount of one-half the receipts from the first two years' working of the practice.

*. The proportion paid over to the executors of his predecessor represents a payment in instalments made by him for the purchase of the practice—that is, they are part of his income paid away as capital. If he had purchased the practice outright for, say, £1,000, that sum clearly would not have been an expense of carrying on the practice, and the essence of the transaction is not affected by the spreading out of the purchase payment over a period.

The cash basis is fair only where there is reason to assume that the old debts being paid in the year are substantially equivalent to the unpaid debts being put on the books for the same year. Our correspondent will not be liable to tax on old debts received after his connexion with the practice ceases, nor are his predecessor's executors now liable on the payments which are being made to them instead of coming into the practice.

When the cash basis is set up at the end of three years, the payments for debts now treated as receipts cannot be excluded. It is true, as "J. C. T." says, that he will in a sense pay tax twice on those debts; but that is assumed to be balanced by the debts on which he will not then pay because the amounts have not been received by him.

"CAR OWNER" inquires whether the refusal of the local surveyor to make an allowance for depreciation of car is legally justified.

*. Yes; the allowance for depreciation is limited under the Income Tax Act to the assessment of "the profits or gains of a trade." The only allowance due in the case of professional profits is cost of replacement of the car as and

when incurred. This is one of the matters which will be put forward by the British Medical Association in its memorandum to the Royal Commission on Income Tax.

LETTERS, NOTES, ETC.

THE NOTIFICATION FEE.

DR. E. F. O'FERRALL (London, S.W.) writes: The following transaction shows not only an ingenious method of reducing the notification fee to disappearing proportions, but also how the State may make a considerable percentage out of the business. Having notified a case of phthisis, I was informed by our esteemed M.O.H. that, having occurred in the Westminster area, he had transferred the notification to that district. So far so good. But now the farce commences. In due course I receive from the Westminster Council a cheque dated August 20th, 1919, measuring about 8 in. by 6 in., bearing the City arms, and of course two penny stamps, for the sum of 1s. This I pay into my bank on September 12th, but I am informed that payment has been refused as the cheque is "out of date." Whereupon, the potential expenditure in stamps having now amounted to about another 1s., or 100 per cent., I write to the representative of the borough council in question, begging him to refrain from sending me a similar querdon in future, but to bestow it preferably upon the crossing sweeper at the corner.

THE R.A.M.C. SPECIAL RESERVE.

"S. R. C." writes: The following points occur to me on reading through the article on the Special Reserve of Officers R.A.M.C. in the JOURNAL of September 20th: (1) The annual gratuity should not stop at age of 40, as is now the case. (2) The Special Reserve Officers should have a guarantee that in case of general mobilization of the medical profession their pay should be at least equal to that of men who receive temporary commissions. (3) The seniority of an officer should date from the time of receiving his commission, so that if mobilized after five years he would get a rise of 2s. 6d. a day, and again after ten years, as in the Regular R.A.M.C. under the new Royal Warrant. (4) A scheme is needed in respect of the teaching, training, and subsequent examination of officers for promotion to major. (5) Promotion above the rank of major, by selection alone, would open the field to favouritism. A good man may be in a country practice and out of touch with his superiors, during times of peace. (6) Neither branch would approve your correspondent's suggestion for transfer to the Territorial Force.

WAR HONOURS.

"T. E. W." writes: Having returned to enjoy the blessings of the land without the fruits of my labours, I have read "Permanent R.N.V.R.'s" letter (September 13th, p. 367) with much interest. Being myself one of this band of heroes, I feel that I would fain remind him of the old saying that "The greatest of all distinctions is to be without any." Surely our record is sufficient in itself. We were there, we were ready, and we went. The Service received us gladly, and I have on many occasions heard their views upon the treatment we received—in the intervals between requests for dental treatment, as our "ocean wave" stripe and uniform was identical with that of temporary surgeon-lieutenants (D.) R.N.V.R. The fact is that we did our bit and came through—most of us—with plenty of sea-time to our credit. Personally, as I sit amid the ruins of my practice, I am proud to have been there; and I would do it again, though I am not a man of private means. I may be poor, but, thank God, I am proud.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 35, 39, 40, 41, 42, 43, and 44 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 36, 37, 38, and 39.

THE following appointments of certifying factory surgeons are vacant: Almondsbury (Gloucester), Leven (Fife), Maldon (Essex).

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *postes restant* letters addressed either in initials or numbers.

A Clinical Lecture ON TWO CASES OF CHRONIC RENAL DISEASE:

A CONTRAST IN TREATMENT AND PROGNOSIS.

BY

SIR JAMES GALLOWAY, K.B.E., C.B.,
SENIOR PHYSICIAN TO CHARING CROSS HOSPITAL.

I wish to draw your attention to-day to two patients suffering from chronic renal disease whose progress we have been watching during the last two months of the summer session and of whom I have spoken to you on various occasions. These patients have shown very distinctly the features and development of two types of disease which differ so much from each other as to indicate clearly that they are due to distinct functional and structural defects. One of these (Case I) is a very characteristic example of disease in which uraemia or azotaemia associated with vascular degeneration gives rise to the impressive symptoms; the other (Case II) is a well marked case in which hydraemia and anasarca are the outstanding features. You will all of you remember the first case—sitting up in his bed propped up with pillows, his nervous, anxious, excitable appearance and conduct, and his frequent attacks of exhausting dyspnoea; and you will not fail to have noted the contrast presented by the other patient—his pallid face and body swollen to the bursting point, his calm and placid demeanour in spite of his exceedingly unhappy plight, possibly rendered more easy in his case on account of the reputed "child-like and bland" disposition of his race. The first of these two cases corresponds to the "interstitial" variety of chronic nephritis, in which, unhappily, our methods of treatment, with the exception of prophylaxis, are not yet very helpful, and the prospect of cure is not good—in the case of our patient his disease ended fatally after a most painful and distressing illness. The second case corresponds to the "parenchymatous" variety of the disease, in which treatment is much more helpful and the prospect is by no means so unfavourable—our patient is convalescent, and begs to be allowed to return to work, as he declares that he is quite fit now to carry out the duties required of him.

CASE I.

Charles C., aged 55 years, was admitted on June 2nd, 1919, on account of dyspnoea. He was a Londoner by birth, his forebears have lived in London for at least two or three generations, and seem to have been a good healthy stock. He was married; his wife and two grown-up sons who survive him are vigorous folk and in good health. There was no history nor any evidence of syphilis in his case nor any indication of gout; in fact, he seems to have enjoyed excellent health until the onset of the symptoms of his present illness. He had always been a good eater, and had taken a certain amount of beer and other alcoholic beverages, but declared very firmly that the amount consumed had always been "moderate." His occupation as an artisan—a worker in wood and metals—had brought him into contact with lead, but he said that he knew about lead poisoning, and that he never had the least symptom of it. Before the war he was in regular occupation, not too arduous in character, but in the early days of the war he obtained employment as a munition worker, and worked harder than had been his custom for a long time. About twelve months before he came to us he noted the early symptoms of his disease; these were failure of desire and power to work, headache, occasional giddiness, insomnia, and especially distressing and unaccustomed attacks of shortness of breath. He had to give up work in consequence, and after being treated at home for the greater part of the year, he came to us.

You will remember that he was a well-formed man of fair complexion, and that his naturally clear and ruddy colour was often dusky as the result of dyspnoea. He had a slight amount of oedema on admission, most evident about the ankles and dorsal surfaces of his feet, but also, though very slight, over the body, so that the stethoscope made a little mark on the chest. This oedema almost disappeared soon after admission, and did not recur to any extent till the later stages of his malady; it did not

become troublesome until the last few days of his life, when pulmonary oedema became the serious complication.

The cardio-vascular condition was of special import. The heart showed definite signs of enlargement, the apex beat being palpable about 5 in. to the left of the mid-sternal line. The second sound of the heart was accentuated, especially at the base and to the right of the sternum, and was modified by a rough, though not loud, diastolic murmur. The radial arteries did not give much evidence of degeneration by palpation, but the arterial tension was increased. The systolic blood pressure corresponded to 180 mm. of mercury soon after admission, subsiding to about 160 mm. in a few days; at about this point it remained during his illness. The retinal arteries were more defined than usual, and there were several small haemorrhages in both fundi, at least one of which occurred while he was in hospital. There was little or no evidence of oedema of the retinal tissues or of the optic discs.

The urine was reduced in amount, varying from 18 to 25 fluid ounces daily, with the specific gravity of from 1.018 to 1.025. The reaction tended to be alkaline, there was often a heavy deposit of phosphates, and a certain amount of oxalate of lime was seen from time to time. It contained albumin varying in amount from 0.25 to 1 part per 1,000 by Esbach's measurement and showed hyaline and fatty epithelial casts in small numbers, but no blood was noted as being present at any of the numerous examinations made. The amount of urea excreted in the urine was considerable—on one occasion shortly after admission the specimen contained as much as 4.2 per cent.—an important point to bear in mind in view of the discussion as to the value of the urea test as an indication of the degree of azotaemia, and of the power of the kidneys to extract nitrogenous material from the blood on the one hand, and of the nature and extent of the kidney lesion on the other.

The dyspnoea from which he suffered was peculiar in type and characteristic of his malady. It was clearly paroxysmal, although for hours at a time, even during the most trying period of his illness, he would be breathless, and would breathe more frequently and more deeply than is normal. When the paroxysmal attacks came on he said that he felt a tightness in the upper part of the chest, and would then begin to breathe more often and more deeply until the distress became very great, his eyes would appear staring, he would snatch at the upper part of his chest or neck, as if attempting to remove some obstruction, and he might make an effort to get out of bed or from his chair, and even to do violent injury to himself. In a short time, after perhaps twenty or thirty violent respirations, the breathing would become less violent gradually, and he might return to his normal state and be at peace, or another attack might follow rapidly, or he might relapse into a state of comparatively mild breathlessness. Between the paroxysms there was no period of apnoea, and in this respect the dyspnoea differed distinctly from Cheyne-Stokes respiration. There was no sign of difficulty in expiration or inspiration, as in cases of true "spasmodic" asthma. His own description of his feelings is worth noting. He said that when his trouble was coming on he felt a weight or tightness about the upper part of the chest and throat, there was no pain, and especially there was no feeling of pain radiating along the arms. Then came the necessity of panting and fuller breathing, and this would gradually work up to a point when he felt "as if everything is going to go," and then just after "he turned the corner." The excitement during an attack might be very great. He would shout, attempt to get out of bed, and on one occasion he attempted to reach the window during the night with the intention of trying to throw himself out. It may be imagined easily that he was a very difficult patient to control, that he alarmed the other patients in the ward, and that he tried the tact and skill of sister and the nurses to the utmost.

The treatment of this patient had to be arranged on almost purely symptomatic lines. Rest was obtained for him, so far as was possible, in bed, where he had to be propped up continuously, or on a chair; from time to time he had to be permitted to move about the ward. His great wish during the most severe part of his illness was to get near a window or on the balcony of the ward. The diet was chosen so as to be as easily digestible as possible. A fair amount of protein was given in the form of milk, fish, and occasionally a small portion of easily digestible meat,

but the total quantity of protein was considerably less in proportion to the total amount of food taken than in the case of the normal hospital diet. In addition he had various carbohydrate foods, fruit, and vegetables. He usually said that he had a good appetite and wished to take food, but, as may be guessed, he did not take a great quantity. He was encouraged to take as much water as he felt inclined to drink. Attempts were made to relieve his uraemic state by means of increasing the output of urine. With this intention saline diuretics were freely administered. Digitalis was used and given in as large doses as was thought to be safe, bearing in mind the condition of his vascular system and the increased blood pressure. Theobromine was used and pushed to the utmost. Aperient remedies were used as freely as was advisable.

During the first fortnight our patient made some improvement, shown by the fall of blood pressure, diminution of the dyspnoeic distress, and increase in his feeling of comfort. But during the next month the symptoms gradually became worse, and he passed through the most distressing period of his illness. While in this state various measures were made use of to relieve his distress. On two occasions venesection was performed in order to relieve attacks of uraemic dyspnoea, with no good result. The use of sedatives had then to be considered carefully. The administration of bromides had no effect. One of the valuable drugs in the treatment of such cases is chloral hydrate, and this was employed freely in the first instance, alone and also administered with brandy. A certain amount of relief was obtained in this way. But it was found soon that this remedy had not sufficient effect, and the more powerful and in many ways the most valuable drug in such cases—namely, morphine—had to be employed. The use of morphine in cases of uraemic distress, especially with dyspnoea, has long been recognized to be of great value; but the drug must be administered thoughtfully and with care. In my experience—although it must be admitted that the drug is a most valuable assistant in the treatment of the patient and a merciful means of securing rest—it is rare to find that the patient will recover if it has been found necessary to commence the use of this drug. It must be borne in mind, therefore, if the physician determines to administer morphine in such cases, that in all probability he marks a milestone in the down grade of his patient. It must be remembered also that a very small dose is usually sufficient to secure a good result; it is very satisfactory to observe the rapid relief of the most trying symptoms after the use of a small dose. In this case the dose of $\frac{1}{4}$ grain administered hypodermically was never exceeded, and usually $\frac{1}{8}$ grain was sufficient to obtain the desired relief. At first this remedy was given once in two or three days, but during the most trying period $\frac{1}{8}$ grain was given every evening for eight days in succession. About a fortnight before he died evidence of strain and commencing failure of the heart became noticeable by irregularity of the heart-beat and indications of enlargement of the cardiac area. Along with this there appeared definite increase in the amount of general oedema, and unfortunately the oedema showed a tendency to affect the lungs to a relatively great degree. In spite of these ominous symptoms, the patient did not appear to suffer nearly so much as in the previous stage of the disease. It is true that he lost his mental alertness to a considerable extent, but his distress was much less trying. But even to near the end of his life the paroxysmal attacks of dyspnoea tended to show themselves in the accustomed manner, although not nearly so severely, not so frequently, and for shorter periods. He died two months after admission to hospital owing to oedema of the lungs.

CASE II.

W. T. Y., aged 36 years, was admitted on June 11th, 1919, on account of dropsy. He is a Chinaman, having been born in a country place some forty miles from Shanghai, where his father earned his living as a shoemaker. He says that his father and the members of his family are healthy folk. He has been for many years a wanderer over the face of the earth, usually as a steward on merchant ships, but for the past four years he has settled down as a waiter in a restaurant frequented by his countrymen, near the hospital. He states that he has not suffered from any serious illness previous to the present malady, with the exception of attacks of malarial fever in

days gone by, and that he does not take alcoholic drinks. He considers that he has had good general health all his days. There is no evidence of syphilis. The present illness commenced a few weeks before admission, when he noticed for the first time that there was puffiness under the eyes; swelling of the ankles developed later. He soon found that he was not fit to go on with his work because he got short of breath on climbing stairs. The symptoms increased and in consequence he came to hospital.

You will recollect his appearance soon after admission, when the subcutaneous tissues became very oedematous, and the abdominal cavity was distended with fluid. The great anasarca and the characteristic whitish-yellow complexion of his race produced a very remarkable picture of renal dropsy; his appearance and demeanour were in marked contrast to his neighbour C. (Case 1).

The heart and blood vessels were in good condition. The beat was regular and of good quality, and the apex was well within the nipple line. There was no evidence of degeneration of blood vessels, the fundus oculi was normal in each eye, and the blood pressure was not increased. Readings of about 112 mm. of mercury in systole were obtained.

The urine on admission varied in quantity from 26 to 46 fluid ounces daily, with the specific gravity of 1.020 to 1.028, but as the anasarca increased the amount of urine diminished to 10 to 20 ounces daily with the specific gravity of 1.025 to 1.038. The amount of albumin contained in the urine was from 4 to 6 parts per 1,000 soon after admission, but it increased to 6 to 14 parts per 1,000 when the anasarca was at the worst. The reaction was usually acid, and there was little or no deposit. No casts were observed on microscopic examination.

The dropsy, which was the prominent feature in this case, increased steadily in amount in spite of the treatment used during the early period of his residence in hospital. I refrained from tapping him, hoping that a favouring diuresis might be brought about, until the mechanical difficulties in nursing him properly became so great that we had to interfere. By that time, however, the abdomen was full of fluid as well as the subcutaneous tissues generally, and oozing was taking place through the skin at certain weak spots, the elastic fibres of the cutis had given way at the points of greatest strain and "lineae albicantes" had appeared. He was tapped by means of Southey's tubes passed into the subcutaneous tissues of the legs and sides and into the abdominal cavity, and relieved of fluid to the extent of 10 pints. In spite of all these distressing conditions you will remember the calmness with which he bore his illness. He lay quietly in bed and bore his ills with equanimity, drawing my special attention to his condition when oozing of the subcutaneous fluid began to incommode him greatly.

The treatment for this patient was arranged at first mainly with the purpose of securing as much comfort and rest for him as was possible. Rest was obtained in bed without difficulty. The diet was chosen so as to be as easily digested as possible, and consisted largely of milk with farinaceous foods, bread with a certain amount of butter, and a sufficient amount of fruit or easily digested fresh vegetables. The more highly albuminous foods were not excluded, but were limited in amount, but he had in addition to milk a certain amount of fish or eggs, and even small quantities of meat occasionally. The amount of salt allowed was sufficient to make the diet palatable; no free salt was given. The amount of fluid was limited as closely as was thought advisable. A rough calculation of the nutritive value of his diet at this period of the treatment was made, and was found to correspond to about 1,580 Calories, of which about 427 Calories were derived from the protein in his food. The patient was therefore on a low diet, and told us that he was hungry and would willingly take more food. The anasarca nevertheless increased steadily, and his general condition deteriorated. Efforts were made to obtain increase in the amount of urine by various means. Theobromine was administered in as large doses as was thought desirable, the saline diuretics were used freely, and digitalis was tried in order to obtain its diuretic action—but the hoped-for diuresis did not occur. I then determined to make a very thorough change in the character of his diet. In the meantime the anasarca had increased to such an extent that tapping, which I had postponed as long as was possible, became urgently

necessary, and was done in the manner and with the result already mentioned. A certain amount of comfort was obtained for our patient by this means, but not to such an extent as could have been wished, and for a day or two it appeared as if the fluid were reaccumulating, especially as no increase in the outflow of urine occurred. The new diet was commenced within a day or two of the tapping. It consisted of bread, rice, green vegetables, and fruit; the amount of milk was increased, and in addition he had two or more eggs daily; as he had been told that his diet was to be increased he asked if he might have rabbit, so rabbit cooked in various ways formed part of his menu, alternating with fish. The amount of fat in the previous diet was cut down, and this he felt to be a distinct deprivation, inasmuch as he no longer had butter. The nutritive value of his diet under the new regimen increased till it corresponded roughly to 2,625 Calories, a much larger proportion of this amount being derived from albuminous foods and little from fats. The result of this change in the dietary was remarkable. In three days after the new diet was commenced the amount of urine had increased from a daily output of from 16 to 20 oz. to 42 oz.; it remained for a week at the level of 36 to 48 oz. daily; the amount then increased again largely to 48 to 64 oz., and in seventeen days from the commencement of the new, highly albuminous dietary the output was no less than 94 fluid oz. in one day—the true “polyurie libératrice” was established. Concurrently with this polyuria a fall occurred in the specific gravity of the urine from 1.038 to 1.015, the amount of albumin diminished from 14 parts per 1,000 to 0.5 part per 1,000, and the anasarca vanished. His general condition underwent a marked change for the better, so much so as to allow of his getting up and moving about the ward and into the open air. The remarkable feature of this change for the better was the rapidity with which the favourable conditions made their appearance. Within three weeks our patient had passed from the condition of a man whose life was threatened by a dangerous illness to that of a convalescent who feels so well that he begs to be permitted to return to work at the earliest moment.

This experience may be claimed as another piece of evidence that the plan of underfeeding our patients suffering from chronic nephritis with dropsy as the chief symptom, especially by diminishing the amount of albuminous foods in the dietary, requires reconsideration and amendment, and that the recommendations made by Dr. Epstein, of the Mount Sinai Hospital, New York, have firm foundation in clinical experience. You will recollect that Sir Clifford Allbutt has given his favourable experience of the dietetic treatment of such cases on the plan which has given so good a result in this case.

During the summer session I have drawn your attention to certain aspects of recent experimental and clinical observation on the subject of renal disease recorded by various workers in France, in the United States, and in this country, and to certain tests that have been employed with the view of ascertaining the efficiency of various functions of the kidneys. At the close of the session I would recommend you all to read a paper by Dr. Albert A. Epstein in the *American Journal of Medical Sciences* for November, 1917 (vol. cliv, No. 5, p. 638), in which he gives his views on the subject of treatment; and not to forget to study a Report to the Medical Research Committee on an Investigation into the Effects of War Nephritis on Kidney Function by Drs. H. MacLean and De Wesselow, published in the *Quarterly Journal of Medicine* for July, 1919 (vol. xii, No. 48, p. 347).

The fund of the Harvard Infantile Paralysis Commission has reached a total of £8,050.

In the *Medical Journal of the Siamese Red Cross* for December, 1918, Dr. M. E. Barnes, Representative of the International Health Board, Rockefeller Foundation, states that in Northern Siam of 20,209 persons examined for hookworm disease 15,458, or 76.4 per cent., were found infected. *Necator americanus* (Stiles) is the species of nematode ordinarily found in Northern Siam. Very advanced cases are seen occasionally in the northern provinces, though at present they are somewhat infrequent in Siam as compared with Ceylon and Java. Measures are being taken by the Government which, it is hoped, will stamp out the infection. Among the anthelmintics used thymol and oil of chenopodium have proved especially valuable.

SOME PRACTICAL CONSIDERATIONS ON THE OPERATION FOR REMOVAL OF ADENOIDS AND ENUCLEATION OF TONSILS.

W. H. BOWEN, M.B., M.S.LOND., F.R.C.S.,

ASSISTANT SURGEON, AND ASSISTANT SURGEON IN CHARGE OF EAR,
NOSE, AND THROAT DEPARTMENT, ADDENBROOKE'S HOSPITAL;
FORMERLY SURGEON TO THE EAST LONDON HOSPITAL FOR
CHILDREN AND THE ROYAL EAR HOSPITAL.

This paper makes no pretence to an elaborate review of the indications for operation nor yet the methods of operating, but aims rather at setting out practical considerations gradually forced upon one by an experience covering some fourteen years. The relatively new operation of complete enucleation of tonsils by the guillotine alone, as opposed to the crude and uncertain cutting which had been the custom for so long, opened up a satisfactory era to the surgeon in charge of a special clinic. It gave confidence in the results of the operation, since he felt that now the whole infective focus could be removed, with the most ordinary attention to a simple method, thus making the probability of cure much greater. Disappointment was inevitable to those who, like the writer, watched the result of the older operation of cutting for many years after the operation had been performed, and saw recurrence of trouble follow in the remnants of the tonsil. Dispassionately considered, many cases could only be described as failures; and until some method had been devised whereby the disease could be removed completely, without having recourse to the dangerous and exhausting methods of enucleation then employed, it seemed that these disappointing half-measures must be tolerated.

The method of complete enucleation introduced by Drs. Whillis and Pybus¹ solved the problem. It is simple and quickly mastered, the diseased tonsils are removed in their entirety, the ordinary Mackenzie guillotine can be used (reversed), and, as is so important, the whole operation can be performed in sixty seconds or less after very little practice by anyone used to the guillotine: that is to say, the operation can be performed as quickly as the former cutting operation, and with incomparably greater benefit to the patient.

Haemorrhage and sepsis, the former having a distinct bearing on the latter, are the two risks of the operation. Their avoidance demands anxious attention. The plan of preparation with this end in view set out below has been gradually evolved, and, whilst it is difficult to prove its worth, the comparative study of a large number of cases has been sufficiently convincing to justify its being tried by others.

The aims of the operation are by removing adenoids to eliminate a source of continuous infection from the nasopharynx and to make nose breathing possible, and by enucleating the tonsils to remove an actual or potential infective focus from the throat. Furthermore, it must be strongly insisted that the proper time to perform the operation is early childhood. Probably the ideal time is from three to six years of age, for childhood is the time of these hypertrophies, and failure to treat them in the early stages, especially the enlargement of the nasopharyngeal tonsil (adenoids), leads to the troublesome complications which the aurist especially sees in later years.

The relation of enlarged tonsils and adenoids to diphtheria carriers is worthy of the closest attention, and this paper endeavours to emphasize its importance.

Indications.

Of all the indications for operation the forestalling of deafness is the most important. It is no unusual thing for a mother to bring a child and to say that he is inattentive and will not listen to what she says. It is often called “naughtiness,” but can easily be shown to be due to loss of hearing power by turning the child's back to the speaker and then asking for a repetition of words said. It is usually quite easy to assure the mother that the child is deaf by getting her to ask the child to do something whilst its back is turned to her. The child will hear words spoken but not pick up the individual words, and is therefore unable to grasp the order or request. On turning round and facing the mother, and getting the additional assistance of watching her lips, the child will respond,

showing that it is not a question of obedience. It is the limitation of a sense, not a perversion of the brain.

On examining the membrana tympani, it will be found that there is some thickening of the drum as a whole, and already retraction. At times there may be marked foreshortening of the malleus, and a condition which in an adult would almost make one despair. In a child it may be viewed with the greatest optimism, for the drum will recover absolutely when the cause has been removed. In other cases there are attacks of pain in the ear or ears due to subacute catarrhal inflammation of the middle ear. If neglected it may lead to an acute inflammatory infective process with suppuration and perforation. All these conditions may occur independent of adenoids. Acute infective catarrhal rhinitis and nasopharyngitis may lead to infection of the middle ear, for instance, but such diseased conditions are usually secondary to enlargement of the nasopharyngeal tonsil (adenoids). Justice has not been done to deafness, otalgia, or discharging ears in a child until the question whether adenoids are present has been answered in the negative. In acute mastoid disease, which comes under observation as a definite surgical disease demanding immediate treatment, unless the surgeon keeps in mind the fact that it is the result and not the cause he may relieve the immediate acute symptoms but leave a chronic infective process behind. The operation on the mastoid should invariably be followed by an examination of the nasopharynx (it can easily be done at the end of the operation), and if there are any adenoids at all they should be removed, for the disease, if there be no definite pneumococcal lesion elsewhere, begins in the nasopharynx; if adenoids are present and are allowed to remain as a focus for continuous reinfection, the chances are that whilst the wound behind the ear heals the discharge from the meatus continues, so that later on a discouraged surgeon is driven to a radical mastoid operation with all its drawbacks.

Other conditions calling for attention and differential diagnosis are those associated with catarrhal rhinitis. This may be due to an ordinary infective cold, to ethmoid disease, or to irregularities of the nasal septum; but the commonest cause of persistent cold in the nose in children, or of recurrent winter colds, is adenoid growth. There are degrees of obstruction produced by adenoids, varying with the varying congestion of the parts. A parent may say of a child that his breathing is so heavy that she fears he will "choke in his sleep," and on the other hand an intelligent mother, when told that her child's deafness is due to adenoids, will exclaim: "But he always sleeps with his mouth closed." This is quite possible with a small hypertrophy of the nasopharyngeal tonsil in a roomy nasopharynx.

Sometimes the child is brought for mouth breathing without a history of deafness or of colds. In young children, having put out of court deflection of the nasal septum and polypoid formation from ethmoid disease, the diagnosis of adenoids is safe; their removal imperative. It is interesting to note the dental decay which sometimes follows on mouth breathing. Sometimes mouth breathing is denied when it is possible to demonstrate that the incisor teeth of the upper jaw are dry over a crescentic area exposed by the slight retraction of the upper lip. This crescentic area arches from biting edge to biting edge of each lateral incisor with the concavity down. It is due to exposure of the lower part of these teeth by the slight retraction of the upper lip; they become pitted and decayed, and then destruction from biting edge to gums often follows. It is quite possible that a focus of infection is thus produced which is followed by the extensive dental caries so often found in these cases. Children are often brought for a chronic irritable cough which to the parents is the only clinical manifestation of chronic catarrhal pharyngitis secondary to the hypertrophic lymphoid tissue. A cure can be promised on removal of the cause and on the establishment of nose breathing.

Enlarged glands in the neck may or may not be due to enlarged tonsils. In the majority of cases no gross lesion is discoverable, and the advisability of operation for removal of the glands, primarily diseased, must be judged by the rules generally laid down. When, however, the enlarged glands are associated with the definite clinical manifestations of tonsillar enlargement, it may be, and probably is, sound to look upon the throat condition as the primary lesion. The primary focus should obviously

be dealt with first, with a hope that the enlarged glands, reasonably regarded as secondary, will disappear later. It has always been my aim to safeguard the patient by minimizing loss of blood, shock, and any possible later exhaustion. It is quite wrong to operate on such patients in the out-patient department and send them home afterwards. In some cases the glands may require operative interference later, being too far involved in tuberculous disease to recover naturally; but where it is possible to prepare in advance and impose sound hygienic surroundings at the time of operation and afterwards I have never known the "breaking down" of the glands to follow immediately on operation on the throat and nose.

The subject of the tonsils and adenoids as carriers of the *B. diphtheriae* has been of great interest to the writer ever since he accidentally stumbled on a case some years ago. The case was reported at the Cambridge Medical Society, and briefly stated was as follows:

A boy aged 16 was sent home from a training ship where an epidemic of diphtheria had prevailed, and before his return a negative swab from the throat was demanded. He had never had diphtheria, and was apparently in the best of health. To my surprise the swab was returned as positive. The boy was isolated and antiseptic swabbings and gargles employed; but at the end of fourteen days the swab was still positive. The tonsils were large and congested, and it seemed quite possible that the crypts of the tonsils harboured the organisms. At this time I did not know that this view of the matter had been anticipated by some German practitioners, who, acting upon it, had removed the tonsils. I decided to remove the tonsils, and was prepared to give antitoxin beforehand. Dr. Graham Smith, lecturer on hygiene to Cambridge University, of whom I sought advice, agreed with the advisability of removal of the tonsils, but did not think there was any need to give antitoxin. His advice I followed. The operation was performed on March 27th. Convalescence was uneventful, and on April 13th the throat was free from *B. diphtheriae*. After the boy's return to the ship another epidemic of diphtheria broke out, and the boys were sent home again. Examination of his throat showed a few *B. diphtheriae* present on one occasion. They soon disappeared. The operation was incomplete. It was in the days before I attempted enucleation; the tonsils were removed without anaesthesia, and no attempt was made to clear the nasopharynx (he was a nose breather).

Dr. Graham Smith took the matter up, and at the time war broke out had accumulated a large amount of valuable material. He has allowed me to refer to some of the microscopical sections of tonsils removed in carriers of diphtheria; they show the difficulty of any attempt to clear the organisms from the bottom of some crypts. In one case the crypt, after running about half the depth of the tonsil, suddenly turned upon itself at an acute angle, and ran down to the very base of the tonsil (capsule), where it expanded into a small cavity full of bacilli.

The view that the carriers of diphtheria usually have enlarged tonsils is so strongly implanted in my mind that on one occasion when there was clinical proof that a diphtheria carrier was in the children's ward at Addenbrooke's I told the house-surgeon that by looking at the children's throats I would tell him the offender. The ward is not a large one. I found one child with very markedly enlarged tonsils (and adenoids), and this child yielded a positive swab. The possibility of persistence of infection in the fossae and sinuses of the nose after removal of tonsils and adenoids cannot be ignored, but the investigations so far carried out suggest that once the hygiene of the nose and throat has been improved by operative interference on the lines indicated there is a natural tendency to cure.

Other infections of the tonsillar crypts may give considerable trouble and waste much time. As an example may be quoted the case of a lady over 30 years of age, the wife of a doctor, who suffered every winter from recurrent tonsillitis. Usually three attacks occurred each winter and laid her up for a week at a time. The tonsils were only slightly enlarged, but as the attacks were follicular tonsillitis there could be no doubt that the tonsils were the centre of disease, and only by enucleation could permanent health to the throat be restored. Therefore, with every preliminary precaution, I enucleated the tonsils completely a year ago. The patient has never had an attack of tonsillitis since.

Anatomical.

It is unfortunate that the term adenoids has been applied to hypertrophy of the pharyngeal tonsil. It gave the idea of a multiple rather than of a single structure; and there are still people who expect to remove

several individual structures at operation and who take several strokes with the curette to do it. I teach the men at Addenbrooke's Hospital that to fail to remove the pharyngeal tonsil in one piece and at the first attempt is as bad as failing with a faucial tonsil.

When removed, the pharyngeal tonsil (adenoids) is seen to be an oblong structure with the longer side vertical; it has a marked central cleft and one or two lesser lateral clefts. The clefts are in the long axis of the mass. The central cleft is deep, so deep sometimes as almost to divide the mass into halves. It is quite possible in rapid digital examination for adenoids that the finger may slip up this central cleft, the soft vascular mass slipping away on each side, so that a false sense of clearness of the nasopharynx is obtained. With the deliberate examination unopposed, which is possible under an anaesthetic, such an error is not likely to occur.

One of the essentials of the modern operation of enucleation of the tonsils with the reversed guillotine is to press the buried portion of the tonsil into the guillotine. If the thumb is pressed backwards and slightly inwards on the convex spherical surface immediately outside the anterior pillar of the fauces it is pressing on the anterior half of a hemispherical body which is the buried portion of the tonsil.

The macroscopic appearance of a tonsil is very variable. There is often a cleft running downwards and backwards; sometimes it almost divides the tonsil into two portions, and the postero-inferior portion being hidden from view unless looked for, it is quite possible in an imperfect light or a hurried anaesthesia to slip the edge of the guillotine into the interval between the two portions of tonsil and take away the antero-superior portion only. A tongue of tonsil, not visible as a separate structure, runs up into the soft palate nearly as far as the uvula. It is probable that it is infection of this part of the tonsil with imperfect drainage which leads to the condition known as quinsy. In the former imperfect cutting operation this palatal part of the tonsil was not touched, and in consequence the risk of quinsy was not eliminated.

Age Considerations.

As to the best age to operate for tonsils and adenoids certain rough guiding rules may be given. Unless there are very strong indications, it is advisable to wait until the child is 2 years old. The "strong" indications are summed up as discharge from the ears, or repeated ear-ache. Very seldom does the critical surgeon derive any satisfaction from the attempted removal of adenoids in a child under 2 years of age. At the same time it is extremely simple to give such a child a whiff of chloroform and explore the nasopharynx with the little finger of the right hand, and if there is any enlargement present, remove it with one sweep of a small curette. I have never done this in a child under 1 year, and rarely under 2 years old, but when I have to do it I prefer to use a curette for the removal and not the finger-nail.

No dogmatic answer can be returned to the question whether if the tonsils are definitely enlarged they should always be removed. I would go so far as to say, however, that once the tonsils have been the seat of tonsillitis they should be removed. If the tonsils are only slightly enlarged, but with no history of disease, and the child is under 4 years of age, I am content to remove the adenoids only, on the understanding that the parents realize what is being done. Alone it is a trifling operation, but combined with enucleation of tonsils it is quite severe. Parents must be warned in such cases that nose-breathing after operation is vital to success. It must not be forgotten that some children of 2 are much stronger than others of 4. In out-patient work one must be guided by the distance the children have to travel home and the climatic conditions at the time.

It cannot be too strongly impressed upon those responsible for these operations that the removal of the adenoids is the essential. They are the main obstructive growth and the origin by proximity of the ear complications. At the same time they are hidden away in the nasopharynx, whilst the tonsils cry out for recognition to anyone with eyes in his head. I tell the men at Addenbrooke's Hospital that their failure to remove tonsils I can condone, for I can see their failure for myself; but their failure to remove the adenoids completely and finally is an unforgiv-

able offence; for their removal is assumed after an operation; incomplete operations may not avert the ultimate danger of deafness.

Preparation of the Patient.

The two complications to be feared after an operation for tonsils and adenoids are haemorrhage and sepsis. Functional success will be obtained if the patient become a nose breather; to obtain this the co-operation of the parents or friends is required. The friends should have it drilled into their heads by the emphasis of repetition. At Addenbrooke's Hospital we tell each mother individually when the child is brought to the surgeon for the first time: "This operation is no good unless you teach your child to breathe with the mouth closed afterwards. Make him lie on his back for ten minutes three times a day and breathe with his mouth closed until he does it day and night without trouble." This is the formula which is reiterated in substance when the out-patient letter recommending operation goes before the sister in charge. After the operation the sister or a nurse goes into the room where the children are waiting, just prior to leaving hospital, and once more emphasizes the importance of nose breathing and the closed mouth. Anyone who does much ear, nose, and throat work will agree that this is not a trifling matter. Ofttimes the child remains a mouth breather after the operation; not that the obstruction remains, but that the cure has not been consolidated by after-treatment. With every additional year after 4 years old the natural closing of the mouth without education is less and less likely to be obtained. From 12 years old onwards this effort to get a functional cure is the most serious aspect of the operation. I have had children brought to me who have had the operation done years before, who have open mouths, narrowed nostrils, and deafness; and the mother usually tells the story that the adenoids were removed, but they have grown again. Often on examining the nasopharynx with a finger it is found quite clear. Usually the mother has never been told to give the child breathing exercises, and unless the need for them is impressed on her, and driven in by repetition, they will be neglected and soon forgotten. My experience is that the failure to emphasize the importance of after-treatment, and to control it by system, is an unsatisfactory feature in hospital treatment. My conviction from experience is that adenoids do not grow again if they are properly removed. The bad results are due to one or both of two causes—the first being imperfect removal, especially cutting them obliquely from above downwards, so that the upper half or third is left; the other, failure to emphasize the importance of nose breathing. Systematic breathing exercises several times a day have not only the advantage of regularity of practice, but they have a mental and suggestive element of much importance.

Haemorrhage and Sepsis.

Of the complications haemorrhage is to be put first, since it plays a great part in so lowering the vitality as to make the patient liable to sepsis; moreover, it has been by far the commoner complication. I have had several very bad cases, and whilst death has never resulted, the greatest anxiety has been felt more than once. There is more risk of severe haemorrhage after tonsillectomy with increasing years. I have never seen severe haemorrhage in a small child. The cases I have encountered have usually been in people over 15 years of age, with a history of recurrent tonsillitis, much congestion of the whole oropharynx, and permanent dilatation of vessels. If tonsillitis is present or there has recently been an attack of tonsillitis, the blood supply is almost certainly excessive. One of the first rules to lay down, therefore, is that no operation shall be performed until all recent acute congestion has disappeared. I insist on a month elapsing since the last attack. To lessen the congestion as much as possible it has seemed advisable to give a mild astringent gargle after meals and at bedtime, such as alum 5 grains to the ounce. Furthermore, since mercury is believed to have a beneficial depleting effect on the throat and nose, when employed as a purgative, a dose of calomel is given two nights before operation, followed by saline next morning. After the calomel I usually advise no more meat until after operation—for two reasons: first, that no portions shall be left round the teeth as infective foci, and, secondly, that the proteins shall not raise the

blood pressure immediately before operation. The night before operation and on the morning of operation a dose of calcium lactate is given. In a delicate anaemic child I usually advise iron for about two weeks beforehand. After operation the patient is not allowed to get up and walk out from the operation room. This may easily be followed by severe bleeding, especially in adults. They should be removed on a stretcher or in a chair.

My experience is that if the risks of haemorrhage be avoided, if the child be protected against shock, and if no operation is performed in the presence of active microbial invasion, there is no risk of sepsis. Surgeons do not take any risks with fingers or instruments in the present day, and if infection occurs it is probably due to the calling into infective activity of some hitherto saprophytic organism owing to lowered vitality. The avoidance of lowered vitality resolves itself practically into an insistence on the maintenance of body heat. Excessive fasting, cold operation room or recovery room, hurried departure with waiting at a station, and a tedious journey afterwards are the risks run by the out-patients of hospitals. If possible the child should not have starved for more than four waking hours. The temperature of the operating room should be 60° or 65°, and so should that of the recovery room, and no draughts should be allowed. This is difficult to enforce with the modern nurse brought up to a purely empirical outlook with regard to fresh air and open windows; it is the open window of the ward which, by abstracting heat from the restless child who has thrown his covering off, leads to the complications which are liable to follow on operation in in-patients.

In winter it is not justifiable to operate on children and afterwards to send them home any considerable distance. After operation I advise that children be kept in bed for a week. At the end of this time the grey, sloughy appearance on the fauces will have practically disappeared.

Anaesthetics.

I am against ether as an anaesthetic owing to the congestion and secretion set up. When I first began operating for tonsils and adenoids, about 1904, we used chloroform at Guy's; but on its introduction turned to ethyl chloride, and in hospital practice I have continued it ever since. It is much quicker than chloroform, an important consideration when you have twenty patients waiting for operation. It gives a long period of anaesthesia, and having been used now for over a dozen years without any mishap the old forebodings should be put aside. Dangers, however, attended the use of somnoform, the mixture which preceded the introduction of pure ethyl chloride. The objection to ethyl chloride has been that children object to the sudden concentrated vapour used in the closed apparatus. This is a drawback, especially with nervous children, and on this account, in private, I have always used chloroform. With the introduction of the open method of administering ethyl chloride this drawback disappears, but I doubt whether ethyl chloride will ever supersede chloroform in cases where time is of no importance and gradual induction and maintenance of confidence is to be desired. With the closed method of administration of ethyl chloride the gag must be put in before the anaesthetic is begun. I always use a Doyen's gag propped well open at the start; it is not made to lever open a jaw which is firmly closed. In a child of about 5 years old and onwards the teeth are not very firm in the jaw in front, and the rough handling of a gag may easily knock them out. If, with ethyl chloride, the child begins to cough, I stop the anaesthetic, and if the trouble begins again on restarting, resort to chloroform, but this is very rarely necessary.

The usual dose of ethyl chloride is 3 c.cm.; the usual stages are ordinary breathing or a short struggle, then a period when there is stoppage of breathing but with corneal reflex present and no change in colour, followed by a period of deep respirations. After about three of these the operation is proceeded with. The stages of ethyl chloride anaesthesia are, however, very unreliable, and this must be counted as a drawback to its use. A very deep anaesthesia has no dangers with it unless an inexperienced operator begins whilst every reflex is abolished. This is the danger with any deep anaesthesia, whether ethyl chloride or chloroform. It is best if in any doubt to put the finger

into the throat and gently touch the fauces. If there is no suggestion of a contraction it is best to wait. The very slightest movement of the pharyngeal muscles justifies proceeding with the operation. The only danger I have encountered, excluding haemorrhage, has been due to too deep anaesthesia, abolition of the coughing reflex, and blood collecting in the larynx, where it may easily clot and, if not dealt with promptly, lead to asphyxial signs. A vicious circle is established of dyspnoea and venous congestion. The condition is very easily dealt with. The child is turned over on to its face, a finger put down to the aperture of the larynx, and any blood clot hooked forward; usually it will flow out without assistance.

The child should be wrapped in a sheet with the arms secured. This permits the child to be controlled on recovery, and especially in the struggling state which may occur where imperfect anaesthesia or inexperienced surgery leads to partial return to consciousness before completion of the operation.

Operation.

Once the fundamentals are grasped and a little practice obtained, the operation of enucleation of tonsils is quite as simple as the older cutting operation. It is essential, however, to be able to see what you are doing. In the old cutting operation the horizontal grooved supports with the curved end, into which the blade was forced and between which the tonsils were extruded, acted as a protection to the anterior and posterior pillars of the fauces, preventing their being cut; so that to anyone with ordinary experience the operation could be done quite blindly and when the mouth was full of blood. This is not possible with the modern enucleation method. It is essential to see, because the posterior border of the guillotine—that is the margin of the circle which encloses the tonsil—is slipped behind the posterior border of the tonsil. The guillotine is reversed so that the handle is directed to the opposite side—that is, for removal of the right tonsil the handle is directed to the left side. Furthermore, this edge of the guillotine in the groove between the posterior border of the tonsil and the posterior pillar of the fauces is pressed very firmly outwards until the long axis of the guillotine lies obliquely across the mouth. The line of this axis is from the juncture of tonsil and the posterior pillar of the fauces to the opposite molar teeth. When firmly fixed in this position the whole guillotine is pulled a little forward, if the tonsil is sufficiently enlarged, to allow leverage on the tonsil. Thus the tonsil is fixed and rendered prominent.

The next manipulation is to press the buried portion of the tonsil through the circle of the guillotine by pressing on the spherical bulge just outside the anterior pillar of the fauces. When this is pressed backwards and slightly inwards the deep portion of the tonsil is pressed through the guillotine. I generally use the thumb for this purpose. With a large tonsil and a small-sized guillotine, a short massage-like pressure may be required to get the tonsil in, but it is best to use a guillotine as small as possible, and it is wonderful how large a tonsil can be massaged through a small guillotine. The advantage of the small guillotine is that the tonsil gets jammed into it. With the deep portion of the tonsil thus pressed into the guillotine and steadied by the slight forward pull of the posterior edge of the guillotine on the posterior border of the tonsil, the blade of the guillotine is driven home. It cuts through the mucous membrane at the juncture of tonsil and anterior pillar of the fauces, and then, taking the line of least resistance, passes between the tonsil capsule proper and the pharyngeal wall. The guillotine must be sharp enough to cut through a thin layer of mucous membrane and blunt enough to take the line of natural cleavage between tonsil and pharyngeal wall. When tonsillotomy was practised, it was known that a guillotine with a sharp edge shot quickly home led to troublesome haemorrhage, whereas a blunt guillotine by a half-crushing action reduced haemorrhage to a minimum. At the same time the guillotine must not be so blunt as to be unable to cut at all, for after cutting through the mucous membrane of the anterior pillar at its junction with the tonsil and slipping between tonsil and pharyngeal wall, it comes up against the mucous membrane at the junction of tonsil and posterior pillar of the fauces. In this thin layer of tissue to be cut through there are blood vessels of which it is desirable to obliterate the lumen by the trauma of a

crushing action. When this posterior line of attachment has been reached the pressure of the thumb of the hand holding the guillotine should not be enough to force it home, owing to the bluntness of the guillotine; it is at this juncture that the other thumb should cease to press on the anterior pillar of the fauces, and the hand thus freed be used to force home the guillotine. The tonsil will always come away with the guillotine, owing to this crushing of the tissues. Since it is necessary to get a good view, it is advisable to pass immediately from the one tonsil to the other before blood obscures the view. Failure to see means that the furrow between the tonsil and the posterior pillar of the fauces may not be hit off, and that the anterior pillar of the fauces may be damaged. I often take away a thin edge of mucous membrane on the anterior pillar of the fauces. It is easily done without touching the musculature. After the enucleation of tonsils a definite smooth-walled cavity corresponding to the buried portion of the tonsil is felt with the finger. On examination of the tonsil the surface of the buried portion will similarly be seen to be smooth with the thin grey capsule of the tonsil covering it. The completeness of this capsule is the demonstration of complete enucleation.

Sometimes, especially in adults, the tonsils have to be

A METHOD OF ENUCLEATING TONSILS WHICH LESSENS BLEEDING.

BY

PETER MACDONALD, M.A., M.D.,

HONORARY SURGEON, EAR, NOSE, AND THROAT DEPARTMENT,
YORK COUNTY HOSPITAL.

THE "reverse guillotine" method of enucleating tonsils, first described in this country by Whillis, is, I suppose, that most commonly now employed, and I personally use it almost exclusively, except that I use my thumb, and not my forefinger, to press the tonsil through the guillotine ring; and after trying various guillotines I came to the conclusion that the Howarth guillotine, with sharp and blunt blades, was much the most convenient of the instruments made for this purpose. I have come to use the blunt blade only in the vast majority of cases, keeping the sharp blade in reserve for cases where the fibrous attachments of the tonsil are so tough that they do not readily give way to the blunt blade—a condition found only in a small minority of cases operated on.

To obviate bleeding, and also to lessen the liability of the patients either swallowing blood or sucking blood into the larynx, I have recently somewhat modified my methods. It is much more convenient to engage the tonsil in the guillotine with the patient on the back than on the side, but to prevent blood from accumulating in the pharynx, with risk of its passing into the larynx or oesophagus, I like to have the patient on the side with the face turned somewhat down before performing any cutting, so that any blood runs down out of the mouth.

I adopted, accordingly, the following procedure: The patient is anaesthetized on the back and the operation field well illuminated with a head lamp or frontal mirror. Standing on his left side facing him, I first engage the left tonsil in the ring of the guillotine, shut down the blade by the handle lever and give this closed handle to an assistant (usually a nurse) to hold, and then engage the right tonsil with the second guillotine and close the blade and hold the handle myself.

On this being completed, the patient is turned on to the left side and the face turned somewhat down. Up to this time there is practically no blood in the mouth, and as the mouth is now turned down, any blood from the subsequent

removed when there is no faucial prominence at all; there may be an excavation. In cases such as this the operation presents no increased difficulties, since the posterior pillar of the fauces is a guiding mark to the posterior border of the tonsil. Visibility is all-important to maintain the position of a guillotine whilst the tonsil is pressed into the guillotine. I have removed a tonsil which on examination afterwards was cup shaped, consisting of an excavated buried portion of tonsil only.

The removal of adenoids calls for no other remarks beyond what has been said with regard to removing them with one sweep of the curette. It is always well to feel and steady the curette against the posterior border of the nasal septum where it touches the roof of the nasopharynx. This can quite well be done without any damage to what is a relatively fragile structure. One quick sweeping movement with maintenance of pressure backward on to the pharyngeal wall is then all that is necessary. At the end of operation the child can be turned sideways or face downwards to allow of the escape of blood; but is kept wrapped up, to avoid struggling, until such time as consciousness returns.

REFERENCE.

1 On Enucleation of Tonsils with the Guillotine, by S. S. Whillis, M.D., and C. F. Pybus, M.S., F.R.C.S., BRITISH MEDICAL JOURNAL, November 25th, 1911, p. 1402.

operative procedure will run out of the mouth over the edge of the operating table. This manoeuvre almost completely obviates the swallowing of blood during the rest of the operation.

I now remove the tonsils, and I do so not by cutting out or tearing out; but, using the closed instrument in the same way as a pressure forceps is employed to perform torsion on a small artery, I twist the tonsil until the pedicle of fibrous tissue, engaged between the guillotine blade and the ring, containing the principal blood vessels of the tonsil, gives way.

In this way the bleeding from the tonsils is reduced to a minimum. The tonsil is removed in its capsule, and with rare exceptions the removal is complete. If necessary, adenoids are now removed with the face still turned somewhat down, so that blood from these also runs out of the mouth. On completion of the operation the patient is turned completely over on to the chest and face, with the

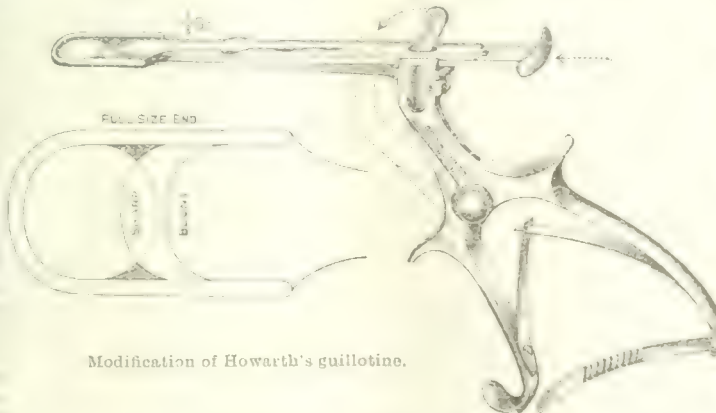
head hanging down over the edge of the table, and on removal to bed or recovery couch, care is taken that the patient is not allowed to lie on the back until there is a considerable degree of recovery from the anaesthetic.

The inconvenience of handing the closed handle of the guillotine to an assistant to hold, and the risk of slipping involved, soon made it evident that it was desirable to employ, for the first guillotine at least, one with a locking

attachment to lock the blade, such as the ratchet of the Elphick "haemostatic guillotine."

The Elphick guillotine, however, has the handle attached to the blade at right angles, and as the obtuse angle position of the handle in the Howarth guillotine has a great advantage, and also as the serrated edge of the crushing blade of the Elphick has no advantage which I can see, I got Messrs. Down to make me a guillotine which is really a modification of Howarth's.

The principal modification is the ratchet attachment to lock the blade in the closed position, but I had the guillotine made also with interchangeable ring and blades for different sizes of tonsils, and with the blunt blade very blunt. A small modification, but an important one, is that the end of the lever pushing the blade home is turned over to hold the sliding blade down to its bed, as I found in some of my Howarth's guillotines that firm pressure on the handle sometimes forced the sliding blade to ride up



over the end of the lever—a rather awkward *contretemps* in the middle of an operation.

The instrument can also be used as a haemostatic guillotine, and left *in situ* for five minutes, as advocated by La Force.

I find by the method above described that while in the vast majority of the cases removal of the tonsil is complete, there is no greater amount of sloughing of the bed of the tonsil than when a sharp blade with cutting edge is used. The loss of blood is markedly lessened, as also the risk of serious haemorrhage. The amount of blood swallowed is reduced to a minimum.

The sister in charge of my recovery wards is quite clear that post-operative sickness is lessened, and in consequence, where patients have to go home the same day, as in hospital practice is often unfortunately necessary, they are sooner fit for removal.

RELATION BETWEEN THE GENERAL NERVOUS SYSTEM AND SYMPTOMS OF "D.A.H." IN NEURASTHENIC PATIENTS.

BY

H. W. DAVIES, M.B., B.S., CAPTAIN A.A.M.C.,

AND

J. G. PRIESTLEY, M.C., B.M.Oxon.

(From the Clinical Laboratory, Ashburst War Hospital, Littlemore.)

AN investigation¹ carried out by one of us in conjunction with J. S. Haldane and J. C. Meakins at No. 15 Canadian General Hospital, Taplow, during 1918, on patients suffering from symptoms of D.A.H.—chiefly in consequence of irritant gas poisoning—led to the recognition of the importance of the symptom of shallow breathing. This symptom appeared to be due to some abnormal upset of the Hering-Breuer reflex.

Hering and Breuer² described in 1868 the reflex control of the respiratory movements. Their experiments proved that inspiration and expiration are initiated in response to afferent impulses passing up the vagus, and that a state of deflation or inflation of the lungs provides the stimulus which originates the impulse leading to inspiration and expiration respectively. Hering and Breuer's work, however, did not throw any light on the question as to how the depth of breathing is normally regulated. The nature of this regulation was made clear by the work of Haldane and Mavrogordato,³ who showed that the degree of inflation or deflation of the lungs which is necessary to excite the Hering-Breuer reflex depends upon the CO₂ tension of the arterial blood.

Besides the abnormality of the Hering-Breuer reflex the patients also manifested many other functional and nervous symptoms, and consequently it seemed advisable to make some attempt to work out the relationship, if any, between their abnormal respiration and disturbance of other functions of the nervous system.

With this object in view the work was transferred to the Ashburst War Hospital, and the present paper embodies the results of observations made there on neurasthenic patients. These patients were not selected, but were taken at random. All were admitted for "neurasthenia." The total number of patients on whom observations were made was 100.

The first point to which attention was directed was the prevalence and severity of D.A.H. symptoms among patients admitted for neurasthenia, and with this end in view the patients were all subjected to the following examination as far as possible:

1. Pulse rate at rest.
2. Pulse rate after two minutes' work on a bicycle ergometer at 3,170 foot pounds per minute.
3. Time taken for pulse to return to resting rate.
4. Rate of respiration sitting quietly in chair.
5. Rate of respiration sitting quietly and breathing through inspiratory and expiratory valves so that the volume could be measured.
6. Volume per respiration and volume per minute.
7. Vital capacity.
8. Time during which the breath could be held (a) in inspiration, (b) in expiratory position.

In addition a note was made of any spontaneous complaint by patients of shortness of breath on exertion.

It may be well here to point out one difficulty which we experienced—namely, that the observations were made at very varying times after the onset of symptoms and after various kinds of treatment. Hence the patients had recovered to different degrees. In considering the results it was noticed that the patients exhibited a gradation of D.A.H. symptoms from none to moderate severity. They did not, however, except in a very few cases, show by any means such an extreme degree of severity of symptoms as was common among patients admitted directly in consequence of the effects of irritant gas.

An attempt was made to classify the cases observed under three heads: (1) Those with marked D.A.H. symptoms, (2) those with definite D.A.H. symptoms, and (3) those with no appreciable D.A.H.

Table I gives a selection of representative results of this classification.

TABLE I.

	Pulse at Rest.	Pulse after Work.	Time (min.) for Pulse to Return.	Complaint of Dyspnoea.	Respn. without Valves.	Respn. with Valves.	Respn. during Work.	Holds breath, Inspn. (secs.).	Holds breath Expn.	Vital Capacity, Litres.
Marked D.A.H....	88	136	2+	No	35	48	48	7	5	2.7
	80	176	7+	Yes	32	32	62	25	15	3.5
Definite D.A.H....	96	124	1	Yes	15	15	28	20	15	3.5
	84	100	4+	No	22	20	30	55	25	3.0
No appreciable D.A.H.	58	72	½	Yes	22	27	29	43	18	4.0
	60	88	2	No	13	26	22	51	33	3.2

On examining the figures for the whole series of cases it is evident that in the several degrees of D.A.H. the regulation of the pulse and respiration are both upset, but that in the milder cases the symptoms may be manifested chiefly with respect either to the pulse or respiration.

This is shown in Table II, where two cases of mild D.A.H. are compared.

TABLE II.

No. of Case.	Pulse at Rest.	Pulse after Work.	Time (min.) of Return of Pulse.	Complaint of Dyspnoea.	Respn. without Valves.	Respn. with Valves.	Respn. at Work.	Holds breath, Inspn. (secs.).	Holds breath Expn.	Vital Capacity, Litres.
97	72	116	3+	No	18	18	22	42	25	2.7
39	72	84	1	No	25	21	29	19	18	3.2

Table III gives a summary of the results, and in addition shows the relation of previous infection and gas poisoning to the frequency of D.A.H. symptoms.

TABLE III.

	No. of Cases.	Gas and/or Infection.	No Gas or Infection.
Definite symptoms of D.A.H. ...	13	12	1
Less marked symptoms ...	57	37	20
No appreciable D.A.H. ...	30	14	16

It appears from this table that of the 13 cases which showed well defined symptoms of D.A.H., 12, or 92.3 per cent., gave a history of gas poisoning or infection, either recent or from which the symptoms dated; of the 57 cases with ill defined symptoms, 37, or 64.9 per cent., and of the 30 cases free from D.A.H. symptoms, 14, or 46.6 per cent., gave this history.

These results accord well with the findings of Lewis and his co-workers.⁴ In considering them it should be borne in mind that several of the cases with no appreciable D.A.H. which are shown as having suffered from gas or infection gave a history of very slight gassing. Also in this connexion it should not be forgotten that the patients examined had been under treatment for very varying periods. Hence the figure of 46.6 per cent. may be taken as a maximum.

A certain number of the patients definitely attributed the onset of their nervous symptoms to some infective illness. It therefore appeared to be desirable to endeavour to find out if there was any causal relation between the effects of gas poisoning and infections, and the onset of symptoms of neurasthenia. With this objective in view the whole series of cases were analysed with a view to separating those who had recently been gassed or suffered from some infection previous to the onset of nervous symptoms from those in whom there was apparently no antecedent infection or gassing which could be related to the neurasthenia.

The result was as follows: Of the 100 cases, 52 gave a history of recent gassing or infection previous to the onset of neurasthenia, 48 gave no such history. The nervous symptoms were so diverse in character, and it is so impracticable to estimate them quantitatively, that it was not possible to classify the patients in order of severity of their symptoms, so that a table comparable to Table III cannot be given.

As stated above, the circulatory and respiratory mechanisms are not necessarily proportionately affected in mild cases of D.A.H., and with a view to obtaining further information in this connexion we have examined the condition of other reflexes in these neurasthenic patients. In making this attempt we were faced by the obvious difficulty that reflex responses cannot be estimated quantitatively. One has therefore to depend on some such arbitrary classification as brisk and sluggish or increased and normal.

On examining the clinical notes of the whole series of cases, it appeared that on the whole there was a tendency for the patients to show some exaggeration of the tendon reflexes, abdominal reflexes, etc. Tremor of hands and tongue was also frequently present. With regard, however, to both tremors and tendon reflexes, it was not possible to classify the patients into groups corresponding to the headings of Table III. There did not appear to be any relation between the severity of D.A.H. symptoms and the frequency of occurrence of exaggerated reflexes. Similarly, no relation could be observed between exaggerated reflexes and a history of recent gassing or infection.

With regard to tremors, however, it was evident that this symptom is more severe in cases showing well marked D.A.H. symptoms than in those who do not suffer in this way.

In view of the functional symptoms so frequently found in patients suffering from D.A.H. as a result of irritant gas poisoning, it was thought advisable to try to obtain some information as to the possibility of the upset of the Hering-Breuer reflex in these patients being of functional origin. An attempt in this direction was made at Taplow.

One of the gassed patients who showed the symptom of rapid shallow breathing to an extreme degree was hypnotized, and while in the hypnotic state was told to breathe slowly and deeply. In response he somewhat increased the depth of his respirations, but the rate remained quite unaltered. Consequently, when the experiment was terminated after a few minutes, he showed indications of over-ventilation. Immediately after he was roused from the hypnotic state the breathing became as shallow as before. The rate remained uninfluenced throughout. Since in this preliminary experiment there was no certainty as to the degree of hypnosis obtained, a second attempt to influence the rapid shallow breathing by hypnotic suggestion was made at the Ashhurst War Hospital.

The patient (Pensr. W.) joined the army in 1914, having previously always had good health. He gave a history of gradual onset of nervousness and of dysentery in France. Never gassed.

On admission his respirations were rapid and shallow, varying between about 40 and 53 per minute. His pulse rate also varied from about 80 to 120.

Hypnotic treatment was tried as follows:

January 3rd. First hypnosis: Not asleep; respirations 44 per minute.

January 5th. Second hypnosis: Slightly deeper; respirations 44 per minute.

January 8th. Third hypnosis: Relaxes well; respirations 44, varying slightly and going up to 46 just before he wakes spontaneously.

January 9th. Fourth hypnosis: Respirations 36, sitting quiet; 34 after three minutes.

January 11th. Fifth hypnosis: Seems to go fairly deep; feels warm glow in abdomen; cannot lift hand; respirations remain at 36 per minute, in spite of suggestion; respirations almost entirely costal.

Hypnotic treatment was then suspended for a time, and during the next few months he improved somewhat on the whole with rest, graduated exercise, and occasionally oxygen at night.

In May hypnosis was again tried by another medical officer daily for about a week. Respirations in waking state varied between 30 and 40 per minute. Under light hypnosis they could be reduced to 24, and on one occasion to 20 for about a minute, becoming more abdominal in character. The respirations would remain at about 25 per minute as long as he remained recumbent and relaxed, but returned to 30 to 40 as soon as he sat up.

CONCLUSIONS.

1. Of 100 patients admitted for "neurasthenia" 13 showed well marked symptoms of D.A.H., and 57 had the same condition in lesser degree.

2. The evidence available does not show the same causal relation between previous infection or gassing and "neurasthenia" as holds in the case of D.A.H.

3. No definite relation could be traced between the abnormal Hering-Breuer reflex of D.A.H. patients and the altered tendon reflexes of neurasthenia.

4. Attempts to control the Hering-Breuer mechanism by hypnotic suggestion were only partially successful. The respiration could be slowed for a short time while the patient was relaxed, but no permanent effect could be obtained.

We are indebted to the medical officers of the Ashhurst War Hospital for the clinical notes of the patients, and in particular to Major W. McDougall, F.R.S., who also carried out the first hypnotic treatment in the case of Pensioner W. We are also indebted to the Medical Research Committee for much help, and also to the British and Australian army authorities. To all these we wish to express our thanks.

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TWO CASES OF PNEUMO-BACILLARY MENINGITIS OF BACTERIOLOGICAL INTEREST.

BY

CAPTAIN H. A. HAIG, R.A.M.C.,

FORMERLY BACTERIOLOGIST TO NO. — GENERAL HOSPITAL, E.E.F.

THE following is an account of a bacteriological and pathological investigation of two cases of meningitis which occurred in No. — General Hospital, E.E.F., during 1917; they presented features of unusual interest, for the reason that the organism isolated from the first case closely resembled *B. pestis*, and in the second case the clinical aspects were so closely allied to those seen in cerebro-spinal meningitis that until the *B. pneumoniae* was isolated from the cerebro-spinal fluid the case was considered to be one of meningococcal infection.

CASE I.

Pte. X. was admitted to hospital suffering from an enlarged, hard, and painful gland in the posterior triangle of the neck; his temperature on admission was 102° F., and his mental condition was sluggish. In a short time (about one week) marked drowsiness supervened, and this passed on to coma, from which he did not recover. Shortly after admission the gland in the neck was incised; a sterile swab was passed deeply into the wound and sent in for bacteriological investigation. No obvious collection of pus was found upon incision.

An agar culture was made, and after forty-eight hours at 30° C. opaque, greyish-white shining colonies had appeared; a Gram preparation made from these colonies showed: (1) Cocco-bacilli, a few of them showing bipolar staining with fuchsin, and occurring at times in pairs. (2) Rod and filament forms. Both of these were negative to Gram staining. A guinea-pig inoculated with the culture died after six days; films made from the spleen (which showed, naked eye, numerous yellowish-white areas) and inguinal glands showed large numbers of coccobacilli, many of which showed definite bipolar staining with fuchsin or Loeffler's methylene blue.

Cerebro-spinal fluid from this patient was cultured upon agar and serum-agar at 30° C., and colonies similar to those obtained from the gland juice had grown after thirty-six hours; films made from these colonies showed Gram-negative coccobacilli and filament forms, with occasional bipolar staining in the former. The sugar reactions of a pure subculture gave glucose (ac.), lactose (ac.), mannite (ac.), no gas being formed in any. Gelatin was not liquefied, and upon potato the organism grew well.

At the end of the third week the patient died, the post-mortem findings being as follows: (1) Purulent exudate at base of brain:

(2) normal spleen; (3) other organs apparently no naked-eye change.

A rat was inoculated with pus from the base of the brain, and died after fourteen days; films made from the spleen and inguinal glands showed cocco-bacilli morphologically identical with those found in the guinea-pig. Cultures upon agar and serum agar of the pus from base of brain of the patient showed numerous colonies after twenty-four hours at 30° C., these being shown to be composed of an organism identical with that isolated from the gland in the neck.

In addition to the above investigations cultures were made from the blood of the patient during life and *post mortem* from the heart, but all proved negative for enterica or for septicaemia.

The interesting features about this case were:

1. The morphological similarity of the isolated organism to *B. pestis* (pleomorphism, bipolar staining). The cocco-bacilli seen in the smears of the guinea-pig's spleen and in those from the rat might possibly have been confused with *B. pseudotuberculosis rodentium*, but the animals were shown to be quite healthy before inoculation.

2. The meningococcus may at times assume a somewhat variable morphology, but the presence of bipolar staining and filament forms is unusual.

3. After about three subcultures upon agar the character of bipolar staining had disappeared, there being only deeply staining cocco-bacilli, occurring for the most part in pairs.

Finally, sugar reactions of a pure subculture corresponded in all respects with those given by *B. pneumoniae*—that is, a complete fermentation (AC + G) with all the ordinary sugars.

Clinically the case was unlike one of bubonic plague; the duration of the illness and the fact that the cervical glands are rarely affected (about 5 per cent. of all cases and then generally in children),¹ also the rarity of meningitis as a complication, all tended to negative the diagnosis of plague.

Cases of "larval plague" might possibly simulate such a case, but these are uncommon except when occurring during an epidemic.

B. pneumoniae varies somewhat in its cultural and morphological characters, according to the body medium in which it is growing—in this case a gland, and finally the cerebro-spinal fluid; bipolar staining is stated to be a fairly common variation in cases where the organism is passed through a guinea-pig or rat, and is a point which should be borne in mind.

CASE II.

Pte. Y. was admitted to hospital with clinical signs and symptoms pointing to a meningitis. No enlarged cervical glands were found and Kernig's sign was absent. A specimen of cerebro-spinal fluid was sent for cytological and bacteriological examination but gave entirely negative results, this specimen being quite clear and yielding upon centrifugalization only a few mononuclear leucocytes. A second specimen of cerebro-spinal fluid was sent next day, and this time was opaque, a film from the centrifugized deposit showing polymorphs in large numbers and a few coccoid and cocco-bacillary organisms which were Gram-negative as to staining. A culture of this deposit (pus) on Loeffler's serum gave, after twenty-four hours at 37° C., numerous opaque greyish-white shining colonies which proved to be composed of Gram-negative cocco-bacilli, occurring for the most part in pairs. The sugar reactions were as follows: Glucose, AC+G; lactose, AC+G; mannite, AC+G; saccharose, AC+G; dulcitate, AC+G; thus definitely showing that typical *B. pneumoniae* was the infecting organism. This strain grew well and rapidly upon agar at 37° C., and cultures showed a certain amount of pleomorphism.

This patient made a good recovery.

The author's thanks are due to Major Ferguson, R.A.M.C., Director of the Military Bacteriological Laboratory, E.E.F., for his assistance in carrying out the animal inoculations, etc., in connexion with Case I, and to Captain Campbell, R.A.M.C., of the same laboratory, for performing the *post-mortem* examination in the author's absence.

REFERENCE.

¹ Stitt, *Tropical Diseases*.

OF four hundred Serbian doctors in practice before the war, it is stated that in August fewer than one hundred were left.

The Paris Neurological Society is organizing an annual meeting which neurologists and psychiatrists of various countries will be invited to attend. The first will be held in Paris in July, 1921, and will extend over two days. The question proposed for debate is the clinical forms and the treatment of syphilis of the nervous system.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

RADICAL CURE OF FEMORAL HERNIA BY THE INGUINAL ROUTE.

AN operation for radical cure of femoral hernia I have performed for several years past has given perfect satisfaction and can be thoroughly relied on, provided there is asepsis. The method has been described in the *American Journal, Surgery, Gynecology, and Obstetrics*, September, 1918. The idea is to produce a closure on the ball valve principle.

The Operation.

Make a sufficient incision just below and parallel to Poupart's ligament. Expose the sac and its coverings. By gauze dissection free the sac and its coverings up to the femoral canal. Pulling on the sac, with a blunt dissector separate the attachments in the femoral canal. Open the sac and split it well up to the ring. Free adherent omentum and reduce the contents if possible. Now dissect up skin and fascia well above Poupart's ligament and incise the external oblique aponeurosis a quarter to half an inch above Poupart's ligament and parallel to it. Retract the cord or round ligament inwards. Incise the transversalis fascia from the spine of the pubes upwards and outwards, parallel to Poupart's ligament. Curved artery forceps are now passed up from the thigh through the femoral ring, external to the sac and coverings, to the abdominal aspect, and there the points of the forceps are exposed in order to see that the way is free and that there is sufficient room. From above, curved artery forceps are now passed downwards on to the thigh, and one half of the sac and its coverings are seized and pulled upwards to the abdominal aspect, and then the other half is made to follow suit. Examine the opening and free any further adhesions if present. Carefully, with needle and catgut, suture the neck of the sac high up, leaving the distal part intact. Now with needle and catgut stitch the sac and its coverings, till it assumes the shape of a ball, about half as big again as the abdominal aspect of the femoral ring. This size can be gauged with the finger. Finally, leave two long ends of this last piece of catgut at the distal portion of the ball. Curved forceps are now passed upwards from the thigh, through the canal, and the two terminal ends of catgut are seized and pulled downwards through the femoral canal on to the thigh. Gently pull these two ends of catgut till the ball of sac has been well wedged down beneath the transversalis fascia, which thoroughly blocks the opening at the abdominal aspect of the femoral ring. Thread one of the catgut ends on a needle, and this needle takes up a portion of the pectineal fascia, then the needle is withdrawn and the two ends tied together, thus steadying the ball valve of sac on the abdominal aspect of the femoral ring. The result is obvious that the more the patient strains the firmer the closure. Suture divided structures.

Patients can be guaranteed a cure, and can be got out of bed in a week. One of my last patients was a gentleman of about 70, whose hernia was strangulated, and he was home and walking about in a fortnight. The operation is a little tricky, and is best carried out by a surgeon of experience.

Edinburgh.

J. W. DOWDEN.

POLYCYTHAEMIA IN MITRAL DISEASE.

In April of this year a Chinese girl, 16½ years of age, was admitted to the Victoria Hospital, Hong Kong, under my care, complaining of great dyspnoea and distress on the slightest exertion. She had fainted several times lately. Both the girl and her mother were of the uneducated class, and a history was difficult to elicit, but it appeared that although the condition had existed for some years it did not date back to early childhood. The girl was slightly built, her breasts were quite undeveloped, and she had never menstruated.

The heart's apex beat was somewhat heaving and diffuse, and 4½ in. to the left of the mid line in the fifth intercostal space. The right border of the heart extended ½ in. beyond the right border of the sternum. There was a marked presystolic thrill and definite presystolic and systolic bruits at the apex; the latter conducted into the axilla. The second sound at the pulmonary base was much accentuated, and after any slight exertion a very soft, blowing, mid-diastolic murmur could be heard at the pulmonary base, conducted down the left border of the sternum. This apparently was due to a certain degree of incompetence of the pulmonary valve, induced by long-standing high pressure in the pulmonary circuit, secondary to the damaged mitral valve. No signs of congenital abnormality could be made out. There was a slight cough throughout, with a few crepitations at the bases of both

lungs. There was no enlargement of spleen or liver, and the urine was normal.

There was at no time any cyanosis; the girl always looked pale and her conjunctivae were almost blanched. Her fingers were long and tapering and there was no trace of clubbing. The blood count was, therefore, surprising:

Red blood corpuscles	...	...	7,600,000
White blood corpuscles	...	...	8,200
Haemoglobin	...	...	90 per cent.
Colour index	...	...	0.6

The girl remained in hospital for six weeks, and with good food, rest, and digitalis her condition improved considerably. Two further blood examinations were made, the figures on both occasions agreeing closely with the first count.

H. M. CAMERON MACAULAY, B.Sc., M.R.C.S.,

Hong Kong.

L.R.C.P., Captain R.A.M.C.(S.R.).

BEZOLD'S MASTOIDITIS WITHOUT HISTORY OF AURAL SUPPURATION.

C. F., aged 32, was referred to me by her physician, Dr. John Halahan. She was complaining of a severe headache which had been almost continuous for two or three days. Dr. Halahan, in the absence of any indication of aural trouble, and having exhausted other possible causes in his investigation, nevertheless suspected the mastoid as the source of trouble.

I learnt that the headaches had occurred at intervals in the last two and a half years, lasting some days and disappearing; there had been no discharge at any time from the ear; she had had measles in childhood. There was a perforation in the anterior and posterior inferior quadrants of the tympanum. The tympanic cavity contained a clear secretion. I was struck by the extreme sensibility of the posterior wall of the aural canal, out of all proportion to the small amount of inflammatory reaction. Pressure over the antrum and point of the mastoid caused pain.

In consultation with the physician we resolved on a radical operation, to which the patient objected. I saw her again five days later. The headache was very severe, the temperature was 38.5° C. in the axilla, and there were other symptoms of general infection. The aural canal was dry, but, as before, there was clear secretion in the tympanic cavity. The point of the apophysis was very tender, and there was marked tumefaction of the tissues of the neck—in short, an undoubted perforation of the inner surface of the apophysis.

I operated on the same day, making the usual retro-aural incision, and extending it below over the sternocleidomastoid. Deepening the incision in the neck I found multiple small abscesses and a large one internal to the muscle. The region around the antrum was very eburnated and contained caseous material, whilst that of the point of the mastoid consisted of large cells containing thick pus.

After removal of the diseased bone and the extirpation of the apophysis of the mastoid, I made a plastic flap and closed the post-aural incision completely. Drainage of the lower incision with iodoform gauze and tamponing through the aural canal completed the operation.

The patient complained of headache for three days afterwards, but in five weeks made an uninterrupted recovery.

DOUGLAS W. SIBBALD, M.D.,

Surgeon to the Ear, Nose, and Throat Department, Alvear Hospital, Buenos Aires, Republica Argentina.

ACUTE YELLOW "ATROPHY" DURING PREGNANCY TREATED BY CAESAREAN SECTION.

Mrs. B., aged 42, was admitted to the Oldham Union Infirmary on the evening of May 1st, 1919. She was seven and a half months pregnant, and had had four previous normal confinements, the last being twelve years ago. She had been vomiting for a fortnight. She was profoundly collapsed, constantly retching, and vomiting faecal, blood-stained material. She was deeply jaundiced, the tongue was dry and brown, the pulse feeble, and the temperature subnormal. There was tenderness of the liver and spleen, and the area of liver dullness was much diminished. The os uteri was not absorbed and the cervix was rigid. The urine contained a large amount of albumin, and crystals of leucin were found on microscopic examina-

tion. The mental condition of the patient was strange, and her conversation quite incoherent.

It was decided to evacuate the uterus as rapidly as possible, and Caesarean section, under ether, was performed by Dr. Frank Radcliffe, the visiting surgeon. The anaesthesia was as light as was consistent with safety. The fetus was found to have been dead some time, but the placenta, membranes, and endometrium were normal; the liver was tucked away under the ribs and was yellowish. At the conclusion of the operation the patient's pulse was 68, and the temperature 97.4°; she was very collapsed. She was put on rectal salines of glucose and sodium bicarbonate, and a mixture containing tincture of iodine (one minium) was administered hourly.

Vomiting ceased from the time of operation and the patient's recovery was rapid. She was almost ready for discharge, the wound having healed perfectly, when she had a sudden attack of dyspnoea and died in a few minutes, fifteen days after operation.

Post-mortem examination showed death to be due to pulmonary embolism. There was yellow mottling of the liver, which was soft and friable, and enlarged, its weight being 61 oz. The kidneys and spleen were congested. The heart was normal.

In the literature at my disposal I cannot find any reference to the treatment of this condition by Caesarean section, but the rapidity and safety by which delivery in this way could be effected were the deciding factors in the choice of treatment. I wish to thank Dr. R. P. Parker, the Superintendent Medical Officer, for permission to record this case.

MARY G. CARDWELL, M.B., Ch.B.,

Resident Assistant Medical Officer.

Union Infirmary, Oldham.

Reviews.

SURGERY OF THE LUNG AND PLEURA.

DURING the present century a great deal of attention has been paid to the surgery of the lungs and pleura, of late particularly so in the case of gunshot wounds of all sorts. These of course have received treatment for the most part near the battle front, or at any rate within fifty miles of the spot where they were sustained. Since the year 1916 both French and English army surgeons have done a vast amount of work illuminating the subject, and an excellent account of the present position of the treatment of wounds of the lung and pleura is furnished in Mr. Fagge's translation of Professor GRÉGOIRE and Dr. COURCOURX's French book¹ on the subject. This is divided into three parts, the first dealing with aseptic wounds of these tissues, the second with infected wounds, the third with the late sequelae of such wounds in general. It is not possible to summarize the conclusions reached by these authors or their translator, nor the evidence upon which they are based. It may be said that the expectant line of treatment generally adopted in the first half of the recent war was replaced in its second half by more active and ambitious forms of surgical interference—applied early in the severer cases, without much delay in those of intermediate type, and held in readiness for the milder cases. As Professor Duval put it, "every chest wound of serious aspect should be operated on"; and Mr. Fagge adds that effusions of blood into the pleura should be evacuated without undue delay by aspiration. The book is well written, and has been admirably translated; its subject matter is really part of the surgery of war, but much of it is applicable to cases of injury that are not rare even in times of peace.

The more ambitious and much more expensive volume on the *Surgery of the Lung and Pleura*,² by Mr. MORRISTON DAVIES, gives a detailed account of the whole subject, based mainly on the author's own experience in this branch of surgery; it is designed for the use of surgeons. Beginning with a chapter on anatomy, in which the bases

¹ *Wounds of the Pleura and of the Lung*. By R. Grégoire, Professor of the Faculty of Medicine, Paris, and A. Courcoux, Physician to the Hospitals of Paris. Translated and edited by C. H. Fagge, F.R.C.S. London: University of London Press, Ltd.; Paris: Masson et Cie, 1919. (Cr. 8vo. pp. xxiii, 222; 44 figures. 7s. 6d. net.)

² *Surgery of the Lung and Pleura*. By H. Morrison Davies, M.A., M.D., M.C., F.R.C.S., Hon. Captain R.A.M.C.(T.). London: Shaw and Sons, 1919. (Cr. 4to. pp. xxiv + 260; 80 figures. 25s. net, postage 6d. extra.)

of the two lungs are figured as extending equally low on the two sides behind (Fig. 9), a relation that is surely unusual, the author next discusses intrapleural pressures, the diagnosis and prognosis in pulmonary disease, diseases of the pleura, and injuries of the lungs and pleura. The rest of the volume is given to chapters on various affections of the bronchi and lungs, the longest dealing with pulmonary tuberculosis. The book is admirably illustrated, and most of the many reproductions of skiagrams it contains are very good. The author has had a large experience in the surgery of the lungs and pleura, and his very general exclusion of the work of other writers from the book has the advantage of unifying the volume and increasing the personal appeal it makes to the reader. But so much surgery of the lung has been performed in Scandinavia, for example, and so much artificial pneumothorax treatment for pulmonary tuberculosis, not to mention such by-products as Jacobaeus's method of dividing pleural adhesions by the actual cautery, that the reader may, perhaps, feel a little disappointed to find no mention of such work in Mr. Davies's extensive and very practical volume. Cases of pulmonary and pleural disease still fall mainly to the lot of the physician, and are passed on to the surgeon on the basis of the physician's interpretation of the symptoms and physical signs presented by the patient. It is for this reason that the collaboration of a physician and a surgeon found such a happy expression in the publication of Fowler and Godlee's classical textbook at the end of last century; it is possible that both the author and his readers have lost something through the lack of some such collaboration in the production of Mr. Davies's valuable monograph.

A complete contrast to the method of composition adopted by Mr. Morriston Davies is afforded by Professor Ricketts's collection of papers on the *Surgery of the Thorax and its Viscera*.⁸ Here the references to the literature of the subjects discussed may be counted by hundreds, and the text deals far more with the opinions and experiences of the authors quoted than with the observations made by Professor Ricketts himself. It is apparent that he must be an unusually attentive student of the literature of the subject in all its branches; thus, in his chapter on the surgery of the lymphatic glands and channels, he gives references to such topics as the development of the thoracic duct in the turtle. He does not, however, seem to mention in his text the treatment of fat embolism by establishing a temporary fistula of this duct in the neck, as advocated and practised by Wilms. The book consists of nineteen chapters, or reprinted lectures and addresses, dealing with the surgery of the thorax and the various viscera and structures it contains. It is full of useful information, and should form highly suggestive and instructive reading for surgeons interested in the many topics with which it deals.

ENGLISH PUBLIC HEALTH.

THE war brought home to the nation the fact that its greatest wealth consists in the health and well-being of the individuals composing it, and that the vast amount of physical and mental deterioration brought to light by recruiting medical officers must be arrested if our country is to keep its place in the van of the great peoples of the earth.

The appearance of the English Public Health Series is timely, and should help to educate and form a sound public opinion on all matters affecting the country's hygienic and sanitary requirements. The success of a Ministry of Health will in the end largely rest with the people themselves, and for their education this series should prove invaluable. The series is so planned as to appeal to the general reader as well as to the great body of professional and voluntary workers in the domain of public health. It is under the editorship of Sir MALCOLM MORRIS, and the introductory volume, which relates *The Story of English Public Health*,⁴ is from the able pen of the editor. The scope of the first volume can be inferred from the titles of the chapters composing the work. They are:

The "New Humanity," "The Nation's First Health Charter," "The Era of Inquiry and Education," "The Local Government Board," "Other Central Health Authorities," "Local Health Authorities," "Bacteriology," "The Crusade against Venereal Disease," "The Ministry of Health."

With his introductory volume Sir Malcolm Morris supplies a history in concise form of the evolution of State medicine from the times of Mead and Howard up to its latest phase—the establishment of a Ministry of Health. This little book will stimulate the advanced student to consult the works of Sir John Simon and Bannington, and will give the general reader an idea of the growth and development of our sanitary institutions. It gives a good idea of how much we owe to the enthusiasm of social workers and voluntary health associations as well as to official departments.

Sir Malcolm Morris's racy style and vivid presentation of the facts will grip the reader's attention from beginning to end. The introductory volume of the series gives a clear outline of what has been accomplished during the past three-quarters of a century, and holds out hope of a brighter future.

BUCHANAN'S MANUAL OF ANATOMY.

BUCHANAN'S *Anatomy*⁶ has now passed into a fourth edition, and may be said to have established itself as one of the standard British textbooks on the subject. It contains over seventeen hundred pages, and may be fairly credited with containing all the facts of the science any candidate for an examination or any general practitioner of medicine is ever likely to require. Despite its size it is the smallest of the standard textbooks—a no inconsiderable merit in these days of increasing demands on the student's time by teachers of other subjects. The book differs from other books of its class in that the subject matter is arranged topographically instead of systemically, in that there is included after the description of each region a guide to the dissection of the region, and finally in that the "old" nomenclature has been retained, a procedure in accordance with the views of the members of the Anatomical Society of Great Britain and Ireland as expressed at a recent meeting.

All the above features have much to commend them. If it be granted, as we think it must be, that a student can best pursue the study of anatomy in the dissecting-room, where he must perforce adopt the topographical method, it seems only rational to counsel him, when revising his knowledge of the subject in his study, to follow the lines along which he originally proceeded. The inclusion of the "guide to the dissection" has also the effect of enabling the student to revive more readily his memory of the actual dissection. On the other hand, the alternative systemic arrangement gives the student a complete account of each system, and consequently facilitates reference. Each arrangement has its advocates and no doubt its merits. The method of the present reviewer in acquiring as a student his knowledge of the subject was, apart from osteology and embryology, to study the subject topographically, and he has never seen any reason to regret the course or to advise a student to take any other.

As to the subject matter, the facts of anatomy as distinct from the theories are now so determinate that one textbook must be very much as another. The only difference that remains possible is in the illustrations, and in the way in which the facts are applied to clinical medicine and surgery. In this volume the publishers have had access to so many English and foreign publications, and the author and editors have shown so wise a discrimination in their selection, particularly in following the *via media* between schematicism and realism, that the illustrations may be said to form one of the most successful and attractive features of the book.

As to the application of anatomy to medicine and surgery, we venture to think that more might be done in this direction; and now that, as we understand from the preface, future editions will be edited by London teachers of anatomy, we hope that a serious attempt will be made to make the work still better adapted to the needs of students, the vast majority of whom will become medical

⁸ *Surgery of the Thorax and its Viscera: Symptoms, Diagnosis, Indications, and Treatment.* By Benjamin Merrill Ricketts, Ph.D., M.D., LL.D., F.A.C.S. Cincinnati: By the Author, 1918. (Demy 8vo; 16 figures.)

⁴ *The Story of English Public Health.* By Sir Malcolm Morris, K.C.V.O. English Public Health Series. London: Cassell and Co., Limited, 1919. (Cr. 8vo, pp. xi+166. 5s. net.)

⁶ *Manual of Anatomy: Systematic and Practical, including Embryology.* By the late Professor A. M. Buchanan, M.A., M.D. Fourth edition, edited by a Committee of Anatomists in London. London: Baillière, Tindall, and Cox, 1919. (Demy 8vo, pp. xii+1743. 677 figures. 30s. net.)

practitioners. Even as it is we consider the book is, on the whole, in size, arrangement, and illustrations, better suited for such students than any other book with which we are acquainted.

NOTES ON BOOKS.

*Pye's Surgical Handicraft*⁶ has now reached its eighth edition. Several chapters have been rewritten and new illustrations have been added. The new matter includes an account of Sir Robert Jones's methods of treating orthopaedic cases. The character of the work has in no way been altered, and its well-known standard of excellence is maintained. It has reappeared at an opportune moment. Those members of the profession who left their hospitals without holding a resident appointment and have now returned, can be strongly recommended to read this work before going into practice. The book should always be at hand as a guide to dressers and house-surgeons.

The third edition of Dr. FLEMING'S *Short Practice of Medicine*⁷ provides both the medical student and the practitioner of medicine with a first-rate summary of the subject. It is clearly written, dogmatic (as all textbooks should be), and up to date. The author has retained the old anatomical nomenclature, inserting a short glossary with the equivalents of many of the older names in the so-called international terminology. One may, perhaps, doubt whether his description of the murmur heard in cases of patent ductus arteriosus as "a loud, somewhat late systolic murmur" (page 333) is adequate; the murmur is, surely, continuous throughout systole and diastole, but much louder during systole. There is a general tendency to expand with each successive edition of the shorter textbooks of medicine. Dr. Fleming is to be congratulated on the success with which he has resisted this tendency. The book may be cordially recommended to medical students and practitioners.

The second edition of Miss E. M. MAGILL'S *Notes on Galvanism and Faradism*⁸ is intended for the use of masseuses preparing for the examinations in medical electricity now held by the Incorporated Society of Trained Masseuses. It deals only with the elements of the subject, and should be of some service to those for whom it is intended, as it is clearly written and well illustrated. One may doubt whether it is well to describe accumulators as galvanic cells (p. 34); the statement, "It is possible to interpose so great a resistance in a circuit that no ordinary voltage can force a current through it" (p. 36), is misleading; on p. 119, line 2, the words "similar to" should be deleted.

In *The Life of Matter*⁹ Dr. ARTHUR TURNBULL has written a general introduction to the subject of life for the general reader. It is based on observation and experiment and endeavours to cover in a short, suggestive, and highly illustrated manner the modern views of science on questions arising in every department of human activity. It is divided into three parts, the first giving some account of matter, the second details of the way in which its properties may be investigated; the third introduces the reader to the applications of science to the problems of life, speaking broadly. Dr. Turnbull has written for the benefit of those who want to learn how to connect modern progress in knowledge with the necessities of daily life. His style is intimate, his pages are replete with facts and explanations that should stimulate thought. The book ought to prove a success in its effort to popularize scientific method and its results.

⁶ *Pye's Surgical Handicraft*. A Manual of Surgical Manipulations. Minor Surgery, and other matters connected with the work of House-Surgeons and Surgical Dressers. Edited and largely rewritten by W. H. Clayton-Greene, B.A., M.B., B.C. Camb., F.R.C.S. Eng. Eighth edition, revised. Bristol: John Wright and Sons, Ltd. London: Simpkin, Marshall and Co., Ltd. (Demy 8vo, pp. xvi + 639; 362 figures, 11 plates. 21s. net.)

⁷ *A Short Practice of Medicine*. By Robert A. Fleming, M.A., M.D., F.R.C.P.E., F.R.S.E. Third edition. London: J. and A. Churchill, 1919. (Roy. 8vo, pp. xxiii + 675; 64 figures. 21s. net.)

⁸ *Notes on Galvanism and Faradism*. By E. M. Magill, M.B., B.S. Lond., D.P.H., R.C.S.I. Hons. Second edition. London: H. K. Lewis and Co., Ltd. 1919. (Cr. 8vo, pp. xvi + 224; 67 figures. 6s. net.)

⁹ *The Life of Matter*. An Inquiry and Adventure. Edited by Arthur Turnbull, M.A., B.Sc., M.B. Glasg. London: Williams and Norgate, 1919. (Mod. 8vo, pp. 324; 322 figures, 4 coloured plates. 7s. 6d. net.)

AN institute of biology and serumtherapy has recently been founded in Madrid. The director is Professor Dr. Gustavo Pittaluga y Fattorini, professor of parasitology in the university.

MINISTRY OF HEALTH.

CONSULTATIVE COUNCILS.

THE Ministry of Health made the following announcement on September 29th:

When the Ministry of Health Bill was before Parliament, it was made clear that the Ministry when established would seek advice on a variety of subjects within its province from advisory bodies chosen so as to include men and women with full practical knowledge of the questions on which they would be asked to advise. These bodies are called in the Act Consultative Councils, and their constitution and functions will be found in the Order in Council of August 18th, 1919. In the case of England they will be four in number, and will consist of the Consultative Council on Medical and Allied Services, the Consultative Council on National Health Insurance, the Consultative Council on Local Health Administration, and the Consultative Council on General Health Questions. The secretary will be Mr. Michael Heseltine, C.B., Ministry of Health, Whitehall, S.W.1. The councils will consist of twenty members each, including a chairman and vice-chairman, but they may for special purposes appoint committees on which other persons may be co-opted, so that particular problems will be considered with the help of those who have made them a special study.

The membership of the Consultative Council on General Health Questions, which will also be twenty in number, is not yet completely settled, but at least half of its members will be women.

CONSULTATIVE COUNCIL ON MEDICAL AND ALLIED SERVICES.

To this Council will be referred such problems as the national development and extension of medical, nursing, and midwifery work, and it is proposed that for some purposes it should, in accordance with the arrangement outlined above, act through committees more specialized than the Council itself. Its members have been chosen from the fields of specialist medicine and surgery, general practice both private and insurance, the public health services, the work of women in medicine (particularly the care of mothers and infants), hospital administration, and the application of other branches of science to medicine.

It is intended that when questions are under consideration that specially affect the nursing and midwifery services of the country the Council should be assisted by the appointment of a committee consisting partly of its own members, but also including practising nurses and midwives and other persons, not members of the Council, who have devoted themselves specially to the study of nursing and midwifery questions.

The Council will consist of the following:

Chairman: Sir BERTRAND DAWSON, G.C.V.O., C.B., M.D., F.R.C.P.,

Physician to the London Hospital; Dean of the Faculty of Medicine, University of London.

Vice-Chairman: Colonel C. J. BOND, C.M.G., F.R.C.S., F.L.S.,

Honorary Consulting Surgeon to the Leicester Infirmary; Member of the Medical Research Committee of the Ministry of Health.

NORMAN G. BENNETT, Esq., M.A., M.B., B.Ch., L.D.S. Eng.,

Dental Surgeon to the Royal Dental Hospital and to St. George's Hospital, London; Chairman of the Representative Board of the British Dental Association.

R. A. BOLAM, Esq., M.D., B.S., M.R.C.P.,

Honorary Physician to the Skin Department, Royal Victoria Infirmary, Newcastle-on-Tyne; Professor of Medical Jurisprudence in the University of Durham.

VICTOR BONNEY, Esq., M.D., B.Sc., M.S., F.R.C.S.,

Assistant Obstetric and Gynaecological Surgeon to the Middlesex Hospital; Surgeon to the Chelsea Hospital for Women.

T. EUSTACE HILL, Esq., O.B.E., M.B., C.M., B.Sc.,

Medical Officer of Health and School Medical Officer for the County of Durham; Medical Adviser to the Durham Insurance Committee; Professor of Hygiene and Public Health in the University of Durham.

F. GOWLAND HOPKINS, Esq., M.A., D.Sc., F.R.S., F.R.C.P.,

Professor of Biochemistry in the University of Cambridge; Official Analyst to the Home Office; Representative for Cambridge University on the General Medical Council; Member of the Medical Research Committee of the Ministry of Health.

Miss M. H. F. IVENS, M.B., M.S.,

Honorary Medical Officer for Diseases of Women to the Stanley Hospital, and Honorary Surgeon to the Samaritan Hospital, Liverpool; former President of the Northern Association of Medical Women.

- Miss JANET E. LANE-CLAYPON, M.D., B.S., B.Sc.,
Dean and Lecturer on Hygiene of the King's College for
Women, London.
- A. LINNELL, Esq., M.R.C.S.,
Chairman of the Insurance Committee and Secretary of the
Panel Committee for Northamptonshire.
- H. G. DAIN, Esq., M.B., M.R.C.S., L.R.C.P.,
Chairman of the Insurance Committee and Chairman of the
Panel Committee of the City of Birmingham.
- A. FULTON, Esq., M.B., B.Ch.,
Vice-Chairman of the City of Nottingham Health Committee;
Chairman of the Nottingham Insurance Committee.
- Sir WILLIAM S. GLYN-JONES,
Secretary and Registrar of the Pharmaceutical Society of
Great Britain; Alderman of the Middlesex County Council;
formerly Chairman of the Middlesex Insurance Committee.
- T. A. GOODFELLOW, Esq., M.D., B.Sc., M.R.C.S., L.R.C.P.,
Member of the Insurance Committee for the City of Man-
chester; Chairman of the Manchester Local Medical and Panel
Committees.
- G. E. HASLIP, Esq., M.D., D.P.H., M.R.C.S., L.R.C.P.,
Treasurer of the British Medical Association, and former
President of the Metropolitan Counties Branch of the
Association.
- J. A. MACDONALD, Esq., M.D., LL.D., M.Ch.,
Honorary Physician to the Taunton and Somerset Hospital;
direct Medical Representative for England on the General
Medical Council; Chairman of Council of the British Medical
Association.
- E. W. MORRIS, Esq.,
Secretary of the London Hospital, Whitechapel, E.
- JOHN ROBERTSON, Esq., C.M.G., O.B.E., M.D., M.B., B.Sc.,
Medical Officer of Health for the City of Birmingham, former
President of the Society of Medical Officers of Health.
- T. W. SHORE, Esq., M.D., M.R.C.S., L.R.C.P., B.Sc.,
Dean of the Medical School and Lecturer on Comparative
Anatomy and Biology to St. Bartholomew's Hospital.
- Sir WILLIAM A. TILDEN, D.Sc., F.R.S., LL.D.,
Emeritus Professor in the Imperial College of Science and
Technology, formerly Dean and Professor of Chemistry of the
Royal College of Science, London.

CONSULTATIVE COUNCIL ON NATIONAL HEALTH INSURANCE.

This Council will, as its name indicates, consider
problems of approved societies' work arising in the
administration of the cash benefits (sickness, disablement,
and maternity) by approved societies under the Insurance
Acts. Its membership includes persons familiar with the
work of all the principal types of approved societies, and
is as follows:

- Chairman: T. NEILL, Esq., J.P.,
Chairman of the National Amalgamated Approved Society.
- Vice-Chairman: The Rev. Canon F. C. DAVIES,
Past Grand Master of the Manchester Unity; President-elect
of the National Conference of Friendly Societies.
- FRANCIS ASKEW, Esq., J.P.,
Secretary of the United Ancient Order of Druids; Past Pre-
sident of the National Conference of Friendly Societies.
- J. BADLAY, Esq.,
Royal Liver Friendly Society.
- F. W. DANIELS, Esq.,
Secretary of the Ideal Benefit Society.
- JAMES DEVONSHIRE, Esq.,
Managing Director of Metropolitan Electric Tramways,
London, and Suburban Traction Co., London United
Tramways.
- GEORGE DEW, Esq., J.P.,
Past Chairman of the Hearts of Oak Benefit Society; Parlia-
mentary Agent for the National Conference of Friendly
Societies.
- A. P. DIXON, Esq.,
Secretary of the Eastern Counties Approved Societies and of
the National Association of Approved Societies for the Eastern
Counties.
- Miss FLORENCE,
Secretary of the Women Clerks and Secretaries Friendly
Society.
- A. HENRI, Esq.,
Secretary of the Liverpool Victoria Approved Society.
- HENRY LESSER, Esq.,
Secretary of the South Metropolitan Gas Company's Em-
ployees' Provident Society and President of the Federation of
Employers Approved Society.
- Miss MARY R. MACARTHUR,
Secretary of the National Federation of Women Workers.
- WILLIAM MARLOW, Esq.,
Secretary of the Ancient Order of Shepherds; Parliamentary
Agent for the Ancient Order of Foresters, and Parliamentary
Agent and Secretary of the National Conference of Friendly
Societies.
- R. J. MELLER, Esq.,
Assistant Secretary of the Prudential Approved Societies.
- W. F. PURDY, Esq.,
Executive Council of Ship Constructors and Shipwrights'
Association.
- P. ROCKLIFF, Esq.,
Secretary of the New Tabernacle Approved Society; Secretary
of the Joint Committee of Approved Societies.
- Councillor J. H. STEELE, J.P.,
President of the National Conference of Friendly Societies,
1918-19; Treasurer, Sons of Temperance Approved Society.

- The Right Hon. J. H. THOMAS, M.P.,
Secretary of the National Union of Railwaymen.
- C. TUCKFIELD, Esq.,
Secretary of the National Deposit Friendly Society.
- G. H. WARNE, Esq.,
Executive of the Northumberland and Durham Miners'
Association.

CONSULTATIVE COUNCIL ON LOCAL HEALTH ADMINISTRATION.

This Council will consider the administrative problems
arising out of proposals for the development and extension
of health services, and its membership has been composed
so as to include persons familiar with the work of local
authorities of various types, the Insurance Committees,
and the Poor Law guardians. The membership of the
Council is as follows:

- Chairman: Sir W. RYLAND ADKINS, M.P., J.P.,
Vice Chairman, Northamptonshire County Council.
- Vice-Chairman: W. T. POSTLETHWAITE, Esq., LL.B., O.B.E.,
Clerk to the Swinton and Pendlebury Urban District Council;
Late Chairman of the Executive Council of the Association of
Urban District Councils.
- E. R. ABBOTT, Esq.,
Clerk to the Middlesex Insurance Committee.
- J. R. ANDERTON, Esq.,
Chairman of the Public Health Committee of the London
County Council.
- FRANCIS BATE, Esq.,
Chairman of the Berkshire Insurance Committee.
- Miss BROADBENT,
Member of the Marylebone Board of Guardians; Chairman of
the Marylebone Infirmary Committee, and Member of the
Metropolitan Asylums Board.
- A. B. BRYCESON, Esq.,
Town Clerk of Woolwich.
- NEVILLE CHAMBERLAIN, Esq., M.P.,
Late Lord Mayor of Birmingham.
- Sir HARCOURT E. CLARE,
Clerk of the Peace for Lancashire and Clerk to the Lancashire
County Council.
- Sir JAMES CURTIS, K.B.E.,
Clerk to the Guardians of the Birmingham Union.
- Mrs. DIMSDALE,
Cambridgeshire County Council.
- Sir ROBERT E. FOX,
Town Clerk of Leeds.
- Rev. R. V. O. GRAVES, J.P.,
Chairman of the Rural District Council of Maldon (Essex).
- W. GILL HODGSON, Esq.,
Clerk to the Liverpool Insurance Committee.
- A. J. LEES, Esq.,
Secretary of the Urban and Rural District Councils'
Association.
- Sir CHARLES LONGMORE, K.C.B.,
Clerk of the Peace; Clerk of the County Council and Clerk to
Lieutenancy for Hertfordshire.
- Sir WILLIAM MIDDLEBROOK, M.P.,
Late Lord Mayor of Leeds.
- Sir DOUGLAS NEWTON, K.B.E.,
Vice-Chairman, Cambridgeshire County Council.
- R. B. NICHOLSON, Esq., O.B.E.,
Town Clerk of Lowestoft.
- Lieut.-Colonel SEYMOUR WILLIAMS,
Clerk of the Warrley Rural District Council; Chairman of
the Executive Council of the Rural District Councils'
Association.

WELSH CONSULTATIVE COUNCIL.

In the case of Wales there will be one Council consisting
of thirty members. It will give advice and assistance in
connexion with such matters as relate to National Health
Insurance (approved societies' work), medical and allied
services, local health administration, and general health
questions in Wales and Monmouthshire. The members of
the Council will be as follows:

- Chairman: Sir EDGAR R. JONES, K.B.E., M.P.
- Vice-Chairman: Sir WALTER P. NICHOLAS,
Clerk to the Rhondda Urban District Council.
- Mrs. L. ANDREWS,
Pentre, Rhondda Valley.
- Mrs. BREESE,
Member of North Wales Nursing Association.
- Miss CROWTHER,
Inspectress under South Wales Nursing Association.
- WILLIAM DAVID, Esq., J.P.,
Past High Ruler of the Independent Order of Rechabites.
- Miss A. M. DAVIES,
Honorary Secretary of the North Wales Nursing Association.
- IDRIS DAVIES, Esq., J.P.,
Secretary of the Breconshire Association of Friendly Societies.
- Mrs. F. ROSE DAVIES,
Member of the Aberdare Maternity Committee.
- D. W. EVANS, Esq.,
General Director of the Welsh National Memorial Association.

- J. HARRISON EVANS, Esq.,
Divisional Manager of the Pearl Assurance Company.
- LEOLIN FORESTIER-WALKER, Esq., M.P.,
Member of the Monmouthshire County Council.
- E. P. HARRIS, Esq., J.P.,
Member of the Pembrokehire County Council.
- EDWARD HARRIS, Esq.,
Clerk to the Swansea Rural District Council.
- W. HARRIS, Esq.,
Secretary of the South Wales Labour Federation.
- Lieut.-Colonel D. HEPBURN, C.M.G., V.D., M.D., C.M.,
Dean of the Faculty of Medicine, University College, Cardiff.
- D. ROCYN JONES, Esq., M.B., C.M., D.P.H.,
County Medical Officer of Monmouthshire.
- HUGH JONES, Esq., M.B., C.M., D.P.H.,
Chairman of the Merionethshire Panel Committee.
- R. T. JONES, Esq., J.P.,
Secretary of the North Wales Quarrymen's Union.
- LEE JOSEPH, Esq., M.P.S., J.P.,
Past President of the South Wales and Monmouthshire Pharmacists' Association.
- F. LLEWELLYN-JONES, Esq., LL.B.,
Chairman of the Flintshire Insurance Committee.
- Lady ADA MATHER-JACKSON,
Member of the Priory for Wales of the Order of St. John of Jerusalem.
- Lieut.-Colonel EWEN J. MACLEAN, M.D., M.Ch., M.R.C.P.Lond.,
F.R.S.(Edin.),
Honorary Gynaecologist, King Edward VII's Hospital, Cardiff.
- J. W. MORRIS, Esq.,
Chairman of Merthyr Tydfil Insurance Committee.
- E. LL. PARRY-EDWARDS, M.D., D.P.H.,
County Medical Officer of Carnarvonshire.
- ELLIS W. ROBERTS, Esq.,
Member of Carnarvonshire County Council.
- LAWSON TAYLOR, Esq.,
Town Clerk of Wrexham.
- D. LLEUFER THOMAS, Esq., M.A.,
Chairman of Welsh Housing and Development Association.
- W. E. THOMAS, Esq., C.M., M.D., J.P.,
Chairman of Glamorganshire Panel Committee.
- D. T. WILLIAMS, Esq.,
Ex-Chairman of the Rhymney Urban District Council, and
Member of South Wales Miners' Federation.

Mr. Percy E. Watkins, Welsh Board of Health, City Hall, Cardiff, will be the Secretary of the Welsh Consultative Council.

ESTABLISHMENT OF A VENEREAL PREVENTION COMMITTEE.

In January last an Interdepartmental Committee was appointed, with Mr. Waldorf Astor as chairman, to report on the means which could be taken to mitigate the dangers of the dissemination of tropical and other diseases among the civil population from the process of demobilization and the abnormal shifting of population during the restoration of industry to peace conditions. The committee considered that the objects coming within the terms of reference were threefold:

1. To institute inquiry and to make recommendations with a view to preventing the spread of infection on demobilization.
2. To consider and advise as to the co-ordination of the administrative activities of the departments concerned and to render assistance by the interchange of information.
3. To consider whether any special methods of preventing and treating various infective conditions might be required in consequence of demobilization, or of the occurrence from time to time of epidemics or other disturbing factors in the civil community.

The committee first turned its attention to the prophylaxis of venereal disease, and the memorandum of which an account was given in our issue of September 13th (p. 349) was the result of its inquiries. Its conclusions with regard to the distribution of prophylactics before exposure to infection were: that certain drugs, if properly applied, were efficacious, but that if not properly or skillfully applied their efficacy could not be relied upon; that the issue of prophylactic packets tended to give rise to a false sense of security; that the most carefully organized packet system, such as exists in the army, could not produce such a general reduction in incidence as to counteract the disadvantages; and that energy should not be dissipated on measures of doubtful value, but concentrated on wise propaganda and the provision of early, prompt, and skilled treatment. In view of the considerations mentioned and of the administrative and social difficulties involved, the committee considered that "the official application of a packet system to the civil community is neither desirable nor practicable."

The report has led to the publication of the following manifesto:

In view of the White Paper recently presented to the Ministry of Health containing the decision that the official recognition of self-disinfection in civilian venereal disease is "neither desirable nor practicable," we think it urgently necessary, in the interests of the national and racial health, to ask our fellow citizens for the action which the official forces of the nation find themselves unable and unwilling to take.

There are evidently only three possible courses:

- (1) To take no action against venereal infection, apart from moral teaching.
- (2) Delayed disinfection (early treatment centres).
- (3) To teach and provide immediate self-disinfection.

We all agree in rejecting (1).

The White Paper recommends (2), but the provision of centres for delayed disinfection is not and never can be adequate. The London County Council, the greatest urban authority in the country, has rejected the scheme. No method is even suggested that could be worked in rural districts. The practical difficulties in town and country alike are insuperable. Time, the vital factor, is necessarily lost in every case.

There remains only (3), immediate self-disinfection. We maintain that venereal disease is thus preventable; that authoritative teaching on the subject is urgently required; and that the means, together with approved instructions for their use, should be readily accessible to the public.

We fail to recognize any moral distinction between the provision of delayed disinfection at centres and the provision of immediate self-disinfection, and we decline the grave moral responsibility of attempting to conceal the knowledge which is capable of saving myriads of the innocent, living and unborn, from the most hideous disease of body and mind.

We have provisionally formed ourselves into a Venereal Prevention Committee, to whom inquiries may be sent at this address.

- WILLOUGHBY DE BROKE (Chairman).
H. BRYAN DONKIN, M.D., F.R.C.P.
R. MURRAY LESLIE, M.D.
HARVEY LITTLEJOHN, F.R.C.S., F.R.S.E.
ROBERT LYSTER, M.D.
OTTO MAX, M.D.
FREDERICK W. MOTT, K.B.E., M.D., F.R.S.
G. ARCHDALL REID, M.B., F.R.S.E.
HUMPHRY ROLLESTON, K.C.B., M.D.
C. W. SALEeby, M.D., F.R.S.E.
JAMES H. SEQUEIRA, M.D., F.R.C.P., F.R.C.S.
DAVID WATSON, M.B., C.M.
R. M. WILSON, M.B.
HUGH WATSEY BAYLY, M.C., M.R.C.S.(Hon. Sec.).

143, Harley Street, W.1.

A Method of Propaganda.

Mr. William Heinemann has in the press a book by Sir Archdall Reid, for which Sir Bryan Donkin has written an introduction, on *The Medical Prevention of Venereal Disease*. The book will include an examination of the memorandum referred to above. The author in a recent letter to *The Times* put forward the proposal that "brief and clear instructions for swift personal disinfection shall be posted in public lavatories," and summarized certain evidence given to the Interdepartmental Committee as follows:

"Instructions, of which the really effective part was conveyed by posters, were given to soldiers inhabiting a group of barracks in a large seaport. The force usually present averaged 2,000, and 20,000 passed through these barracks in two years. Not one man who followed instructions acquired disease, and only seven men, all of whom failed to follow instructions, acquired disease. The rate of infection was therefore 1.75 per 1,000 per annum. In a still larger naval unit not one man who followed instructions acquired disease, and only one man failed to follow instructions. In a large military hospital for venereal diseases not one man of all those who passed through it had acquired disease after immediate disinfection, but nearly every patient had practised 'early treatment.' In India and South Africa results equally remarkable have been achieved by the same simple and inexpensive method. I believe there is not a record, a single instance, of the failure of the method of quick disinfection. The operation is actually about as difficult and dangerous as washing the hands with soap and water."

A Central Hygienic Institute for Infectious Diseases has been established by the Chinese Government. A Central Bureau for the Prevention of Plague was created a year ago, and Mr. Liu Tao Jen, Chief of the Sanitary Department, Nei Wu Pu, and Dr. Yen Chi Chung, Director of the Peking Isolation Hospital, were appointed superintendents.

British Medical Journal.

SATURDAY, OCTOBER 4TH, 1919.

THE MEDICAL CONSULTATIVE COUNCIL.

THE names of the members appointed to the first Medical Consultative Council to form a part of the Ministry of Health are published at page 443. We believe that the medical profession will regard its constitution as on the whole satisfactory. The seventeen medical members seem to represent as fully as was possible within that very limited number its various activities and interests—clinical teaching and investigation, insurance practice and private practice, dental surgery and public health. The inclusion of a pharmacist is appropriate, and if it was considered desirable to go outside the profession itself for an expert in hospital administration a better choice could not have been made than the House Governor of the London Hospital; but the reason for the nomination of a retired professor of chemistry is less obvious. Professor Hopkins represents chemical science in its direct application to medicine, and if a lay representative of science was deemed necessary it would have been wiser to look to some other department, such as physics, which in future must bulk even larger in medical education and practice.

The profession will be gratified to learn that Sir Bertrand Dawson has consented to become Chairman of the Council; a better selection, we venture to say, could not have been made. During the discussions which preceded the introduction of the bill to establish the Ministry he showed that he possessed a strong grasp of principles, a clear view of the important, nay determining, share medicine should have in guiding the policy of the Ministry, and a statesmanlike understanding of practical possibilities. In Mr. C. J. Bond of Leicester the Council has as its vice-chairman a surgeon of scientific eminence, whose width of view and sobriety of judgement have earned for him the respect of the profession and the warm regard of all who know him.

The scheme for a Ministry of Health, approved by the Council of the British Medical Association in January, 1918, recommended that an Advisory Council should be by statute an integral part of the Ministry, and that it should be composed of representatives of all the interests concerned, including the medical profession. The idea was further defined by Sir Bertrand Dawson in his Cavendish Lectures published in our columns on July 13th, 1918, when he said: "The Ministry will need to draw to its counsels representatives from all departments of medicine, both preventive and curative, and these counsellors must have real power, with direct access to the Minister." In an introduction written for the pamphlet in which the lectures were reprinted, Sir Bertrand Dawson, who it will be remembered is a member of the Council of the British Medical Association, discussed the principles which should govern the constitution of the Ministry of Health and showed that their application required that a medical advisory council should be a part of the permanent organization of the Ministry. "To be a reality," he continued, "such council must meet regularly, be empowered to seek information from the heads of departments, have direct

access to the Minister and the right to initiate advice." The view thus expressed was endorsed by the joint committee of the English Royal Colleges, the British Medical Association, and the Royal Society of Medicine. The words we have quoted well express the functions the Medical Consultative Council is designed to fulfil, and as we have said, it is eminently satisfactory that one who took so influential a part in the discussions which preceded the institution of the council should be its first chairman.

We will not hesitate to say that the establishment of this Consultative Council marks an epoch in the relation of the medical profession to the government of this country, and will be accepted by the profession as evidence of a desire to provide machinery through which it can in its collective capacity be brought into organic relation with health administration, using that term in its widest sense. It is a new departure fraught with great possibilities of good for the people, and must without doubt affect the line of development of medicine in this country, widening its sphere of influence and increasing its opportunities. It will, we may reasonably hope, mark the end of a parliamentary tradition which constantly tended to place Parliament and the profession in apparent antagonism. Hitherto changes have too often been imposed on the profession from without by the state—that is to say, by the party which had a majority in the House of Commons—without consultation with the general body of the profession, which has thus been forced into an invidious position, being compelled to oppose a scheme it may have approved in principle because the method of application, upon which it alone was capable of forming an opinion, was unsound. "Who sees the end sees the means" has not been true of Governments in the past in respect of health legislation. Commonly they have declared the end before discussing the means with the profession through whose exertions and hearty co-operation only was it possible smoothly and quickly to attain that end.

The establishment by statutory authority of councils to advise a Minister is a principle which if not altogether without some precedent is certainly a novelty in constitutional practice when applied to the machinery of a permanent Ministry. The proposal, though widely approved, came in for a good deal of criticism in both Houses of Parliament on the ground that it would tend to diminish ministerial responsibility. When, however, it is remembered that any proposal of the Council accepted by the Minister must run the gauntlet of the Cabinet, and, in the matter of finance, of the House of Commons, it will be seen that there is very little substance in this objection; whereas the great advantages that may confidently be expected to flow from bringing the Ministry into actual contact with a council composed of members of the medical profession are obvious. The anxiety of purists in constitutional practice has been allayed by the terms of the Order in Council, which directs that the members of the Councils shall be appointed by the Minister. Though the Medical Consultative Council is thus not a representative body in the sense of a body elected by the votes of members of the profession, the Minister gave his approval to and employed machinery for ascertaining the wishes of representative professional organizations. A large number of such bodies, corporate and voluntary, including the Royal Colleges as well as the British Medical Association, were invited to submit names of persons they severally considered suitable to serve on the Consultative Council. The long list thus obtained was referred to a special selection committee, also suggested by medical organizations. This

selection committee, in framing its recommendations, endeavoured to give representation to varieties of knowledge and experience and to different parts of the country in so far as this was compatible with a council of reasonable size. It was with this list before him that the Minister made the appointments now announced. This precedent will, we may anticipate, be followed in future nominations to the Medical Consultative Council.

The Council is not an executive body, its duties are solely advisory. Health administration must remain in the hands of local authorities, and the administrative work of the Ministry must be carried out by its own administrative staff.

Having thus stated what the Medical Consultative Council is not, we may consider the nature of the duties placed upon it. Its responsibilities are very great, being no less than to bring to bear on the policy of the Ministry the considered opinion of the profession with regard to those social and scientific matters on which it is competent to speak. It is only necessary to look at the terms of the Order to find justification for this statement. In the first place, the Council is to report upon questions arising in connexion with the drafting of Orders in Council, and of regulations, orders and special orders, proposed to be made by the Minister; it may be assumed that the Minister will submit such documents to the Council, although this is not specifically laid down. The Minister will also refer to it "questions involving consideration of important principle and scientific difficulty," and any other questions in connexion with such of his powers and duties as relate to matters affecting or incidental to the health of the people; the Minister is charged to place at the disposal of the Council the information required for the consideration of the matters thus referred to it. Two other weighty responsibilities rest upon the Council, and their wise discharge must have a great effect in the bettering of health administration, and incidentally, as has been said, on the development of medical science and practice in this country, and the line along which this development shall proceed. The Council may ask the Minister to refer to it any matter appertaining to its functions, and the Minister must consider this request; further, the Council may, on its own initiative, present to the Minister a report on any matter appertaining to its functions, even though it has not been made the subject of reference to it by the Minister, and the Minister is required to receive and consider such report.

In brief, the Consultative Council has direct access to the Minister and the power to initiate advice. Thus the Council occupies a position of independence which, we conceive, will greatly increase its power for good. The larger and more embracing the Ministry of Health becomes the greater will be its influence on medical affairs, and it is essential that this influence should be along the lines of free natural development of a progressive science and art—for medicine is both. There is no profession which comes into such intimate relation with men's businesses and bosoms, none which depends more for its efficiency on the application of science to practice, and none which is in more need of living knowledge and sympathy from those who have a part in controlling its destinies. While having the highest admiration for the ability and public spirit of the distinguished medical staff of the Ministry of Health, we are convinced that it will be the better for, and have no doubt that it will welcome, suggestions and experience from a body of men and women drawn from the larger world of medicine outside the Ministry. The new Council

will look at matters submitted to it from its own practical point of view, and will be able to point to other matters not yet, perhaps, ripe for legislative or administrative action, but in its opinion needing investigation, so that when that time does come full information may be available for the Ministry and the Legislature. There will be no divergence of aim or purpose between the Consultative Council and the permanent medical staff, and it will require no more than simple statesmanship so to co-ordinate their methods and labours as to make the two bodies helpful to each other and to promote unity of effort.

It is important, too, that the profession as a whole should appraise the aims and functions of the Consultative Council aright, not expecting from it the impossible, but realizing that it is there to give advice, and thereby help to mould sound policy—not there to administer, and still less to exercise patronage or promote interests.

THE STRIKE.

THE strike has come at an unfortunate time for the medical schools. A number of the London schools had made arrangements for addresses and prize distributions at the opening of the new winter session, and in spite of transport difficulties some of the opening ceremonies were held on the afternoon of October 1st. Thus, Dr. Addison gave the introductory address at the London (Royal Free Hospital) School of Medicine for Women, Lieut.-General Sir John Goodwin distributed the prizes at St. Mary's Hospital, and Dr. S. Squire Sprigge gave an address at St. George's Hospital. The distribution of prizes by Sir Auckland Geddes at Charing Cross Hospital has been postponed indefinitely. The students of this hospital, together with those from St. George's and the Westminster Hospitals, take their first two years at King's College, which is closed for the duration of the strike, but the final year lectures at Charing Cross Hospital will begin on October 6th. The opening of the session at University College has been deferred one week, the arrangements made for the present week having been transferred as a whole to the week beginning next Monday. Lectures began at St. Bartholomew's Hospital on October 2nd, but they will not be in full swing until next week. At the Middlesex Hospital the opening ceremony has been postponed, but the medical school reopened on October 1st, and classes began that day. At St. Thomas's and Guy's Hospitals the work of the winter session began on October 1st. At the London Hospital the session reopened formally on October 1st, but the ordinary classes have not yet commenced, and special arrangements are being made in order that students unable to reach the hospital may not suffer by their enforced absence. All the old students' dinners arranged for this week have been postponed owing to the strike. The chief immediate risks to the public health arising out of the strike are in relation to the supply of milk—especially for children—and to scavenging. So far the efforts of the Ministry of Food to bring milk for distribution in populous centres have been attended with considerable success. The official accounts of the milk distribution in London on Monday show that about two-thirds of the emergency supply was received and distributed; it is hoped that with the development of road transport a full emergency supply will be forthcoming within a day or two. Somewhat similar accounts from the country are received, stating in general that the distribution of milk in the large centres is going on very well. Priority schemes have been provided for in many localities during periods of shortage, under which children and invalids have first claim on the available supply; and food committees in certain districts have been authorized to put

priority schemes into force during the present crisis. Appeal is made for voluntary restriction of consumption by adults, and we would add any force there is in our opinion to that appeal. Its force is greater on behalf of children than of invalids. The effects of depriving infants artificially fed and young children of fresh milk would be serious, and would not disappear until long after the supply had been restored. It would appear that scavenging has not suffered so far; but it must be remembered that should the supply of coal greatly diminish, those areas and towns which depend upon pumping for their water supplies may be placed in a very awkward position. In London, Manchester, and a few other big centres, the difficulty of getting from the suburbs is considerable, and those who have gone still further afield must just now be inclined to regret their enterprise.

THE FUTURE OF GRADUATE EDUCATION IN LONDON.

A PROPOSAL to amalgamate the Fellowship of Medicine and the London Post-Graduate Association was adopted by both bodies at a joint meeting held last week. The new organization is to be known as "The Fellowship of Medicine and Post-Graduate Association," though some simplification of that rather ponderous title will probably be hit upon. The executive committee will consist of the members of the executives of both the constituent organizations. The committees have to some extent been identical in personnel, and the president of both bodies was Sir William Osler, who, it is hoped, will continue to preside over the combined body. The machinery of post-graduate courses which has been set up by the Fellowship is to be used and extended and improved. Of the two combining bodies the first in actual origin was the Post-Graduate Association, but owing to war conditions it remained dormant for two years, and was not formally organized until the meeting held at the Royal Society of Medicine on April 29th last (*JOURNAL*, May 3rd, page 551). Meanwhile the Fellowship of Medicine had been constituted on December 4th, 1918 (*JOURNAL*, December 28th, page 722), and formulated an emergency post-graduate scheme to fill up the interval until the more permanent scheme of the association could be launched. Sir Humphry Rolleston, who has been chairman of the executive committee of the Fellowship, made it plain that the post-graduate courses were undertaken without prejudice to the larger future effort. The immediate object of the Fellowship was to assist the many medical men from the Dominions, the United States, and the allied countries who were in London in the early part of the present year. Its success was due in great measure to the energy of Mr. Philip Franklin, F.R.C.S., who is an American by birth. The Fellowship of Medicine is going ahead with its various courses by arrangement with the medical schools in London. The future programme and the details of more ambitious schemes have to await the first meeting of the new committee, which we understand will shortly be called. Meanwhile the course arranged by the Fellowship of Medicine is in full swing, and members have the opportunity of attending clinical lectures and practice at most of the principal London hospitals. In addition special lectures are given several times a week at the house of the Royal Society of Medicine, 1, Wimpole Street, London, W. A copy of the *Bulletin* and full particulars can be obtained on application to the secretary of the Fellowship of Medicine at that address.

THE RED CROSS UNDER THE LEAGUE OF NATIONS.

THE British Red Cross Society and the Order of St. John, whose spheres of activity are similar, have come to an agreement to work together through a Joint Council, as they worked with so much success throughout the war.

The members of the existing Joint War Committee are members of the new Joint Council, which will consist of twenty-four persons appointed by the British Red Cross Society and a like number appointed by the Order of St. John. The new Joint Council will have general control of the work of the two corporations, and without its consent neither can make a public appeal for funds. Sir Arthur Stanley, Chairman of the Joint War Committee, has issued a memorandum explaining the situation. In it he states that it is anticipated that the petition of the British Red Cross Society for an extension of its existing charter, in order that it may be empowered to deal with the work contemplated in Article XXV of the Covenant of the League of Nations, will be granted. This article provides that "the members of the League agree to encourage and promote the establishment and co-operation of duly authorized voluntary national Red Cross organizations having as purposes the improvement of health, the prevention of disease, and the mitigation of suffering throughout the world." The matters to which Sir Arthur Stanley suggests attention should immediately be given are: assistance for sick and wounded, whether still on the active list or demobilized, to supplement that given by the War Office and the Ministry of Pensions, and as long as may be necessary for men who have been prisoners of war. The War Committee has been working in close connexion with the National Association for the Prevention and Cure of Tuberculosis; grants in conformity with its scheme have recently been made to many counties, and it is proposed to continue this co-operation. The Central Council of Child Welfare recently formed will, it is hoped, work under the auspices of the Joint Council. Many V.A.D.'s have already taken up such work, and many others, it is stated, are only waiting for an opportunity to do so. Assistance will be given in all branches of nursing, health, and welfare work ancillary to the Ministry of Health, and in this way it is believed that many openings will be provided for V.A.D. workers. Scholarships have already been given, and it is hoped that many will be willing to qualify themselves to render that supplementary assistance to the regular nursing profession which they rendered so efficiently and successfully in time of war. It is intended to continue the system of work parties to provide garments, etc., for hospitals and health institutions, and to maintain the Red Cross hospital library. At the end of the war the Joint War Committee found itself with a large number of motor ambulances in France and elsewhere, and a scheme was instituted by which ambulances have been placed, under the control of county directors, in various suitable localities, so that a network of ambulances is being established, covering practically all the country districts. It is hoped that through it all sufferers will be within easy reach of an ambulance, which can either bring assistance to them or take them to the nearest hospital. The question of future V.A.D. organization is under consideration, and will eventually, along with the other matters mentioned, come under the control of county committees, comprising representatives of the British Red Cross Society and the Order of St. John, and of societies dealing with tuberculosis, child welfare, and other activities coming under the definition of "Red Cross work" in the Covenant.

TUBERCULOSIS IN WALES.

THE seventh annual report of the King Edward VII Welsh National Memorial Association for the Prevention, Treatment, and Abolition of Tuberculosis, presented to the Governors in July, 1919, contains a very valuable summary of the methods of procedure at present employed, and a detailed account from the medical point of view of the future requirements for effective suppression of the disease in the home. The Principality has given warm support to the scheme, and all the counties, with the single exception of Pembrokeshire, have contributed their share to the

success of the movement. The reasons for this isolation of a single county are difficult to discover, but it would appear that the authorities in Pembrokeshire are not only unwilling to take a share in the work, but have failed to pay the debt incurred by them for the treatment of their cases by the association. Under the presidency of Major David Davies, M.P., the council of the association has entered upon ambitious schemes, some of which are rapidly taking concrete form. Not only are several additional sanatoriums to be started, but a plan of pecuniary relief to families deprived for a time of their breadwinner—for purposes of early treatment—is being urged upon Government authorities. This plan, if accepted, will go far to overcome the reluctance now so often felt by the consumptive head of the family to give up work for the sake of the prospective arrest of the commencing disease. Further powers for the segregation of infective cases and for systematic teaching are being sought, and in every direction the association is setting an example of energy which deserves recognition and imitation.

MALARIA IN ENGLAND.

WHAT was somewhat alarmingly described in the newspapers of last week as an outbreak of malaria occurring at Fletton, on the outskirts of Peterborough, proves to have been limited so far to a single case. We learn on inquiry from Lieut.-Colonel S. P. James, who is adviser on malaria to the Ministry of Health, that from January 1st, 1919, to the present date 36 cases of indigenous malaria in various parts of England and Wales have been reported to his department and investigated. Not all the cases reported have proved to be malaria, and of the malaria cases not all have been found to be indigenous. At least 25 cases, however, have been found to be true indigenous malaria contracted during the present year, and that being so, the localities in which they have occurred are of interest, since these are evidently danger areas. The only considerable group of cases occurred in the Isle of Grain, between the Medway and Thames estuaries in Kent, and in the Sheerness and Queenborough districts of the Isle of Sheppey. Single cases have occurred at the following places: Colchester and Brightlingsea (Essex), Peterborough and St. Ives (Huntingdonshire), Coalport (Shropshire), Emsworth (Hampshire), and Chatham (Kent). A large proportion of these true cases—perhaps even the majority—have occurred among children. Each case has been inquired into by Colonel James and his assistant, Major A. C. Parsons, and very careful precautions have been taken, in accordance with the malaria regulations of 1919, to prevent the spread of infection. Where only one case has occurred in a district, the medical officer of health is instructed, if he considers that action is necessary to prevent spread, to take steps to ensure that the person suffering from malaria is supplied with efficient mosquito netting, receives necessary quinine treatment, and is advised as to its continuation in order to prevent relapses, and as to precautions to be taken to prevent the infection spreading. On the occurrence of two or more cases in a district the local authority may, on its own initiative or on the instructions of the Ministry of Health, appoint and pay a medical practitioner, approved by the Ministry, to make systematic visits to houses where malaria has occurred or where risk of infection arises, and offer to examine persons suspected of infection, and endeavour to obtain material for microscopic examination. He has also to see that effective measures are taken to prevent spread. In 1918 the indigenous cases reported numbered 99; in 1917 they numbered 231, the majority occurring in Sheerness and Sheppey and in Sandwich. There is a doubt, however, as to the year in which the infection was contracted in some of the cases: a certain number of patients who are discovered in a

particular year really contracted their infection during the previous autumn, though it remained latent during the winter.

CAUSATION OF INDUSTRIAL ACCIDENTS.

The etiology of accidents is no doubt highly complex: some accidents, such as being struck by lightning, are pure accidents, or, in the old phrase, by the visitation of God; others, including the "didn't know it was loaded" case, are due to natural incompetence or folly, and there are many intermediates. In a study of trivial accidents occurring in munition factories, Dr. Major Greenwood and Miss Hilda Woods¹ have applied statistical methods to discover whether (a) the principal factor is pure chance, or (b) individual peculiarities of the workers, or (c) the loss of nerve engendered by once having sustained a pure accident and becoming thereafter less self-possessed. They conclude that the factor (b) is the most important, individuals being self-consistent in their liability to or immunity from accidents in different months. Regarding runs of trivial accidents as evidence of unsuitability for operations involving risk of injury, they suggest that the records of works' ambulance rooms may be of considerable value to the organizer.

THE HARVEIAN SOCIETY OF LONDON.

THE Harveian Society of London is one of the oldest metropolitan medical societies, having been founded nearly one hundred years ago. Dr. Anthony Todd Thomson and Dr. Marshall Hall were its first presidents, in 1831 and 1832. Meetings continued to be held regularly in the early years of the war, but in 1917 the society suffered an almost complete but temporary eclipse, for a bomb fell at the corner of Titchborne Street and Edgware Road, completely wrecking the rooms in which its meetings were held. Subsequently a few meetings were held at St. Mary's Hospital. The society hopes now to resume its activities. It has been decided that for the present the meetings shall be held in the rooms of the Medical Society of London at 11, Chandos Street, Cavendish Square. Sir Berkeley Moyulhan has promised to open the session on Thursday, October 23rd, at 8.45 p.m., with an address on the diagnosis and treatment of gastric ulcer, to which all medical practitioners are invited. We are informed that a full programme for the rest of the session is being prepared. Sir Thomas Horder will deliver the Harveian Lecture of the society on a Thursday evening in March to be announced later. The president this year is Dr. James Taylor.

NOTICE TO MEMBERS.

OWING to the railway strike the postal authorities are unable to undertake to deliver this issue of the JOURNAL through the post except within a radius of ten miles from the General Post Office, London. The issue will be forwarded to every member as soon as the Post Office is able to undertake delivery. Meanwhile steps have been taken to place a copy of the issue in the hands of the Secretaries of Divisions and Branches of the Association at the end of the week or at latest on Monday, and it is hoped that they will take every opportunity of explaining the circumstances to members. Owing to the dislocation of business and the difficulty in obtaining supplies of paper, it has been found necessary to curtail the number of pages in the current issue of the JOURNAL, and in particular to postpone the publication of the Epitome.

¹The Incidence of Industrial Accidents upon Individuals, with Special Reference to Multiple Accidents. By Major Greenwood and Hilda M. Woods. (Report No. 4, Industrial Fatigue Research Board.) Stationery Office, 1919. Price 6d.

DR. JOHN W. STANTFORTH of Hinderwell, S.O., Yorks, has been added to the Commission of the Peace for the North Riding of Yorkshire.

Correspondence.

INTRAVENOUS INJECTIONS OF GUM SOLUTIONS IN CHOLERA.

SIR,—I greatly regret that the letter to which Sir Leonard Rogers refers in your issue of September 20th had the misfortune of never reaching me. I would otherwise have made more experimental investigations in order to try to find out the cause of the failure of gum-saline in the cases related by him. It is possible that, owing to the concentration of the blood, the addition of gum may produce too great a viscosity. This is an inappropriate property in such circumstances, and I have searched for a substance having the correct osmotic pressure, which is the essential thing, and at the same time one to which the blood vessels are impermeable; hitherto without success. Some experiments which I have already made do not indicate the production of excessive viscosity with gum. The solution as made by Telfer's process at Boulogne had only a viscosity of twice that of water, while normal blood may have four or five times that of water. The fact that some of the cases of failure were not very severe cases of cholera is also an argument against the viscosity hypothesis.

The symptoms described by Sir Leonard Rogers—distress, cyanosis, and difficulty of breathing—remind one of occasional reports from the army in France, where unpleasant effects were sometimes noticed from solutions prepared locally. But it appears that they were not noticed after the regular supply of the solution from Boulogne. The cause is not clear, but was attributed to the water. This can, however, scarcely be the explanation of Colonel Leventon's experience. It would be of great interest if we could have a more detailed report from Colonel Leventon as a basis for further experimental work.

With regard to the excretion of toxic substances through the kidneys, one of the most striking facts in my experiments was the restoration of the flow of urine by gum-saline when it had stopped from various causes, such as low blood pressure, destruction of blood corpuscles, etc. It might, perhaps, be worth trying the effect in cholera of alternate injections of saline and of gum-saline, in order to increase the renal excretion and at the same time maintain the blood pressure. But I understand that Colonel Leventon has tested the action of dilute solutions of gum.

Doubtless the use of serums would be a great advance, and if the difficulties attending gum-saline could be overcome—as I feel certain they can be—the combination of the two would enable an efficient circulation to be kept up while the curative treatment was in progress.—I am, etc.,

London, N.W., Sept. 25th.

W. M. BAYLISS.

THE NERVOUS SYSTEM IN PERNICIOUS ANAEMIA.

SIR,—It is no new idea that in pernicious anaemia the disease often invades the nervous system. In the *Australian Medical Gazette* of December, 1905, p. 644 (long before Woltmann in 1919), I wrote: "In this case nervous symptoms of a pronounced kind developed. He had delirium and severe lightning pains down his legs and through the abdomen in paroxysms; paraesthesia and later anaesthesia, especially in patches, and paresis ending in paralysis; wasting also occurred. For some time the knee-jerks were exaggerated; later they disappeared. There was also paresis and anaesthesia of the bladder, and failure of the sphincters. Cystitis and bed-sores also occurred, though splendid nursing postponed these troubles. The nervous symptoms of pernicious anaemia vary. They may be tabetic in type—loss of light reflex, loss of knee-jerks, lightning pains, anaesthesia, and sphincter troubles, but may be rather related to functional disturbances of the pyramidal tracts (I had one case of this kind resembling progressive muscular atrophy)."

My article was based upon a series of cases which came into my ward (Prince Alfred Hospital) under varying diagnoses, such as "ulcerative endocarditis," "dysentery," "Bright's disease," "asthma," and "obstructive jaundice,"

because no blood examination had been made. The blood examinations are given in my article, and megalocytes and megaloblasts were found in all.—I am, etc.,

W. CAMAC WILKINSON, M.D., F.R.C.P.

London, W., Sept. 25th.

STIFF KNEE IN COMPOUND FRACTURE OF FEMUR.

SIR,—In examining a considerable number of pensioners who have had fractures of the femur resulting in stiff knee I have been struck with the abnormal position of the patella, and it occurred to me that if this could be prevented a great improvement would result.

In the normal knee at rest in full extension the lower extremity of the patella is about a quarter of an inch above the level of the lower end of the femur, and if held in this position by the hand it will be seen that the knee can be flexed 30 degrees without the patella moving downwards. If the patella be pulled downwards with the knee extended and at rest, flexion as far as 45 degrees or even further can be obtained without further downward movement.

If now the quadriceps be contracted when the knee is straight, the patella is drawn up from the normal resting position for about half an inch, and it is in this position that one finds it in cases of stiff knee. Any attempt to move it downwards will meet with very little success owing to the shortened muscle.

I suggest, therefore, that in treating a case of fractured femur the quadriceps muscle should be put on the stretch from the very beginning either by a silver wire through the patella or through the tendon just above. By fixing the wire in a loop and attaching it to the leg or to the splint the patella can be kept in the normal resting position, or just below it, thus preventing contraction of the quadriceps. By removing the extension for a short time the muscle can be exercised and movement of the patella assured.

A point that may be overlooked is that the injury which causes the fracture also sometimes causes partial rupture of the ligaments of the knee with consequent haemorrhage into the joint resulting in increased liability to stiffness. It is probably this injury which is the cause of so many cases of lateral movement of the knee following gunshot wounds of the femur.

In treating any fracture of the limb bones it is well to remember that

(a) All muscles put at rest for a considerable time tend to contract—this is increased by the presence of extravasated blood and still more by sepsis.

(b) No harm is done by keeping a muscle stretched to its normal length.

—I am, etc.,

Harrogate, Sept. 23rd.

C. D'OYLY GRANGE.

SIR,—May I add a few words to what Colonel Broome-Giles has said in your issue of September 27th regarding ionization for stiff knee? It is important when the stiffness follows exudation into the joint, or inflammation of the muscles and tendons which move the joint, to begin treatment early before the exudates become organized into dense fibrous tissue. The knee-joint being superficial, is specially suited for ionization treatment, since there is no thick layer of muscle, as in the case of the hip-joint, to shunt the current off before it reaches the part we want to treat. The ion introduced should be an anion, and of the various anions the salicyl or chlorine ion is the most suitable. Consequently the electrode should be attached to the negative pole. Great care should be taken to envelop the joint with many layers of tissue moistened with a solution of sodium salicylate or of common salt. The bandage should be evenly applied and no undue pressure exerted on a bony prominence, or a burn will result. Each treatment should be long—an hour with a considerable strength of current, 60 milliamperes or more—and the treatments should be given twice a week. The solvent action common to all anions is well shown by a laboratory experiment of Professor Leduc.

Some white of egg is poured into a U-tube, which is then placed in boiling water to coagulate the albumen. An equal quantity of a solution of sodium chloride or other salt is added to each limb, and a wire connected with the positive pole of a battery is dipped into the solution in one limb, while a wire from the negative dips into that in the other limb. After the

current has flowed for some time it will be seen that the levels of the solution in the limbs are no longer the same—that on the positive side has fallen, while that on the negative side has risen. Moreover, the albumen on this side of the bend has been dissolved.

It is to this solvent action on exudates and imperfectly organized adhesions that the benefit resulting from ionization with chlorine or salicyl ions is to be in a large measure ascribed. It is often advisable to choose an anion whose specific properties are also beneficial for some special symptom—for example, pain. Thus, by using the salicyl ion we combine the solvent action of an anion and the soothing effect of the salicyl.—I am, etc.,

London, W., Sept. 29th.

A. R. FRIEL.

SCHOOL MYOPIA.

SIR,—I have read with interest and not a little amusement the leading article entitled "School Myopia." For once, Mr. Editor, you have been caught napping—a rare event, I will allow. For this article is no "leader." It is a piece of polemical writing which should properly have had attached to it the author's name.

The article is curiously lacking in balance. It is aflame against one limited theory of the causation of myopia, and as ardent for another equally circumscribed. There is a lengthy tirade against the assumption of a "school myopia," all because myopia is found in illiterates and rural peoples. Incidentally, there is an attack on the myope classes first established in London and now widely adopted in this and other countries. "School myopia" is a term of currency; it implies nowadays a low degree of myopia, up to three or four dioptries. The use of the term is as familiar as that of the term "artery." Both terms carry a definite connotation to our minds, and both are remote from the original conception implied in their derivation. We know now that there are many conditions that go to the production of myopia, whether of low or high degree—heredity, congenital defect, illness, bad social conditions, and too much close eye-work. Your writer denies the influence of the last. I believe in its influence. Indeed, I am sure of it on the evidence at my disposal. Further, of the five causes or predisposing conditions of myopia, it is the one that we can directly deal with in education, and for that reason it must weigh heavily in our minds.

The attack of your writer on the conception of the myope classes is due to want of knowledge. No "school myopes" are admitted to these classes; the places are reserved for those children who are short-sighted to a serious degree, whether by reason of high myopia, scarred eyes, or congenital defect. These children have bad vision, and because of this they are not normal children, and are not fitted to join in the normal curriculum adopted for those who have normal or average vision. The implication of your writer that the existence of these myope classes is based on a theory of myopia is wrong. It is based on the necessity for meeting as satisfactorily as we know how a heavy handicap which tells seriously against the chances of a fair start in life for these children. The scheme of education adopted for the children in these classes does not "restrict their future career of usefulness." The scheme is essentially a reversion to natural conditions, where the mind of the teacher is the light of the pupils instead of the school book. Educationalists are trying, and with a very real measure of success, to improve the conditions in which children, both normal and abnormal, use their eyes in school, but your writer apparently would have us do—nothing!—I am, etc.,

London, W., Sept. 27th.

N. BISHOP HARMAN.

SIR,—I have read with much pleasure the leader in last week's BRITISH MEDICAL JOURNAL on myopia, and entirely agree that there is no evidence supporting the theory that the use of the eyes for near work causes myopia. In the *Lancet* of January last year I wrote an article based on the detailed examination of a very large number of cases of myopia, and the cause of myopia appears to be intermittent increase of intraocular tension through back pressure on the veins and lymphatics of the eye. This is caused by certain diseases—bronchitis, whooping-cough, and particularly measles—and certain forms of exercise such as heavy lifting, particularly with the eyes pointing downwards. The relation of cause and

effect is very striking, as indeed is the result of stopping the cause. A child whose myopia has been increasing term by term has no further increase when these exercises are forbidden; raising itself up and down on its hands is a particularly objectionable form of exercise from the point of view of producing myopia.

It should here be pointed out that intermittent increase of intraocular tension is an entirely different thing from a continued increase, especially as in the former case the optic disc is supported by the back pressure in the lymphatics.—I am, etc.,

London, N.W., Sept. 30th.

F. EDRIDGE-GREEN.

"D.A.H." AND "V.D.H."

SIR,—After reading the very interesting article on the etiology of "D.A.H.," by Dr. J. A. Venning, in your issue of September 13th, I went through my own notes on 124 heart cases that came under my personal care in the — General Hospital in Mesopotamia during 1917 and the first half of 1918.

As to diagnosis, 70 were received labelled "D.A.H." and 54 labelled "V.D.H." Of these latter, after consultation with Captain C —, M.D., thirty-five were rediagnosed as "D.A.H." One "D.A.H." was a "V.D.H." With regard to causation, out of 19 genuine "V.D.H.'s" 12 gave a history of rheumatic fever, 3 of scarlet fever, and 2 of diphtheria; the other two appear to have given no relevant history. Infections certainly played an important part in the causation of "D.A.H.": Dysentery and "diarrhoea" (probably untreated dysentery), "I.C.T." of various kinds, malaria, enteric group, and sandfly fever in order of frequency.

Intoxications: Pyorrhoea alveolaris with dental caries, "E.O.H.," and tobacco, in order of their frequency.

The tremendous heat of the summer of 1917, when a shade temperature of 120° was by no means uncommon, was also a potent factor in the causation of broken compensation and the onset of D.A.H.

The care of the teeth is certainly not made enough of in the army or in civil life, and I am sure that the amount of invaliding directly traceable to it was very great in our force. I believe that compensated V.D.H. can be broken down by it, and D.A.H. inaugurated and kept going by it. Its influence on dysenteric, enteric, and gastric cases is far-reaching but wide of the point here.

Tobacco was without doubt a frequent cause of D.A.H., and the rapidity of recovery of several obstinate cases of D.A.H. when the cigarettes were either stopped altogether or limited to one after each meal was most striking. In the end all my D.A.H. cases were strictly rationed as to cigarettes, and a few "incurable" cases returned quickly to duty.

During recovery a graduated system of physical exercises carried out under the direct supervision of a medical officer was very helpful. As regards treatment for the heart condition itself, potassium bromide gr. x thrice daily was most generally useful.—I am, etc.,

A. H. H. HOWARD, M.R.C.S., L.R.C.P.

Sheffield, Sept. 22nd.

AN ARMY VENEREAL DISEASE CLINIC.

SIR,—As my experience runs directly contrary to the views advanced by Dr. Rhys in the BRITISH MEDICAL JOURNAL of September 20th, p. 378, concerning the extent to which the men availed themselves of prophylactic measures provided at venereal clinics, I venture to submit the following facts:

I was in medical charge of two camps in Alexandria for a year—

- (a) A small camp consisting of 200 to 300 men,
- (b) A larger camp, about 800 to 1,100 men,

in both of which prophylactic accommodation was provided. I was also responsible for a similar place for the use of men on leave.

Unfortunately I have not the actual figures here. But as I rendered a weekly return to head quarters I can fairly accurately quote the average:

- (a) 30 to 40 (12-13 per cent.) availed themselves each week.
- (b) 20 to 30 (2½-3 per cent.) availed themselves each week.

I account for the apparent discrepancy in the proportion of these figures by the fact that the necessity for prophylactic measures was not present to so large an extent in the latter camp as in the former.

The returns for the third place varied directly with the number of men on leave, up to 30 or even more a week.

The number of men admitted to hospital suffering from venereal disease (including soft sore) was:

- (a) One man in 3 weeks, less than 1.6 per cent. per week.
 - (b) One man in 4 weeks, less than 1.32 per cent. per week.
- Casual men on leave, one man in 4 weeks.

—I am, etc.,

Haywards Heath, Sept. 26th.

D. N. HARDCASTLE,
Captain R.A.M.C.T.

"THE CULT OF INDIVIDUALISM."

SIR,—Dr. Fothergill has had the courtesy to send me in advance a copy of his last letter to you. He takes up two points in my letter in your issue of September 20th.

The first concerns the meaning of individualism, and is a purely academic question of no special interest in medico-politics; and I see no object in carrying it further.

The second, however, is of real importance. To quote Dr. Fothergill's own words:

The weak link . . . is . . . some few or more . . . members of the medical profession itself who would at the last push be in a position—owing to the present economic conditions of medical practice—to flip their fingers at any attempt made to dictate to them how and in what manner they should conduct their professional activities . . .

When I read this I took off my glasses, rubbed them, and read again. The words were still there. Why, Sir, this is the case for trade unionism, and not an argument against it.

The Coventry case has made it clear to the meanest capacity that the British Medical Association is powerless to deal with the sort of person described in Dr. Fothergill's words. We of the trade unions say and believe that we are not so powerless. If so, well and good; let the trade union grow. If not, still well; no harm is done, unless too much energy is wasted in mutual fighting between the Medico-Political Union and the British Medical Association.

Why does not Dr. Fothergill join me in asking individual members of the profession to support the British Medical Association and the Medico-Political Union?—I am, etc.,

York, Sept. 27th.

PETER MACDONALD.

SIR,—In these days of unrest and turmoil it seems to me that, as a profession, we need to guard against the growing evils of trade unionism in our midst. We must, of course, have some organization to defend our interests and obtain just and adequate terms, but anything which savours of an interference with the medical services to the community on any pretext whatever cannot be too strongly condemned.

Let us, whatever may happen, avoid the pitfall into which trade unionism has led organized labour, for we hold a position of trust and confidence, built up for us by generations of practitioners, which is quite unique and cannot be too jealously guarded.—I am, etc.,

Bridgwater, Sept. 28th.

RICHARD COATES.

MEDICAL MEN IN PUBLIC LIFE.

SIR,—At different times it has been urged in your JOURNAL that doctors should take some part in public life, and become members of councils or boards of education.

I was nearly twenty years a member of an ancient corporation with very ancient ideas, and it was not a bed of roses. Perhaps a short account of my experience might be useful to some of your readers. First, my fellow practitioners looked askance at me, as one seeking a cheap advertisement; others sought out some way by which they might reap some small advantage. How I was drawn into the vortex of local politics it is not necessary to relate.

The opposition in the corporation was remarkable; when I moved the adoption of the Notification of Diseases Act (this was a long time ago) I was strongly opposed by an old doctor, an alderman who was styled a sanitary reformer; his opposition was purely on personal and political grounds; a second attempt to get it adopted in the following year was crowned with success.

The housing question was like a red rag to a bull; it was denounced by all parties, and my introducing it was regarded by many as an act of audacity. With outside help, however, I was able to employ an expert in inspecting slum property, and the very comprehensive report he drew up was presented to the corporation. The report was promptly pigeon-holed, but a second copy was retained

by me, and was extremely useful in keeping up the agitation for many years. And this agitation was not fruitless, for many houses were built and several good building sites came into the market.

In later years a citizens' league was formed to study all questions relating to the well-being of the community. The old city was repeatedly visited by small-pox epidemics, and it was then possible to render some service for the public good, especially when it was decided to provide a fever hospital. The medical officer of health was badly paid, but his salary was augmented without opposition. For a time I held the unique position of chairman of the health committee of the urban district council whilst I was medical officer of health to the rural district council.

When elected mayor I initiated a reception which gave much satisfaction; the sweep and the milkman met the dean and archdeacons, and all shook hands with the mayor and mayoress. Also I managed to introduce and provide the proper insignia of office, and brought about an improvement in the style of dress of the aldermen of the council. I was able to give a helping hand to the St. John Ambulance Association by having a big parade of miners holding certificates, a special service in the cathedral and a special preacher, with a meeting to follow to discuss ambulance work.

The work of the council was a great call upon one's time; it was necessary to attend at least a hundred committee meetings in the year; the real work is done in committee.

It cost me dear to be an enthusiastic reformer. Personal abuse, threats of personal violence, and slander were amongst the rewards for the services rendered; yet there was a satisfaction in having aroused public opinion on matters affecting the welfare of thousands.

One suggestion I would make for those wishing to enter public life, and that is to obtain the support of fellow practitioners of the Division or Branch, and so voice the feelings and wishes of the profession in a more determined manner and with greater force.—I am, etc.,

EDWARD JEPSON, M.D., J.P.,

Ruislip, Sept. 23rd.

Ex-Mayor and ex-Alderman, Durham City.

RURAL PRACTITIONERS' REMUNERATION.

SIR,—It is to be hoped that the Insurance Acts Committee and its Rural Practitioners' Subcommittee are pressing the subject of mileage for rural and semi-urban practitioners. The acceptance or rejection by such categories of practitioners of any capitation fee likely to be offered by the Ministry of Health must depend largely upon a suitable mileage grant being obtained, as a differentiation of capitation fees appears to be both impolitic and difficult to work.

That rural practitioners require special consideration in fixing remuneration is now generally recognized by all who have gone into the question, and figures have been published which have tried to express in £ s. d. the extra cost in time and money incurred in visiting in country areas. The special grant on account of extra practice expenses was an attempt to level things up, but the basis upon which it was divided among areas was faulty, and the amount quite inadequate.

Taking my own experience, with a medical list of about 700, as a case in point, I have travelled 2,688 miles to see insured patients so far this year. At 6d. a mile, a conservative estimate, this works out at £67 4s., or for the whole year £84. My mileage grants will come to about £32; thus I am at a disadvantage of £52 in motor costs alone when compared with my colleague with a list of the same size in a large town.

The time element must also be allowed for. Probably 12 miles an hour is a fairly accurate estimate of average speed attained in visiting country patients. A great deal of the mileage is done over twisty, narrow lanes, often with an excruciating surface; or on foot along field paths or up hillsides, half an hour or so each way being frequently occupied in one of these walks. If 12 miles an hour is a fairly accurate figure, I have spent 224 hours, or twenty-eight full working days of eight hours each, in travelling the 2,688 miles, or, reckoning my time as being worth 7s. 6d. an hour, £84 for the nine months, or £112 for the entire year, for which no allowance is made. This is over three times the total of the present grants.

To put the rural practitioner in this area in a position comparable with that of the urban man, it is therefore necessary for him to have a mileage grant at least six times as large as he gets at present.

I am not forgetting that the urban practitioner has to travel and spend time in getting to his patients, but the advantages which accrue from large lists must about counterbalance that, otherwise the town men would not be apparently pleased with the insurance scheme.

It is difficult to estimate what would satisfy the semi-urban practitioner who in this area has not had any mileage until 1918, but no doubt a substantial sum would be required to put him in an equally advantageous position with the urban man.

Whatever the amount of the grant, let us hope that there will be no "discounting." (The grant for this area has never paid more than about 70 per cent. of the unit approved as reasonable by the Commissioners in the mileage scheme of the area.) If the Ministry agrees that such and such a sum is fair in respect of each insured person in any area, let it be paid in full, and not with annoying deductions, of whose correctness the doctor is unable to satisfy himself. I suppose we do not insist on having our premiums paid in advance at the commencement of the period of risk (like all other insurance), because we rely on the Government to pay with certainty. The least they can do, then, is to pay in full when they do discharge their debts.—I am, etc.,

September 24th.

TRAVELLER.

SELECTED EMPLOYMENT FOR TEMPORARY OFFICERS R.A.M.C.

SIR.—Apropos the discontent existing among temporary R.A.M.C. officers may we suggest that, if their compulsory retention in the army is proceeded with, some recompense should be given in such matters as choice of work and station.

In contrast to the regular officer, who is meanwhile getting on very contentedly with his life's work, the conscripted temporary officer is not merely marking time, but losing time, becoming rustier, and mentally jaded; does it not seem fair that the latter, particularly if he is a 1914-15 man, should be allowed to do his service in some place where he could employ his spare time profitably? For example, post-graduate study is urgently necessary; many would sign a new contract, and do their military work with a better will, if something of this sort could be brought within reach, to compensate a little for loss of time, and freedom, and money.

And what about the recent graduate enjoying a glorious freedom, while we, with several years of our lives torn away, are still wondering, not only when, but if, we are to be allowed to carry out our own plans?—We are, etc.,

September 20th.

TWO TEMPORARIES.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

SIR.—In reply to Dr. Rooke, I do not know what arrangements were made by Dr. Rooke with his colleagues for looking after his patients during his absence, but I suppose that a certain proportion of fees were received by him in addition to his army pay, not to mention his army rations, which were certainly generous. I remember the phrase "rare and refreshing fruit," which somehow failed to mature; and although I worked day and often night without a holiday through the war I have had no experience of the "rich financial fruits" mentioned by Dr. Rooke.

With regard to the question of medical profession v. clerk I think Dr. Rooke has rather stretched a point, possibly to bring in his little witticism, "If so, he made a mistake in the choice of his profession." Does not my remark point to the fact that there were doctors doing clerical work in the army who would have been better employed doing medical work at home, and we should have welcomed their services. I am the man who stayed at home. I have looked at my books, both of receipts and expenses, and I can assure Dr. Rooke that his obvious inference is like many other obvious inferences, not founded upon fact. I do not intend to pursue this subject further, as, having stated facts, discussion is unprofitable.—I am, etc.,

Bedford, Sept. 20th.

S. J. ROSS.

THE MEDICAL SERVICE AT ST. PAUL'S.

SIR,—Will you allow me to call the attention of your readers to the advertisement on another page of the special service to be held in St. Paul's Cathedral at 7 p.m. on Tuesday, October 21st, with the Lord Bishop of London as the preacher?

All medical men and students are invited to attend, and the Medical Guild of St. Luke, which was founded in 1864, desire that the attendance at this thanksgiving service should be worthy of our profession.—I am, etc.,

GEORGE COWELL,

Provost.

London, S.W., Sept. 29th.

Obituary.

MAJOR GEORGE MAGILL DOBSON, R.A.M.C. (retired), who died on September 17th at Penmaenmawr, North Wales, aged 58, was the eldest son of the late Robert Dobson, of Mohill, county Leitrim. He was born on April 11th, 1861, and educated at Trinity College, Dublin, where he graduated B.A., M.B., and B.Ch. in 1883. He entered the army as surgeon in 1885, became surgeon-major in 1887, and retired in 1905. He served in the Sudan campaigns of 1885-86, with the Frontier Field Force, receiving the Egyptian medal and the Khedive's bronze star; and in the Lushai campaign of 1892, in the operations against the eastern Lushai clans, receiving the Indian Frontier medal with a clasp. As a member of the Reserve of Officers, he rejoined for duty in the late war on August 6th, 1914, but had been demobilized over a year ago.

MR. FREDERICK WALTER LOWNDES, M.R.C.S. Eng., died at his residence in Liverpool on September 2nd, aged 81. After leaving school he began business as a clerk, but subsequently studied for the medical profession at the Liverpool School of Medicine and the University of Edinburgh. He took the diplomas of M.R.C.S. and L.S.A. in 1865, and after serving as resident surgeon to one of the Liverpool hospitals proceeded to London. He returned to Liverpool in 1868 and commenced practice as one of the district medical officers of the parish. In 1877 he was appointed surgeon to the Liverpool City Constabulary, and retired from that office in 1911 after thirty-four years' service. He took great interest in the status and duties of coroner, and was the author of *Reasons why the Office of Coroner should be held by a Member of the Medical Profession*, which ran through three editions. He also contributed papers to the *Liverpool Medico-Chirurgical Journal* on the study and treatment of venereal diseases, drawn from his experiences as surgeon to the Liverpool Lock Hospital. The funeral took place on September 5th, and was attended by a number of Liverpool medical practitioners.

SIR JOHN FURLEY, C.H., C.B., one of the most active of Red Cross workers, died on September 27th, at the age of 83. In 1868 he joined with Sir Edmund Letchmere and other members of the Order of St. John in forming a provisional committee for the establishment of a National Aid Society for the relief of the sick and wounded in war; he was one of the delegates to the first international conference at Berlin, and had attended nearly all the international Red Cross conferences since that date. On the outbreak of the Franco-Prussian war the English branch of the National Committee of the Red Cross was formed. Mr. Furley, as he then was, was commissioner for the British Society during the war, and after the armistice went with his supplies to Paris, where he remained throughout the Commune. He received the honour of knighthood in 1899, and on the outbreak of the war in South Africa designed, and afterwards commanded, the hospital train sent out at the suggestion of Princess Christian. Ago sat lightly upon him, and at the beginning of the European war he was able to render valuable service to the Red Cross, especially in the designing of hospital huts and hospital trains.

PROFESSOR FILIBERTO MARIANO, of the University of Genoa, died on August 23rd. He founded and edited till the end of his life a periodical entitled *Le Malattie del cuore e dei vasi*.

The Services.

THE NEW NAVAL RATES OF PAY.

In the JOURNAL of July 26th, 1919, p. 121, we gave a summary of the recent Admiralty Order announcing the new rates of full, half, and retired pay for naval officers. Although certain features of the new rates have been criticized lately in our correspondence columns by naval medical officers, there can be no doubt that, taking the Admiralty Order as a whole, the Naval Medical Service has gained substantially, and most of the important points have been conceded which were pressed for in the memorandum put forward this summer by the British Medical Association. It is true that some allowances, such as "charge pay," have disappeared, and that after the end of the current year the navy, in common with the other armed forces, will be assessed for income tax at the civil rate. Nevertheless, taking all things into consideration, it is estimated that under the new scales there will be an average increase in pay of about 60 per cent.

Beyond the actual increase in full pay, the practical abolition of half pay is recognized to be an immense gain. Under the new scale officers below the rank of surgeon commander while awaiting employment receive full pay up to six months, and a scale intermediate between full and half pay for a further six months. Surgeon captains receive a special rate of £2 8s. a day on promotion if not employed. Surgeon rear admirals receive £2 5s. a day when unemployed, in place of £1 18s.

A point insisted upon by several correspondents is that in dealing with the present list of officers the words "maximum retired pay £600" should be removed from the Admiralty Order.

Old and New Rates Compared.

A naval correspondent, to whom we are indebted for the tabular comparison of the scales of pay given below, sends us the following further notes:

In addition to the improvements in full pay and half pay, the allowances for (1) subsistence, (2) lodging, (3) compensation in lieu of provisions, light, and fuel, and (4) servants' allowance, have all been materially increased. Charge pay of 3s. 6d. a day formerly allowed to medical officers of ships with complements of not less than 650 officers and men has been abolished, also charge pay for surgeon captains 7s. 6d. a day and surgeon commanders 2s. 6d. or 5s., according to seniority, in naval hospitals, and the allowance to medical officers in hospitals in lieu of provisions, fuel, and lights.

On the other hand, 44 specialist allowances of 2s. 6d. a day have been created for officers below the rank of surgeon captain. The rates of retired pay have been substantially increased, the age for compulsory retirement reduced from 55 to 50 in the case of surgeon commanders and from 60 to 55 in the case of surgeon captains. Further, optional retirement at 40 is to be allowed for all ranks at Admiralty discretion.

In Table I the rate of pay which has been in existence since 1911 is compared with the new rate just issued, ignoring the bonus paid since February last, as that was only a temporary measure and is absorbed in the new rate.

So that there shall be no inflation of the new rate, the income tax at civil rates which will be payable after the end of the present financial year is shown against it, using the current scale for the present financial year.

Income Tax Table.

Total Income for the Year from all Sources.	Rates of Tax on			Rate of Abatement.	
	Naval Pay.	Civil Pay.	Un-earned.	Naval.	Civil.
£ s. d.	s. d.	s. d.	s. d.	£	£
130 to 160 ...	—	2 3	3 0	Exempt	120
160 to 300 ...	0 9	2 3	3 0	160	120
300 to 400 ...	1 3	2 3	3 0	120	1.0
400 to 500 ...	1 3	2 3	3 0	100	100
500 to 600 ...	1 9	3 0	3 9	100	100
600 to 700 ...	1 9	3 0	3 9	70	70
700 to 1,000 ...	1 9	3 0	3 9		
1,000 to 1,500 ...	2 3	3 9	4 6		
1,500 to 2,000 ...	2 9	4 6	5 3		
2,000 to 2,500 ...	3 3	5 3	6 0		
2,500 ...	3 6	6 0	6 0		

Table II gives a few comparisons of net incomes under the two scales at various periods of service, and shows in a footnote the approximate percentage gain.

TABLE II.

Scale.	Daily Rate.	Yearly Rate.	Rate of Income Tax.	Amount of Income Tax.	Net Income.
On entry:	£ s. d.	£ s. d.	s. d.	£ s. d.	£ s. d.
New ...	1 4 0	438 0 0	2 3	38 0 6	399 19 6
Old ...	0 14 0	255 10 0	0 9	3 11 8	251 18 4
After 6 years:					
New ...	1 15 0	638 15 0	3 0	85 6 3	553 8 9
Old ...	0 18 0	338 10 0	1 3	13 0 8	315 9 4
After 12 years:					
New ...	2 5 0	821 5 0	3 0	123 3 9	698 1 3
Old ...	1 4 0	435 0 0	1 3	21 2 6	416 17 6
After 20 years:					
New ...	2 13 0	967 5 0	3 0	145 1 9	822 3 3
Old ...	1 10 0	547 10 0	1 9	47 7 6	500 2 6
Plus charge pay	0 3 6	63 17 6			
		611 7 6			

Note.—The gain in net income under the new scale is: On entry, £148 1s. 2d. (approximately 58 per cent.); after 6 years, £237 19s. 5d. (72 per cent.); after 12 years, £281 3s. 9d. (67 per cent.); after 20 years, £322 0s. 9d. (65 per cent.).

TABLE I.—Scales of Pay Compared.

Old Scale.				New Scale.			
	Per Diem.	Income Tax at Naval Rate	Rank.		Income Tax at Civil Rate.	Rank.	
On entry ...	£ s. d.	s. d.		£ s. d.	s. d.		
After 2 years ...	0 14 0	0 9	Surgeon Lieutenant	1 4 0	2 3	Surgeon Lieutenant	
After 3 years ...	0 15 0	0 9	" "	1 4 0	2 3	" "	
After 4 years ...	0 15 0	0 9	" "	1 9 0	3 0	" "	
After 6 years ...	0 17 0	1 3	" "	1 9 0	3 0	" "	
After 8 years ...	0 18 0	1 3	" "	1 15 0	3 0	Surgeon Lieut. Commander	
After 10 years ...	1 0 0	1 3	Surgeon Lieut. Commander	1 15 0	3 0	" "	
After 12 years ...	1 0 0	1 3	" "	1 17 0	3 0	" "	
After 14 years ...	1 1 0	1 3	" "	1 17 0	3 0	" "	
After 16 years ...	1 4 0	1 3	" "	2 5 0	3 0	Surgeon Commander	
After 18 years ...	1 5 0	1 3	" "	2 5 0	3 0	" "	
After 20 years ...	1 5 0	1 3	" "	2 9 0	3 0	" "	
After 22 years ...	1 7 0	1 3	Surg on Comm'ndr	2 9 0	3 0	" "	
After 24 years ...	1 8 0	1 9	" "	2 13 0	3 0	" "	
After 26 years ...	1 10 0	1 9	" "	2 13 0	3 0	" "	
After 28 years ...	1 10 0	1 9	" "	2 17 0	3 9	Maximum as Surg. Commdr.	
After 30 years ...	1 11 0	1 9	" "				
After 32 years ...	1 11 0	1 9	" "				
After 34 years ...	1 13 0	1 9	Maximum as Surg. Commdr.				
After 36 years ...	1 13 0	1 9	Surgeon Captain	3 5 0	3 9	Surgeon Captain	
On promotion ...	2 5 0	1 9	" "	3 10 0	3 9	" "	
After 3 years ...	2 5 0	1 9	" "	3 15 0	3 9	" "	
After 6 years ...	2 5 0	1 9	" "	4 0 0	3 9	" "	
After 9 years ...	2 5 0	1 9	" "	5 5 0	4 6	Surgeon Rear Admiral	
On promotion ...	3 11 0*	2 3	Surgeon Rear Admiral				

* Approximate; representing £1,300 per annum.

Universities and Colleges.

UNIVERSITY OF LONDON.

GUY'S HOSPITAL: ASTLEY COOPER PRIZE FUND.

UNDER the authority of the Charity Commissioners, the trustees of the above fund, who are the physicians and surgeons to Guy's Hospital, have been empowered to establish a studentship in connexion with the Gordon Museum of Guy's Hospital. The student will be elected for a period of three years, and will be called the Astley Cooper Assistant to the Curator of the Gordon Museum. The present value of the studentship is about £150 per annum, with an additional sum of £50 for expenses.

In accordance with the terms of Sir Astley Cooper's will, the studentship shall not at any time be awarded to any member of the staff of Guy's or St. Thomas's Hospital or to anyone related by blood or affinity to them.

Particulars regarding the studentship can be obtained from Mr. C. H. Fagge, M.S., Guy's Hospital, London, S.E.1, to whom application for the post should be addressed on or before October 15th, 1919.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.

The following awards have been made:

Entrance Scholarship in Arts (£100): F. A. Bevan. Jeaffreson Exhibition (£50): R. N. Curnow and H. F. Hiscocks (equal). Senior Entrance Scholarship in Science (£75): J. N. Kerr. Junior Entrance Scholarship in Science (£100): E. J. Blackaby and A. B. Cooper (equal).

UNIVERSITY OF LEEDS.

At the Court of the University on September 24th a resolution was adopted in the following terms:

The Council deplore the heavy loss which the university has sustained by the premature death of Dr. W. Angus, Professor of Public Health, and record their appreciation of the great service which he rendered to the School of Medicine and to the citizens of Leeds by his scientific insight, public spirit, and devotion to duty. They desire to express their deep sympathy with Mrs. Angus in her bereavement.

The Pro-Chancellor, Mr. A. G. Lupton, who presided, said that during the war a large proportion of the staff of the university was absent on national and military duties, and since the coming of peace a number of professors had left the university staff and many appointments had been made. The financial position had been difficult, but he hoped that the future would be free from anxiety in this respect. With the enlarged scope of the work and the increased number of students, he foresaw that within a short time the university would have to call upon its friends for funds for additions to the buildings, appliances and facilities to enable the work to be adequately performed. Further developments of the medical school and a larger number of students had caused the council to purchase adjoining property, which was being fitted for this new purpose. A new hall, a new library, and a new students' union were wanted.

A list of names for honorary degrees was submitted and approved; it included Sir Alfred Keogh, G.C.B., G.C.V.O., C.H., and Sir Almoth Wright, K.B.E., C.B.

UNIVERSITY OF ST. ANDREWS.

The following candidates have been approved at the examination indicated:

THIRD M.B., Ch.B. (*Materia Medica*).—Isabella D. Kilgour, Nona S. Lesslie, Katharine D. Macfarlane, Gracie MacG. McRorie, Elizabeth W. MacVicar, W. L. Tullis.

Medical News.

DR. A. J. RICE-OKLEY, C.B.E., J.P., has been unanimously nominated Mayor of Kensington for the coming year.

A GALTON SOCIETY for the study of the origin and evolution of man has been formally constituted in New York.

DR. J. MACKENZIE BOOTH, Lecturer on Diseases of the Ear, Nose, and Throat in the University of Aberdeen, left personal estate of the value of £43,160.

A COURSE of lectures on tuberculosis will be given throughout the autumn session at the Hospital for Consumption and Diseases of the Chest, Brompton. The lectures will be delivered on Tuesdays and Fridays, at 8 p.m., during October, November, and December, commencing October 21st.

IN 1918 the number of persons who underwent the antirabic treatment at the Paris Pasteur Institute was 1,805. Of these, 5 died of hydrophobia, a percentage of 0.27. One of the patients, however, was attacked by the disease while under treatment, and another attended irregularly. Deducting these cases, the true death rate was 0.16 per cent. In the first year of the application of Pasteur's method the mortality was 0.94 per cent.

THE Secretary for Scotland has appointed Dr. H. Ferguson Watson and Dr. W. D. Chambers to be Deputy Commissioners of the General Board of Control for Scotland, in place of Dr. R. Cunyngham Brown, who has been appointed Director of Medical Services in the Ministry of Pensions, and Dr. C. Macpherson, who has resigned.

THE University of Liège has conferred the degree of Doctor of Medicine *honoris causa* on M. Clemenceau and Mr. Hoover.

At the instance of Dr. Heyerdahl of Christiania, a Scandinavian society of medical radiologists has been formed. Its first meeting is to be held in Copenhagen in 1921.

THE French University of Strasbourg will shortly issue to all allied universities an invitation to send delegates to their inauguration ceremony, which is to take place on November 22nd, the anniversary of the entrance of French troops into the city.

THE American Public Health Association will hold its annual meeting at New Orleans in October (27th to 30th). The chief subject of discussion will be the health problems of the South, including malaria, typhoid fever, hookworm disease, and soil pollution.

THE provision of rewards for motherhood initiated by the late Dr. F. Nuñez in Cuba has extended widely over the island, each of the six provinces being allotted a proportion of the prizes. This year forty-one of the 112 municipalities are offering prizes in the campaign for healthy children.

THE University of Toronto has received a bequest of £10,000 from the late Dr. Julius Mickle of London, a graduate of the university. It is to provide two fellowships—one in honour of the donor's parents, the other to be awarded to the student of the university who passes highest in his or her third or fourth year.

THE London Medical Exhibition, promoted by the *British and Colonial Pharmacist*, has not been held during the war. The ninth exhibition will be opened on Monday next at the Central Hall, Westminster. Medical men, for whom alone it is intended, are invited to visit it on any day next week between noon and 7 p.m.

PROFESSOR WILLIAM H. RAPPAUD of the University of Geneva has been appointed general secretary of the League of Red Cross Societies. He is a member of the International Committee of the Red Cross, and was for two years associate professor of economics at Harvard University.

AMONG the war prizes awarded by the French Académie des Sciences are the three Montyon prizes of £100, given respectively to MM. Louis Martin and Auguste Pettit, of the Pasteur Institute, for a memoir on ictero-haemorrhagic spirochaetosis; MM. Weinberg and Seguin, of the same institute, for a research on gas gangrene; and MM. Rouvillois, G. L. Pédeprade, and A. Basset for their studies on war surgery. A prize of £120 was awarded to M. Paul Ravaut for his researches on paludism, and one of £80 to M. Goris for studies on the localization of alkaloids and glucosides in vegetables and on the preparation of catgut.

THE late Professor Pozzi was a great connoisseur. His collection, which includes fine examples of mediaeval, Renaissance, and modern art, representative pictures of the best schools, tapestries, Persian miniatures, porcelains, Chinese statuettes and bronzes, Gothic wood sculptures, Oriental carpets, Louis XIII, Louis XIV, and Louis XV armchairs, is to be sold.

THE Minister of Public Instruction of the Republic of Uruguay has officially published the general conclusions of the second South American congress of infant hygiene held recently at Montevideo. The congress called on governments to institute a campaign of prophylaxis and assistance for tuberculous children, and advised that suspected cases should be removed from schools and placed in special institutions. Instruction on the prevention of tuberculosis, syphilis, alcoholism, hydatid cysts, and paludism should be given in all schools. The principles of child-rearing should be taught in all primary schools. The strictest uniformity in the collection of statistics should be enforced. A special death certificate should be required for infants in which the fact of illegitimacy and the dietary should be stated. Special precautions should be taken in the early conceptive period and continued till the completion of convalescence. Prizes and grants for nursing women in institutions of infant protection should be founded. Midwives should be supplied to rural districts at the public expense. The need of prenatal prophylaxis of purulent ophthalmia and stringent precautions against the introduction of trachoma by immigrants are insisted on. Dental dispensaries should be attached to all schools.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitology, Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

DR. W. A. GRIGGS (60, Montpelier Road, Brighton), who is collecting evidence about spiritualism, asks readers to send him, "in strict confidence, the number of patients in their own practice who through spiritualism and its methods have become insane, obsessed, or reduced to a state of debility, nervousness, fear, etc. Apart from all fraud, spiritualism can do much harm physically and mentally."

ASTHMA POWDERS.

A CORRESPONDENT replies to "Antispasmodic" (JOURNAL, September 27th) as follows: The method of compounding is: Dissolve the nitrate of potassium in four times its weight of hot water; pour the solution over the previously mixed powders; allow to stand twenty-four hours, and then carefully dry. Various modifications of the formula are in use, a tendency being to delete the black tea either wholly or partly, substituting other drugs, such as indian hemp, opium, tobacco, aniseed, fennel. However, Sir W. Hale-White in his *Materia Medica* recommends the leaves of stramonium, datura tatula, indian hemp, and lobelia of each $\frac{3}{4}$ oz., nitre 1 oz., oil of eucalyptus 30 minims, as a combination answering its purpose well.

INCOME TAX.

Q" purchased a practice in May, 1916, but, owing to his enlistment in the army, sold it again in April, 1917. From the figures supplied it would seem that a profit would be made on the working of the practice for the twelve months, but losses incurred on commencing and realizing the practice almost or entirely cover the profit made. The surveyor asks for payment of tax on £350 less £120 abatement for the year 1916-17.

* * The hardship in this case appears to be the legal inability to make any deduction for the loss of capital arising through enlistment, and is accentuated by the fact that our correspondent's military service has, temporarily at any rate, rendered him incapable of doing professional work. We suggest that he place the full facts before the Board of Inland Revenue—either through the local surveyor or by communicating with the Secretary, Somerset House—and ask for special consideration of the circumstances on the ground of abnormal hardship. It seems a case where any power of waiver that the department may have would very properly apply.

LETTERS, NOTES, ETC.

DR. OLIVER OF BATH.

P. W. L." inquires where he can obtain information relative to the life of Dr. Oliver of Bath.

* * In the eighteenth century there were two physicians of Cornish descent bearing the name William Oliver, but it does not appear that they were related. The elder was born in 1659, and died in 1716. His medical studies were interrupted by service in the Duke of Monmouth's expedition as surgeon to the troops. After various adventures he obtained the Licence of the Royal College of Physicians of London in 1692, and was afterwards elected F.R.S. There is some doubt as to whether he practised at Bath, but he wrote a dissertation on the "Bathe Waters," and he was buried in the Abbey Church of that city. William Oliver, the younger, was born in 1695; he studied at Pembroke College, Cambridge, and graduated M.B. in 1720 and M.D. in 1725. Like the elder Oliver, he also studied physic at the University of Leyden, and, like him, was elected F.R.S. From 1725 until his death in 1764 he lived at Bath, and had the leading practice of the city. Ralph Allen of Prior Park was his friend. Oliver was physician to what is now the Royal Mineral Water Hospital,

and drew up regulations for the admission and removal of patients. In the board room there is a portrait of him examining patients with Jeremiah Pierce the surgeon. He was the inventor of the famous "Bath Oliver biscuit," and according to the *Dictionary of National Biography*, from which these notes are taken, he confided the recipe to his coachman Atkins, giving him at the same time £100 in money and ten sacks of the finest wheat flour. The recipient opened a shop in Green Street and soon acquired a large fortune.

INSURANCE REMUNERATION.

DR. H. A. WATSON (Worcester) writes: In view of the proposed new terms under the Insurance Act, the enclosed statistics I have just found for 1914 and 1916 may be of interest. Since the dropping of record cards I have not kept such particulars. To my mind the figures show how very poor the pay is at the present rates. These years do not include any epidemics such as occurred last year, when the work was doubled and the rate of pay correspondingly diminished. Another point to notice is that the numbers taken are those of my index slips and the full nominal rate of 7s. is taken. When allowances are made for so-called inflation of list, and if the actual amount received were reckoned, the rate would come out considerably lower.

City of Worcester.		County of Worcester.	
1914.		1916.	
Patients on list, 906.		Patients on list, 932.	
No. treated, 604=66.6 per cent.	sick.	No. treated, 557=60.4 per cent.	sick.
Visits and attendances, 4,267	=7 per sick person.	Visits and attendances, 4,167=7.5	per sick person.
906 patients @ 7s.=6,342s.		932 patients @ 7s.=6,524s.	
∴ Each visit or attendance	=1s. 5½d.	∴ Each visit or attendance	=1s. 6½d.
Patients on list, 235.		Patients on list, 202.	
No. treated, 137=58.3 per cent.	sick.	No. treated, 107=53 per cent.	sick.
Visits and attendances, 1,188	=8.7 per sick person.	Visits and attendances, 745=7 per	sick person.
235 patients @ 7s.=1,645s.		202 patients @ 7s.=1,414s.	
∴ Each visit or attendance	=1s. 4½d.	∴ Each visit or attendance	=1s. 10½d.

PEDICULOSIS OF THE EYELASHES.

DR. M. ESTHER HARDING (London) writes: A case of pediculi of the eyelashes came under my notice about a year ago. A little girl, aged 3 years, was admitted to Plaistow (Fever) Hospital suffering from diphtheria. She was reported by the nurse in charge to have a "dirty" head. On examination it was found that her eyelashes and eyebrows were encrusted with nits, while many small pediculi could be seen crawling in the latter. A weak mercury ointment was ordered and the condition soon cleared up.

MEDICAL PRACTICE IN JAPAN.

IN a recent lecture in praise of the Japanese Hospital under the direction of Professor Shiotō established in the Astoria Hotel, Paris, Mme. Adrien Lenoir said that the total number of medical practitioners in Japan, according to the latest census, was 42,404, giving a proportion of 1 to every 1,266 of population; nurses numbered 14,549. The hospitals, some State and others private institutions, were subject to inspection. All nurses must have a diploma, and there was a special licence for male nurses who cup and apply the cauterium. Massage is in the hands of special operators, many of whom are blind. There are in Japan 2,363 dentists, 5,461 pharmacists, and 31,048 midwives. Breach of the laws regulating medical practice is punished by suspension of licences, temporariness or permanent.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 23, 24, 26, 27, 28, 29, and 30 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 25 and 26.

THE appointment of certifying factory surgeon at Royton (Lancaster) is vacant.

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NOTE.—It is against the rules of the Post Office to receive *posteo restante* letters addressed either in initials or numbers.

THE CURE OF CRIPPLED CHILDREN.

PROPOSED NATIONAL SCHEME.

BY

SIR ROBERT JONES, K.B.E., C.B., CH.M., F.R.C.S.,

LIVERPOOL,

AND

G. R. GIRDLESTONE, F.R.C.S.,

OXFORD.

It is unfortunately the case that children suffering from crippling diseases and deformities of all kinds exist in large numbers throughout our country. The majority lie out of sight in their homes; many are in workhouses or collected in homes for crippled children, but many others are frequently to be met in our streets. The number of adult cripples resulting from disease or deformity in childhood is a still more common object for our sympathy; and shame is added when we realize that perhaps three-fourths of these could have been cured, and most of the others given much greater activity, if their condition had been recognized early and treated efficiently. There is no lack of sympathy for these children, but it must be led into practical channels, and, after all, the comparative comfort of a cripples' home is but a half-measure. Our sympathy should be directed towards the cure of the deformities and diseases from which they suffer, or, where cure is beyond reach, the greatest improvement that can be attained. This paper is written to draw attention to this need and to bring forward proposals for the establishment of a system of orthopaedic hospitals and clinics for the active treatment of cripples, and more particularly of crippled children, throughout the country. In Shropshire a system of hospital and out-patient treatment such as is here to be described has been organized, owing to the pioneer work of Miss Hunt, who started the Children's Orthopaedic Hospital at Baschurch in 1900. As a direct consequence many hundreds of children have been cured or greatly benefited. Further, through the out-patient clinics added more recently, many cases have been brought to light which would otherwise have remained unknown and untreated. Thus we have been able to realize more fully the great number of cases in very serious need of treatment.

The proposals put forward are thus not merely theoretical, but concern the multiplication of this organization throughout England and Wales, and its general co-ordination under the Ministry of Health.

The accompanying table is compiled from the list of cases under treatment in Shropshire, and at a daughter institution at Stoke in Staffordshire, and represents fairly the principal disabilities and the three main groups in which they may be included.

It will be seen that rickets and surgical tuberculosis taken together account for 40 per cent. of the crippled children under treatment in these areas. Of the causes of these diseases and of the means of preventing them we have practical knowledge. Rickets occurs almost exclusively in the children of the poorer sections of the population and surgical tuberculosis is commoner among them than among the well-to-do. Overcrowding and bad housing, with lack of open-air playgrounds and ventilation in the homes, are among the predisposing causes of both these diseases, coupled in the case of rickets with improper or insufficient food, and in that of surgical tuberculosis with tuberculous milk. Of the causes of the other groups too little is known to justify any sanguine anticipations that they can be greatly diminished in the near future. We are impotent to prevent congenital deformities and have little or no power to control the incidence of paralysis, though much may be done by suitable early treatment to prevent or later to rectify the deformities so produced. The table shows that cases under treatment for congenital deformities and paralysis constitute 45 per cent. of the total. In health organization directed towards the elimination of the causes of rickets and tuberculosis lies the best hope of any early reduction in the frequency of crippling disabilities. Even were this achieved and the present total of cripples diminished by 40 per cent., then would remain the other 50 or 60 per cent. crippled by causes over which we have little or no control.

Table of Cases under Treatment.

Nature.	Shropshire.	Stoke.	Total.
A. D. deformities, congenital or acquired.			
Rickets	51	177	228
Deformities of the foot	51	71	122
Scoliosis	14	8	22
Congenital dislocation of hip	8	16	24
Fractures, non- and mal-union	10	15	25
Other deformities		43	43
Total	134		
B. Paralyses:			
Infantile paralysis	72	211	283
Infantile hemiplegia	11		
Spastic paraplegia	11		
Total	94	254	348
C. Surgical tuberculosis:			
Spine	75	55	230
Hip		57	
Knee		26	
Other joints, etc.		17	
Total	75	155	230
D. Other conditions:			
Osteomyelitis	11	33	44
Various	28	16	44
Total	39	49	88
Total	342	748	1,130
Approximate population of area served	246,307	425,000	671,307
Approximate proportion of cases under treatment to population	1 to 722	1 to 538	1 to 594

GENERAL CONSIDERATIONS AS TO TREATMENT.

Under present conditions some of these children die, and of the remainder most become cripples. Many are fully curable, almost all can be benefited; but an organization to provide early and well-directed treatment is necessary.

The country has, so far, made no real effort to face the problem. The great need for hospital provision for cases of surgical tuberculosis has indeed been recognized by Government under the National Insurance Act (1911), but no comprehensive scheme has been brought forward. Here and there orthopaedic hospitals, or orthopaedic departments of general hospitals, exist as a result of voluntary effort, but these are only capable of dealing with a small percentage of the cases. For the immense majority there is no hospital accommodation, nor can they hope for adequate treatment. The task is beyond the scope of the general hospitals, for it is impossible for them to provide the necessary conditions, which should include ample bed accommodation in open-air country hospitals. It is characteristic of orthopaedic surgery that an operation is often not an end in itself, but one link in a chain of treatment; moreover, by early treatment and progressive orthopaedic measures operation can in many cases be avoided altogether. Further, there is, as a rule, no period of natural convalescence, but, on the contrary, in the case of most deformities a persistent tendency to relapse long after complete correction. For these reasons a long stay in hospital with continued careful corrective treatment and after-supervision are necessary.

In those cases of paralysis in children where tendon grafting is needed, a carefully planned course of treatment preparatory to operation must be carried out and afterwards directed toward the restoration of function.

Again, the need for time is exemplified in the more chronic diseases of bones and joints, which may call for perfect immobilization and surgical care for very long periods.

A lengthy stay in hospital must therefore be foreseen and provided for. The average duration of in-patient treatment may be reckoned as six months or more, and the bed accommodation should be sufficient to allow this.

Further, there should be no fixed age limit, for adolescent and adult cripples needing active treatment must not be shut out, and a considerable number of accidental injuries occur which demand orthopaedic treatment.

Experience has proved the very great advantage of treating the children in open-air wards in the country. Not only is this most advisable on account of the actual benefit due to the country air, but also it is economically sound owing to the immensely higher price of alternative town sites.

Further, the final results, and the rapidity with which they can be obtained, depend to a very great extent on early recognition and treatment. For example, a congenital deformity which in early infancy can be cured by simple painless manipulation will, when the child is six months old, require forcible correction under anaesthesia, and at six years may need several such manipulations, and possibly operative interference as well, with in the end a less perfect result.

At present a paralysis or deformity is too often accepted by parents, and even by medical men, as permanent and incurable. This is due to the want of knowledge of parents and those responsible for the case of what can be done and of the importance of doing it early. If hitherto there have been very few orthopaedic hospitals in England; as a consequence, such children have been sent up to a busy general hospital, where, owing to pressure on the beds, it has not been possible to keep the patients in long enough; further, there has been no after-care organization, and the whole treatment has been nullified by the inevitable tendency to relapse.

PROPOSED SCHEME.

Our proposals concern:

- A. The division of England and Wales into a number of districts.
- B. The establishment in each district of
 - (1) An open-air country orthopaedic hospital.
 - (2) A system of scattered out-patient clinics.
- C. The organization of efficient treatment.
- D. General co-ordination by a committee working under the Ministry of Health.
- E. The number of beds required.
- F. Financial provision required.

A.—The Division of England and Wales into a Number of Districts.

This division should be coincident with that for other administrative purposes, and might well follow that adopted by the Ministry of Pensions. Where the Pensions "Regions" are too large they should be suitably subdivided. The districts should not be too large, as close interworking of hospital and clinic is necessary; wherever possible a radius of fifty miles should not be exceeded.

B.—The Establishment in Each District of

(i) An Open-air Country Orthopaedic Hospital.

These hospitals will be referred to as the *Central Orthopaedic Hospitals*. Each should provide bed accommodation adequate to serve the district, have open-air wards, be situated on dry soil with a good aspect, and be in the country, but preferably near enough to a town to share in its water, light, transport, and drainage systems.

In addition to the wards there will be needed operating theatres, gymnasia, handicraft workshops, schoolrooms, playrooms, and an administrative block. Most, if not all, of these requirements could be met by suitable huts.

As the patients will be mainly children of school age, it will be necessary for the education authorities to arrange for their schooling and to provide the requisite teachers.

Workshops where the children can learn simple handicrafts such as basket making, carpentering, and leather work, are of great value, and for the older children we hope that some definite training in suitable industries may be possible.

While cure of the disability is the prime object of the whole organization, we feel that the development of happiness, of a self-reliant outlook and the capacities of these children is of the utmost importance.

The hospitals should be centres of play, of handicrafts, and of education, as well as of treatment.

For management these hospitals should, if possible, be affiliated to the general hospital of the neighbouring town

This arrangement would be simple whenever a suitable general hospital willing to accept the responsibility existed, but where the C.O.H. (central orthopaedic hospital) was situated near a big city, a system of representation of all the principal general hospitals on the committee of management should be instituted. In any case, we would suggest that this committee should consist of:

- (a) Representatives of the general hospital or hospitals.
- (b) The orthopaedic surgeons and matron of the C.O.H.
- (c) The medical officers of health and tuberculosis officers of the district.
- (d) Representatives of the local authorities and education authorities of the district.

A large committee of this kind is needed to ensure the representation of all the interests concerned. It would appoint from among its members a smaller Executive Committee. It is by the possession of a truly representative local governing body that these hospitals can best be organized so as to carry out effectively their various activities in the clinical departments, the workshops, the schoolrooms and playrooms, and the out-patient clinics.

The affiliation between general and orthopaedic hospitals should not stop short at administrative affairs. Clinical co-operation is even more important. The spirit of mutual help rather than rivalry should run through all their relations. A great step towards ideal co-operation would be taken if the general hospitals would institute an orthopaedic section of their out-patient department and appoint one of the surgeons of the C.O.H. to take charge of it. Out-patients coming up could then be given provisional grouping, and later after examination, be referred readily, for opinion or transfer, from the general to the orthopaedic side or vice versa.

Staff.

The staff may be considered as:

1. Orthopaedic surgeons. In most cases these would be visiting surgeons, and the salary would be on a part-time basis. In some places the appointment of a whole-time surgeon might be advisable.
2. Radiologist and physiotherapist.
3. House surgeons.
4. Matron.
5. Sisters, nurses, masseuses.
6. School teachers.

The appointments of the surgeons, radiologist, and matron should be made by the Ministerial Committee (see below) in consultation with the local committee. They should be held for a limited period, the occupant being eligible for re-election.

The house surgeons should be elected for periods of six or twelve months by the local committee on the recommendation of the surgeons.

In London and other big cities where orthopaedic hospitals or departments already exist it would be advisable merely to bring the existing institutions into the general organization so that co-ordination might be obtained. In this description of the C.O.H.'s and their management we are mainly concerned with those places where there is no satisfactory organization of this work.

(ii) A System of Scattered Out-patient Clinics.

As has been stated, these children require after-care or periodic supervision for long periods, sometimes for years, and the maintenance of this is fundamental to the success of the treatment. Often also appliances need repair or renewal. It has been found impracticable to bring all the patients more or less recently discharged up to one central hospital frequently for these purposes; scattered out-patient clinics are therefore a necessity.

A second and very great advantage in their existence is that they provide means for the preliminary examination of cases referred to them from local sources.

A third gain consists in the fact that it is possible to treat some of the minor cases as out-patients throughout. The clinics should probably number between twelve and twenty-four in each district, and as the use of the rooms would only be periodic, should be held in connexion with a local hospital, dispensary, or child welfare centre.

Wherever possible suitable local practitioners should be asked to help. One of the surgeons of the C.O.H. should visit the clinics periodically and see all the patients. He should also be prepared to examine cases sent to the clinics for consultation by local doctors and school inspectors. These facilities would become generally

known throughout each district, and this would mean that cases would be brought under treatment earlier, and that fewer would remain unknown and untreated.

A competent orthopaedic sister, selected from the staff of the C.O.H., should visit the clinics frequently, carry out treatment and exercise general supervision on the instructions of the surgeon.

C.—The Organization of Efficient Treatment.

The methods employed in dealing with these cases, and in particular the intimate knowledge of work with splints, appliances, and plaster-of-Paris, call for a specially trained surgical and nursing staff.

Further, in the demand for a very great deal of personal attention on the part of the surgeon lies one of the most convincing arguments for specialization. It is the special predilection for this work, and the patient attention to detail and after-care, which should distinguish the orthopaedic surgeon. Having withdrawn himself from active participation in the surgery of the head, the thorax, and the abdomen, he is able to specialize in the treatment of the disabilities of the joints, bones, muscles, ligaments, and nerves.

The central hospitals, where near a university town, would be available for the instruction of medical students, and the house-surgeon appointments would be of considerable educational value.

Nurses.

In addition the central hospitals would take their part in the training of nurses. And in this connexion there is a special advantage in definite affiliation with general hospitals, so that:

- (1) All nurses may get some experience of this work and
- (2) It may be possible for any nurse to specialize in orthopaedic work without having to extend her training excessively.

It is anticipated that under new regulations for the registration of nurses it will be necessary for every qualified nurse to be trained for three years in a general hospital. Therefore, unless the orthopaedic hospital is under the aegis of the general hospital, it would be necessary for the period of orthopaedic training to be entirely additional to the three years in the general hospital. Where, however, affiliation exists only about one extra year will have to be spent by those who want to take up orthopaedic nursing. At least six months in the plaster and splint department would be a necessary part of their training.

It will be essential to give good salaries and proper leisure so as to make the work attractive to the best type of nurse. In connexion with this side of the work we would recommend the appointment of a nursing tutor, who would carry out the clinical educational work and leave the matron free for her administrative duties.

Physical treatment will play a very important part in these hospitals. All working in this department should have passed the standard examinations in massage, electrotherapy, and remedial exercises.

D.—General Co-ordination by a Committee Working under the Ministry of Health.

This committee should consist of representatives of that authority, the British Orthopaedic Association, and the C.O.H.'s. The committee would appoint or advise as to the appointment of the staff of the C.O.H.'s, and would consider and make recommendations as to the general policy and methods of administration. It would be responsible for the attainment and maintenance of a high level of efficiency throughout the system.

For the primary organization a preliminary committee might well be appointed consisting of, say, three representatives of the Ministry of Health and three of the British Orthopaedic Association.

E.—The Number of Beds Required.

It is possible to get a fairly close estimate of the bed requirements by two methods.

(a) From the table already given it may be seen that the cases under treatment in Shropshire and at Stoke represent approximately 1 in 594 of the populations of the area "served." It is the opinion of those responsible for both

these organizations that less than half of the cases requiring treatment are so far reached, so we may take the proportion as 1 in 500 and be on the safe side. Almost all the patients require in-patient treatment for a time, and the relation of the average periods of in-patient and out-patient treatment is probably about 1 to 4. On these figures beds would be required for 1 in every 2,000 of population.

(b) In France before the war the establishment of beds for surgical tuberculosis was, we believe, based on the proportion of 1 to 8,000 population. This provision was found inadequate. Now the proportion of cases of surgical tuberculosis and other conditions in the total figures from Baschurch and Stoke is 230 to 1,130 or 1 in 5. Following these figures, 5 in 8,000 (or 1 in 1,600) would be the proportion to take in order to make a provision comparable to that of France.

By these two methods, which admittedly lead to approximate estimates only, we obtain the needs as 1 to 2,000 and 1 to 1,600 population. But as it is wiser to start with too few beds rather than too many, we would suggest the establishment as a commencement of 1 bed to 4,000 population, or, in round numbers, 10,000 beds in England and Wales.

F.—Finance.

(a) *The Establishment of the C.O.H.'s.*—We would recommend that these should be hatted hospitals. Probably a complete unit of 200 beds would cost £10,000. If this estimate proved correct the 10,000 beds would cost £500,000.

(b) *Upkeep.*—It is our opinion from the experience at Baschurch that £2 per bed per week would provide for the total expenditure of the C.O.H., including all salaries. For the 10,000 beds that would mean £1,040,000 per annum. For the out-patient clinics an attendance fee of 2s. 6d. or 3s. 6d. would probably meet all expenses. If we assume that there would be 40,000 out-patients (that is, four times the number of in-patients) and that the average attendance would be once a month, the annual cost at 3s. 6d. would be £84,000.

These statements are estimates of the total cost of the scheme, but are in no way to be considered as actual new expenditure. This must be far smaller owing to the following deductions. First, as regards establishment; hatted hospitals already exist in suitable places; they are at present used for war work, but will become available for transfer to the Ministry of Health; there are also orthopaedic hospitals already established which will be utilized in the organization. Secondly, under existing circumstances, many of the 10,000 patients who would occupy the beds have to be taken into general hospitals or workhouse infirmaries. These patients will come to the orthopaedic hospitals, but it will not mean new expenditure but a corresponding relief of the other hospitals. Similarly, cases belonging to the large class of surgical tuberculosis are now being maintained in various institutions under the provisions of the National Health Insurance Act; they will be transferred to the orthopaedic hospitals, but their maintenance fees will come with them. Further, the gathering together of all these cases into hospitals specially devoted to, and prepared for, their active and effective treatment will mean that the money expended on their care and treatment will be used more efficiently, and in many cases enable them to leave hospital more quickly and return to an active life. It will relieve the general hospitals of some of their most trying and chronic cases, and mean the setting free of beds to the relief of their waiting lists.

Such new expenditure as does prove necessary should not fall entirely on the Treasury.

Capital expenditure should be shared in suitable proportions with the local authorities. And with regard to running expenses there should be:

- (1) Private wards for those who could pay full fees.
- (2) Arrangements by which all patients should make a contributory payment who could afford to do so.
- (3) Arrangements by which local authorities should pay at least part of the cost of the poorer patients.

In this way the Treasury, the local authorities, and the patients would share the expenses. Possibly half the first cost and one-third of the running expenses would come from Treasury sources through the Ministry of Health. From the national point of view the improvement in the earning

capacity of the 40,000 or more children treated annually should go far toward covering the expenditure.

Finally, we would plead that the matter is very urgent. First, owing to the crying need; one cannot walk through the streets without seeing children and adults crippled for want of treatment.

Secondly, because the local authorities are now becoming alive to the condition of affairs, and are anxious for something to be done. A general organization is wanted for the efficient co-ordination of the work rather than any compulsion of local authorities. In both Shropshire and Staffordshire, where the authorities are already at work, there is general eagerness to join in the local organization.

Thirdly, a unique opportunity is presented now. The Ministry of Pensions is organizing orthopaedic hospitals and clinics, on similar lines to those described, for men crippled in the war; is providing them with the special departments, supplying the apparatus necessary, and is staffing them with surgeons trained in orthopaedic principles, many of whom have had much experience with crippled children.

These pensions hospitals will at first be fully occupied,

but before many months there will be a diminution in the needs of the soldier cripples. Then will come a time when they will have to be cut down, and their staffs gradually dispersed, unless the Ministry of Health has made its plans in advance and obtained the necessary financial provision for taking them over, either in part for children's work only, or as a whole with the responsibility of such war work as remains to be done. The opportunity is exceptional, and the advantages offered by it very great. But preparations should be made by the Ministry of Health immediately, so that it may be in a position to act when the time comes.

The matter is so urgent that Government action should not be awaited. Everywhere efforts should be made to start local organizations which would fit into the general scheme, but such action should be taken in consultation with the Ministry of Health.

We feel confident that, if an organization such as we have outlined is set up, many thousands of children otherwise doomed to the life of cripples will be deemed to health, and others, though not fully cured, enabled to become self-supporting citizens, and given far greater possibilities of activity and happiness.

TRANQUIL TRACHEOTOMY, BY INJECTING COCAINE WITHIN THE WINDPIPE.*

BY

SIR STCLAIR THOMSON, M.D., F.R.C.S.ENG.,

PROFESSOR OF LARYNGOLOGY, AND SURGEON FOR DISEASES OF THE
NOSE AND THROAT, IN KING'S COLLEGE HOSPITAL.

As a general rule, the opening of the trachea is accompanied by so much disturbance that there often ensues a scene which the elder dramatists would have described as one of "wild excursions and alarms"! It is depicted in the following words by Clinton Wagner: "The introduction of the knife, together with the flow of blood, produces violent reflex action. The larynx rises and falls spasmodically and very rapidly, and the use of a knife or scissors is fraught with danger. The operator at this moment has need of all his coolness and presence of mind. Blood will find its way into the trachea and lungs, and death on the table from asphyxia may suddenly take place."¹

Apart from the risk of such a catastrophe, I remember the days when, before opening the trachea, one had to advise the audience to "take cover" behind the head of the operating table, as the cough started by the first entry of air into the windpipe frequently resulted in blood being shot out with such force that it bespattered the assistants, the walls, and even the ceiling.

All this commotion can easily be avoided by the intra-tracheal injection of cocaine in the way to be described. I acknowledge my indebtedness for the idea to Dr. Crosby Green, who, in an article on "Thyrotomy for cancer of the larynx," describes how, before splitting the larynx, he injected a 1 per cent. solution of cocaine through the cricothyroid membrane into the cavity of the larynx.² He, it appears, is not in the habit of performing a preventive tracheotomy in this operation, and he makes no mention of injecting cocaine within the trachea. If not the first to use it in tracheotomy, I think I was the first to employ it in this country. This I did in the year 1913.

It is employed in the following way (see diagram). An ordinary hypodermic syringe is charged with about twenty drops of a 2½ per cent. solution of cocaine. As soon as ever the tracheal rings are laid bare the syringe is grasped,

as one does a pen, with the forefinger about one inch from the extremity of the needle, and with this the windpipe is sharply stabbed between two tracheal rings. The middle, ring, and little fingers are resting on the neck, and they prevent the point from penetrating more than a quarter to half an inch within the lumen of the trachea. The cocaine solution is injected into the cavity of the windpipe, some five to fifteen drops, and the needle is sharply withdrawn.

The liquid in the windpipe at once gives rise to a slight, stuffy cough. It causes no spasm or distress, and as it trickles down towards the region which endoscopists know to be the sensitive spot of this area—namely, the carina at the bifurcation of the trachea—this tickling cough soon ceases. If there is no great urgency, ten minutes should be allowed to elapse, the time being occupied by clearing the front of the trachea, checking all bleeding, preparing the tube, and so forth. At the end of that time the incision can be made into the trachea and the cannula introduced without pain, spasm, or even the slightest cough, as quietly and smoothly as the original incision through the skin. The calm with which this proceeding takes place is in striking contrast with the agitated, hurried, and often bloody and dangerous operation of former days.

I have used cocaine of the strength of 2½ per cent. for the simple reason that a 5 per cent. solution is generally at hand, and it has been convenient to dilute it one half. I find the 2½ per cent. strength quite as effective as the 5 per cent., which

I tried first. In children a 1 per cent. solution and five drops would be sufficient.

The method is employed with either general or local anaesthesia. Local anaesthesia is sufficient in all adults when the opening of the trachea is the only operation to be performed at one sitting.³ With novocain used endermically, and the cocaine used in this way within the windpipe, there is neither pain, spasm, nor coughing in performing tracheotomy. A patient gets up from the table and walks back to his ward, to eat his usual meal.

I have records of 25 cases of laryngo-fissure in which this method has been used in performing the preliminary tracheotomy, and the numerous visitors to my practice have been able to see the calm which it secures. In these five years it has been used in scores of cases of tracheotomy by myself, Mr. Hope, Dr. McIlraith, and the house men in King's College Hospital, with uniformly good results and with no drawbacks.



Semi-diagrammatic illustration showing the injection of cocaine within the lumen of the trachea, as a preliminary to tracheotomy. It also shows the best position of the shoulders and head for tracheotomy, laryngo-fissure, and other external operations on the larynx and trachea.

* A paper read before the American Medical Association (Section of Oto-Laryngology), Atlantic City, N.J., on June 13th, 1919

It has not come my way to use it in children younger than 4 years, but, with the precautions I have advised, I think it can be safely employed. Nor have I had occasion to use it in sudden asphyxia—the “operation d’urgence.” Most cases of extreme stenosis of the larynx ought to be provided against by timely tracheotomy, and even when there is dyspnoea, the few minutes’ delay entailed by this useful detail are more than compensated by the calm and security with which the operation can be completed.

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¹ *Med. Record*, New York, 1896, xlix, p. 1. ² *Transactions American Laryngological Association*, xxxv, 1915, p. 165. ³ St. Clair Thomson, Tracheotomy under Local Anaesthesia, *BRITISH MEDICAL JOURNAL*, October 14th, 1905.

A CASE OF COEXISTENT SUPRARENAL AND RENAL DISEASE OF UNCERTAIN ORIGIN.

BY

CAPTAIN H. G. SPARROW, R.A.M.C.(T.C.),

AND

CAPTAIN W. S. SODEN, R.A.M.C.(T.).

AFFECTIONS of the suprarenal body being always of interest, we think that the following case, which came under our observation last November in Palestine, is worthy of record. While the outstanding clinical features were those of profound Addison's disease, the presence of albuminuria and of purpura rendered diagnosis very difficult.

We would add that, as is well known to those who have worked in malarial districts, malignant tertian fever may simulate almost any non-tropical disease; that pyrexia may be atypical and the parasite absent from the peripheral blood on repeated blood examination, especially after quinine administration. It is not surprising, therefore, that this case, occurring at the time when malignant malaria was rife among the troops of the Egyptian Expeditionary Force, received quinine treatment in spite of negative blood films. The *post-mortem* appearances were not those of true Addison's disease.

History and Condition on Admission.

Pte. M., R.A.M.C., aged 32, was admitted as a patient to his own field ambulance on October 21st, 1918, with weakness, vomiting, and night blindness, in evidence for two months. He appeared very weak and anaemic. Blood film negative to malaria. Treated with quinine orally, and evacuated four days later. There is no record of the temperature. A second blood film at the casualty clearing station was also negative to malaria, but quinine was continued. He was admitted to No. 35 Stationary Hospital on October 27th.

On admission the temperature was 102° F. The patient was pale; no icterus, skin dry, recent loss of subcutaneous tissues evident; tongue moist, slightly furred, mouth healthy, breath odourless. Heart no enlargement, sounds rather soft, no thrills or murmurs. Pulse 80, regular, low tension. Lungs normal; liver and splenic dullness normal. Abdomen slightly retracted, no pain or tenderness, no visceral abnormality discovered.

Central nervous system lethargic but mentality normal; cranial nerves normal, no nystagmus, pupils equal, reactions normal; muscles generally flabby, no paresis, sensation normal, no ataxy; knee and ankle jerks present and equal, abdominal reflexes sluggish, plantar reflexes flexor.

Course.—The initial pyrexia had subsided by the following morning, and a subnormal course was recorded for seven days. During this period he was treated with quinine gr. xxx by mouth daily. On the evening of November 4th the temperature rose to 99°, 100° being recorded the following morning, and a further rise to 103.2° that evening. Two blood films, taken during this period, were negative to malaria and relapsing fever. An intramuscular quinine injection (gr. xii) was given on the 6th and repeated on the 7th, the pyrexia readily responding. The temperature thereafter seldom reached the normal line. The pulse and respiration rates were within normal limits until the last few days of the illness, when the pulse reached 100 at times. The bowels tended to constipation until the end, when diarrhoea set in. The average amount of urine passed was about 40-50 oz. daily; it was pale in colour, frequency was not noted. The blood pressure was always conspicuously low. On November 7th the vomiting, which previously had not been greatly in evidence, became more marked. It was always accompanied by nausea, and unrelated to food. Examination of the urine showed specific gravity 1015, ++ albumin, no sugar. The fundi were not examined, as no ophthalmoscope was then available. The cardiac condition remained unaltered, no headache was complained of, and no oedema was noticeable. The following day a blotchy purpuric eruption appeared on the lower aspect of the chest, over the abdomen, and to a lesser extent on the

extremities. Examination of the urine on November 9th showed albumin +, no sugar, no casts or organisms. A differential white count showed increase of polymorphs. The same evening acetone was detected in the breath, and about an hour later the patient vomited a large *ascaris* worm. Saline and santonin treatment was instituted, no further worm being vomited or passed in the motions, and the acetone odour of the breath gradually disappeared. The vomiting, however, continued, and the low blood pressure, together with the marked asthenia, strongly suggested Addison's disease. A careful examination of the lungs for tuberculosis was negative, and evidence of abnormal skin pigmentation was at this stage too indefinite to be of any service. The deep reflexes gradually disappeared and abnormal skin pigmentation became definite by November 23rd, the distribution corresponding to the usual Addisonian type; the mouth, however, was remarkably free.

At this stage the patient presented the following picture: Signs of general bodily wasting. Mentality normal, very lethargic; cranial nerves normal; no nystagmus. An appreciable degree of bilateral pseudoptosis. Pupils equal, reaction to accommodation and bright light fairly brisk, to shaded light poor. Cilio-spinal reflex not elicited. Abdominal reflex absent. Both knee and ankle jerks absent on reinforcement. Plantar reflexes flexor, but elicited with difficulty. Pronator, supinator, biceps and triceps jerks barely elicited. Muscles very flabby, no actual paresis. No sensory loss. Heart: No enlargement, no thrills or murmurs. Pulse regular, rather rapid, very low tension. Blood pressure (both brachials) by sphygmomanometer 62 mm. Capillary instability marked. Abdomen scaphoid, nothing else discovered. No glandular enlargement. Purpura fading, but still evident. No oedema of legs, back, or face. Blood examinations: Total leucocytes 11,600 (polymorphs 84 per cent., lymphocytes 10 per cent., large mononuclears 4 per cent., eosinophils 1 per cent., myelocytes 1 per cent.). Slight poikilocytosis and anisocytosis of reds, no polychromatophilia, no nucleated reds present. Pituitarin injections brought about no appreciable rise of blood pressure.

On November 30th vomiting became more frequent, and diarrhoea was superadded; motions greenish, and much bright blood present. Faint uraemic odour in breath. No appreciable diminution of urine. Examination (routine) of the stools for dysentery was negative, the condition being ascribed to purpura.

Patient sank and died on December 3rd, being quite conscious till the end.

Post-mortem Examination.

Pericardium healthy, cardiac muscle a little cloudy, no fatty or fibrotic change evident, no hypertrophy. No apparent dilatation. Valves healthy. Coronaries healthy. Aorta, no atheroma.

Suprarenal bodies: Cortex of both glands appeared somewhat shrunken; medullary portion in each case was represented merely by a thin-walled, deeply pigmented sac, containing the slightest traces of a fatty material. Under the microscope the cortex was narrowed and atrophied, no trace of medullary substance, unless represented by some fatty spaces. Some degree of cloudy swelling and granularity of cortical cells.

Kidneys: Right kidney, size of hen's egg, very pale in colour, very adherent capsule, granular surface (granules size of mustard seed). Cortex very narrow, vessels thickened, no cysts or mottling. Kidney not microscopied. Left kidney, slightly smaller than normal, capsule stripped none too readily, surface as in right. Outline fan-shaped on section. Scar near upper pole (? old infarct). Five cysts in cortical zone, containing urinary fluid, one contained small oxalate crystal. Much mottling generally. Vessels appeared somewhat thickened. The microscopic changes were marked swelling and granularity of cells of cortical tubules, marked disintegration of cytoplasm, with frequent absence of nuclear staining. Much granular debris in lumina, in some cases definite hyaline casts. Glomerular tufts more cellular than normal, but no actual fibrosis. Pyramidal tubules showed more frequent casts, but epithelium not so extensively degenerated as in cortical tubules. Some increase of connective tissue stroma in pyramidal zone, but no true fibrosis.

Lumbar glands: Some general enlargement, consistency soft, black in colour, no caseation.

Spleen: Normal (no lardaceous reaction). No malarial parasites. No melanin. Liver: Slightly cloudy, otherwise normal. Stomach: Some catarrh. Intestines: Both large and small intestines showed numerous purpuric patches, especially the former, there being an especially large one in the caecum, with evidence of recent bleeding. No worms present. The remaining organs appeared normal.

Bacteriological report: Lung smears and cerebro-spinal fluid negative to malaria.

Conclusions.

It would seem probable that the renal and suprarenal lesions occurred *pari passu*, the suprarenal element so overshadowing the renal that it is doubtful if the latter would ever have been diagnosed during life but for the albuminuria. Whether the condition was a primary one, or secondary to a toxæmia from other causes is debatable. The occasional pyrexia is puzzling.

It has been suggested that a blood culture might have thrown some light on the matter; we cannot reconcile ourselves to a septicæmia, more or less apyrexial, reacting

completely to quinine medication, and, moreover, showing none of the common symptoms and signs thereof, with the exception of purpura. Purpura is certainly not uncommon in septicæmia, but it occurs in many other conditions also. The leucocytosis of 11,600 did not seem of much clinical value.

The presence of *Ascaris lumbricoides* was probably accidental; its toxicity is usually slight in adults, though on inquiry we learnt from a colleague from India of a case of severe toxæmia with purpura, the origin of which was unaccountable until the patient one day vomited two *ascaris* worms, which led to treatment of the condition and disappearance of the symptoms. The worms in this case were, however, numerous. Malaria, relapsing fever, and tuberculosis were disproved both clinically and at the autopsy; the enterica *à la*.

In spite of the negative history of syphilis a Wassermann reaction might have been of service, though a matter of some difficulty under the local conditions. The terminal purpura, if not the early purpura also, may perhaps be accounted for by the combined renal and adrenal condition.

Lastly, an interesting point in the case is the absence of all visible sign of cardiac hypertrophy so common in renal disease, explicable perhaps by the deficiency of adrenalin.

We are much indebted to Major Alec Ferguson (pathologist to Egyptian Expeditionary Force), Captain Rhys Jones (No. 1 Military Laboratory), for the pathological and bacteriological findings; and to Lieut.-Colonel Fredk. E. Roberts, D.S.O., R.A.M.C., for permission to publish the case.

TWO CASES OF CHOLESTERIN PLEURAL EFFUSION.

BY

H. SHARPE, M.R.C.S., L.R.C.P.,

HOUSE-PHYSICIAN TO THE BROMPTON HOSPITAL.

CASES of cholesterol pleural effusion are so rare that it seems well to put on record the details of the following:

CASE I.

S. H., aged 34, married, was admitted to the Brompton Hospital on March 21st, 1919, under Dr. Perkins, with the following history:

In December, 1911, he states that he had "peritonitis," consisting of severe abdominal pain and constipation, which, however, cleared up after he was given an aperient.

On February 12th, 1912, he was admitted to this hospital under Dr. Perkins for pleurisy with effusion on the left side. X-ray examination showed the roots of both lungs to be opaque, with small densely opaque areas in the lung tissue (suggesting calcifying glands?) Only a small area of the inner portion of the diaphragm was visible on the left side. Obscuring the greater part of the left diaphragm and the lower ribs was a dense opacity, with a hard and definite border, extending upwards and outwards towards the axilla, becoming less opaque above, strongly suggestive of fluid (encysted).

On February 27th, 1912, the left pleura was punctured in the eighth space in the mid-axillary line, and some clear straw-coloured fluid was aspirated. The clinical laboratory report on the cytology of the pleural effusion showed:

Polymorphonuclear neutrophils	...	8 per cent.
Endothelial cells	...	15 "
Small lymphocytes	...	77 "
		100

A few red cells were present. No reference in the report of the fluid was made to its appearance being "spangled."

On March 29th, 1912, he was sent to the Frimley Sanatorium, his general condition having improved. There was then dullness and diminished movement over the left side of his chest. The breath sounds were almost absent, and vocal resonance and vocal fremitus were diminished. After fifteen weeks' treatment at Frimley his general condition improved; he had gained 5 lb. in weight, and reached Grade VI, and the only physical signs he showed was an area of dullness at the left base, with fine crackling râles.

During the whole period of his stay at the sanatorium he was afebrile, and had a small amount of sputum on a few occasions only. On discharge he was able to resume his occupation as a glass cutter. After this he remained in fairly good health until October, 1918, when he had a sudden hæmoptysis, bringing up about half a pint of blood.

On March 21st, 1919, when readmitted to the Brompton Hospital, his condition was as follows:

He looked decidedly ill, and had apparently lost weight. He had a cough and a good deal of muco-purulent expectoration. He complained of night sweats and dyspnoea, and his sputum was slightly coloured. There was limitation of movement over the whole of the left side of the chest. Vocal fremitus was

increased at the left apex, and absent over the left base. There was impairment of the percussion note at the right apex, and slight impairment at the left apex. The note over the left base was dull.

On auscultation crepitations were heard at the left apex in front and behind, vocal resonance was increased, and pectoriloquy was present. Over an area extending from the fourth to the sixth intercostal spaces in the mid-axillary line there were numerous râles, but the breath sounds were barely audible. Râles were present behind, between the spine and the vertebral border of the scapula, and also round its inferior angle. At the left base in front breath sounds were absent, as was also vocal resonance. Behind, a few friction sounds were audible.

The apex beat was in the fifth intercostal space just internal to the mid-clavicular line. The liver, spleen, and kidneys were not palpable, and the urine was normal.

X-ray examination showed "Lessened expansion and translucency at both apices. The left apex is absolutely opaque. The heart is slightly displaced to the right, and there is a dense opacity with a well-defined edge on the left side suggesting pleural effusion."

Between April 16th and June 11th he had three pyrexial attacks, each attack lasting about a week; the temperature each time reached 102° and fell by lysis. In the intervals the temperature was normal. Each attack was accompanied by profuse expectoration, the last attack being the most severe, when, in two and a half hours, he expectorated 11 oz. of frothy muco-purulent sputum with an offensive odour. The last attack strongly suggested the presence of a cavity, bronchiectatic or tuberculous, and the physical signs found on auscultation were confirmatory.

On June 16th another x-ray examination was made, and the report showed "the left side of the diaphragm is raised and the stomach translucency can be made out. No excavation noted."

On June 17th three attempts were made by Dr. Burrell to produce an artificial pneumothorax in the seventh space in the mid-axillary line. At the third attempt, after the needle had been inserted to its utmost limit, about 10 c.cm. of straw-coloured fluid were drawn off. The pleura was found to be greatly thickened and of a corky consistence.

The bacteriological report on the effusion states: "The centrifuged deposit shows under the microscope large numbers of cholesterol crystals. No cellular elements are present."

No further attempt to produce an artificial pneumothorax was made on account of the dense adhesions.

Examination of his sputum had revealed the presence of tubercle bacilli on March 24th, July 8th, 9th, and 10th.

Since June 22nd he has made satisfactory progress, and his temperature has remained normal except on two occasions, the first on June 30th, when it rose to 100.4° and fell to normal the next day, and the second on August 4th, when it rose to 101.4°, and on August 9th fell to normal. His general condition has improved, and he was transferred to Frimley on September 3rd.

CASE II.

D. B., aged 9, was admitted to the Brompton Hospital on April 7th, 1919, under Dr. Cecil Wall.

There was a history of pulmonary tuberculosis on his mother's side, two of her sisters and one niece having died of phthisis. He had an operation for empyema when 2 years old; whooping-cough when 3 years old; tonsils and adenoids removed in June, 1918; in March, 1919, he developed a pleural effusion whilst living at home, and 1½ pints of fluid were aspirated from the left side of his chest; this was "spangled" in appearance.

His condition on admission was as follows: He complained of a cough and occasional pain in the left side of his chest; he had some dyspnoea and had lost weight. His general condition was good. There was diffuse pulsation in the second and third intercostal spaces half an inch to the right of the right edge of the sternum, and the heart was found to be entirely over to the right of the sternum. There was an old empyema scar in the fourth space, about 3½ in. in length, the mid-point being in the left anterior axillary line. There was very slight movement of the left side of the chest, there was impairment of the note at the left apex, and there were weak breath sounds both in front and behind. There was absolute dullness from the third interspace downwards on the left side in front and behind; breath sounds, vocal resonance, and vocal fremitus were completely absent.

On April 8th the left side of his chest was explored, and about 10 c.cm. of golden-yellow coloured fluid was withdrawn. X-ray examination showed "a very sharply defined upper limit of opacity in the left side of the chest, the diaphragm on this side being obscured. The heart is considerably out to the right."

On April 16th 5 oz. of fluid were withdrawn from the left side of his chest, and on April 23rd 17 oz. more were aspirated. On April 30th the left side of the chest was again aspirated, and 34 oz. were drawn off. After this aspiration he vomited for about twenty-four hours. At this time the apex beat was one inch inside the left nipple line; there was dullness from the fifth interspace in front and from the inferior angle of the scapula behind downwards. The breath sounds were audible but considerably diminished.

On May 9th he had a rise of temperature (100°), his tongue was furred, and a few cervical glands were palpable. Nothing abnormal was felt in the abdomen. The heart was still slightly over to the right side of the sternum, and there was no diminution of dullness at the left base. He looked pale, and was quieter than was his wont.

On May 19th his temperature was steadily rising. The

abdomen was slightly distended, nothing abnormal was felt, and there was no tenderness on pressure. There was a "squeaking" bruit just to the left of the sternum, and pulsation to the right of the sternum; the bruit was in all probability cardio-pulmonary.

On May 21st his temperature had risen overnight to 102.4°. His pallor had increased, and he looked ill, and was constipated. His spleen was palpable but not tender, and the liver was not enlarged. Next day the left side of his chest was again aspirated, and 10 c.cm. of opaque, dark, amber-coloured fluid was withdrawn. A sediment appeared on allowing the fluid to stand, and on microscopic examination pus cells and a few cholesterol crystals were seen.

On May 24th his chest was aspirated and 18 oz. of fluid drawn off. The fluid was thicker in consistence than on former occasions; it was greenish-brown in colour and odourless. There was increased sediment, and microscopic examination showed a few cholesterol crystals and many pus cells. A culture of the pleural effusion showed: In aerobic culture, *Staphylococcus aureus*; anaërobic culture, sterile.

On May 30th, as the temperature had been fluctuating between 99.2° (morning) and 102.4° (evening) since May 17th, an operation was decided upon, and about one inch of the seventh rib was resected near the inferior border of the left scapula and 2 pints of pus evacuated. A drainage tube was inserted. Bacteriological examination of the pus revealed in culture a pure growth of *Staphylococcus aureus*.

After this he improved rapidly until June 13th, when he had a sudden rise of temperature to 102.4° and complained of a sore throat. There was a small patch of exudate on the left tonsil, and a few submaxillary glands were palpable. This quickly improved, and his temperature fell to normal on June 16th. On June 25th the left lung was apparently expanding well and the heart was in its normal position. There was still some discharge from the sinus. On July 8th his temperature was normal, his general condition had improved, and he was putting on weight.

He had now lost his cough, and has had no expectoration since his admission to the hospital.

Since compiling these notes he has been discharged from hospital and his condition on leaving was as follows: The breath sounds at the left base behind were clearly audible, but still diminished in front. The "squeaking" bruit had disappeared. The empyema wound was still discharging.

The first case was shown by Dr. Batty Shaw at the meeting of the Association of Physicians on July 12th. I am indebted to Dr. Perkins and Dr. Cecil Wall respectively for permission to publish these cases.

A PERICARDIAL EFFUSION OF "GOLD-PAINT" APPEARANCE DUE TO THE PRESENCE OF CHOLESTERIN.

BY

J. S. ALEXANDER, M.R.C.S., L.R.C.P.,

HOUSE-PHYSICIAN, UNIVERSITY COLLEGE HOSPITAL, W.O.

The significance of cholesterol in the body fluids is little understood. In a recent monograph on this subject Adrien Grigaut describes the presence of cholesterol in pleural effusions and hydroceles, but I can find no record of the occurrence of cholesterol in a pericardial effusion.

A. G., aged 32 years, a chauffeur, was admitted to University College Hospital under Dr. H. Batty Shaw on October 15th, 1918. He gave a history of the following symptoms, of five years' duration: Roughness and dryness of the skin; loss of hair; thickness of speech; and, during the last few months, swelling of the feet, legs, and abdomen, and shortness of breath.

His features were heavy, skin harsh and dry, hair coarse and scanty. He was orthopnoic, cyanosed, and slightly jaundiced. There was a well marked pulsus paradoxus; trace of albumin in the urine; systolic blood pressure, 100 mm.

Examination of the chest showed a great increase in the area of precordial dullness; x rays confirmed, and in the photograph a definite boss could be seen on the right lower border of the shadow. The heart sounds were faintly audible to the right of the sternum.

The condition of the skin and hair was attributed to hypothyroidism; the causation of the pericardial effusion remained obscure. Under treatment with thyroid extract and diuretics his condition improved, although x-ray examination showed no alteration in the pericardial effusion, and on his discharge from hospital in February he was able to resume work and continued at it for six weeks.

He was readmitted to hospital on April 8th, 1919, with severe dyspnoea, weak rapid pulse, cyanosis, jaundice,

marked oedema, and ascites. His condition improved but little, and a tack of bronchitis caused a further embarrassment of the overtaxed and failing heart; it was decided to open the pericardium.

Mr. Gwynne Williams carried out the operation under regional anaesthesia on May 13th. Over three pints were withdrawn of an opaque dark brown fluid of a scintillating gold paint appearance. Laboratory examination showed the presence of large quantities of cholesterol crystals; no bacteria were found.

The cardiac condition rapidly improved, and the patient was discharged early in June, free from symptoms. The last x-ray photograph shows a slight diminution in the area of opacity, and a dense area has developed over the right base.

A PRELIMINARY NOTE ON THE TREATMENT OF INOPERABLE CARCINOMA WITH SELENIUM.

BY

E. WATSON-WILLIAMS, M.C., B.A.,
M.R.C.S., L.R.C.P.

FOLLOWING the work of Wassermann and Keyser¹ on the treatment of mouse cancer with selenium and eosin, a number of observations were recorded in France and elsewhere on the Continent on the effect of injections of colloidal selenium on human patients with inoperable carcinoma. The pharmacology and low toxicity of this agent were investigated by Duhamel² in 1912. Unfortunately the earliest publication in English on the subject³ attributed a total therapeutic inefficacy to the preparation; and it may be that to this fact must be attributed the lack of notice which in England alone has been accorded to this work.

Previous Reports.

A brief summary of the more important series of observations hitherto published may be useful.

I. Cade and Girard, 8 cases; 5 c.cm. of 0.02 per cent. selenium up to twenty intramuscular injections. No untoward effects. Definite benefit in 5 cases.

II. Bougeant and Galliot, 12 cases; 5 c.cm. of 0.02 per cent. selenium in serum up to (in one case) fifty intravenous injections. Benefit in all cases.

III. A. Blumenthal, 6 cases; 5 c.cm. of 0.02 per cent. selenium up to ten intravenous injections. One case died from sloughing carcinoma of uterus; one not reported; two completely relieved of symptoms; two benefited.

IV. Trinkler, 4 cases; 5 c.cm. of 0.02 per cent. selenium up to eight subcutaneous injections. Some pain. All improved.

V. Touche, 27 cases; 5 c.cm. of 0.02 per cent. selenium; three weekly intramuscular injections, repeated if required. In one case possibly accelerated death (from hemiplegia); seven cases gave negative results; three slightly improved; twelve markedly improved; one showed no macroscopic trace after death. In three the disease appeared to be arrested.

VI. Hope,⁴ 2 cases; 3 c.cm. of 0.02 per cent. selenium thrice weekly up to five doses close to growth. Both improved.

VII. Carles and Vieron, 10 cases; 2 to 5 c.cm. of 0.02 per cent. selenium up to thirty intramuscular injections. Six cases improved.

Personal Observations.

Recently, when I wished to try the effect of copper on a patient with inoperable carcinoma of the stomach, Mr. T. P. Legg, C.M.G., M.S., under whose care the patient was, was good enough to suggest treatment with selenium. Since then, by the kindness of several surgeons, I have been able, at King's College Hospital and at the Throat Department of Bristol Royal Infirmary, to observe the effect on 24 cases. It is as yet too early to pronounce finally on the value of this agent. But pending the completion of treatment in certain of these cases it may be of interest to record the results, in a general way, of my observations as far as they go.

Selenium as available for injection is a "protected" colloidal suspension of erythro-selenium beta, prepared chemically or electrically, and is a dichroic coral-red fluid. It appears not to be very stable; in old preparations the metal is found to be precipitated. It is isotonized, if this has not already been done, before injection, by the addition of sodium chloride solution. I have been careful to record the strength of "solution" used, as there are at least three strengths on the market. I inject a dose representing 0.0005 to 0.005 gram of the metal, preferably intravenously. Intramuscularly it is painless, and this may

prove the method of choice in ambulatory cases, or for those who can only attend at intervals, as it is probably more uniformly absorbed. Injection into the subcutaneous tissues and in the intermuscular septa is slightly painful. The biggest dose I have given is 0.005 gram every day. Several cases have already received 0.1 gram of the metal. In therapeutic doses it appears to be absolutely non-toxic, and is said to non-cumulative.

A transient general reaction—slight malaise and a rise of 1° to 2° F. in temperature—occurs occasionally with the earlier injections. It is more marked in subjects with extensive growths. Later, in those cases in which the tumour can be observed, after four or five injections a focal reaction is to be noted. The tumour becomes softer, appears better supplied with blood and slightly oedematous. I have not observed any definite necrosis or sloughing. The beneficial results observed in greater or less degree in nineteen cases have included:

1. Diminution or disappearance of pain. This is the earliest and most striking result.
2. Diminution in tenderness.
3. Healing of ulcerated surfaces; decrease of discharge.
4. Diminution in size of tumour and secondary deposits.
5. Increased mobility.
6. Improvement in anaemia and cachexia. This is the second most striking feature.
7. Improved sleep.
8. Increase in weight (in two cases).
9. Improved memory and general health (one case).

The improvement has been most marked in carcinoma of the alimentary tract.

In carcinoma of the larynx (8 cases) it appears advisable to proceed cautiously so that the treatment may be modified or suspended in the event of a considerable focal reaction.

It is my intention to afford fuller details of the more interesting cases in a later and amplified communication. I have seen nothing so far to suggest that selenium will cure carcinoma. It appears, however, to be a simple, safe, and not too expensive remedy, and the degree of relief already witnessed is sufficiently considerable to justify the assertion that in the treatment of inoperable carcinoma colloidal selenium deserves more attention than it has received in this country.

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- ¹ *Deut. med. Woch.*, December 21st, 1911; *Berl. klin. Woch.*, January 1st, 1912. ² *S. c. de Biologie*, April–May, 1912. ³ *W. ker. Lancet*, May 18th, 1912. ⁴ *Proc. Roy. Soc. Med.* (Laryngology), 1913, p. 75.

SURGICAL ANAESTHESIA AMONGST BRITISH TROOPS IN THE TROPICS (INDIA).

BY

LAURENCE M. ROUTH, M.D., B.C.CANTAB.,

CAPTAIN R.A.M.C.(S.R.),

SENIOR ANAESTHETIST LONDON TEMPERANCE HOSPITAL; HOUSE ANAESTHETIST ROYAL DENTAL HOSPITAL OF LONDON; LATE SPECIALIST IN ANAESTHESIA BOMBAY BRIGADE.

THE art of inducing and maintaining anaesthesia amongst Europeans in the tropics has definite characteristics distinguishing and complicating the action of general anaesthetics in contradistinction to their administration in England.

During the last three and a half years I have been in India, and most of that time in Bombay, where in the various war hospitals I have had ample opportunity (in the capacity of specialist in anaesthesia for two years) of noting the mode of action mainly of ether and chloroform.

Of recent years it has been more fully realized that a skilled anaesthetist is as necessary as a skilled surgeon; and this obtains more especially in the tropics, where climatic and temperamental vicissitudes prevail. The Bombay war hospitals are devoted almost entirely to troops inviolated from field service, and in the vast majority of cases from Mesopotamia. As in France, so in greater degree in Mesopotamia, the strain of active service has the effect in many instances of inducing a highly nervous condition, especially in the highly strung and primarily neurotic subject, but evident also in the phlegmatic

temperament. In my opinion, in the tropics the subject calling for special care in anaesthesia is the thin and anaemic youth of from 18 to 25 years, perhaps recently out from home and unacclimatized, and particularly the young officer who has had much responsibility thrown on his shoulders, where an error of judgement in the front line might court disaster. Of the two, it is rather the full-blooded beer drinker that I would prefer to have to anaesthetize in the tropics; he will doubtless cause trouble during induction, from struggling, etc., but he will be unlikely to display evidence of collapse and failure of pulse and respiration, or both, which is always in view in the former type.

Irregular and often unsuitable food while on active service also leaves its mark. In a tropical country the food question is often very difficult, especially in the front lines, for bully beef and biscuits predominate, vegetables are often a rare luxury, and a temperature of 120° F. does not add to freshness of the food or to the comfort of the surroundings.

Excessive smoking also plays its untoward part in predisposing to tachycardia and cachexia. Moreover, the climate and surroundings do not permit of entertainments and healthy sports to the same extent as in a non-tropical zone to divert the soldier's thoughts and keep him physically fit.

CHOICE OF ANAESTHETIC.

Ether.—I have been frequently told by medical men in India that ether, at any rate by the open method, cannot be employed in India. This theory I have found to be entirely erroneous. In Bombay, though a moist climate, ether can be administered, either pure by the open method, or as a mixture of ether and chloroform; if pure ether is used I find very little more ether is used than at home. "Up country," with a dry climate and a temperature well over 100° F., open ether can be given satisfactorily, but it is necessarily somewhat more extravagant than in England owing to the atmosphere. In Bombay, for routine administration I find ether 3 parts and chloroform 1 part a very convenient mixture, and patients remain comfortably "under" with the same ease as with the commonly used C.E. mixture at home—(chloroform 2 parts, ether 3 parts). A further dilution still with ether is frequently advantageous, and in serious cases pure open ether is indicated. Ether has been procurable during the last two years, especially at the war hospitals, but during the later months of 1915 and early in 1916 it was extremely difficult to obtain it suitable for general anaesthesia (specific gravity 0.720). The whole supply of ether is imported, and it is mainly owing to the transport difficulty, which in India has been acute, that I have not habitually used pure open ether as at home.

Chloroform.—A relatively dangerous drug in the tropics, especially for those debilitated after field service. Its use in the pure state should, I think, be almost entirely confined to operations requiring Junker's inhaler. It predisposes to shock, and the patient is liable to inhale a toxic dose. Chloroform is always easily procurable, and Duncan's White Label is plentiful, and though one has to work with other brands occasionally, I have had no occasion to suspect their quality. It is necessary in such a climate to keep stock bottles in a cool and dark place.

MODE OF ADMINISTRATION.

A preliminary injection of morphine and atropine is convenient in a nervous subject, but generally quite unnecessary even with open ether; the secretion of mucus is usually slight and rarely interferes with the administration; moreover, surrounding the mask with towels or gauze to any extent is superfluous. Should an injection have been decided on, I have found morphine gr. $\frac{1}{4}$ and atropine gr. $\frac{1}{10}$ half an hour before operation satisfactory. The patient should then not be allowed to walk to the theatre, but should be carried on a stretcher.

A degree of disordered action of the heart unnoticeable ordinarily becomes very evident before an operation, the beat becoming markedly forceable, even to a thrill, and various bruits may be present, which disappear when the stage of surgical anaesthesia is reached.

Although patients "go under" as easily and as quickly as in England, there is increased danger in the tropics during the induction stage, especially with any struggling,

and pushing at this stage may court disaster, particularly with chloroform.

The tendency to failure of heart and respiration seems greater than at home, probably climatic in origin, and is undoubtedly aggravated by the highly nervous condition in which so many patients come to operation.

A somewhat lighter anaesthesia can be maintained than in England. The corneal reflex is rarely lost, its presence even during the primary skin incision seems to have little effect. In one instance, as far as I am aware a unique one, at the close of the operation when the patient was coming round, but with no evidence of retching, he suddenly sneezed; this was followed immediately by complete cessation of respiration, which had to be maintained artificially for over five minutes, with ultimate recovery. The pulse was good throughout.

Sweating is often profuse, especially in a subject in a bad condition; this is undoubtedly largely climatic; for this reason a fan is contraindicated in a theatre if a laparotomy or other serious operation is in progress.

Pituitrin is a drug I have found it necessary to resort to more frequently during operations than at home, with the same valuable results in augmenting the heart's action and countering shock.

Post-anaesthetic vomiting is rare and never troublesome, but a little retching before leaving the table is common. I have seen no case of post-anaesthetic acidosis or delayed poisoning in the tropics.

Nitrous oxide is little used in India, but anaesthesia with it is in every way satisfactory. The gas is now made locally, but is rarely obtainable except for dental work.

Ethyl chloride I have never seen used in India as a general anaesthetic; it is too volatile for the climate.

In the course of a considerable experience in India I have been perhaps fortunate in having no fatalities. Extreme care, continual watching of the patient, maintaining an even anaesthesia, and the use of a suitable anaesthetic or mixture, together constitute in my opinion the secret of obtaining satisfactory results in the tropics.

NOTES ON A CASE OF POISONING BY HYDROQUINONE.

BY

ALEXANDER MITCHELL, M.B., Ch.B.,

HOUSE PHYSICIAN, WARNEFORD GENERAL HOSPITAL, LEAMINGTON SPA.

AND

JOHN WEBSTER, F.I.C.,

ASSISTANT SCIENTIFIC ANALYST TO THE HOME OFFICE; PATHOLOGICAL CHEMIST TO ST. MARY'S HOSPITAL, PADDINGTON.

The three isomeric dihydroxybenzenes, $C_6H_4(OH)_2$, possess toxic properties in varying degree. It is stated that the toxicity of the various phenols increases in general with the number of hydroxyl groups. Resorcinol (meta-dihydroxybenzene) is an exception, being less toxic than ordinary phenol (C_6H_5OH). Both hydroquinone (para-dihydroxybenzene) and catechol (ortho-dihydroxybenzene) are stated to be more toxic.

Cushny¹ states:

The three dihydroxybenzenes resemble carbolic acid in their effects, but produce more intense stimulation of the central nervous system, for convulsions have been observed in man after their use. This is especially true for catechol and hydroquinone, resorcinol being much less toxic than these.

Records of cases of poisoning by the dihydroxybenzenes are very few in number.

Dixon Mann records a case by Murrell² of poisoning by resorcinol, and also states that "in another case epileptiform convulsions occurred,"³ but no record of a case of hydroquinone poisoning is mentioned. A case is also recorded⁴ in which 1 gram of resorcinol gave rise to perspiration, retraction of the head, and muscular stiffness. J. Gadamer⁵ states with regard to resorcinol, "although the least poisonous of the phenols, it has frequently given rise to serious poisoning." In one case 10 grams of resorcinol produced profuse perspiration, dyspnoea, convulsions, opisthotony, and loss of consciousness.

We have found no detailed record of any cases of hydroquinone poisoning; it is, however, stated⁶ that doses of 0.5 to 1 gram have frequently caused slight poisoning, accompanied by sickness, giddiness, delirium, and collapse.

The following case of poisoning by hydroquinone (followed by recovery) may, in the absence of many such records, be of interest.

Clinical History.

D. H., aged 21, single, was admitted to the Warneford Hospital, Leamington, on June 26th, at 9 p.m., as a supposed case of poisoning, with the history of being suddenly taken ill. On admission patient was unconscious and pallid in appearance. Some blood-stained foam was observed at the mouth, the lips were pale, but no staining was seen round the mouth. No odour of the breath was discerned; the skin was cold and clammy. The temperature was subnormal, the pulse fast and feeble. The pupils were equal, medium in size, and reacting to light; the conjunctivae insensitive to touch. The knee jerks were absent, there was no ankle or patellar clonus, the plantar reflex was present. On auscultation a soft mitral systolic bruit was heard. The lungs were clear. No vomiting or diarrhoea was present. There was retention of urine, and examination of a catheter specimen showed the urine to be greenish in colour, acid, specific gravity 1010, a heavy cloud of albumin, no sugar.

About ten minutes after admission the patient had a violent convulsion, in which the head was thrown back, the eyes looked upwards, and the pupils were dilated. The fingers were bent into a cone shape, the thumb bent across the palm of the hand, and the whole body was flung into violent clonic movements. Respiration became very shallow until imperceptible, after which it began to improve. This convulsion was followed soon afterwards by another, and at short intervals by other convulsions to the number of eight. After 10.50 p.m. (an hour and a half after admission) no further convulsions were observed. From 10.30 p.m. till midnight the patient remained in a semi-conscious condition, but after midnight consciousness was recovered, and though vomiting several times she passed a fairly comfortable night.

The patient was treated as a case of poisoning, and the stomach washed out frequently with sterile water. Ether was given subcutaneously, and the bodily warmth kept up. Next day she was fully conscious, but still appeared very weak. The knee-jerks were still absent, and a sample of urine passed normally showed a specific gravity 1023, colour dark, but no albumin. On June 28th knee-jerks were present, and from that date on the patient progressed steadily.

As no history could be obtained of the patient taking any drug previous to admission, and as she stated she had suffered from no previous illness, a sample of the first stomach washings (obtained immediately after admission) was sent for analysis.

Chemical Analysis.

Hydroquinone, or quinol (para-dihydroxybenzene) is a crystalline substance readily soluble in water, alcohol and ether. It has, like its isomers, a limited use in medicine, but considerable application in photography.

In the present case the stomach washings were submitted to chemical examination for alkaloids, glycosides etc., by a modified Stas-Otto process. The resulting aqueous solution was extracted whilst still in an acid condition, with ether, and the ethereal extract evaporated to dryness. A fine crystalline residue was obtained which was further purified by dissolving in alcohol and treating with a small quantity of blood charcoal, and the extract was evaporated to dryness. After drying at 100° C. for one hour the melting point was taken. The substance began to soften at 163° C., and completely melted at 166° C. It had a sweetish taste, was readily soluble in water, and gave the following reactions:

It reduced silver nitrate solution in the cold. On alkalinizing with sodium hydrate solution the liquid rapidly darkened. Fehling solution was reduced without heating. Froehde's reagent gave deep purple, gradually becoming chocolate brown and later green and greenish blue. Millon's reagent gave yellow colour, gradually deepening to orange-yellow, depositing a reddish-orange coloured precipitate.

The melting point of the purified residue mixed with an equal amount of pure hydroquinone (melting point 169° C.) was found to be 164 to 165° C. [It may be stated that pure hydroquinone, originally melting at 169° C., extracted by ether from aqueous solution and the ethereal solution evaporated to dryness, further dried at 100° C. for two hours, gives a melting point of 166° C.]

The amount of hydroquinone in the portion of the stomach washings submitted for analysis was 2 grains. The total amount of the first stomach washings (of which only 8 oz. were sent for analysis) was 4 pints. The quantity of hydroquinone present in the whole of these washings was therefore 20 grains. It was impossible to obtain any data which would enable us to arrive at a conclusion as to the amount of the drug taken. The washings were further examined for poisons other than hydroquinone (especially strychnine), but none was detected.

We are indebted to Dr. Cole, visiting physician to the Warneford Hospital, for permission to publish these notes; and to Dr. F. Haas of University College for valued co-operation.

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¹ *Pharmacology and Therapeutics*, p. 155. ² *Medical Times and Gazette* 1884. ³ *Medical Jurisprudence*, 1915, p. 670. ⁴ *Lehrbuch der Chemisch. Tox.*, p. 392. ⁵ Gadamer, loc. cit., p. 392.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

APPARENT INTUSSUSCEPTION RELIEVED BY ACCIDENTAL JOLTING.

SISTER — complained of mild colicky pain about 2 p.m. on August 25th, 1919. It had been noticed at long intervals for about twenty-four hours, but she had felt neither need nor desire to go off duty. Nothing in the diet seemed likely to have disagreed, but she was advised to take a dose of castor oil and rest.

Not appreciating oil, and being a dispenser, she preferred and took two grains of calomel and five minims of tr. chlorof. et morphinae, but vomited it almost immediately. Within ten minutes she vomited three times, bringing up partially digested food but no bile, and the vomit was not unduly acid. She had had a motion the day previously and that same morning.

During the afternoon she had recurring colicky pain and passed one motion; the pain steadily increased in frequency (about ten minutes' interval) and in intensity, till at 6 p.m. she went to bed and sought advice. The tongue was coated and white, the expression of the face pinched, and the pulse depressed and somewhat slow; the temperature was 97°; the abdomen looked natural, was not unduly tympanitic, and not tender. Pain was referred to the right iliac fossa and localized over the caecum. Pressure was fairly well borne, even during a rather sharp paroxysm, which lasted almost a minute, but some relief was felt on removing the pressure. No swelling was felt; there was no hernia at the usual sites. A mixture containing hyoscyamus, compound tincture of cardamoms, dilute hydrocyanic acid and aromatic spirits of ammonia was immediately vomited. Hot water was ordered to be given in small quantities and nothing else. A hot binder was applied. She stated that her bowels had acted twice (but with formed motion) during the afternoon.

At 8.30 p.m. she was having violent paroxysms of pain at intervals of five minutes. The lips were blue, the nose pinched, the expression anxious, and the general appearance and feeling that of desperate illness. Even hot water was not retained; there had been continual sickness and constant desire to go to stool; one loose discharge was passed during vomiting, but this, unfortunately, was not seen. The extremities were cold and clammy. The pulse was still slow between the pain attacks, but before and during attack became small and "running." The pain, still localized and gripping (so violent as to cause moaning in a "good" patient), was edging inwards, above the umbilicus, to the mid-line. Still no swelling could be detected on palpation; gurgling was heard in the bowel over the site of pain, but nowhere else. The percussion note was perhaps dulled, but there was no absolute dullness. Tenderness was increasing.

Commencing intussusception being diagnosed, the patient was placed in an ambulance and started for hospital, accompanied by the doctor; just before starting she vomited a clear, non-acid watery fluid.

For a short time pain, tenesmus and nausea continued, but just as a paroxysm started the ambulance "jumped" at a level crossing and she was swung sharply up, falling gently back into her supine position. Relief was immediate; two minutes later the lips regained colour, the face looked relieved, and she said she felt well enough to get up. Ten minutes later the driver was asked to return; no more pain occurred, and only tenderness remained; shortly after she was in bed and smiling. Within a few hours a small quantity of brown mucus was voided per anum.

GEORGE S. WARE,

Willesden, N.W.

Captain R.A.M.C.

ACUTE SUFFOCATIVE CATARRH.

On the morning of September 9th M. B., female, aged 7½ years, previously healthy, woke up feeling out of sorts, and complaining of some soreness of the throat. I saw her at 10.30 a.m.; her pharynx and tonsils were somewhat inflamed; temperature 103°; pulse 120, regular; respirations 30 per minute; no cough; nothing abnormal made out in chest, but she was constipated and in an extremely excitable condition.

I was called to see her again at 6 p.m. She had had a movement of the bowels and immediately a convulsion began. Her mother stated that she had complained of difficulty in getting her breath at times during the day. The convulsions were very marked; she was quite unconscious; pupils equal and dilated; temperature 103.5°; pulse 120, regular; respirations 40 per minute; no rigidity of neck, and no cough. She brought up quantities of pale brown froth, and occasionally about a tablespoonful of "prune juice." We swabbed out her throat frequently but could not at any time get any cough reflex, even when she was conscious later on. A colleague and myself carefully examined her throat; nothing was found except the redness previously mentioned; her heart was normal; inspiration and expiration were apparently normal and neither was exaggerated; there was no sucking in of intercostal spaces; no consolidation, but fine moist râles were to be heard all over the chest.

At about 7.30 she became conscious and complained of pain over the pit of the stomach and difficulty in breathing, and the nurse in charge was instructed to send if anything further developed. At 11.30 I was again summoned. She had had convulsions off and on since I left. She still brought up brown froth and "prune juice." There was no cough, and no cough reflex could be obtained. Her breathing was shallow—44 per minute. The air entered the lungs fairly well, but moist fine râles were heard all over both lungs. Her lips were blue and her nails and fingers gradually assumed the same colour. Her pulse was 160, poor tension and volume. Gradually the convulsions ceased. She passed into a comatose condition. Respirations became Cheyne-Stokes. She ceased to bring up froth and "prune juice," and, in spite of stimulants and artificial respiration, her heart failed and she died at 1 a.m.

It is interesting to note that her three brothers all developed a typical chicken-pox rash next day. It would appear that the above was a toxæmic condition, due to paralysis of vagal nerve endings in the respiratory passages.

Permission for a necropsy was not obtained.

New Brighton.

C. O. JONES, M.D., M.Sc., M.R.C.S.

PENETRATING WOUND OF PELVIS WITHOUT INJURY OF PERITONEUM.

A boy of 15, experimenting with a pulley and tackle, was climbing a rope, when he fell some 5 ft. in a sitting posture.

On the ground immediately beneath him there was standing erect the weight holder of a weighing machine, of which a sketch is given. The hook end entered his pelvis about half an inch to the right of the anus, and when I saw him he was lying on the abdomen, and about 4 in. of the weight end were protruding, while the hook end could be felt under the abdominal wall. The weight was sawn off and he was removed to hospital. With the buttocks supported on sandbags I performed a laparotomy, and to my astonishment found no signs of any injury to any of the viscera, nor was I able to feel any bare metal.

The hook was presenting about 2 in. to the left of the middle line from a point midway between pubes and umbilicus, and had evidently passed between the peritoneum and the parietes. By retracting the margin of the incision to this extent it was easily withdrawn, and the patient has made an uninterrupted recovery.

CECIL P. LANKESTER, M.R.C.S.,

Guildford.

Assist. Surgeon, Royal Surrey County Hospital.

SEPARATION OF TIP OF NOSE WITH COMPLETE PRIMARY UNION.

THE case of primary union of the separated tip of a man's nose, recorded in your issue of September 27th by Sir J. O. Skevington of Windsor, reminds me of a somewhat similar case which occurred many years ago when I was a boy (and long before the days of antiseptic or saline dressings) in the practice of my father, the late Dr. David Hadden of Skibbereen. In a street row the tip of a man's

nose was bitten off! He ran at once to my father's surgery with the piece of his nose in his pocket. After being stitched on the result was as satisfactory as in the case at Windsor.

Portsmouth.

W. E. HADDEN, M.D.

Rebuelus.

THE DIAGNOSIS AND TREATMENT OF VENEREAL DISEASES.

It is a sign of the times that a book entitled *Veneral Diseases*¹ has been written by a clinician and a pathologist in collaboration, and Dr. WATSON and Dr. BROWNING are to be congratulated on the result of their combined labours—a book of small dimensions but containing nevertheless a full and practical account of these very important diseases.

The first half deals with syphilitic infections, and here the advantage of the pathologist's special knowledge is very evident. Since the discovery of the *Spirochaeta pallida* by Schaudinn in 1905 laboratory investigations have assumed a high and important place in the diagnosis and treatment of syphilis. The careful description of the technique employed in the examination of the exudate from chancres, and (in an appendix) of the method followed by Dr. Browning in carrying out the "Wassermann" reaction, are thus of peculiar value. The authors also give in its proper place the interpretation of these results, but, while emphasizing their importance, are careful not to advocate reliance on them to the exclusion of clinical evidence. Thus, although more space is allotted to laboratory methods than is usual in books of this kind, the balance is so well maintained that a clearer conception of disease results.

It should not be assumed from what has been said that the clinical part has been neglected; it is fully considered and illustrated by numerous plates, some in colour. In discussing treatment the collaborators are equally happy, the schemes are well conceived and practical, and while chief place is naturally given to salvarsan and its substitutes, subsequent prolonged courses of mercury are insisted upon. This advice will appeal with particular force to those workers who are now seeing the many unsatisfactory results of the short intensive methods.

While for syphilis much can be accomplished, for gonorrhoea many things may be done. These and other matters are discussed in the second part, where gonorrhoeal infections are considered. The maxim that "the first attack of gonorrhoea is never cured" finds no place here. Various and elaborate methods for eliminating the gonococcus from the genito-urinary tract are explained, and descriptions are given of the manner of employing the complicated apparatus of the surgeon-instrumentalist. The list on p. 201 of seven chosen methods of treatment used in chronic gonorrhoea is evidence of what it is possible to do in the more resistant forms of this complaint.

The book is a carefully thought out and accurate exposition of scientific medicine, and is of special value because of the practical manner in which it deals with its subject.

TREATMENT OF MALARIA.

In his book on *Malaria and Its Treatment*² Captain ALPORT gives a great deal of information and his own experiences in a form that should be of use to others besides members of the R.A.M.C. The book deals almost entirely with his work in the Balkans; it begins with a short account of the three types of malarial parasites, and the diagnosis and prophylaxis of malaria; of the prophylactic exhibition of quinine as a routine he speaks slightly.

After a brief chapter on the clinical features of acute malaria he comes to the subject of its treatment; he has treated about 12,000 cases himself in Macedonia. The best salt of quinine, he says, is the bihydrochloride, given

in solution, whether by the mouth, by deep intramuscular (gluteal) injection, or by intravenous injection. He is a believer in the large dose; from 10 to 40 grains for single administration, and 30 to 120 grains within a period of twelve hours in cases of emergency. The intravenous method is recommended in cases with mental symptoms, drowsiness, noisiness, aphasia, twitches; in cases of severe exhaustion, anaemia, cachexia, jaundice; and in cases of blackwater or bilious remittent fever; from 20 to 40 grains of the salt dissolved in 8 ounces of boiled water are allowed to run slowly into a vein through a salvarsan needle. As an instance of the large doses successfully employed by Captain Alport may be quoted the case of a man of 41 with cerebral malaria, who received 1,880 grains of quinine salt in the course of fifty-six days with excellent results; the drug must be pushed in the early stages—say 100 grains intravenously or intramuscularly in the first twelve hours, 160 grains in the first thirty-six hours, and 200 grains in the first sixty hours.

Details of the methods of treatment adopted are given freely, with many illustrative cases, both of cerebral malaria and of pernicious malaria with cardiac symptoms and collapse. In the treatment of chronic malaria the author again advises that quinine should not be stinted; he speaks of 45 grains a day for a month, and, if relapse occurs meanwhile, recommends that the dose should be increased to 60 grains a day for a week. Quinine deafness, he notes, may be treated with bromides. For chronic malarial anaemia he advises the use of quinine and galyol by intravenous injection, or some other arsenical preparation by the mouth. In his chapter on blackwater fever, which he attributes to neglect of quinine in the treatment of malaria, the author advises the liberal use of intravenous and intramuscular quinine; one patient, for example, averaged over 47 grains a day for six weeks. It is encouraging to read that Captain Alport has only met with four cases of quinine blindness in ten years' experience of the treatment of malaria; all recovered their sight, possibly with some contraction of the field of vision.

The author writes with the conviction born of great experience, and his book, which loses nothing by being perhaps a little polemical, may be recommended warmly to the attention of all medical men who have to treat acute or chronic malaria. It is well illustrated.

WAR NEUROSES.

A CHEAP reprint of the excellent little volume on *Shell Shock and its Lessons*,³ by Professor G. ELLIOT SMITH and Mr. T. H. PEAR, is particularly opportune at the present time. The problem of the war neuroses is by no means solved by the termination of hostilities and the consequent removal of the stress which has been instrumental in their causation. There are still a large number of "shell shock" cases in the country, and though many of them have been cured of their gross hysterical symptoms, yet the habit of maladaptation has been formed and they are drifting into a condition of chronic neurasthenia. Such a book as this, therefore, serves a most useful purpose, both for the intelligent layman, to whom the whole subject is somewhat of a mystery, and for the general practitioner, who will find in it valuable indications of the direction in which treatment may be usefully applied.

After a discussion of the nature of the war neuroses, in which stress is laid on the psychogenetic factors instrumental in their production, the question of treatment receives detailed consideration. The methods of isolation, suggestion, hypnosis, "rational treatment," and work-therapy are described and their limitations indicated. The authors themselves favour the method of psychological analysis and re-education, which, after all, would seem to be the most scientific method of treatment and the one which promises the most permanent results, since it aims at finding out the mental conflict at the root of the neurosis and leads the patient back to mental health by his own intelligent co-operation and by the development of insight and self-understanding. The last chapters of the book deal with the lessons that have been learnt from experience of the war neuroses and their application to the wider social problem of the treatment of the psychoses and neuroses generally. Strong criticism is levelled at the

¹ *Veneral Diseases*. By C. H. Browning, M.D., D.P.H., and David Watson, M.B., C.M. London: Henry Frowde, and Hodder and Stoughton. 1919. (Cr. 8vo, pp. xv + 336; 50 figures. 16s. net.)

² *Malaria and Its Treatment: In the Line and at the Base*. By Captain A. Cecil Alport, R.A.M.C.(T.), M.B., Ch.B. Edin. London: John Bale, Sons, and Danielsson, Ltd. 1919. (Demy 8vo, pp. xii + 279; illustrated. 21s. net.)

³ *Shell Shock and its Lessons*. By Professor G. Elliot Smith, M.D., F.R.S., and T. H. Pear, M.A., R.Sc. London: Longmans, Green and Co. Cheap edition. (Cr. 8vo, pp. xv + 135. 1s. 6d. net.)

inadequate facilities which obtain in this country for the teaching and treatment of mental disorder, and valuable suggestions are made as to the directions in which reform is necessary. These views are expressed in a restrained but convincing fashion and should exert considerable influence.

One criticism would seem to be indicated. The term "shell shock" is generally recognized as most unfortunate and misleading from nearly every point of view. It is true that the term is firmly fixed in the mind of the public, and they will thus understand to what the title of the book refers and therefore be more likely to read it. This is all to the good and it is eminently desirable that the book should reach the general public, but it nevertheless seems a pity that this term should become still more deeply rooted in the popular and even in the medical mind than it already is. As a matter of fact, the authors' whole treatment of the subject in this volume is in itself a most powerful argument against the retention of this particular term as one suitable to include the war neuroses.

MILITARY MEDICAL MANUALS.

EARLY in the recent war the French took the opportunity to begin the publication of a series of manuals dealing with the special medical and surgical problems, researches, and methods brought into prominence by the results of enemy activity. These admirable and up-to-date volumes were gathered together to form the French "Collection Horizon," appropriately named after the colour of the French soldier's uniform, and many of them have been translated into English, and published in the "Military Medical Manuals" series, under the general editorship of Sir Alfred Keogh. Reviews and notices of a number of these volumes, whether in French or English, have been published in the pages of this journal during the last three years; it may safely be said that the books have been of the greatest service to physicians and surgeons, both in the field and at home, and that their authors and translators have maintained exceptionally high standards of literary skill and practical utility in their production. Dealing as they do with the experiences gained in war, these "Manuals" lose interest for the medical reader now that the war is over; unjustly so in many cases, for much of what is to be read in them finds application to the accidents of peace no less than to those of war. We append a list of the titles of these well-written and well-illustrated volumes, recommending them strongly to the attention of medical practitioners interested in the various subjects with which they deal; the price of each volume is 7s. 6d. net, except in the few cases noted otherwise: "Typhoid Fevers and Paratyphoid Fevers"; "Dysenteries, Cholera, and Exanthematic Typhus"; "Abnormal Forms of Tetanus"; "Malaria"; "Syphilis and the Army"; "The Psychoneuroses of War"; "The Clinical Forms of Nerve Lesions"; "The Treatment and Repair of Nerve Lesions"; "Hysteria or Pithiatism and Reflex Nervous Disorders"; "Electrodiagnosis in War." The remaining volumes are of interest particularly to surgeons and to specialists: "The Treatment of Infected Wounds" (6s. net); "The Treatment of Fractures" in two volumes; "Fractures of the Lower Jaw"; "Fractures of the Orbit and Injuries of the Eye in War"; "Wounds of the Skull and Brain" (8s. 6d. net); "Localization and Extraction of Projectiles" (12s. 6d. net); "Wounds of the Abdomen" (8s. 6d. net); "Wounds of the Vessels"; "War Otitis and War Deafness"; "The After-Effects of Wounds of Bones and Joints"; and "Artificial Limbs."

NOTES ON BOOKS.

THE fourth edition of Professor BING'S Compendium of regional diagnosis in affections of the brain and spinal cord,⁵ revised and brought up to date so as to be of utility in the surgery of war as well as of peace, is a book written for the general practitioner of medicine. It describes the symptoms of nervous disorders in terms based on their pathology, and is both clearly written and well illustrated with diagrams, many of which gain additional lucidity by being coloured. The second edition of Dr. F. S. Arnold's English translation of an earlier edition of Professor Bing's

book was reviewed in this journal six years ago; the new edition of the German original may be recommended to medical men and students to whom that language is not objectionable.

Dr. J. LAWSON DICK'S little book on *Defective Housing and the Growth of Children*,⁶ written for the layman as well as the general practitioner of medicine, gives a straightforward account of the way in which slum life tends to produce rickets in infants and children. The matter is one of no little importance when public attention is concentrated on public health to an extent unknown before the war. While the precise details of its etiology still remain to be found out, rickets can be certainly set down as a "deficiency disease," primarily dependent upon the administration of an inadequate diet. But it has long been known that fresh air and sunlight are the determined foes of rickets; thus it has been recorded as a common disease in certain sunless Scandinavian valleys, but rare in the adjoining countryside where the conditions of life were identical but for the fact that the dwelling-houses were not cut off from the sunlight. It cannot be denied that rickets is a disorder far too common in British towns at the present time; the remedy, as Dr. Dick points out, lies in improving the food and the housing of our children.

IN *Preparing for Womanhood*,⁷ by Dr. E. B. LOWRY, we have a simple easily-written volume of general and special advice to girls of from 14 to 21 years of age, which many young women will doubtless find very helpful. We would specially commend the common-sense chapter on "Home-making."

⁶ *Defective Housing and the Growth of Children*. By J. Lawson Dick, M.D., F.R.C.S. London: George Allen and Unwin, Ltd. 1919. (Cr. 8vo, pp. 34. 3s. 6d. net.)

⁷ *Preparing for Womanhood*. By Dr. E. B. Lowry. Chicago: Forbes and Company. 1918. (Cr. 8vo, pp. 175. 1 do.)

THE LEAGUE OF RED CROSS SOCIETIES.

THE head quarters of the League of Red Cross Societies, which was formed in Paris on May 5th, 1919, are at 9, Cour de St. Pierre, Geneva, and the work of organization is proceeding as rapidly as possible. The founder members of the League were the American, British, French, Italian, and Japanese national Red Cross societies. The following national societies have since become members: Argentina, Australia, Belgium, Brazil, Canada, China, Cuba, Denmark, Greece, Holland, India, New Zealand, Norway, Peru, Portugal, Rumania, Serbia, South Africa, Spain, Sweden, and Venezuela.

The third number of the *Bulletin* of the League gives a list of the officers and heads of departments who have already been appointed and have taken up their duties at head quarters. The Director-General is Lieut.-General Sir David Henderson; the Secretary-General is Professor William E. Rappard; the Treasurer-General is M. André Pallain; the General Medical Director is Colonel Richard P. Strong, with Dr. Leonard Finlay as Director of the Department of Child Welfare; the Counsellor in International Public Health is Professor Rocco Santoliquido. In the departments of Public Health and Hygiene bureaux will be organized to deal with the subjects of child welfare, tuberculosis, malaria, preventive medicine, venereal diseases, and nursing.

Several references have been made in our columns to the Inter-Allied Medical Commission, recently sent by the League at the request of the Polish Government to investigate the pandemic of typhus fever in Poland. One of the gravest consequences of the devastation of Poland during the war has been the great decline in the sanitary condition of the Polish population, with a concurrent rise in the general mortality. The Inter-Allied Commission will report on the sanitary conditions in Poland, and will make recommendations as to the advisability of establishing sanitary cordons to suppress the spread of typhus into adjacent territories. When the Commission has issued its report the League will be in a position to devise relief and preventive measures in the countries concerned, to propose to the Red Cross societies interested in the work an active sanitary campaign, and to urge the necessary measures that should be undertaken by the governments themselves. It is believed that the Polish pandemic of typhus originated in Russia and Ukraina.

The reports of the various sections of the medical conference held at Cannes in April last have now been published. They are printed in English, French, Italian, and Spanish, and may be had on application to the Department of Information and Publication of the League.

⁵ London: University of London Press, Ltd.

⁶ *Kompéndium der topischen Gehirn- und Rückenmarkdiagnostik*. By Robert Bing, a.o. Professor an der Universität Basel. Fourth edition. Berlin and Vienna: Urban und Schwarzenberg. 1919. (Sup. roy. 8vo, pp. viii + 235; 97 figs. Mk. 16; bound, Mk. 20.)

THE R.A.M.C. AS A CAREER.

INTRODUCTORY ADDRESS AT ST. MARY'S HOSPITAL, LONDON,
BY

SIR JOHN GOODWIN, K.C.B., C.M.G., D.S.O.,
DIRECTOR-GENERAL A.M.S.

It was comparatively recently that I realized the near advent of the first of October and the fact that my address was still unwritten. I cast round for advice, I asked one friend as to the nature of the subject on which I should address you; he answered: "Oh, that's quite simple—reply to the criticisms which have been directed at the Army Medical Service during the war." My reply to this was that I had only been asked to give one address, and had not been requested to read a series of papers extending throughout the winter session.

I consulted others, but finally I thought that I would simply be guided by the experience of my daily life during the last eighteen months, and would talk to you on a subject relative to which I answer innumerable questions almost daily—namely, the advisability of adopting the Royal Army Medical Corps as a career, the present conditions and the future prospects of the service.

The R.A.M.C. in the War.

Now we have all heard a certain amount of criticism during the last few years, and, looking back over those years, I suppose that we can all see how things might have been somewhat better. We have made mistakes both of omission and commission, but it is always easy to be wise after the event, and I believe that even the most critical of us must own that the Royal Army Medical Corps has emerged from this war with a record of some good work accomplished and much knowledge and experience gained. I think that perhaps some of us do not quite realize the colossal nature of the task which faced the medical authorities at the outbreak of war, nor the enormous strain, anxiety, and labour which the various problems and difficulties entailed. This condition of affairs continued throughout the war; no sooner had one problem of immense difficulty and magnitude been dealt with than another situation arose which was almost appalling, but which had to be grappled with and overcome if disaster were to be avoided.

Let us consider briefly as to what had to be accomplished in the way of personnel, hospitals, and equipment.

At the commencement of the war we had in our regular Royal Army Medical Corps 1,026 officers and 3,168 non-commissioned officers and men. Every one of these had been detailed for his own specific work in the event of mobilization; every officer knew what his unit was, where it would mobilize, and what his own particular post in that unit would be. Officers had been selected, so far as possible, in accordance with their special abilities and training, and had been detailed accordingly for specific duties on mobilization; for example, officers who had worked at hygiene and had taken special degrees, such as the diploma of Public Health, were posted as sanitarians, others who had held surgical appointments were posted as surgeons to hospitals, etc.

This system was satisfactory so far as it went, but calculations were somewhat upset by the rapid and enormous growth of our armies and by the expansion of military operations into many different quarters of the globe.

Our original medical service of less than 4,500 officers and men rapidly expanded until it eventually numbered more than 13,000 officers and over 130,000 non-commissioned officers and men. Comparatively few of these newly commissioned officers had any previous experience of service in the field or knowledge of field service conditions, and our regular Royal Army Medical Corps officers and men were quickly scattered all over the various theatres of war.

I would say here that the two things which impressed me most during this war were the courage and resource shown by our newly commissioned officers, and the quickness with which they acquired knowledge of their duties. I have known a young temporarily commissioned officer, who had never before seen a shot fired in anger, carry on his duties under a heavy shell-fire with a cool courage

which was beyond praise or description, and this not once but in dozens of cases; and similarly I have seen young men with no previous knowledge of field service conditions start to work in a field ambulance or casualty clearing station, and improve themselves in their work with a rapidity and to an extent which one might have thought impossible.

As regards hospitals, at the commencement of the war we had 7,000 beds in military hospitals in the United Kingdom; these were expanded until at the time of the armistice we had in the United Kingdom alone more than 364,000 hospital beds and 333,000 patients in our charge. The number of hospital beds throughout the various theatres of war totalled at the time of the armistice 637,746, and we had under our care 577,906 patients.

As regards material and equipment, I shall not weary you with masses of figures, but you may realize the magnitude of the work in this direction when I mention that, quite exclusive of the initial medical equipment taken by units, we sent nearly 526,000 cases and bales of medical stores overseas.

To particularize a few items, I might mention 250,000 surgical instruments yearly dispatched, over 96 million bandages, nearly $1\frac{1}{2}$ million splints, and over 6,400 tons of lint and wool. Vaccines—typhoid, cholera, dysentery, etc.—we prepare at our Royal Army Medical College at Millbank, and of these we supplied during the war more than 20,600,000 doses; these vaccines, if purchased in the open market, would have cost us more than $1\frac{1}{2}$ millions sterling. Of the various serums we furnished $11\frac{1}{2}$ million doses. I think that these few figures may serve to visualize the enormous quantities of supplies of medical and surgical equipment which are required for a modern army in the field.

To revert for a few minutes to the question of our medical personnel, it would, of course, have been most desirable to fit every temporary commissioned officer into the particular niche for which he was best suited; but, in view of what I have just told you, you may realize the difficulties.

The Officers' Card Index.

There can be no doubt but that one of the most important requirements in the Royal Army Medical Corps—in war time equally with peace conditions—is that the best possible use should be made of every man; that there should, in fact, be no "square pegs in round holes." Theoretically, this desideratum should present no difficulties which could not be overcome, and with our present system I think that really satisfactory results are ensured. The aims of this system are briefly as follows:

1. To record fully the special qualifications of each individual officer, the work done, and the appointments held by him prior to his having entered the service.
2. To obtain, in a convenient and readily accessible form, an accurate record of the movements, stations, and work of each officer.

In order to attain these ends a card index system has been established; the qualifications, previous work, appointments in civil hospitals, etc., of each officer are entered on this card; the original is kept at the War Office, and the duplicate is forwarded to the head quarters of the command to which the officer is posted. All movements of the officer within that command, and the nature of the duties which he performs, are entered on the card at the command head quarters. On the officer leaving the command the duplicate card, recorded up to date, is forwarded to the War Office, and any additional information is there entered on the card in the main index; the duplicate card is then forwarded from the War Office to the new command to which the officer has now been posted. By this method the card constitutes a brief but complete record of each officer's services, and facilitates the employment of officers on the duties for which they are best suited, thus ensuring a more satisfactory form of service to the officers themselves, and increased efficiency to the army.

The system will provide a means of continuous and accurate supervision of every officer's work, progress, and career.

With regard to the various advantages and disadvantages of the service, I shall endeavour to lay matters before you fairly and without bias or prejudice.

Pay and Prospects.

First, as to monetary considerations—I apologize for putting this first, it really should come last, but, sordid though it may be, I suppose that when a career is being decided upon the question of £ s. d. is bound to be considered by most of us, and as a matter of practice I find that this is usually one of the first questions asked by a young medical man who contemplates entering the Royal Army Medical Corps.

The new Royal Warrant, issued very recently, lays down the pay and allowances for the Royal Army Medical Corps as follows:

On being commissioned as a lieutenant in the Royal Army Medical Corps an officer receives pay at the rate of £1 per diem, and he also receives various allowances, which bring his total emoluments up to an annual sum of £495, if unmarried, and £558 if married.

This pay steadily increases with service; a bachelor captain (to which rank an officer is promoted after three and a half years' service) receives £622 per annum, a major £815, a lieutenant-colonel £907, increasing to £1,189, a full colonel £1,395, and a major-general £2,001. Should an officer be married he receives slightly higher rates.

Now if we read between the lines of official documents we may often, in addition to the bald facts so tersely stated, gain hints which may be of value, and, bearing this in mind, I would point out that, as regards the increased allowance for married officers, there is a proviso that an officer is not entitled to draw the increased married rate until he has attained the age of 30, that being presumably the earliest year of discretion; the inference to be drawn is evidently that an officer should not commit matrimony until he is 30 years of age. Advice on these lines is no doubt excellent; it is frequently given, and I am afraid as frequently disregarded; in fact, I think that nearly all advice on the question of matrimony is prone, like the argument of doctor and saint, to go out "by the same door wherein it went." On this weighty question every man must judge for himself.

There is, however, another inference which you possibly might—but which I beg you will not—draw from these official rates of pay, and that is due to the fact that the rate for a married officer is only some £50 or £60 more than that for a bachelor. Please do not infer from this that the additional expenditure involved by matrimony on y amounts to some £60 per annum. All the best authorities will tell you—and will be quite correct in so doing—that a married establishment involves a much greater expenditure than that of a bachelor; as regards one possible item alone we have it on the authority of *Punch* that a perambulator costs more than a motor car.

Now, as to pension. After fifteen years' service an officer can retire on £150 per annum, and thereafter he can retire on steadily increasing rates, depending on his rank and service, the *maximum* rates being £450 a year for a major, £600 for a lieutenant colonel, £800 for a colonel, and £1,000 for a major-general.

From the above you will see that you are not likely to make a fortune in the Royal Army Medical Corps, but I would point out that it is not every man who makes a fortune in civil life, and I would also mention a few of the advantages of the service. First, the pay is such that a man can live comfortably, it steadily increases, and the provision of a pension ensures that a man is steadily, throughout his service, providing for the future.

Another advantage to which I would draw attention is the fact that if an officer's health should fail he is granted sick leave up to twelve months on full pay, provided there is a prospect of his being eventually fit for service. So much for the financial side of the Royal Army Medical Corps. Now let us touch on the far more important question of work in the service.

I was much impressed some years ago on reading the address which Mr. Rudyard Kipling gave at the McGill University of Montreal. He said:

Only use one hand to procure wealth, keep your right for the "proper work of life," for if you employ both arms in the game of acquiring wealth you will be in danger of stooping, in danger also of losing your soul.

Now I have heard it said that there was not sufficient work in the Royal Army Medical Corps. I cannot say that I have ever at any time been so unfortunate as to

suffer from an insufficiency of work—the direst evil that can befall any man—and I have more than a suspicion that when a man suffers from an insufficiency of work he is suffering from a neglect to make use of his opportunities.

A man must always be ready to make use of his opportunities; remember that "fortune only favours the man who is prepared." I say with confidence that if a man makes the most of his opportunities he will always find an abundance of intensely interesting work in the Royal Army Medical Corps.

Entry to the service is by competitive examination; the place which he takes in this examination decides an officer's position as a lieutenant in the Army List; after three and a half years' service, and after having passed an examination, he is promoted to be captain; between the seventh and twelfth years of his service an officer is seconded for a nine months' course of study in London; at the termination of this course he undergoes an examination, after passing which he is qualified, on the completion of his twelfth year of service, for promotion to the rank of major.

This nine months' course of study is carried out at the Royal Army Medical College at Millbank and in various of the London hospitals, and a considerable portion of the time is spent in the study of whichever "special subject the officer may select—for example, surgery, ophthalmology, State medicine, etc."

Specialist Appointments.

Should an officer show special aptitude for a particular subject, and qualify by examination in it, he is eligible for many years of his service (and I draw especial attention to this fact) until he attains the rank of full colonel, to hold specialist appointments in the subject. These appointments have in the past carried additional pay at the rate of 2s. 6d. per diem, but these rates have recently engaged a good deal of our attention as regards revision, and it has now been decided that when we have again settled down to the more or less normal conditions of peace, specialist appointments will be paid at the following rates:

Operative surgery	...	...	5s. per diem.
Medicine	...	...	5s. "
Ophthalmology	...	...	5s. "
Gynaecology	...	...	5s. "
Dermatology	...	...	5s. "
Otology, laryngology, and rhinology	...	...	2s. 6d. "
Radiology	...	...	2s. 6d. "
Anaesthetics	...	...	2s. 6d. "
Mental diseases	...	...	2s. 6d. "

Several of the above rates of pay show a considerable increase over those hitherto in force—for example, pay for specialist appointments in operative surgery, ophthalmology, gynaecology, and dermatology has been increased from the former rate of 2s. 6d. per diem to 5s. per diem. Medicine, not hitherto recognized and paid as a special subject, now receives pay at 5s. per diem, while radiology and anaesthetics have been introduced as special subjects, appointments in which carry extra pay at 2s. 6d. per diem. There is also extra pay at rates varying from 2s. 6d. to 10s. per diem for the charge of a hospital or the medical or surgical division of a general hospital.

You may notice that in the above list of special subjects no mention is made of two very important branches of the profession, branches on which the welfare, indeed the very existence, of an army depends. I refer to hygiene and pathology. Now these two subjects have been dealt with, in official parlance, in another file, and I may say that that file was a very bulky one and entailed a very great deal of work, work which bore good fruit, for it was finally sanctioned this year that there should be two sub-directorates at the War Office, one in hygiene and one in pathology, each with a director at its head, assisted by a deputy director and a staff. Serving under the direction of these directors there will be assistant directors and deputy assistant directors at the various commands at home and abroad, in Egypt, Gibraltar, Malta, Ceylon, Jamaica, Bermuda, etc., and schools of hygiene will be formed in certain commands for the instruction of staff and regimental officers. By this means we hope to keep up to date with all the most recent developments as

regards tropical and other diseases and the methods for their treatment and, even more important, for their prevention.

Administrative Work.

There is one point on which I hear a very great deal, and on which I should like to make my own views clear, and that is the question of administrative and professional work. I had very nearly said "administrative *versus* professional work," for from what I sometimes hear I might be led to believe that a combination of the two was impossible—that they were, in fact, incompatibles.

Now, honestly, I cannot see this. Surely—how can it be seriously questioned or doubted by anyone?—the profession of medicine, to which we all belong, is the bedrock, the essential, of the Army Medical Service; if you sink the profession you are left as a ship without a rudder. But—here I come to my proviso—every man in the Royal Army Medical Corps should endeavour to make himself acquainted with the organization of his corps and of the army, and should hold in his hand at least the threads and principles of administration; it will not only be to his own advantage but also immensely to the advantage of the service if he does so. For think of what would happen on the outbreak of war if the officers of the corps were not acquainted with its organization, with the principles of administering hospitals and other units, and with the functions of field ambulances, casualty clearing stations, etc. The acquiring of such knowledge is most interesting; it is not by any means difficult, and it will in no way whatever divorce him from his profession. Surely every man is the better for being able so to organize and administer any unit that every branch of professional work in that unit may be so carried out as to attain a really high standard of efficiency.

May we consider for a moment the instance of an operating surgeon? We will suppose that this surgeon is as nearly as possible perfect in operative skill, courage, knowledge, and manual dexterity. Now, to my mind, such a surgeon will be lacking in capability and performance if he confines himself simply and solely to the actual operating; he will, in my opinion, be a more efficient and valuable man if he organizes the work in his operating theatre on a systematic basis, if he creates a team of workers, assistant, anaesthetist, theatre sister, etc., and so perfects the work of that team as to obtain the best work from each individual and the most perfect combined result from them all.

By having such organizing and administrative knowledge and power he will lose nothing and will gain much. I could give you numerous other examples—for example, the hygienist with an army in the field who, with his expert knowledge and skill, should be able so to organize the work of hygiene and sanitation in that army as to ensure that it is free from disease, and maintained in fit condition to function as an army.

The pathologist in a new, possibly an almost unknown, tropical country, who knows the prevailing diseases of the country, their causes and the methods for preventing and combating them, he surely, of all men, should best be able so to organize and systematize these methods as to obtain the best results.

My ideal commanding officer of a hospital would be a man who knows his hospital from top to bottom and all the patients in it, who knows his staff, trusts them and is trusted by them, who is really keen on every branch of his profession, and who is able to decide in his own mind without hesitation as to whether the work in every branch—surgery, medicine, pathology, etc.—is or is not being carried out in a manner which will bear the most critical examination.

I should like to see such a man looked to freely and without hesitation for opinion and advice, giving the best work himself, and obtaining—without asking for it—the best work from every one under him. You may say that this is an ideal to which it is difficult to attain; possibly so, but without an ideal you will attain nothing. The fact that a man is up to date and really efficient in his profession is all in his favour when he attains to the higher ranks and administers hospitals and supervises the work carried out in them.

I do not wish to labour the point, but I do desire to impress on you that a man must keep up his professional

knowledge; he must never allow it to lapse into the background: he must keep himself up to date; and, consequently, he must be constantly working; but the whole work of the Royal Army Medical Corps is so interesting that one can hardly call it a labour—it becomes one's life.

There is one point regarding the corps on which I have not touched, and that is the fact that a certain portion of one's service is spent abroad; this fact may be regarded either as an advantage or a disadvantage according to the tastes of the individual. Personally, I have always loved seeing other countries, and regard the foreign service as a great attraction in the army.

Another point which I think appeals to many is the fact that one is working with, and for the good of, one's comrades in the army; the British soldier is the best man in the whole world for whom to work; he is not always easy to understand, and at first I found it a little difficult to realize the qualities which made certain officers beloved by their men. After I had been on active service, now some twenty odd years ago, I understood, and Kipling puts it pretty clearly when he says—

All the years I have known So and so I have never known him to say whether he was cold or hot, wet or dry, sick or well, but I've never known him forget a man who was.

I may be biased—though I do not admit it—but I look upon the Royal Army Medical Corps as offering a really good career and a happy life to a young medical man, and, were I starting life again as a newly-qualified man, I should unhesitatingly choose it for myself.

The Future of the Corps.

The improvements and advances which I have seen take place in the Medical Service of the Army during the last twenty-five years have been enormous, and I hope you will not regard me as a visionary or an idealist when I say that I look forward to steady and progressive improvements in the future. I hope and believe that the Royal Army Medical Corps in the years ahead of us will be deservedly looked to as an up-to-date scientific body of men, taking their part in the nation's work in the advancement of science and knowledge, and organized on such a basis that in a time of national emergency they may bear their share—and it is of necessity a very large share—of the nation's burden.

The last five years have taught us much. I do believe that the Royal Army Medical Corps stands now on a better basis with the rest of the army than it has ever done, and I think that we may now regard the Royal Army Medical Corps and the civil profession as being one. The great majority of the civil profession has been—and very many members still are—in the Royal Army Medical Corps, and I honestly believe that we officers in the regular Royal Army Medical Corps are more closely bound by ties of mutual trials, mutual work, and affection to the civil profession than has ever before been the case, and I also hope and believe that the civil profession is in far closer touch, and in much greater sympathy, with the Royal Army Medical Corps than it has hitherto been.

In conclusion, I venture to give you a few words of counsel: Keep your youth, your enthusiasm, your energy; if you permit your youthful enthusiasm to wane you will find difficulty in regaining it. If you would be successful and happy in your work you must give ungrudgingly of your best, for that way happiness lies; as Robert Louis Stevenson truly wrote:

If a man love the labour of any trade, apart from any question of success or fame, the Gods have called him.

The finest men—those who most command our respect, admiration, and devotion—are those who give their all to work for the work's sake, and not for any personal reward; we all know such men, and we know how much the profession and the nation owes to them.

And, finally, I would beg you always to be loyal to your profession and to your brother professional men, and if any of you do eventually enter my service you will, I know, be loyal to it and to the army.

A DIAGNOSTIC hospital, to accommodate 500 cases daily, has been established in New York. The estimated cost is £100,000, and the funds have been supplied by the contributions of some thousand practitioners.

British Medical Journal.

SATURDAY, OCTOBER 11TH, 1919.

THE "PROCEEDINGS" OF THE APRIL MEETING.

THE volume containing the *Proceedings* of the Special Clinical and Scientific Meeting of the British Medical Association, held at the Imperial College of Science, South Kensington, in April last, has now been published.¹

The object the Council of the British Medical Association had in view in holding the meeting was to afford an opportunity to discuss scientific and clinical matters, particularly the medical and surgical lessons learnt during the war, and the ways in which the lessons so learnt might be applied to future practice. The meeting was held early in the year in order to have the advantage of hearing the views of medical officers of the Dominion Forces and of the United States army before they left this country. The programme of the scientific work of the meeting was arranged by a committee over which Colonel J. G. Adams, F.R.S., C.A.M.C., presided. It determined that there should be only three sections, but that there should be many demonstrations. The plans worked well, and the meeting was in every respect successful. The invitation to attend, given to medical officers of all the services, met with a large response; the discussions were animated, and the demonstrations, of which there were a large number, filling up each of the three afternoons of the meeting, were much appreciated and largely attended. Colonel C. T. C. de Crespigny, Australian A.M.C., was secretary of the Section of Medicine; Mr. C. H. S. Frankau, lately temporary Colonel A.M.S., of the Section of Surgery; and Major A. M. W. Ellis, Canadian A.M.C., of the Section of Preventive Medicine and Pathology. An international character was given to the meeting by the attendance of many officers of the Medical Corps of the United States army, and by the active part they took in the proceedings.

The subjects selected for discussion in the Section of Medicine were: War neuroses, introduced by Sir F. W. Mott, M.D., F.R.S.; venereal disease, introduced by Colonel L. W. Harrison, M.B., D.S.O.; and prognosis in cardio-vascular affections by Dr. Thomas Lewis, F.R.S. In the Section of Surgery Colonel T. R. Elliott, F.R.S., and Colonel G. E. Gask, C.M.G., D.S.O., dealt with gunshot wounds of the chest; Professor W. M. Bayliss, F.R.S., and Dr. H. H. Dale, F.R.S., opened the discussion on wound shock, and Major R. C. Elmslie, M.S., and Major Rowley Bristow, F.R.C.S., combined to give a review of reconstructive surgery, which was followed by a debate. In the Section of Preventive Medicine and Pathology a discussion on the dysenteries was introduced by Colonel Leonard S. Dudgeon, C.M.G., A.M.S., and another on malaria, by Lieut.-Colonel S. P. James, I.M.S.(ret.), who is at present adviser on malaria to

the Ministry of Health. A joint meeting of this section with that of Medicine was held under the chairmanship of Colonel Haven Emerson, Medical Corps, U.S.A., for the discussion of influenza, when the clinical aspects of the subject were brought forward by Major-General Sir Wilmot Herringham, K.C.M.G., the epidemiological by Captain M. Greenwood, R.A.M.C. (T.F.), and the etiological by Major F. B. Bowman, C.A.M.C. The *Proceedings* contain the full text of all the introductory papers and reports of the discussions which followed. Accounts are given also of the numerous demonstrations, which were a special feature of the meeting; many of them were planned to illustrate the subjects discussed in the sections, an arrangement which commanded general approval and caused large audiences to assemble. The volume includes the striking address, "The New Birth of Medicine," by the President of the Association, Sir Clifford Allbutt, K.C.B., F.R.S., Regius Professor of Physic in the University of Cambridge, which was circulated to members attending the meeting, and also a full report of the Popular Lecture in which Sir Cuthbert Wallace, K.C.M.G., consulting surgeon to the First Army in France, described the rise of the casualty clearing station and gave details of the work these units, so finely conceived and well administered, did during the various stages of the war. The lecture is illustrated by sketch plans of a casualty clearing station for seriously wounded men, and of another for walking wounded.

The later pages of the volume are occupied by a brief historical account of the Medical Services in the war; for the preparation of this, of the roll of honour, of summary statements of the strength of the services at various stages, and of the honours conferred on medical officers, the Association is indebted to Lieut.-Colonel D. G. Crawford, the historian of the Indian Medical Service. Lists of the medical head quarters staffs have been appended; in the preparation of the lists of the head quarter staffs, including General Head Quarters, lines of communication, and the staffs of the various armies in France, Italy, Salonica, Malta, Mesopotamia, East Africa, of the Army of the Rhine, and of the British troops in France and Flanders after the armistice; Sir Anthony Bowlby, K.C.B., has given valuable assistance; while for those of the Canadian Army Medical Corps, the Australian Imperial Force, the New Zealand Medical Corps, and the South African Medical Corps acknowledgements are due to the courtesy of the senior officers of these corps in this country. These additions will, it is believed, add to the permanent value of the volume as a reflex of medical opinion at the time, and as a memorial to those who gave their services, and too often their lives, in the great emergency.

BACILLARY DYSENTERY: CARRIERS AND FLIES.

THE investigation of bacillary dysentery in Macedonia was begun in 1915, but it was not until the autumn of 1916 that a definite scheme was adopted by Colonel L. S. Dudgeon, C.M.G., C.B.E., F.R.C.P., Major A. L. Urquhart, R.A.M.C., and Colonel W. R. Logan, R.A.M.C. Later several other bacteriologists in the command assisted; the advantages to be gained by several bacteriologists working in various parts of Macedonia and by the correlation of the work at a central laboratory, were apparent. All special strains of bacteria were fully investigated in the central laboratory, immune serums and antigens were prepared and sent to the various laboratories, and the

¹ *Proceedings of the Special Clinical and Scientific Meeting*. London, April 8th-11th, 1919. London: The British Medical Association. (Demy 8vo, pp. xvi + 405.) The volume is published at the price of 3s., but copies will be supplied to members of the Association free on application to the Financial Secretary of the Association, 429, Strand, London, W.C.2.

information obtained during the research was distributed among the other bacteriologists. The report¹ contains much valuable information, but Colonel Dudgeon is at pains to point out that many important questions were left unsolved or only partially answered, and to urge that opportunities shall be afforded to those bacteriologists who have studied the disease in its acute form to obtain the information still needed with regard to its causation, prevention, and treatment, for dysentery is one of the most serious diseases in subtropical and tropical countries, more especially to an army operating in a country in which it is both endemic and epidemic.

The earlier and larger part of the report is concerned with technical matters which will call for careful study by bacteriologists and physicians concerned with the diagnosis and treatment of dysentery. We may pass on to the section dealing with carriers. It is said that the occurrence of mucus in the stools should be regarded always with grave suspicion among patients with a previous history of dysentery, and the opinion of Dr. E. H. Lepper, O.B.E., bacteriologist to a dysentery hospital B.S.F., is confirmed, to the effect that it should be an essential part of the work of medical officers in dysentery wards to select samples of faeces which contain mucus for bacteriological examination and to notice if patients who are discharged are passing shreds of mucus. She considered that the percentage of convalescent dysentery patients carrying bacilli was about 6, but that three months after the onset this had been reduced to 1.5. In the Salonica command a dysentery section of a convalescent dépôt was established, conducted upon a definite scheme, one object being to test the power of the men to undergo physical labour gradually increased.

After discharge from hospital dysentery patients may suffer from attacks of diarrhoea when first put on army diet, because the intestinal tract has not completely recovered from the inflammatory processes. It was noted that patients with defective teeth were specially liable to such attacks. A series of cases which had suffered from repeated attacks and were to be regarded as chronic dysentery were carefully studied, and the conclusion was that the occurrence of mucus depended upon errors of diet, cold, fatigue, or an attack of malarial fever which might have lasted for a few hours only. Among the patients suffering from the effects of chronic malaria and dysentery it was common for a relapse of one infection to excite the recrudescence of the other. In certain cases it was ascertained that the infective agent was not constant in each attack. Further study of this question is necessary, and can only be satisfactorily carried out if sufficient fully trained bacteriologists and protozoologists are available. Meanwhile, the rule should be to return to hospital every patient who has mucus in his stools or is suffering from diarrhoea following an attack of dysentery.

Of serum treatment in acute bacillary dysentery it is said that this has sometimes become a ritual, antiserum being injected as soon as the patient announces that he is passing blood and mucus. While it is thought that this line of treatment is probably based on a false conception of the disease, it is recognized that the life of a patient suffering from acute dysentery may depend on whether or not treatment with antiserum is commenced at the earliest possible moment. It is admitted to be practically impossible to examine bacteriologically all cases of dysentery occurring among troops on active service,

and that a negative result may be obtained if proper precautions are not adopted for a correct examination of the specimens, a subject dealt with at length in the report. The opinion is expressed that if every case of acute dysentery which needed serum-therapy were to receive a mixed antiserum at the beginning better results than those hitherto recorded might be obtained. Experience of bacillary dysentery during the Gallipoli campaign and in Macedonia during 1916-18 led to the conclusion that the vast majority of severe cases were due to the Shiga bacillus. It is urged therefore that every effort should be made to produce an efficient and standardized anti-Shiga serum which could be administered on the same lines as anti-diphtherial serum, thus avoiding excessive dosage with horse serum. The injections could be given subcutaneously.

The belief that the infection of dysentery and certain other intestinal diseases may be carried by the house-fly is very generally held, and has been made the basis of crusades. It has been founded mainly on general considerations, but has received support from some careful bacteriological investigations, especially those of Faichnie, Graham-Smith, and Bahr. The last section of the report before us contains some epidemiological and experimental observations of a precise kind, tending still further to incriminate the insect. The inquiry was conducted under three heads: the number of flies present at different seasons in a certain area was compared with the incidence of bacillary dysentery arising in that area; experiments were made to ascertain whether a fly deliberately infected with a bacillus of the dysentery group carried that bacillus; and, thirdly, to ascertain whether flies in their natural state were carrying dysentery bacilli. Two years' experience in the Salonica command showed that while bacillary dysentery occurred to some extent among the troops throughout the warmer months, there was a greater prevalence in spring and early summer, and in late autumn—periods when the fly pest was at its worst. The number of flies was estimated by the use of fly traps; the numbers trapped reached a maximum in May, and then declined, to rise again at the end of October, but their number then was much smaller than in the early summer. The number of flies was low in March, when the mean temperature of the air was below 50° and the minimum was 25°; the climate was then evidently too cold for the incubation of the eggs and larvae of the fly. In July, August, and early September the mean temperature was usually between 75° and 85°, with a maximum of 102° or 104°, but the relative humidity curve was, with one exception, below 50. This weather evidently rendered the breeding grounds too dry for the successful hatching of pupae, and probably killed many adults. Changes in local conditions in the areas under observation introduced certain fallacies, but, on the whole, it was obvious that periods during which bacillary dysentery was most prevalent corresponded to the periods when the flies were most numerous. In the early summer the rise in dysentery appears to have followed the rise in the number of flies at an interval of about three weeks. In the autumn the rise in the number of cases of dysentery seems to have preceded the rise in the number of flies.

In the experiments to ascertain whether the fly is capable of carrying dysentery bacilli the insects were fed in improvised cages on materials known to contain Flexner or Shiga bacilli. Three methods were used to recover the bacilli after feeding; in the one a fly was allowed to roam about on a plate of

¹ Medical Research Committee. Special Reports Series, No. 40. H.M. Stationery Office. (Price 3s.)

MacConkey's medium for some fifteen minutes, then destroyed, and the plate incubated. This reproduced the natural process, since the fly might infect the medium by wiping the feet, regurgitation, or defaecation, as in food contamination. In the second the fly's faecal deposit was collected and emulsified on sterile saline solution; it was then plated. In the third method the insect was killed, the legs were detached and dropped into broth, which was incubated for from six to twelve hours and then plated. A variable amount of growth was obtained by all methods, often, in the first and third methods, too great for convenient examination. The second is therefore recommended as the most suitable method for the isolation of dysentery bacilli at and beyond twenty-four hours from the time of infection; after the lapse of this time the prospect of recovering the infecting organism from the fly diminishes very markedly. The total number of flies examined was 382, and positive results were obtained in 79.

The series of experiments to ascertain whether flies in their natural state were carrying dysentery bacilli were made on insects caught in various parts of two hospitals, in neither of which were there wards allotted to cases of dysentery. The results were sufficient to show that flies living under natural conditions may carry dysentery bacilli, but judging from these experiments alone this would appear to occur infrequently. During the period April to June, 1918, when the flies were in an active state, in great numbers, and the incidence of dysentery was high, 1,240 were collected in equal numbers from the two hospitals. Typical dysentery bacilli were not recovered, but Flexner's bacillus (inagglutinable) was recovered from two, and a para-Shiga bacillus from one. In October, 1918, during the increased incidence of dysentery at that time 330 flies caught in one of the hospitals were examined. The flies were numerous and active. Among 160 flies examined by the walking method typical Shiga's bacillus was recovered in one instance (a fly caught in a hospital kitchen), and a Flexner-like bacillus (inagglutinable) in four. The faeces from 170 other flies were examined; typical dysentery bacilli were not found, but a Flexner-like bacillus (inagglutinable) was recovered from two. Though the number of positive results was small, it must be remembered that 1,670 flies—the total examined by this method—would form a very small proportion of the total swarms.

TEMPORARY COMMISSIONS IN THE R.A.M.C.

WE understand that the response to the recent appeal of the War Office to medical practitioners, including those who have been demobilized, to undertake duty with the army has not been as satisfactory as could be wished. Nor, indeed, as large as the needs of the country demand. It will be remembered that under the new arrangements published last month the period of engagement will be for six months, the contract not being terminable by either party prior to the expiration of that period, and that applicants who have served before will be commissioned in their previous rank. The pay of lieutenants will be £600 per annum, and officers of this rank, on completion of one year's satisfactory service, will be commissioned as captains. The pay of captains is £650 per annum. In addition each officer will be entitled to pay at the rate of £50 a year when serving elsewhere than in Europe, to rations, and to specialist or charge pay when holding a position for which the issue of such is authorized. Officers holding higher acting or substantive rank than that of captain will, if they desire, be granted the pay and allowances of the higher rank. These terms are a considerable

improvement on those previously offered, and have, we understand, proved attractive to over 500 officers now serving; but the response from medical men who have not previously served and from demobilized officers has been disappointing. The total applicants under the new contract, we believe, scarcely exceed 600. We are satisfied that the needs of the Army Medical Service are great. The country still has considerable forces afoot—in Mesopotamia, in India, in Egypt, and on the Rhine. Leave, save in very exceptional circumstances, is not being granted to regular officers R.A.M.C. Those serving in India are being retained, and sick leave has been given only to two or three in very urgent circumstances. The case of temporary and Territorial officers who were stopped in India on their way home from Mesopotamia is particularly hard, and the War Office is specially anxious to bring them home for demobilization, but the demands of India for medical officers seem to increase rather than diminish. The same is true of Egypt. Leave to I.M.S. officers has practically stopped, and the Indian Medical Service has recruited over 800 temporary officers; yet, in spite of this, demands for further R.A.M.C. officers are being received from India. Some of our correspondents affirm that R.A.M.C. officers in India are not being fully employed, and that redistribution, now that the Frontier war is over, might render it possible to liberate temporary officers who have served longest. We are sure that this matter is receiving the anxious consideration of Sir Charles Burtchaell and his staff, and that everything possible in this direction will now be done; as we have shown, it is most urgent that the demands from India for additional officers should be moderated. The circumstances of the Army Medical Service at the present time are so difficult that it may well make a special appeal to the younger qualified men who have not yet served; we are aware that their numbers are much smaller than in normal times. The number of names on the *Medical Register* in 1918 was little larger than in 1917; the number of new names of practitioners in the British Isles registered in 1918 was 913, as compared with 1,168 in 1913 and 1,433 in 1914. In considering the matter it is only just to remember that many of those who patriotically took advantage of the special facilities to obtain early qualification during the war—a movement which brought up the number of new names registered in 1915 to 1,526—may now properly desire to study for an additional diploma, a university degree, or the fellowship of a college; but there must be a considerable number of men not so engaged who, it might be thought, could well give six months' service in the army. It is hoped—and the hope is reasonable—that the military situation will be much easier six months hence. The number of students attending the medical schools, especially those of the first and second year, is unusually large, but that does not affect the immediate problem.

"MEDICAL SCIENCE, ABSTRACTS AND REVIEWS."

DURING the war the Medical Research Committee published a *Medical Supplement* to the Review of the Foreign Press issued by the General Staff of the War Office. This review of foreign medical war literature, which proved of much value and interest, especially to medical officers serving abroad, was discontinued last April. It has now been revived in a different form as a monthly periodical under the title of *Medical Science, Abstracts and Reviews*,¹ and the first number, dated October, 1919, has just been published for the Medical Research Committee by the Oxford University Press. It resembles in shape and size the monthly lay reviews. The first ninety pages are devoted to articles each of which is a review embodying

¹ London, Edinburgh, Glasgow, New York, Toronto, Melbourne, Cape Town, Bombay: Humphrey Milford, Oxford University Press. Annual subscription 21s.; single copies 2s.

recent observations on some medical or surgical subject: there are, for example, such articles on caecostomy and appendicostomy, on influenza, and on lethargic encephalitis. The value of such reviews is considerable, and is enhanced when the writer treats a subject with which he is familiar, so that he is competent to recognize chauvinistic tendencies, from which neither scientific nor medical literature is altogether free. The remaining forty pages contain abstracts, mostly short, of articles in proceedings and periodicals, arranged under various heads. These abstracts are for the most part founded on papers of a technical character, published chiefly, but not exclusively, in foreign journals; the section on pathology and bacteriology, as is proper, is particularly full, and will, we hope, be maintained and developed. There is, perhaps inevitably, some overlapping with the matter appearing in the general medical journals; but on the whole the new periodical may be considered the complement of the Epitome of the BRITISH MEDICAL JOURNAL.

THE BEGINNINGS OF MEDICAL SOCIETIES.

DR. HERBERT CHAMBERS, who was inducted as president of the West London Medico-Chirurgical Society on October 3rd, devoted his address to a historical sketch of the medical societies of London. All scientific societies, he said, were the remote offspring of those early schools and academies of science which arose from Hellenic culture, but it needed many centuries of patient work to bring into existence associated observation, which was a very late product of advancement in knowledge. In this country Francis Bacon was the first to suggest the formation of a society for elucidating intellectual problems, and the idea bore fruit at last in the establishment of the Royal Society in 1660. Otherwise, with the exception of the Royal College of Physicians of London, founded in 1518, no recognized scientific society existed in this country previous to the Restoration. Edinburgh was the home of the first medical society proper: such a society was founded in that city in 1731. Medical societies now began to appear in London, tentatively at first, but gaining vitality with time. One was founded in 1752, and held its meetings fortnightly at the Mitre Tavern in Fleet Street; it ceased to exist in 1784. Another select coterie of physicians was founded in 1764, but no record of it was discoverable after 1783. The society founded at Guy's in 1771 might be said to have flourished on its fines; as much as £5 was exacted from its members at a meeting; Jenner delivered before this society one of his earliest dissertations on vaccination. The present Medical Society of London was instituted in 1773, largely by Fothergill and Lettson. Thirty-two years later a number of its members separated and founded the Medical and Chirurgical Society, which announced itself as a society with liberal and independent principles, conducted with propriety and dignity worthy of the medical profession. This body ultimately developed into the Royal Society of Medicine. The lecturer concluded by tracing the history of the West London Medico-Chirurgical Society since its foundation, due mainly to Charles Keetley, in 1882.

A TEST OF ARMY SANITATION.

FIELD-MARSHAL LORD ALLENBY, in acknowledging the freedom of the City of London at the Guildhall on October 7th, paid a high compliment to the medical and sanitary services of the army in Palestine. "I was told," he said, "by all the textbooks and authorities that no troops could be kept in the Jordan Valley during the summer, 1,300 feet below sea level, in a heat that could hardly be named, and under frightful conditions of malaria. But we attacked the mosquitos, drained the swamps, canalized the streams, burned the bush, and oiled the pools, and we were able to stay there. After we crossed the Turkish lines we tumbled into it, and got sickness very bad. In six weeks from September 19th,

when I attacked, I lost three times as many men by disease—malaria and influenza—as by wounds in battle. That was not in our own ground, but when we had reached the Turkish area, where they had not taken precautions for attacking malaria."

INCOME TAX OF CIVILIAN DOCTORS ON WAR WORK.

A note on this subject appeared in our issue of September 20th, 1919. We now learn that, as a result of a decision given in the High Court in connexion with the liability to income tax of persons doing army work but not as commissioned officers, the Board of Inland Revenue has recently decided to accept claims by temporary civilian doctors (including women doctors) employed at war hospitals to the "service" rates of assessment, and to the "old" abatement of £160 where the total income of the individual does not exceed £300 per annum. Such claims are not barred by the fact that no notice of objection was lodged when the assessment was made, although they would be affected by the ordinary statutory time limit of three years. Consequently any individual who comes within the category referred to can claim repayment of any excess of tax paid as from April 5th, 1916, onwards, provided that the claim, or an intimation that the claim will be made, is lodged with the authorities by April 5th, 1920. We suggest to any practitioners affected that they communicate with the local surveyor of taxes requesting to be supplied with the appropriate form of claim.

THE LONDON MEDICAL EXHIBITION.

THE ninth London Medical Exhibition, but the first since before the war, organized by the *British and Colonial Pharmacist*, has been held at Westminster Central Hall during five days of the present week. Sixty firms contributed to a very interesting display, though many of them, owing to the railway strike, had to wrestle with unusual difficulties in bringing together their products. The articles shown included chiefly surgical instruments, orthopaedic appliances, fine chemicals and pharmaceutical preparations, patent foods and table waters, hygienic wearing apparel, laboratory equipment, and medical books. In fact the exhibition, particularly on its chemical side, was a repetition on a somewhat smaller scale of the exhibition held at South Kensington during the Clinical and Scientific Meeting of the British Medical Association last April. Doubtless owing to limitations of space, electrical and x-ray apparatus were not illustrated, save by an exhibit of some radiant heat apparatus; but this was interesting because it included electrically-heated waistcoats, gloves, and boot-soles for airmen. During the last six months the range of synthetic products of British manufacture has evidently gone on extending; one firm showed forty or more such products which in pre-war times had all been wholly or in great part imported; and not only has there been extension of range of products, but also improvement in ampoules and administrative devices. Nothing, however, was more significant of the heights of achievement to which the British chemist has risen than a beautiful sample of sodium salicylate flake of unapproachable purity.

THE Harveian Oration, before the Royal College of Physicians of London, will be delivered by Dr. Raymond Crawford at the College on Saturday, October 18th, at 4 p.m.

THE Medical Society of London will open its session on Monday next, when the annual meeting will be held at 8 p.m. At 8.30 the president, Mr. V. Warren Low, C.B., F.R.C.S., will deliver his presidential address. This will be followed by a paper by Dr. F. de Havilland Hall on angina pectoris with low blood pressure. At the next meeting of the society, which will take place on October 27th at 8.30 p.m., Colonel A. L. A. Webb, C.B., C.M.G., will open a discussion on the reclassification and treatment of pensioners.

Scotland.

CONTESTED ELECTION FOR DIRECT REPRESENTATIVE, GENERAL MEDICAL COUNCIL.

THE Medical Act 1886 provided that one direct representative on the General Medical Council should be elected by the registered medical practitioners resident in Scotland, that he should hold office for a term of five years and be eligible for re-election. The present representative is Dr. Norman Walker, whose term of office expired three years ago, but under the provisions of the Parliament and Local Elections Act of 1916, 1917, and 1918, the tenure of the direct representatives was extended until the end of the present year. An election will shortly take place, and Dr. Norman Walker is offering himself for re-election. He is opposed by Dr. Michael Dewar of Edinburgh, and Dr. Ebenezer Duncan of Glasgow. We have received the following reports of meetings of the profession held by Dr. Norman Walker and Dr. Dewar:

Dr. Norman Walker.

In opening his campaign as a candidate for the above, Dr. Norman Walker, the sitting member, addressed a small but representative and enthusiastic meeting of Fife doctors in Kirkcaldy, on October 3rd. He showed, from previous election addresses, that he had carried out a consistent policy for the period during which he had been the representative.

In the medical curriculum he advocated the recognition of the excellent instruction in chemistry and physics at secondary schools; greater attention to the preventive side of medicine all through the curriculum; and the provision of a fourth term annually with a greater supply of lectures if necessary.

He was in favour of the one-portal system, standardized by inspectors in increased numbers, and of the utilization of more of the county hospitals in supplementing professional training, especially after graduation. He agreed with the report of the Departmental Committee appointed at the instance of the General Medical Council on the present position of dentistry.

With regard to the future of medicine, he thought it was "not dark, but misty, and that under such circumstances experience was specially valuable."

These views were cordially reciprocated by the meeting, and a unanimous vote of confidence was passed, on the motion of Dr. C. E. Douglas, who pointed out that Dr. Walker had the confidence and trust of the General Medical Council to such an extent that he had been elected Chairman of the Business Committee, and member and Acting Chairman of the Examination Committee. The profession in Scotland could not afford to lose the services of such a representative at the present time.

Dr. Michael Dewar.

Dr. Dewar opened his election campaign on October 3rd by addressing a meeting of the medical profession in Edinburgh in support of his candidature for the vacancy occurring this year in the direct representation of Scotland on the General Medical Council. He said that for the last thirteen years Scotland had not been represented by a general practitioner, and thus the Act of 1886 had been a dead letter in Scotland for that period, so far as the general practitioners, who formed the great bulk of the profession, were concerned. The whole of the seats for Scotland (eight in number) were held by prominent members of the colleges and universities, who, without exception, were consultants, specialists, or teachers. He considered that it was not too much to expect that the one seat available should be held by a general practitioner. This seat should not be looked upon as the prerogative of any single man simply because a few were of opinion that it is not a pleasant action to try and oust the sitting member. This procedure was adopted by the present representative in 1906. Dr. Dewar expressed himself in favour of:

1. A fairly high standard of proficiency in general education for entrance to the medical curriculum.

2. The compulsory inclusion of Latin in all the entrance examinations, not that candidates should be Latin scholars, but that they should possess a sufficient grounding in the elements of that language to enable them to benefit to the full in their future medical studies.

3. As to the recent resolution of the Council in recognizing certain examinations as qualifying for entrance to student registration—notably, the first schools certificate with two credit passes, the second schools certificate, the intermediate leaving certificate, and the entrance examination to the arts and

science courses—he said that it was not right that the entrance examinations to the medical courses should be on a lower level than those required for the arts and science courses. Mathematics, with the cognate subjects of algebra and arithmetic as a mental exercise, were essential for medical students. There had been a decided tendency towards a lowering of the standard in past years, as compared with that required by the universities thirty years ago. This was not good for the future well-being of the profession. These entrance examinations should be stiffened, if future doctors were to continue to be looked upon by the public as men of education, some culture, and possessing the necessary qualifications to enable them to exercise good judgement in the diagnosis and treatment of the many difficult problems of disease.

4. The maintenance and even extension of the supervision by the Council of the professional examinations, and especially the later examinations. As shown by the reports of the inspectors, there was sometimes displayed in answering the simplest questions a woful lack of knowledge, which must be due either to a defective application by students to their medical studies, or an inability, owing to a deficient knowledge in general education, to think correctly and express themselves clearly.

5. The one-portal system for entrance to the medical course and to registration as medical practitioners. There should be no side door or back door. All should possess a sufficient standard of knowledge in medicine, surgery, and obstetrics to enable them to enter on their medical life on a proper basis.

6. The total prohibition of unregistered dental practice, due regard being given to those men who had been in practice for a number of years, and who may have incurred domestic obligations.

Most of the penal cases affected general practitioners, and he held that as many men as the Act of 1886 allowed, who were engaged in this kind of practice and knew the temptations to which such practitioners were subjected by an immoral section of the public, should be included in the Council and assist in acting as their judges.

In answer to a question as to the reconstruction of the medical curriculum, Dr. Dewar expressed himself in favour of the extension of the age for entrance to the medical course to 18, thus allowing boys in the senior schools to study and pass examinations in the basic sciences included in the First Professional Examination. By this means the five years' curriculum would be relieved of this burden of preliminary scientific education, and leave the whole time to be devoted to a study of the various subjects required for starting life as a medical practitioner.

A vote of confidence in the candidate was unanimously passed.

England and Wales.

STATE-AIDED HOUSING SCHEMES FOR LONDON.

IT was reported to the meeting of the London County Council on October 7th that the Ministry of Health had approved the Council's scheme whereby ten thousand new houses should be completed within the next two years, but that Dr. Addison was not yet satisfied that the proposed provision of a further 19,000 houses within the three following years, and the clearance of the worst of the insanitary areas with an estimated population of 40,000 would meet adequately the needs of London. The reply of the Council was to the effect that it did not suggest that all the eventual needs of London would be met by the scheme, and the Council had indeed provided that before the end of the five-year period the needs of the county should be reconsidered. At the same meeting the Council discussed what relaxations of by-laws might be necessary. A recommendation was adopted declaring it undesirable to relax the by-laws relating to width of streets, formation of blind alleys, and height of habitable rooms, though no objection was offered to certain other relaxations, such as relate to hollow, party, and parapet walls, and the thickness of walls. The statutory width set up for streets is 40 ft. for carriage streets and 20 ft. for foot streets, and the sub-committee on this question gave its opinion that only by adhering to this standard could provision be made for the growth of the population and the consequent increase in traffic. The formation of culs-de-sac, which is suggested in the manual on the preparation of housing schemes issued by the Ministry of Health, was thought likely to lead eventually to the creation of slums; and with regard to the adoption of a height of 8 ft. for rooms, which is also suggested in the manual, the Council's medical officer of health stated that from a large personal experience he

thought that the London Building Act, which required habitable rooms, with some exceptions, to be 8 ft. 6 in. in height, should continue to operate. If windows were kept open and adequate ventilation provided a reduction in height might perhaps be permitted, but it was impossible to ensure these measures.

POST-GRADUATE COURSES IN MANCHESTER.

A series of post-graduate lectures and demonstrations on medical, surgical, and special subjects is being given at the Manchester Royal Infirmary. The first lecture was given by Mr. W. Thorburn, C.B., on October 7th, the subject being prostatic enlargement. The next lecture will be given by Dr. E. S. Reynolds, on the diagnosis of affections of the spinal cord, on Tuesday next. The lectures will be continued each Tuesday until June 29th, 1920, with the exception of December 23rd and 30th, January 6th, April 1st, and May 15th. Tea is served at 4 p.m. and the lecture begins each day at 4.30 p.m. The lectures are open to medical practitioners without fee.

Correspondence.

MEMORIAL TO HUGH OWEN THOMAS.

SIR,—I should like to suggest that the best memorial to this really great man take the form of a collected complete edition of his writings. So far I have failed to find any library that can boast of possessing a complete set. He was not careful about his own reputation as a writer, and appears to have thrown off paper after paper without any care as to their future. Still, I have no doubt if the task were taken in hand by the Memorial Committee it should be possible to obtain (with the help of libraries and members of the profession) a complete list of his printed work, and if the general editorship were entrusted to his distinguished relative, Sir Robert Jones, the profession would have at its disposal probably the most remarkable conspectus of work on any one subject that has ever been produced. I do not think it would call for a large subscription. I believe all that is really wanted is a guarantee fund, for if properly done the work should pay for itself. If the BRITISH MEDICAL JOURNAL will start a guarantee fund I should be glad to stand for £50.—I am, etc.,

London, W., Sept. 24th.

J. Y. W. MACALISTER.

** The following list of the works of Hugh Owen Thomas in the Library of the British Medical Association may serve as the basis of a complete bibliography:

The Past and Present Treatment of Intestinal Obstructions Reviewed, with an Improved Treatment Indicated (title on cover, "Diet and Opium in Intestinal Obstructions"). 1877.

A Review of the Past and Present Treatment of Disease of the Hip, Knee, and Ankle Joints, with their Deformities. 1878.

The Treatment of Fractures of the Lower Jaw. 1881.

* Nerve Inhibition and its Relation to the Practice of Medicine. 1883.

Intestinal Obstruction; with an Appendix on the Action of Remedies. 1883.

* Principles of the Treatment of Diseased Joints. 1883.

* Fractures of the Neck of the Femur. 1884.

* The Principles of the Treatment of Fractures and Dislocations. 1886.

* Fractures, Dislocations, Diseases, and Deformities of the Bones of the Trunk and Upper Extremities. 1887.

* A New Lithotomy Operation. 1890.

* The Colligian of 1665 and the Colligians of 1885. Second edition. 1888.

An Argument with the Censor of St. Luke's Hospital, New York. 1889.

* Fractures, Dislocations, Deformities, and Diseases of the Lower Extremities. 1890.

The volumes marked * form Parts of a series with the general title *Contributions to Surgery and Medicine*, but it appears impossible to reconcile the dates of publication with the author's numbering of the several Parts.

The following works mentioned in the bibliography appended to the pamphlet issued by the Hugh Owen Thomas Memorial Committee of the Liverpool Medical Institution are not in the Library of the British Medical Association:

The Principles of the Treatment of Joint Diseases. 1878.
Inflammation, Ankylosis-reduction of Joint Deformity, Bone-setting.
Spinal Deformities.

These works may possibly have been superseded by or embodied in some of his later volumes. We shall be obliged for information on this point and as to any books by H. O. Thomas not here enumerated.

ROYAL NAVAL MEDICAL SERVICE.

SIR,—Since the new scheme for pay and promotion of naval officers was promulgated we have been expecting to see from abler pens than ours some candid criticisms on those changes which affect the medical branch. However, little has been written, though much has been said.

We may say at once that the new scale of pay is generally considered sufficient if the higher ranks are opened up. Then, Sir, you may well ask, "What is wrong with the Naval Medical Service?" The reply is, "Injustice"; and if you will allow us to put our grievances before you, incidentally they will be known to the medical profession generally.

I. A lack of promotion to the rank of surgeon captain, which does not obtain in service-trained branches of the navy. With the exception of the naval instructors (another non-service-trained branch), all commanders come up for consideration for promotion long before their age for retirement, and those deserving of promotion are advanced to captain.

The result of this is that, for instance, all paymasters with few and understood exceptions, arrive at captain's rank and can retire on £900 a year, while the medical officer can only hope to reach a pension of £500, unless he be an exceptionally fortunate individual.

II. It was generally expected that pensions under the new scheme would be advanced 50 per cent. This has practically been done for all branches except the medical, even to nearly 100 per cent. in some cases, whereas surgeon commanders' maximum pension (so far the most important one) has only advanced 10 per cent. above the rate fixed nearly forty years ago.

III. Officers (other than of the medical and instructor branches) who continued to serve during the war after reaching the age of 50 were generally given acting captain's rank, and paid full pay and a quarter in that rank from that time. On the other hand, in our branch acting rank was almost unknown even where it should have been bestowed. Towards the end of the war acting rank certainly was given to certain surgeon lieutenants who were in medical charge of cruisers, but this is believed only to have been done out of very shame because paymaster lieutenants had been given similar acting rank under similar circumstances years before.

As now the retired pay of commanders in all branches is the same, why should not the doctors have the same advantages as service-trained branches? Do the authorities forget that we bring an expensive and difficult profession with us?

IV. The gratuities which once tempted medical men to join the navy remain the same as fixed about 1882! They are scarcely likely to tempt candidates now. At the same time service-trained officers who have cost the country enormous sums for their education are encouraged to leave the service at a younger age than medical officers could, on approximately the same gratuity!

V. The present compound titles are "impossible." They certainly do not lessen the unpopularity of the service. The changes in uniform made lately were generally welcomed, but the new titles, No! We have never heard a medical officer speak in favour of them.

VI. The adjustment of seniority for surgeon commanders under the new scheme is a most feeble arrangement, some officers gaining two years only and others anything up to four years' seniority.

VII. Surgeon rear admirals have absolutely none of the many advantages of flag officers in the executive branch. They have neither table money nor entertainment allowance, servants' allowance nor charge pay. Neither are they given a barge.

The ranks of the medical officers are most difficult to fill, especially with desirable candidates. There is no difficulty in filling the vacancies in the non-medical branches. In spite of this fact, the pay, allowances, and pensions of the medical branch show a much lower percentage of increase under the new scheme than that granted to non-medical branches.

May we suggest what should be done?

1. All medical officers to be considered for promotion to surgeon captain some time before compulsory retirement.

2. Pensions of surgeon commanders to be increased to a maximum of £900 if they have served after 50 and during the war.

3. Surgeon commanders to be granted the same advantages as engineer commanders as regards service after the age of 50 during the war. Acting rank to be bestowed as freely to us as it is to that branch.

4. Gratuities to those who wish to withdraw to be increased by at least 60 per cent.

5. To abolish the compound titles and have purely executive ones, or to revert to the old time-honoured ones.

6. Under the new scheme all officers over twelve years' service and under the rank of surgeon captain to be given four years' seniority, so that all these officers should be treated alike.

7. Surgeon rear admirals should be given either table money or charge pay.

In conclusion, we could wish for more appreciation of our work as medical men. We are not simple automatons trained only to give a dose of medicine when required.

Since the above lines were penned it really seems as though the Admiralty were trying to exasperate their medical officers. An order has just been issued to the effect that medical officers serving in establishment appointments are not to draw the same amount as compensation in lieu of provisions, light and fuel, and servants as do officers in other branches. For instance, a paymaster commander in occupation of an official residence in a naval hospital would draw £140 per annum as allowances in lieu of provision, fuel, light, and servant, while under the same conditions a surgeon commander, perhaps living in the same terrace, would draw £53. This is almost incredible, but it is so; and this in spite of the fact that medical officers' charge pay has all been stopped under the new scheme, whereas command money or charge pay remains for other branches.—We are, etc.,

Sept. 30th.

FOUR SENIOR MEDICAL OFFICERS, R.N.

"THE CULT OF INDIVIDUALISM."

SIR,—Whether or no one agrees with all Dr. Fothergill's contentions as expressed in his letter to the JOURNAL of September 13th, he has done a service to the Association in throwing the limelight upon the canker of disunion which is sapping our energies and bringing upon us the contempt of all thinking men.

It is too much to expect every man in an individualistic profession such as ours to see eye to eye, but surely where every one starts from the common ground of desire to help to raise our profession, it should be possible to work harmoniously together in order to reach the haven where we would be.

I submit that the first thing to be done is to sink our personal feelings and not to damn an idea just because it emanates from somebody whom we dislike. It may be very tempting to rush into print and score a debating point off a rival, but how does that help along the common cause which all have at heart, however much they may differ as to the methods by which the result may be attained? Civil war while the enemy hammers at the gate is a policy of self-destruction. Personally I find in these new organizations no principle which the Association could not carry out if only it were backed up by a united profession—a consummation devoutly to be wished.

No disease can be treated rationally without a previous sound diagnosis, so let us devote our energies to finding out exactly why nearly half the profession does not belong to the Association. The fact of there being other organizations is in itself a proof that many are dissatisfied with the Association. I shall be the last to deny the existence of sins in that body, both of omission and commission, but I am equally certain that much discontent is due to ignorance and, above all, to apathy. One is constantly refuting the same silly canards and inaccuracies about the Association, and the importance of keeping members *au fait* with what is being done for them cannot be exaggerated, the issue of the monthly reports to secretaries being in this respect a welcome and valuable innovation.

Moreover, only those with inside knowledge can realize the difficulty of satisfying over 20,000 members of an individualistic profession with its bewildering variations in conditions of practice.

Further, can we, the rank and file, be held blameless? For the Representative Meeting in July last more than forty Divisions failed to elect a representative—in other words, one in every five of the Division secretaries allowed their constituents to be disfranchised. How can we expect the Association to exert its proper influence in the face of such apathy? If members are dissatisfied with the Association, and yet are too apathetic to see that the right men are elected as secretaries, and too lazy to see that the Council is composed of men who represent correctly their views, then they cannot reasonably grumble if the actions of the Association are not in accordance with their ideas.

So I venture to appeal to members to take a keener interest in their Divisions, and to secretaries to make greater efforts to bring men together by arranging an attractive programme of meetings, tackling non-members, and so forth, for let the Association and the profession once become synonymous terms, and half our difficulties will be automatically solved.

To the question, "What has the Association done for us?" there are many answers. To the query, "What could not the Association do for us if it had behind it a united profession?" there is but one answer—"Nothing."—I am, etc.,

JOHN F. WALKER,

Honorary Secretary South Essex Division, and
L.M.W.C.; late Visitor to Ministry of
National Service and C.M.W.O.

Southend, Sept. 24th.

SIR,—I am afraid that this discussion is losing sight of the original purpose. Dr. Peter Macdonald has omitted the preliminary sentence in a paragraph quoted by him from a communication in the JOURNAL for September 27th, and has thus turned aside a challenge to medical trade union theorists. It will not do. The challenge was quite clearly stated. The weak link in the medical trade union principle is that some of the members of our profession would at the last push flip their fingers at any attempt (by a medical trade union) to dictate to them how and in what manner they should conduct their professional activities. Now will Dr. Macdonald—to use his case—explain, step by step, how, by using trade union methods or principles, he would compel certain practitioners in a town, who are considered by the British Medical Association to be recalcitrants, to resign their appointments if the Medico-Political Union determined that this should be done? He can consider that these practitioners were members or not of that union, just as he prefers. If he is unable to satisfy any unbiased medical jury on this point, he will readily see why many practitioners consider themselves justified in declining to assist him in asking individual members to join the Medico-Political Union.

But the question of special interest just now is what will be the reply of the honorary officers of the British Federation of Medical and Allied Societies to the questions asked them on p. 426 of your JOURNAL for September 27th last. Rumour states—may it be a lying jade—that they have no reply, never had one, and never expect to have one, but have determined, by lying low and ignoring the challenge, to count on rehabilitating their offspring in the affections of those they woo when the clouds have rolled by and the challenge is forgotten.

It may be useful, therefore, to repeat the questions:

1. Which of its objects do they consider that the British Medical Association cannot carry into effect, and why?
2. What is the power which they consider to be necessary in order to attain these objects; how do they propose to obtain that power; and when obtained, how do they propose to use it?
3. Has not the Association that power at present? If not, can it not obtain that power; and if not, why not?

One of the strongest advocates of this Federation considers that "it can provide at this juncture a round table where some common views as to many vexed questions would be arrived at." Cannot the British Medical Association do this? Is it necessary to bring into existence a new body for such a purpose, and thus further, by duplication of organization, to emphasize our professional tendency towards individualism?—I am, etc.,

Hove, Oct. 6th.

E. ROWLAND FOTHERGILL, M.B.

RURAL PRACTITIONERS' REMUNERATION.

SIR,—The railway strike caught me on an official visit to North Wales, and for the last three days I have been detained (and most hospitably entertained) in Merionethshire, one of the wildest and most difficult of Welsh counties, from the travelling point of view. During these days I have taken full opportunity of renewing an acquaintance, now twenty-five years old, with really rural practice, and I am thus able, I think, to reassure your correspondent Dr. Sydenham. His fears that there will be no representation of the remote parts of the kingdom on the committee which is dealing with the National Insurance Mileage Fund are groundless. Dr. Lewys-Lloyd, a member of that committee, was in general practice in this county before becoming county medical officer of health. He is also secretary of the county Panel Committee, and has devised, with infinite trouble and with full knowledge of every inch of the ground, a local mileage scheme which (apart from the amount available) has proved very satisfactory to the doctors concerned. The interests of practitioners in remote districts are safe in his hands. I know Exmoor and Dartmoor, and I am sure there are no travelling difficulties there that cannot be equalled or surpassed here. As for the Fen or any other district presenting special features, the committee can easily obtain first-hand information of its special difficulties.

My experience of the last few days has deepened my conviction that the rural practitioner—the *really* rural practitioner—is at a great disadvantage as regards remuneration compared with his urban colleague, and now that we are negotiating a new agreement is the time to level up the inequalities. Crawling over bridle-paths never intended for motor cars; looking over the edges of precipices—both with surfaces reminiscent of the beds of mountain streams; climbing gradients which are freak hills only suitable (and occasionally used) as test hills in motor trials; travelling many miles to see one or two patients; and trying to realize what it must be like for six months of the year, I feel that the Insurance Acts Committee and its Rural Subcommittee were thoroughly justified in insisting that not only must distance be taken into account but also surface. More particularly, as they insisted, is it necessary to allow for the *time element*, for the authorities and the average urban practitioner have no idea of the amount of time spent in reaching many of these remote patients, particularly when the journey is over roads which are more like the recollection of a bad dream than what we in the towns know as roads.

I can assure Dr. Sydenham and other doctors working in the remote districts that their special claim for consideration is not at all likely to be forgotten, nor will it fail because of lack of knowledge and sympathy on the part of their representatives.—I am, etc.,

September 29th.

ALFRED COX.

SIR,—I think that unless something is speedily done the country practitioner in many cases will cease to exist. Unfortunately the medical men in the towns know little of the troubles that beset their country brethren. I think that, owing to the great cost of getting about, insurance work in the country is not very well paid, and I also think that some sort of State assistance ought to be given to the village practitioners for the services they render in attending the dependants, that is, the wives and families of the working population in country places, who in the majority of cases are unable to pay adequate fees by reason of the distance of their place of abode from their medical attendant. Neither do I think the maternity fee paid by the Insurance Commissioners in the country is adequate, considering the distance to be gone to attend these cases. The services rendered to the community by the rural practitioners are not small, wherefore I think it is nearly time that they received some sort of State recognition and some sort of a pension when they can no longer work.—I am, etc.,

Ashford, Kent, Sept. 29th.

PHILIP M. TOMS.

AMENITIES OF DEBATE.

SIR,—Anyone perusing the medical journals for the past year or so must have been struck by the discourtesies, insinuations, and recriminations abounding in the columns

devoted to correspondence on insurance matters. As a very mild example of this kind of unpleasantness witness Dr. J. C. Lyth's letter on behalf of the York Local Medical and Panel Committee, and the reply of the Medical Secretary of the British Medical Association. The former's letter was very much to the point, and quite formal in tone. The reply of the Medical Secretary was, as far as I can judge, hardly to the point at all. He quibbles over the word "accept," which appears to me to be quite an excellent one, and quite superior to the Medical Secretary's rather cumbrous paraphrase, as it quite obviously means something else in addition. Later he proceeds to say: "There can obviously be no proof that there has been 'a very large number of attendances . . . unrecorded and uncharged for.' If it be so, it is a reflection on the good sense and business capacity of the profession which the Insurance Acts Committee would regret very much to make."

This surely is quite beside the point. Our profession collectively has notoriously very little "good sense or business capacity." Furthermore, Dr. Lyth is quite right, as can be vouched for by any man with practical panel experience. On the other hand, Dr. Cox's reply can only lead one to suppose that he shares the directly opposite opinion, though I shrewdly suspect that Dr. Cox knows quite well that Dr. Lyth's contention is absolutely sound. This kind of thing must leave the thousands of the rank and file of panel practitioners completely bewildered. I am not going to labour this point further, but Dr. Cox's letter seems to me akin to the answers to questions made in the House of Commons, where under secretaries vie with each other in befogging the questioners and giving the question itself any other meaning than what was originally intended. Does Dr. Cox imagine that, by this sort of quibbling and "scoring off" an opponent as to the choice of words and phrases, he is advancing the cause of the medical profession in the slightest degree? In the days to come the medical profession will be grateful only to those who have really fought for their good in a large way and not obscured the main issues by petty bickerings. It seems to me that if any of the various associations and unions of medical men saw the slightest chance—not a certainty—but the slightest chance of benefiting their profession in the future by amalgamation then it is the solemn duty of these unions and associations to sink their differences—their pride may be—and join forces for the common good. Otherwise, where is the "good sense and business capacity" of our leaders?—I am, etc.,

Maidstone, Sept. 14th.

A. SYLVESTER BRADLEY.

** With regard to the word "accept," which is considered ambiguous, we have made inquiry and are informed that the figures were supplied to the Insurance Acts Committee by the Ministry, and that they were passed on by the Medical Secretary with the intimation that they were the only figures available, and showed a certain state of things.

THE BRITISH FEDERATION OF MEDICAL AND ALLIED SOCIETIES.

SIR,—In a letter which appeared in your columns on September 20th we are reminded that this federation is the successor of the "Medical Parliamentary Committee." There is, however, an earlier stage in its ancestry, and the story, I am afraid, does not make for confidence in the present organization. The beginning was a meeting of the profession held some twelve months ago in the Steinway Hall. This meeting was invited to appoint a committee to draw up a scheme with a view to secure an increased medical representation in Parliament, and the invitation was accepted on the assurance that no executive action would be taken until the scheme had been approved by a further meeting of the profession. Whether any such scheme has been framed I do not know, but certainly the pledge given to the meeting has not been fulfilled. We have heard that the committee took to itself the title of "Medical Parliamentary Committee"; that it entertained medical members of Parliament to dinner; that it contemplated the employment of an expert lobbyist at the House of Commons; and that it intended a deputation to the Prime Minister. All these gratuitous exercises may have been excellent, but they were quite without sanction from

the meeting which called the committee into existence, and they cannot be accepted as a substitute for the particular engagement which the committee definitely undertook.

Again, in the course of the original meeting the chairman, in response to a question from a member of the audience, assured the meeting that the committee would not concern itself with the electoral affairs either of Scotland or of Ireland, and in reliance on this promise an intention to press for representation of Scottish graduates on the committee was abandoned. Yet, at the general election the committee supported the claims of one of the candidates for the Scottish Universities constituency, and it co-opted a representative from a body which called itself the Scottish Universities Parliamentary Association, and which came into existence shortly before the general election, not, as its name might suggest, in one or other of the Scottish academic centres, but at 37, Russell Square, W.C.—that is, at the official address of the gentleman whose candidature the association was formed to promote but failed to carry to success. In other words, the pledge not to interfere with the question of Scottish representation in the House of Commons, though explicitly given by its chairman, was broken by the Steinway Hall committee. Here, then, are two instances in which this committee has not kept its word, and the record, I repeat, does not invite confidence.

So far as I know, the gentlemen signing the letter in your issue of September 20th, and of whose desire to serve the profession there can be no question, took no active part in the Steinway Hall meeting, but I understand that some of those personally committed by the promises made at this meeting are among the officials or directors of the British Federation. What constituency they represent in the Federation I do not know, but most certainly it is not the general meeting of the profession which first called them into being. They were there given a definite and specific reference. This reference they have not discharged, and any other activities they have cultivated have been wholly without warrant. The Federation appears as one of these activities, and its appeal for confidence, therefore, cannot be separated from the story of its origin. The style and title may be new, but the broken pledges remain, and have acquired by this time, it is to be feared, "a very ancient and fish-like smell."—I am, etc.,

London, W., Sept. 28th.

C. O. HAWTHORNE.

*** We referred this letter to the Chairman of the British Federation of Medical and Allied Societies and have received the following communication:

SIR,—We thank you for the opportunity you have given us to reply to a communication from Dr. C. O. Hawthorne dealing with what he terms the ancestry of "The Medical Parliamentary Committee." Dr. Hawthorne rightly assumes, in his letter, that we personally were neither present at the Steinway Hall meeting on October 1st, 1918, nor were we then connected with the "Medical Parliamentary Committee." The pledge referred to as having been given at that meeting was that the temporary committee should report to a further meeting of the whole profession, as distinct from a meeting of representatives of the existing medical organizations. It is hardly likely that the same individuals would have attended a second meeting convened on the lines of the first, and it is more than probable that a meeting of representatives of existing medical bodies would be a far more representative gathering of the profession. What actually took place was that, as a result of the resolution put by the Right Hon. Christopher Addison, M.P., at the Steinway Hall meeting, and carried, a temporary body was formed, which body reported to a further conference convened and held at the Central Hall, Westminster, under the chairmanship of Sir Wm. Watson Cheyne, M.P. At this second conference of representative bodies it was decided to proceed in the formation of a permanent body, the duty of giving effect to the seven resolutions adopted, and of preparing a financial scheme, being left to the provisionally constituted "Medical Parliamentary Committee." This meeting was reported in your columns on May 10th, 1919, and also in the *Lancet* of the same date. The Provisional Committee further reported to a meeting of the representatives of the various associations and societies on

July 11th last, at the College of Ambulance, when the present Federation came into being.

We know of no body established on a "mandate" from all the members of a profession or trade. Surely every new movement owes its origin, and its triumph over the difficulties inseparable from its initial stages, to the forward policy of a few individuals. It matters little, however, how and by whom the movement was started; we now have in the Federation a definite body which, if adequately supported, should enable the profession to unite and exercise the function of guiding public opinion in all matters affecting the national health. Thus can we hope to secure for the nation sound legislation based on expert opinion. A central organization, unconcerned with either the internal affairs or the policies of the bodies forming it, can achieve this aim and provide a common channel of utterance.—We are, etc.,

MALCOLM MORRIS,
Chairman.

CHARLES BUTTAR,
Honorary Secretary.

N. HOWARD MUMMERY,
Organizing Secretary.

The British Federation of Medical and Allied Societies,
20, Hanover Square, W.1, Oct. 6th.

STIFF KNEE IN COMPOUND FRACTURE OF FEMUR.

SIR,—From August, 1917, till the armistice I devoted my whole time to fractured femurs, and found that this bogey of stiff knee is very largely done away with by treating the fracture on a splint bent to an angle between 30 and 40 degrees, which bears out the inference drawn by C. D'Oyly Grange from his observation of the position of the patella.

This bent splint has the added advantage that it tends to prevent the lower fragment from becoming displaced backwards if the extension is applied below the knee only. I also found that there was no looseness of the knee after 20 lb. had been applied continuously for two months as long as the knee was flexed about 30 degrees.—I am, etc.,

P. T. SPENCER-PHILLIPS,
Late R.A.M.C.(T.)

Chelmsford, Oct. 7th.

MUSIC THERAPY.

SIR,—Your editorial in the *BRITISH MEDICAL JOURNAL* of September 20th, p. 388, is very gratifying evidence of a revival of interest in a valuable means of treatment. I gather from Sir F. W. Mott's letter in the *BRITISH MEDICAL JOURNAL* of September 27th, p. 424, that he employs music subjectively—if I may so express it. May I point out that the aim of the Guild of St. Cecilia and of the earlier workers in this field was to use the effects of music objectively, and my paper "Music and medicine" (*Medical Magazine*, 1893) was an attempt to illustrate the rationale of the method? At present the subject is in able hands, and we may look forward with interest to further useful developments.—I am, etc.,

Portsmouth, Sept. 27th. J. G. BLACKMAN.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE UNIVERSITY IN THE WAR.

DR. A. E. SHIPLEY, F.R.S., Master of Christ's, in resigning the post of Vice-Chancellor on October 1st, made an address to the senate, in which he reviewed the recent history of the University. He said that though victory had been won, in many parts of the world the war still lingered; and weekly, almost daily, news was received of the loss of more and still more members of the university who had given up all for the sake of the country and the cause they believed to be right. The careful records prepared by Mr. Austin Fabb showed that of the total number of Cambridge soldier students serving—some 16,000—2,652 had been killed and 3,460 wounded; 497 were reported as missing and prisoners, but most had now been accounted for. The honours included: Mentioned in Dispatches 5,036, Victoria Crosses 12, Distinguished Service Order 899, Distinguished Service Crosses 37, Distinguished Flying Crosses 34, Air Force Crosses 34, Military Crosses 1,861, various Orders of the British Empire 874, Distinctions from Allies 624, Knights Commanders of the

Bath, Companions of the Bath, Knights Commanders of St. Michael and St. George, etc., 305, Companions of Honour 5. It was also to be placed on record that 76 university attendants had been on military service, and that 10 had laid down their lives.

"It is with pride," Dr. Shipley said, "that I recall the connexion of the University and of University men with the defence of the country. It was during the South African war, when a not inconsiderable number of undergraduates joined the ranks as privates, that a movement was inaugurated for the establishment of an Officers' Training Corps in lieu of the Cambridge University Volunteer Rifles, and it was further suggested that enrolment to this new corps should be compulsory. The formation of the O.T.C. in 1908 has proved most valuable both here and in other universities. In January, 1913, the question of compulsory military training at the University was revived in the general interests of education; and no less than 1,800 members of the Senate supported a requisition to the Council for official sanction. It was hoped that a first step might thus be taken by Cambridge towards increasing the supply of officers for the Auxiliary Forces. The outbreak of the war within a few weeks after the presentation of the memorial swept away all such proposals, and the present circumstances are not opportune for elaborating the question. Here I leave it to my successors with confidence that our University will not fail—as it has never failed—to realize its national responsibilities."

After reference to the death of the Chancellor, Lord Rayleigh, that of Professor Alexander Macalister was mentioned, and he was described as "a great teacher and a life-long student of wide and varied erudition, one whose steady and laborious work during the war in the school of anatomy, where he was left almost single-handed, was an example to us all."

The number of matriculations in the last normal year, 1913-14, was 1,178, and during the period of the war—1914-15, 727; 1915-16, 344; 1916-17, 235; 1917-18, 281. With the signing of the armistice the numbers leapt up. In 1918-19 1,835 matriculated, and of these 1,835, no fewer than 1,552 were matriculated in the Lent and Easter terms of 1919. In addition, at the request of the Admiralty, accommodation had been found for some 400 naval officers during the first half of 1919. From the beginning of the Easter vacation to the end of the Easter term, 200 American soldier students were attending the University, and the teachers sacrificed most of their vacation to provide courses for them; the experiment was a complete success, and Cambridge now had scattered through every State of America a small but influential group of citizens, all members of the University, who valued their connexion with Cambridge and its colleges, and would not readily forget.

Dr. Shipley then enumerated the endowments received by the University; they included £210,000 from oil companies and individual benefactors for the endowment of a chemical school at Cambridge; a gift of £10,000 for a chair in Italian from Mr. Arthur Serena, of £1,000 from Mrs. Gibson to provide a scholarship in Spanish literature, of £20,000 from Lord Rothermere to endow a chair of naval history, and of £20,000 from Mr. Emile Mond, for a professorship in aeronautical engineering. Dr. J. B. Hurry, of Reading, who in 1912 founded a research studentship in physiology, of the annual value of £100, had provided a further endowment, which would double the income of the studentship, as "an expression of his admiration for the great services which Cambridge University has been able to render to the cause of humanity."

After mentioning that Sir Ernest Rutherford had become Cavendish Professor of Physics, in succession to Sir Joseph Thomson, who had consented to occupy the new chair of physics without stipend, Dr. Shipley specially welcomed Dr. Hazeltine, professor in the faculty of law, the first citizen of the United States to occupy a professorial post in the University of Cambridge.

The financial outlook, Dr. Shipley stated, was very serious, and it had been resolved to seek Government aid. An interim grant had been promised, but did not amount to 50 per cent. of the minimum stated by the various departments as necessary to reopen the University next term on a pre-war basis. The fees in some departments did not meet the expenses incurred by the students, so that the increase in numbers was in reality a cause of financial embarrassment. The Government proposed to set up a commission to inquire into the resources of the university and its colleges, and into the use made of them. Meanwhile, owing to the inadequacy of the emergency grant, it might be necessary to increase the fees charged to students. Further, the lack of a pension fund hampered university activities in all directions. The earnest hope was expressed that in this period of reconstruction the need for simplification would not be overlooked. The multiplicity of examinations and the complexity of their regulations, which increased yearly, was a heavy tax on college tutors and on the staff of the registry. "The number of syndicates and boards is constantly increasing. I cannot," Dr. Shipley added, "recall an instance in which any really big piece of work in the world's history has been done by a committee, and I venture to think we have too many of them; I feel certain they are usually too large, and I know that in a great majority of cases they lack the inspiration and effectiveness of youth."

Dr. Shipley has been succeeded as Vice-Chancellor by Dr. Peter Giles, Master of Emmanuel.

UNIVERSITY OF LONDON.

GUY'S HOSPITAL MEDICAL SCHOOL.

The following entrance scholarships have been awarded:

Senior Science Scholarships for University Students: A. H. Douthwaite, £75. Junior Science Scholarships: T. S. Blackledge, £120; W. G. Sears, £50. Scholarships in Arts: D. F. Durward, £60; O. F. Farndon, £40.

UNIVERSITY OF GLASGOW.

The following degrees were conferred on October 6th:

M.B., Ch.B.—*D. MacC. Blair, †Elizabeth Pace Cameron †J. Caddies, †A. J. Cronin, J. S. Aitken, T. Anderson, S. B. Borthwick, Edith D. Dobbie, J. Hill, F. McDonald, Ellen T. Mackenzie, Margaret E. MacLaren, Caroline J. Macennan, D. J. Nicol, Kathleen Nicol, A. G. Petrie, H. A. Ross, Catriona Sinclair, H. H. Speacer, D. McD. Sproull, N. E. Stoue, J. Whitelaw, W. A. Wilson.

* With honours.

† With commendation.

The Brunton Memorial Prize of £10 has been awarded to John William Peden, as the most distinguished graduate in medicine of the year.

The Services.

HONOURS.

The following are the statements of services for which the decorations announced in the *London Gazette* of March 8th, 1919, were conferred:

Bar to the Distinguished Service Order.

Captain (acting Lieut.-Colonel) William Ross Gardner, D.S.O., R.A.M.C.(S.R.), attached 138th Field Ambulance.

He was in charge of all forward medical arrangements of the division for the period October 4th, 1918, to October 26th, 1918 first in front of Gheluwe, and then both west and east of Courtrai. During the period in question, night and day, he visited the rear aid posts, relay and forward collecting posts, often under heavy shell fire and gassing, in order to personally ascertain that the work of evacuation was proceeding satisfactorily. He showed great gallantry and ability, and his devotion to duty saved many lives. (D.S.O. gazetted January 1st, 1919.)

Lieut.-Colonel Daniel Paul Kappeler, D.S.O., 5th Field Ambulance, C.A.M.C.

For conspicuous gallantry on October 12th, 1918, in the vicinity of Iwuy, north-east of Cambrai. He drove a car to the forward area through shell fire, which wounded him and others. He proceeded to dress the wounds of the others, directing and assisting in their removal to a place of safety. It was not until all were attended to and removed from danger that he allowed himself to be taken away and suffered his own wounds to be dressed. He showed great pluck and devotion to duty. (D.S.O. gazetted June 3rd, 1918.)

Lieut.-Colonel Thomas McCrae Leask, D.S.O., 10th Field Ambulance, C.A.M.C.

During recent operations in front of Cambrai he was given the task of clearing the wounded of a division. For five days on end he worked with untiring energy and absolute disregard for personal danger. On the night of September 30th-October 1st, 1918, he, with the help of a near-by non-commissioned officer and one of the wounded drivers, succeeded in rescuing patients from a burning car, and had them immediately evacuated. His conduct throughout was admirable. (D.S.O. gazetted January 1st, 1919.)

Distinguished Service Order.

Captain (acting Lieut.-Colonel) William Wallace Boyce, No. 2 Field Ambulance, R.A.M.C.

For great gallantry, initiative, and resource in personally supervising the evacuation of casualties during the operations on November 4th, 1918, near Petit Cambresis. He effected the rapid removal of wounded across the Sambre Canal under very difficult circumstances and considerable shell and machine-gun fire. On one occasion, when his advanced dressing station was blown in by shell-fire, he personally reorganized his stretcher-bearers in a new site, inspired confidence in his officers and men, and undoubtedly saved many wounded under heavy fire.

Major Robert Fulton Craig, 15th Field Ambulance, R.A.M.C.

For conspicuous gallantry and devotion to duty in charge of the heavy division near Bellicourt from September 29th to October 2nd, 1918. During the whole of this period he rendered valuable service, and by his coolness and initiative surmounted all difficulties under most trying conditions. He not only worked the evacuation of wounded from rear aid posts of his own brigade, but he personally reorganized the evacuation from other brigades under very heavy shell and machine-gun fire.

Captain (acting Lieut.-Colonel) William Hillgrove Leslie McCarthy, M.C., R.A.M.C.(S.R.), attached 19th Field Ambulance.

During the operations connected with the crossing of the Sambre, November 4th to 8th, 1918, he exhibited marked gallantry and devotion to duty. He was in command of the advanced dressing station, and maintained the closest touch with the front line troops, arranging for the immediate evacuation of casualties as they occurred. He worked continuously for three days and three nights, and his energetic management, and devotion to duty saved many lives.

Temporary Captain Clarence Randolph Young, M.C., R.A.M.C., attached 1st Battalion Shropshire Light Infantry.

On September 18th, 1918, when the battalion had suffered very heavy casualties, he followed up and remained close behind the front line, and in ground swept by the enemy's machine-gun fire, and exposed to artillery fire, spent a whole day tending and clearing the wounded; and on the following morning he went up, and, after spending some hours in No Man's Land, he got in several wounded men. By his gallantry and devotion to duty he undoubtedly saved many lives.

Second Bar to the Military Cross.

Temporary Captain (acting Major) George Rankine, M.C., R.A.M.C., D.A.D.M.S., 9th Division.

He was constantly with the fighting troops on September 28th, 29th and 30th, 1918, during the active operations, organizing and assisting field ambulance bearers and regimental medical officers in establishing evacuation routes for the clearing of casualties out of the danger zone. He displayed great gallantry and devotion to duty near Dever yck in this occupation, and his initiative and zeal saved many lives. (M.C. gazetted November 4th, 1915; first bar to M.C. gazetted July 26th, 1918.)

Bar to the Military Cross.

Captain James Everett Barry, M.C., C.A.M.C., attached 2nd Canadian Battalion, East Ontario Regiment.

For great gallantry and devotion to duty during the successful operations north of Fourion Wood on September 27th, 1918. Throughout he worked unceasingly under heavy fire from machine guns and artillery. He made three trips to the outpost line to attend to wounded men. All wounded within the area fought over by this unit on September 27th were cleared shortly after the objective had been gained. (M.C. gazetted December 2nd, 1918.)

Temporary Captain Michael Charles Burke, M.C., R.A.M.C., attached 2nd Battalion Durham Light Infantry.

In the operations in the vicinity of Holnon on September 18th to 24th, 1918, he displayed conspicuous gallantry and devotion to duty. Having dealt with all cases at his aid post, he led out stretcher-bearers and, under machine gun and shell fire, collected more wounded. His search led him into an enemy-held trench, where he only desisted when bombed out. His efforts and his fine example were instrumental in saving many lives. (M.C. gazetted August 25th, 1916.)

Temporary Captain George Milne Cameron, M.C., R.A.M.C., attached 65th (West Lancashire) Field Ambulance.

From October 23rd to 25th, 1918, during the heavy fighting about Oviliers and Poix du Nord, he, as bearer officer, showed the highest devotion to duty. He kept in constant touch with his regimental aid post, and several times led bearer squads through intense shell fire to clear wounded. For thirty-six hours he worked without sleep and practically without food till the wounded were cleared. He saved many lives and showed great gallantry. (M.C. gazetted July 25th, 1918.)

Captain Frederick Thomas Campbell, M.C., C.A.M.C., attached 8th Canadian Battalion Manitoba Regiment.

For great gallantry and devotion to duty. During the attack east of the Canal du Nord on September 27th to 28th, 1918, he continuously attended the wounded whilst exposed to severe enemy fire. On September 29th, 1918, in an attack east of the Douai-Cambrai road, he worked coolly and fearlessly in the open for four consecutive hours. His fearless devotion to duty saved many lives. (M.C. gazetted February 1st, 1919.)

Captain Henry Clarke Davis, M.C., 10th Field Ambulance, C.A.M.C.

He was in charge of the evacuation of wounded from the forward area during the fighting in front of Cambrai commencing September 28th, 1918. He formed routes of evacuation under heavy machine-gun and shell fire. He guided parties of stretcher-bearers in front of the regimental aid posts at St. Olle and Sailly, and collected many wounded men. Through it he showed great gallantry and devotion to duty. (M.C. gazetted January 18th, 1918.)

Lieutenant (temporary Captain) William Haig Ferguson, M.C., R.A.M.C., attached 8th Battalion, Royal Berkshire Regiment.

For marked gallantry and devotion to duty. On October 23rd, 1918, during the attack in front of Le Cateau, he was wounded in the left leg whilst attending to casualties. In spite of the wound he carried on attending to the wounded under a heavy enemy barrage. Later, when his temporary dressing station was blown in by a gas shell, he assisted to extricate the wounded, who were in danger of suffocation. (M.C. gazetted September 16th, 1918.)

Lieutenant (acting Major) James La Fayette Lauder, D.S.O., M.C., 138th Field Ambulance, R.A.M.C.

For conspicuous gallantry and marked devotion to duty during the operations, October 14th to 20th, 1918, as officer in charge forward bearer officers of brigades. He worked continuously, personally directing the evacuation of wounded from the regimental aid posts east of Courtrai, wherever the casualties were heaviest, encouraging the bearers, and setting a splendid example under heavy fire to those under him. (M.C. gazetted December 11th, 1916.)

Captain (acting Major) Herbert Bruce Low, M.C., 2/2nd (Northumbrian) Field Ambulance, R.A.M.C. (T.F.).

For conspicuous gallantry and devotion to duty. During the attack, October 3rd to 8th, 1918, on Gouy and Le Cateau, he was in charge of bearers and forward posts. Whilst under considerable shell and machine-gun fire he went forward, visiting regimental medical officers, reconnoitring for forward bearer posts, and supervising the evacuation of wounded from the forward area, keeping up a complete chain of evacuation. (M.C. gazetted January 13th, 1917.)

Captain Harry Clarke Moses, M.C., 5th Field Ambulance Company C.A.M.C.

During the operations north of Cambrai, October 9th, 1918, he was in charge of the stretcher-bearers evacuating the wounded of an attacking infantry brigade. He personally led his parties close behind the advancing infantry under severe shell and machine-gun fire. Owing to his fine example of cool courage and energy the evacuation of wounded from difficult and dangerous positions was rapidly accomplished. (M.C. gazetted February 15th, 1919.)

Temporary Captain James Carter Ogilvie, M.C., R.A.M.C., attached 1st Battalion Border Regiment.

For conspicuous gallantry and devotion to duty near Hoogmolen on October 22nd, 1918. During an attack when many regimental stretcher-bearers had been knocked out by machine-gun fire, he organized a party of bearers and took them out himself, searched the ground for wounded, dressed them under very heavy fire and evacuated them. He worked incessantly for a period of five hours, until every man had been dressed and evacuated. (M.C. gazetted September 16th, 1918.)

(To be continued.)

Obituary.

WILLIAM KAY WALLS, M.B.LOND.,

Honorary Surgeon to St. Mary's Hospital, Manchester; Clinical Lecturer on Midwifery and Diseases of Women in the University of Manchester.

By the death of Dr. William Kay Walls, on September 30th, the North of England has lost one of its most able specialists in obstetrics and gynaecology.

He was born in 1865, the son of a doctor in a busy practice in Manchester. He entered the Medical School of Manchester University, and obtained the diplomas of L.R.C.P. and M.R.C.S. in 1888, and took the M.B.Lond. in 1892. He was Mr. Whitehead's house-surgeon at the Royal Infirmary, and then obtained the post of house-surgeon to St. Mary's Hospital, Manchester. His association with this hospital was only broken by his death. In 1891 he became resident obstetric assistant surgeon and surgical officer, an appointment which he held for seven years. It was at this time he showed his capacity in the special line he had chosen, and gave promise, afterwards so fully realized, of becoming a brilliant surgeon. He seemed very happy in the post, and was glad to stay until a suitable opportunity occurred for starting consulting practice, while the honorary staff, on the other hand, were glad to have a man who was so reliable in cases of emergency and who had talent as an organizer. This long apprenticeship served him well, for when he left the hospital he started his private work with a fund of experience and a practical dexterity which few men of his years could possess. He remained connected with St. Mary's Hospital as assistant surgeon, and after the amalgamation of this hospital with the Southern Hospital in 1905 he had charge of a larger number of beds. He made rapid progress as a consultant, and was widely known as an able and reliable man. His chief reputation perhaps was as a bold and skilful operator, and while this was fully deserved, his sound judgement as to when to operate should not be overlooked. He was very deliberate in his decision, but once he had decided to operate he was rapid and most expert. It is to be regretted that he wrote so little, because there are not many men in his special work who had clearer views. I believe he thought there was a great deal too much writing. But there was no one who had the opportunity of following his work who did not learn something from his methods.

He was a regular attendant at the meetings of the North of England Obstetrical and Gynaecological Society for more than twenty years, and later was a prominent member, being president in 1910. He was modest in his contributions to the discussions, but when he did speak he was always worth listening to. He was an excellent clinical teacher, and held the post of clinical lecturer in the Manchester University.

Outside his professional life Dr. Walls had many interests—golf, motoring, photography, music, and billiards all attracted him. He was the main organizer of an annual competition for medical golfers living in Manchester and neighbourhood, and put in a great deal of work to make these meetings a success. Personally, he was quiet in his manner, and might even have been called reticent. But he was always observant and thoughtful, and in part, I believe, his reticence was due to modesty. He had social instincts and a great fund of quiet humour, and no one had a more attached circle of intimate friends. His nature was essentially kindly, and he would spare no trouble to do a good turn to a friend. As a colleague he was most loyal and helpful. The last two years of his life were clouded by ill health, but until last spring he made no difference in his life; then he was compelled to give up active work. When he must have known that the end could not be far away his courage was remarkable. Even at times when he must have been suffering from pain and great weakness he would talk of his troubles with a touch of his old humour. He will be greatly missed by a large circle of friends, his colleagues, and by many who have been under his care, and not least by the poorer patients who crowded his out-patient room.

Dr. Walls leaves a widow and three daughters.

ARCHIBALD DONALD.

CAPTAIN H. SOUTH, Australian Army Medical Corps, was reported as having died on service, in a casualty list published on September 30th.

DR. ARTHUR COLIN MACKENZIE, J.P., of Mount Morgan, Queensland, Australia, died on July 22nd, 1919. He was the seventh son of the late John Robertson Mackenzie, D.D., of Birmingham, and was born on December 31st, 1860. His eldest brother was the late Sir Alexander Mackenzie, K.C.S.I., late Chief Commissioner of Burma, Chief Commissioner of the Central Provinces, and Lieutenant Governor of Bengal. Of the seven sons only one now is left. Arthur Colin Mackenzie received his education at Cheltenham College, Edinburgh University, and the London Hospital, and obtained the Scottish triple qualification in 1886. He came out to Australia in 1890, and after a trip in Western Queensland and a period of practice in North Rockhampton he settled in Mount Morgan, where he was engaged in active practice until the time of his death. In former years he took an active interest in Masonic matters, and had attained to the 18th degree in Freemasonry. At the time of his death he was Government medical officer, medical officer of health to the municipality of Mount Morgan and the Banana Shire Council, medical inspector of schools, and o/c B. Section, 7th A.A.M.C.

EDWARD FRANK NICHOL, M.C., Captain 3rd Battalion Royal North Lancashire Regiment, youngest son of Dr. Nichol of Margate, died as the result of an accident at Dunkirk on September 24th, aged 22. He got his commission on August 15th, 1914, and attained the rank of captain on May 2nd, 1916.

Medical News.

THE Prime Minister has, through the Minister of Health, addressed a letter to members of Medical War Committees and to members of local tribunals and appeal tribunals, thanking them for their work, which, he says, played a vital part in securing the victory and peace which have been achieved.

SIR GEORGE NEWMAN, K.C.B., chief medical officer to the Ministry of Health, will deliver the inaugural address at the opening of the winter session of the West London Post-Graduate College, West London Hospital, Hammer-smith, W.6, on Thursday next, October 16th, at 4 p.m.

THE postponed opening of the winter session of the Middlesex Hospital will take place on Wednesday next, October 15th, at 3 p.m., and the dinner of past and present students will be held on the same evening at the Holborn Restaurant at 7 o'clock.

THE first annual dinner of the Belfast University Services Club will be held on November 11th (Armistice night), in Thompson's Restaurant, Belfast. Queensmen who have served in H.M. Forces desiring invitations should write to the Honorary Secretary, Services Club, Queen's University, Belfast.

DR. EDWARD HINDLE, Kingsley Lecturer and Bye Fellow of Magdalene College, Cambridge, assistant to the Quick Professor of Biology, has been appointed to the chair of biology in the School of Medicine, Cairo, Egypt.

SIR BERTHAM WINDLE, F.R.S., in his annual report to the governing body of University College, Cork, announces that his resignation of the presidency of the College will shortly take effect. Failing the creation of a university for Cork, he had intended to resign on attaining a pensionable age—that is, a year ago; but the war delayed this step, and the certainty of a university would have delayed it still further. He has accepted an invitation from St. Michael's College in the University of Toronto to deliver a course of lectures on Science in Relation to the Scholastic Philosophy during the first three months of next year.

AN advanced course will be given at the ophthalmological clinic of the Hôtel Dieu, Paris, under the direction of Professor de Lapersonne, beginning on Tuesday, October 14th, at 4 p.m. The course will consist of sixteen sessions, comprising lectures, clinical work, and practical demonstrations. Medical practitioners and students from France and other countries should apply to the Secretariat of the Faculté de Médecine, Paris. The fee is 50 francs. A certificate will be given to those attending the course.

THE Islington war memorial fund for enlarging the Great Northern Central Hospital, Holloway Road, has reached £7,398. The Prince of Wales has consented to preside at a festival dinner in aid of the hospital early in December.

THE Wellcome Historical Medical Museum will be re-opened on Monday next.

DR. ALEXANDER MORISON of London has, by due legal process in Scotland, assumed the name of Alexander Blackhall-Morison.

DR. WILLIAM FAIRBANK, O.B.E., M.V.O., Surgeon to H.M. Household at Windsor Castle, is mayor-elect for Windsor.

COLONEL JAMES TURTON, F.R.C.S., V.D., has been appointed to the Commission of the Peace for Brighton.

DR. R. DUNSTAN, who contested the Moseley Division of Birmingham at the last general election, was the Labour candidate at the Rusholme by-election.

THE Ministry of Health has issued to local authorities and public utility societies model forms of tender and agreement for use in connexion with contracts for State-aided housing schemes.

AT the matriculation examination of the University of London in September, 45 candidates passed in the first division and 340 in the second.

A DISCUSSION on influenza at a meeting of the Royal Sanitary Institute at Poole on Friday next, at 6.30 p.m., will be opened by Dr. A. T. Nankivell, M.O.H. for the borough.

A SPECIAL dinner of the Tuberculosis Society, at which many of the distinguished foreigners attending the Conference of the National Association for the Prevention of Tuberculosis will be present, is to be held in Claridge's Hotel on Wednesday, October 15th, at 7.30 p.m. Applications for tickets (inclusive of wine) together with remittance, 30s., should be sent to Dr. Blackmore, Woolwich Tuberculosis Dispensary, Maxey Road, Plumstead, S.E.18, not later than by last post on Monday, October 13th. A certain number of tickets are available for guests.

THE courses arranged by the Paris Society of the directors of laboratories of radiology and electrotherapy, suspended during the war, will be resumed on November 3rd. They will include lectures and practical demonstrations in radiology, radiumlogy (we are not responsible for the word), electrology, and photoherapy. Full particulars can be obtained from Dr. Delherm, Hôpital de la Pitié, Boulevard de l'Hôpital, 83, Paris (xiii^e).

THE American Relief of Belgium Committee has allotted funds amounting to £3,200,000 for the intellectual restoration of that country. The Universities of Brussels, Ghent, Liège, and Louvain are each offered £80,000, and £2,400,000 will be placed at the disposal of the Belgian Government for grants to students in need of assistance for the prosecution of higher studies.

LIEUT.-COLONEL W. TEMPLE, who won the V.C. by gallantry in the Maori war of 1863, left £3,704. Dr. R. D. Purefoy, for many years Master of the Rotunda Hospital, Dublin, left £44,960. Dr. Clifford Luxmore Drew, coroner for the Western Division of London, left £16,327.

THE Italian Society of Medical Radiology will open its second congress at Genoa on October 20th.

AT the annual meeting of the American Medical Association this year the secretary, Dr. Alexander R. Craig, stated that the membership was 45,412.

A PICTORIAL history of the work of the medical department of the United States army during the operations in Europe, comprising about 75,000 feet of moving and 10,000 of still pictures, has, we learn from the *Journal of the American Medical Association*, been turned over to the Surgeon-General's Office. Fifteen pictures were taken of every hospital, including an aerial view of the buildings, views of the operating theatres and wards, patients, medical officers, and men.

ACCORDING to a statement issued by the Surgeon General's Office at Washington more than 93 per cent. of the 2,000,000 men demobilized since the signing of the armistice have been discharged with a clean bill of health. Six per cent. were reported to the Bureau of War Risk Insurance for disabilities and 1 per cent. were held back on account of communicable diseases in course of development.

IN January, 1919, seventeen students received diplomas at the Hangchow Hospital after a three years' course. In 1918 fifty doctors graduated from the Hangchow Hospital. Twenty maternity nurses, eighteen pharmacists, and a few male and female nurses also obtained diplomas. There are at present very few schools of pharmacy in China, although there is great need of qualified dispensers in hospitals, dispensaries, and chemists' shops, of which there are now many in the country.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitiology*, *Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

SCHOOLBOYS' WEIGHT.

DR. W. R. L. DRAWBRIDGE (Resident Medical Officer, Lancing College) writes: In reply to Dr. Richard Hamilton (Parkstone), it has been my invariable experience for some years that, so far from it being "the rule rather than the exception that boys lose weight during a school term," they almost always actually gain in weight during term. Moreover, this continued to be the case during the period of food rationing, when the amount of nervous and physical energy entailed by work and play remained practically unaltered. This is in the case of boarders. I cannot say if it holds good in that of day boys, as I have not had to deal with the latter. With Dr. Hamilton, I will be much interested to learn the opinion of other school medical officers on this important matter.

DR. J. TREMLETT WILLS (Felstead, Essex) writes in reply to Dr. Richard Hamilton (BRITISH MEDICAL JOURNAL, September 27th, p. 430): I have records of the weights of 439 boys at the beginning and end of their first term at school—all boarders. I find that 76 per cent. put on weight (average $4\frac{1}{2}$ lb.); that 18 per cent. lost weight (average $3\frac{1}{2}$ lb.), and that in the others—6 per cent.—the weight remained stationary. Among those who lost weight I found amounts of 9, 10, 15 (twice), 16, and one of 36 lb., without record of severe illness, suggesting some error in those details. The highest gains were 19 and 18 lb. Slight losses are common among boys who are very fat and flabby on entering the school. The records date backwards from Easter Term, 1916, after which the sergeant was called up and measurements were not continued regularly, and they refer therefore to pre-rationing conditions.

In the Christmas Term, 1918, 191 boys were weighed at the beginning and end of the term to ascertain the effects of rationing, and the record shows that 83 per cent. put on weight (average $5\frac{1}{2}$ lb.); that 11 per cent. lost weight (average 3 lb.); and that in 6 per cent. there was no change in weight. These results seem to show that loss of weight at the end of a school term is the exception rather than the rule.

INCOME TAX.

E. H. inquires whether he is liable to a civil assessment on his pay as a R.A.M.C. officer, the pay having already been taxed by deduction in the usual way.

* * E. H. is certainly not liable to pay double income tax on his pay, and if the full amount of tax due to the Revenue has been deducted no civil assessment should be made. We say "the full amount" because cases have apparently occurred where the army agents have made an insufficient deduction, and we understand that in such cases the Revenue authorities claim to collect the balance due on a civil assessment, which seems not unreasonable. In a statement of total income for any year the army pay receivable for any portion of that year should be shown, otherwise the total would be incorrect; but it can of course be quoted as taxed by deduction.

LETTERS, NOTES, ETC.

PARTURITION AT ADVANCED AGE.

D. H. HUNTER WOODS (New Milton, Hants) writes: I have seen records of several references to childbirth at 48 years of age lately. The following may be of interest: In November, 1898, I attended Mrs. T. at her twentieth full-time confinement, seven weeks before her 50th birthday. She had also had one miscarriage. The family is unhealthy, several of them having very bad tuberculous disease of the spine, but the last seems the healthiest of the lot, and is now in the army. Mrs. T.'s periods continued till she was 55, and she is now in good health and working daily, though she will be 71 next January.

THE MEDICAL DEPARTMENT OF THE AMERICAN REVOLUTIONARY ARMY.

In the *Annals of Medical History* (vol. i, No. 4) Colonel William O. Owen gives extracts from the journal of the American Congress from 1774 to 1783, which show how the medical department of the Revolutionary army had to struggle for recognition. In 1780 the director-general, Dr. W. Shippen, complained that the deputy quartermaster-general "will not supply our department with any more forage unless he is authorized to do so by an order of Congress." A resolution was thereupon adopted granting officers of the medical department certain provisions of land such as had already been made for officers of the line: "The director to have the same quantity as a brigadier-general. Chief physicians and surgeons and apothecary the same as colonel. Physicians and surgeons and apothecaries the same as lieutenant-colonel. Regimental surgeons and assistants to the purveyor and apothecary the same as major. Hospital and regimental surgeons' mates the same as captain." This was amended to include half pay on the same scale as officers of the line. A purveyor and assistant were provided for each hospital, who issued stores on requisition by surgeons. The scale of pay was small. The director-general received only £30 a month; chief physicians and surgeons £28; purveyors and apothecaries £26; physician and surgeons £24; assistant purveyors and apothecaries £15; regimental surgeons £13; surgeons' mates £9. All received rations in addition. At the present day the surgeon-general receives a little over £133 a month, besides commutation for quarters. A regimental surgeon of the rank of major receives £20, in addition to commutation for quarters.

"SHELL SHOCK" AT MARATHON.

In *Science* of September 5th Dean A. Worcester calls attention to a passage in Herodotus (Book vi, Section 117) in which the Father of History seems to refer to a condition corresponding to shell shock arising from fright in battle. In his description of the battle of Marathon (490 B.C.) he says: The following prodigy occurred there: An Athenian, Epizelus, son of Cnephagoras, while fighting in the medley and behaving valiantly, was deprived of sight, though wounded in no part of his body, nor struck from a distance; and he continued to be blind from that time for the remainder of his life. I have heard that he used to give the following account of his loss: He thought that a large heavy-armed man stood before him, whose beard shaded the whole of his shield; that this spectre passed by him and killed the man who stood by his side.

ERYTHEMATOUS PATCHES IN RELATION TO MENSTRUATION.

"MEDICUS" writes: I would like the opinion of others who may have had some experience of similar conditions:—A married lady, aged 45, in good health, had not menstruated for eighteen months. She had suffered for years at intervals from left ovarian pain. One night recently she was alarmed by a rash on the lower abdomen. There were two patches of erythema over the right and left ovary respectively. The patch on the right was diamond-shaped, about 5 in. by 4 in., that on the left was circular, and about 2 in. in diameter. The skin was thickened, raised, reddish, and with a surrounding white line, such as is seen in urticaria. The right spot was painful to touch, the left not so much. Menstruation began in forty-eight hours. The margins of the patches were well defined, and their appearance such as might be expected to follow the application of mustard plasters. The idea in my mind was that the superficial nerves had responded to some congestive state of the ovaries preceding menstruation, and had reflexly caused a dermal picture of the underlying condition.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 48, 51, 52, 53, 54, 55, and 56 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 49, 50, and 51.

THE following appointments of certifying factory surgeons are vacant: Forkhill (Armagh), Hadleigh (Suffolk), Shildon (Durham).

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WHAT DID JOHN HUNTER DO FOR MEDICINE?

BEING THE CENTENARY LECTURE TO THE HUNTERIAN SOCIETY ON OCTOBER 8TH, 1919.*

BY

ARTHUR KEITH, F.R.S.,

HUNTERIAN PROFESSOR AND CONSERVATOR OF MUSEUM, ROYAL COLLEGE OF SURGEONS OF ENGLAND.

WHEN we are asked what Harvey, Pasteur, Lister, Jenner, Charles Bell, Marshall Hall, or Robert Koch did for Medicine we can give a definite answer: each of them opened a gate which led into a new field of medical knowledge; each one of them is labelled and distinguished by his great discovery. But how are we to label the patron saint of this society—John Hunter? He died as the medical schools of London commenced their winter session, October 16th, 1793, aged 65, and during the 126 years which have elapsed since then his admirers and his critics have been discussing his claims to our Medical Valhalla, and the proper inscription to place over the chair which has there been assigned to him. "Whenever I have asked," wrote his contemporary and critic, Jesse Foot, "what advances your preceptor has made in surgery or in anatomical discoveries of any value, I have never found one of you capable of fixing and dwelling upon anything."¹

Let us look for a moment at the answers which Hunterian orators have given to Jesse Foot's question to see if we can find a concise definition of what Hunter did for medicine. We find him defined as "the High Chancellor of the art of healing" (Carlisle, 1820); "the greatest physiologist which the world has yet seen" (Norris, 1817); the "expositor of the nature of disease" (Abernethy, 1819); "among all surgeons of all times the most renowned" (Paget, 1877); in scientific zoology there is no one between Aristotle and John Hunter (J. Hutchinson, 1891); he "remodelled the fabric of knowledge" (Buckle, 1861); he showed how to get by strategy what was formerly obtained by force (Ed. Stanley, 1839); he established a well of biology (Gulliver, 1863); he rationalized pathology and surgery (Hodgson, 1855); "his writings are the greatest and most valuable repository of fact and thought in surgery" (Humphry, 1879); "I would not part with the least of his works for cartloads of scholastic erudition" (Lawrence, 1834); "as a man of natural genius he resembled Shakespeare more than any other man" (Stafford, 1851); he takes a place with "Harvey, Sydenham, Bacon, Locke, and Newton" (Lawrence, 1834); "Newton is the only comparison possible" as a man of science, but as a surgeon "he ranks below Wiseman, Pott, Sharpe, and Scarpa" (Brodie, 1837); Pott improved surgery; Hunter revolutionized it (Lawrence, 1834). These are great and glowing tributes to Hunter's genius, but not one of them gives a clear and concise answer to Jesse Foot's pertinent question: What definite contribution did John Hunter make to our power to heal the human body?

When we turn to the authoritative edition of his works—Palmer's edition published in 1837—we find the various editors almost in an apologetic mood as regards Hunter's claims to be a discoverer in their particular section of surgical or biological knowledge. Thomas Bell, F.R.S., Lecturer in Comparative Anatomy at Guy's Hospital, introduces Hunter's *Treatise on the Natural History and Diseases of the Human Teeth* with the remark that it is "the least felicitous effort of this extraordinary genius, and that of which the errors are most obvious and striking"; while Dr. George Babington, in his preface to Hunter's *Treatise on the Venereal Disease*, frankly states that "the reputation of John Hunter rests more on his other works than this." In the opinion of the late Sir Jonathan Hutchinson, who, like Dr. Babington, served as president of the Hunterian Society, Hunter's venereal work was behind the treatises of his own time. Even the *Treatise on the Blood, Inflammation and Gunshot Wounds*

was found by Palmer to require heavy annotation. The surgeons, we find, base Hunter's claims to fame on his discoveries in biology, but when we turn to the introduction which Sir Richard Owen wrote to Hunter's *Observations on Certain Parts of the Animal Economy* we find him, while giving Hunter credit for extraordinary powers of industry and penetration, claiming a place for him as a zoological discoverer on a few minor points in comparative anatomy and referring to his work on blood and inflammation as the just basis of his fame. Even regarding the great museum he built up there was at one time a difference of opinion. "Had I thought," wrote Sir Joseph Banks, President of the Royal Society and an intimate friend of Hunter, "my friend John Hunter's collection an object of importance to the general study of natural history, or indeed to any branch of science except that of medicine, I hope that two years would not have elapsed without my having taken an active part in recommending to the public the measure of purchasing it." Hunter's commentators and editors fail to give us the definition of which we are in search.

What, then, was John Hunter's great service to Medicine and Surgery? If I had to inscribe the tag attached to the coat of arms of the shade of John Hunter as it applied for entrance to the Valhalla of the great medical dead, I would write: "This is the man who discovered that every measure to further healing and to preserve health and life must be based on an accurate knowledge of the vital processes of living flesh." He was the first to realize that the surgeon, physician, zoologist, botanist, anthropologist, embryologist, palaeontologist, and psychologist, were empirics or quacks, every one of them, and would remain mere opportunists until they knew the conditions and laws under which vital actions were maintained and regulated. Hunter was the first to found the practice of the surgeon on the actions and reactions of living matter. He was a surgeon of a new kind—a "vitalistic" surgeon; it is a realization of that fact which gives us a sure clue to all he did and thought; to all he taught and wrote. He grasped as a fundamental fact that living matter was akin in all its forms; he found that the study of the hydra or "polypus" could throw a flood of light on the more complex manifestations of life in the human body. All living matter, he found, was endowed with the power of mending a breach in its substance and of throwing off disease. He had the audacity to believe that he could, by the application of special methods, wring the secrets of life from living bodies, and that by studying closely the manner in which Nature effected her cures in the human body, he could steal her secrets and apply her methods. From his arrival in London in September, 1748, until his death in October, 1793—forty-five years all told—he dogged the footsteps of Nature day after day, spying out her mysteries and gathering in his museum every specimen which threw light on the conditions and laws of growth and repair. It is when we compare what he did and what he thought with the deeds and thoughts of the medical men with whom he has been compared that we are forced to place Hunter in the same unique position in Medicine as that assigned to Shakespeare in Literature. The gates which Harvey, Pasteur, Lister, and Koch pushed open led to wide and important fields of new knowledge, but it was on the gate of life itself that Hunter brought his battery to bear.

There is no part of the human or animal body on which Hunter did not throw a new light, and of which he failed to give an improved interpretation; there is no page of his voluminous works that does not teem with facts which are of use for modern application; there is not one of his 10,000 specimens which, when seen with Hunter's eye, does not reveal one of Nature's many-sided operations. We can but cull a sample or two from his riches to illustrate the methods by which he made his discoveries, and the manner in which he sought to give surgeons a rational basis for their art. If Hunter were to return to life, nothing, I believe, would grieve him so much as the fact that tying the femoral artery where its coats are sound for the treatment of popliteal aneurysm is counted one of his major contributions to surgery. That operation was merely a side issue in a great chain of discoveries that revealed the nature of the vascular system. Hunter was the first to discover the mechanism of arteries. He demonstrated that they had an inherent and independent

*The Hunterian Society was founded by medical practitioners in the eastern part of the City of London, February 3rd, 1819, its first meeting being held in the London Orphan Asylum, St. Mary Axe, April 21st, 1819. Sir William Blizard, Surgeon to the London Hospital, was chosen as first President. He was one of Hunter's most distinguished disciples; it was he that proposed the name "Hunterian" for the society. It has been the custom, from the inception of the society, to elect the conservator of the museum of the Royal College of Surgeons as an honorary Fellow.

life and action; he showed that the muscular coats of the umbilical artery were still alive forty-eight hours after the cord had been separated from child and mother; he discovered that the elastic coat of arteries was the antagonist or opponent of the muscular coat, and that the outer fibrous coat was the safeguard of both from over-distension. He showed that the small arteries were the more muscular by studying the *post-mortem* changes in the uterus of the cow; he exposed the tibial artery of a dog, and showed that, when stimulated, its muscular coat could act as completely in regulating the flow of blood as a stopcock. He knew nothing of vasomotor nerves, but he was fully aware that the distribution of blood in the body was regulated by the muscular coats of the artery. He spoke of the living and sensitive principle of arteries. He exposed and cut the femoral artery of a living boar, and watched how its open and free proximal end became closed by a plug of blood clot. He exposed the carotid artery of a dog, and tried, unsuccessfully, to produce an aneurysm by weakening its outer coats.

He tied the femoral artery for popliteal aneurysm in his first case in December, 1785. In the summer of that year he had been studying the most remarkable manifestation of bone formation and bone necrosis to be seen in the whole realm of Nature—the growth and shedding of antlers in deer. Hunter has left us no exact record of these experiments; they were probably amongst the papers burned by Everard Home, but we can easily guess why he tied the carotid artery of the stag. He wished, no doubt, to see if he could thereby produce a necrosis of the antler. The velvet of the antlers became bloodless and cold; in a week's time they had again become warm. His attention was naturally switched from the problems of bone growth to that of collateral circulation. Had he known less of the nature of arteries than he did, had he looked upon them as the great Stephen Hales had done—as mere passive pipes of a hydraulic machine—he would probably have concluded, as most surgeons still do, that the pressure of the blood had forced the minute collateral channels open. He knew that the muscular coats were regulated by his mechanism of sympathy, for which Claude Bernard, sixty years later, substituted a vasomotor mechanism; he knew that when antlers commenced to grow there was a mechanism by which they could call upon the arteries of the neck, leading to a vascular enlargement and an increased supply of blood to the head. He saw that when the carotid arteries were tied the antlers and other parts cut off by ligation of the main artery could again call on their “sympathetic” mechanism and bring about a complete structural alteration in the collateral blood channels. It was an easy step from this observation to the realization that if the main artery of a limb were tied the parts beyond the site of the ligation would bring into play the mechanism which secured a blood supply for them. Hunter's ligation of the femoral artery for popliteal aneurysm was but a minor issue of a great discovery—namely, that Nature has provided every part of a living body with a mechanism which secures a sustenance when the main blood channel has been blocked. No doubt this vascular provision is part of the great vasomotor mechanism of the body, but so far as our knowledge of its exact nature is concerned, it stands to-day just where Hunter left it.

One familiar with Hunter's works and specimens could produce from them scores of discoveries of equal or even of greater importance than the one just cited. His aim was to give surgeons a basis of definite fact to guide them in the application of curative measures to the human body. When we inquire how it has come about that such a wealth of discovery has been neglected or overlooked we find that Hunter himself supplies us with the first reason. “I have used,” he said in his lectures, “the word *consciousness* because we have no language existing answerable to all my views of the animal economy, and to coin words would not answer the purpose, because then I must have a dictionary of my own. I have not a word for expressing the cause of those actions which take place in the body, as if it was conscious that such and such things are going to take place. There are actions in the body which come nearest to consciousness of the mind of anything that I can conceive, and therefore I make use of this word; but it is commonly applied by philosophers only to the mind.” The truth is that Hunter not only used *consciousness* in his own particular sense (with a meaning

which, in modern language, we may translate as *reflex* in many of his instances)—but he also wrested many other words from their original or recognized meanings and used them for the designation of phenomena which he was the first to observe and explain. There is a second reason for the general neglect of Hunter's writings. Since his time the terminology applied to the microscopic machinery which carries on the functions of the body in health and in disease has been completely altered. Hunter knew nothing of neurons, ions, cells, or reflexes; all to him were particles of living matter and sympathies. For him arteries were bone builders; the open mouths of lymphatics were bone modellers. But such conceptions did not hinder him from unravelling all the laws relating to the behaviour of living bone under all conditions of health and disease. The discovery of bone cells, instead of relegating Hunter's observations to mere history, won for them, or ought to have won for them, a more general recognition of their truth and importance. Leaving on one side Harvey's demonstration of the circulation of the blood, there has been no great truth so completely demonstrated by observation and experiment as Hunter's law relating to bone absorption and bone modelling. To account for all the phenomena of the remodelling processes seen in living bones he had to resort to his particular use of the word *consciousness*, and even at the present day we still await for someone to coin a word which will express the sensitive manner in which bone cells react to the functional forces and stresses which are brought to bear on them in the daily routine of life. It is not only that Hunter has his own technical terms and that a new microscopic machinery has replaced the one employed by him, which has reduced the number of Hunter's students to a mere handful; his neglect is also owing to two further circumstances. He has packed his observations so closely together in his printed page that their study needs the closest attention; and further, it is only on the rarest occasions that he condescends to show how his facts are to be brought to bear in practice.

There can be no greater mistake than to suppose that the discovery of micro-organisms, phagocytes, toxins and antitoxins, and all forms of serum-therapy, have placed Hunter's writings out of date. No discovery made in the present or in the future can do that. His “morbid poisons” become micro-organisms in our modern parlance; the manifestations to which he applied the term “sympathies” have to be translated as toxin-effects, or in some cases as hormone-effects. Whatever may be the underlying machinery, the phenomena he observed and described are the manifestations of living matter reacting to disease, and will be seen and recognized by medical men so long as life continues.

Perhaps his chief contribution to the art of healing was a full and clear recognition of the mechanism with which Nature has endowed living things to effect repair and to resist or overcome disease. He saw that the chief curative means in Nature's armamentarium was inflammation, and therefore to the manifold manifestation of that process he applied his sharpest powers of observation and discrimination. “Nature resorts to vascularity if she has work to do,” he said. He did not suppose that vascular changes constituted the essential phenomenon of inflammation; he conceived that a non-vascular tissue could show inflammatory reactions. His recognition of the nature of inflammation was based on the results of experiments carried out to reveal the true nature of vital processes. He was the first to perceive that the thermometer (the exact measurement of the heat production and heat regulation) was the most reliable instrument for the investigation of living processes. The crucial tests as to whether matter was living or not was the manner in which it reacted to cold and to putrefaction. He designed scores of experiments for testing the reaction of living matter to cold, and assured himself that life depended on a chemical “decomposition” and “combination,” which in modern language would be translated as “katabolic” and “anabolic” changes. If I had to design armorial bearings for Hunter, a thermometer—such as he got Ramsden to design for him—should be the most prominent figure on his escutcheon. It was the instrument by which he sought to prod the secrets of living matter. Nothing is more characteristic of Hunter than that while using the thermometer to measure the manifestations of life in beast and tree, he never sought to apply it to

estimate the degree of fever in his patients. He had a real aversion to the practical application of discovery. Twenty years after his death medical men began to use the thermometer for clinical purposes.

Some day I hope to deal with Hunter's unique position in the world of biologists and with the discoveries he made in anatomy, physiology, anthropology, botany, and geology. As a biological philosopher he is by far the greatest our country or any country has yet produced. His day is not yet come. In the meantime my chief object is to congratulate this Society on its fortunate title and to try to tempt young men who have to bear the burden of medical progress in the future to look into the riches which Hunter has bequeathed to posterity.

REFERENCE.

¹ *Dialogues between a Pupil of the late John Hunter and Jesse Foot.* London, 1795.

SURGICAL TRAINING:

REMINISCENCES AND SUGGESTIONS.

BY

SIR HAROLD J. STILES, K.B.E., M.B., C.M.EDIN.,
F.R.C.S.EDIN.,
REGIUS PROFESSOR OF CLINICAL SURGERY IN THE UNIVERSITY
OF EDINBURGH.

REMINISCENCES.

THE man who first inspired me with enthusiasm for surgery was my grandfather, Thomas Stiles, who was born in the village of Pinchbeck in the Fens of Lincolnshire, in 1798—one year before Syme. He practised there for over fifty years, and died in his 97th year, seven years after I had taken my degree. I can claim, therefore, that from my close association with him, and the many conversations I had with him about his own life and his own teachers, I possess almost first-hand knowledge of surgery and general practice as it existed a century ago.

It was Sir Astley Cooper who inspired my grandfather with his enthusiasm for anatomy and surgery, just as it was Syme who inspired Lister. Cooper and Syme were alike in that they were the foremost surgeons of their generation. Both men were great teachers, and both had the priceless gift of inspiring their pupils with a love and enthusiasm for their work. Both were equally beloved and revered by their students.

It may at first appear to be a piece of presumption on my part to speak of a humble village surgeon in the same breath with such great men as Syme and the immortal Lister. My excuse, however, is twofold: first, that a century ago the means of transit were such that every country doctor who lived, as my grandfather did, miles from assistance, had to be his own surgeon; and, secondly—and this is just as true to-day—there are, and always have been, men doing general practice in the country who, owing to force of circumstances, have been unable to specialize. It is surely only natural that some of these men—and I personally know more than one—might have been—well, perhaps not exactly Listers, but at any rate ordinary professors of surgery had they had the same opportunities that I and some of my colleagues have had.

[Sir Harold Stiles then made a number of quotations from an autobiography written by his grandfather, illustrating the admiration felt for Cooper, and said that all who had studied the life of Lister knew that Syme had the same gift of inspiring his pupils. The operations Mr Thomas Stiles recorded in his autobiography showed that he was no mean surgeon; in 1830 he successfully performed the operation of perineal lithotomy, and later entered notes of an operation of special interest:

Amputation of a very large malignant breast (Mrs. W.). Glands in the axilla also enlarged. Put a ligature around the base and removed them. Perfect recovery. Health good for nearly two years; then died of cancer in the pelvis.

Sir Harold Stiles compared this brief and matter-of-fact statement with a quotation from Sir Rickman Godlee's *Life of Lister*, giving an account of Lister's pioneer work on the operative treatment of carcinoma of the breast:

The first large radical operation planned on anatomical principles was that performed by Lister in 1867—twenty-one years later. This patient, a relation of his own, was found to have

such an extensive carcinoma that no surgeon would touch it, and she was thinking of handing herself over to a quack.

Though he must often have followed the policy of despair and left poor women thus affected to their fate, yet, when the question was thus forcibly brought home to him, Lister made up his mind that the employment of antiseptics would justify a bolder course. But, as the operation was a new and dangerous one, he could not possibly entrust it to another man, even if he could have found a surgeon willing to undertake it. He had accordingly the double anxiety of performing it for the first time on a member of his own family. After it was over he wrote: "The disease is, I believe, all cleared out, the armpit as well as the breast. I explored the former in my proposed manner and found the proceeding very satisfactory, involving but slight additional wound of the skin, and yet affording free access to the region."

Turning then to his own career, Sir Harold Stiles said that under the inspiration of his father, Dr. Henry Stiles, he determined to be a surgeon, and when he went up to Edinburgh in May, 1879, he had gained an elementary knowledge of anatomy by the study of osteology and dissection of the fetus. He then proceeded to enlarge on the importance of a knowledge of anatomy to a surgeon.

In those days (he continued) we spent three years at anatomy, and during that time I almost dissected the whole body twice. I am afraid my distinguished colleague, the Professor of Physiology, would say I spent far too much time over anatomy. I venture, however, to differ from him. Professor Schafer's contention is that physiology is the pivotal science around which all the medical sciences are centred, and that it furnishes a basis on which the whole of medicine and surgery is founded. While I do not wish in any way to belittle the fundamental importance of physiology, I maintain that anatomy is, and always must be, the most basic of all the medical sciences. Professor Schafer goes so far as to say that "most of the time which the student gives to dissection is—to make no bones about it—wasted." Personally, I hope that the "fiat of the General Medical Council which prescribes that every student shall dissect the whole of the body in the course of his anatomical training" will be adhered to. Despite my devotion to anatomy, I am convinced that I did not spend one day too much in its practical study. I quite agree that physiology has now become an essential part of the training of the present-day surgeon, because surgery has now become as much a science as an art. For this reason I should welcome a class on surgical physiology run on parallel lines to the class on surgical anatomy.

With regard to the position of anatomy in the curriculum, it is evident that something will have to be done to keep this fundamental subject alive in the student's mind after he has passed his second professional examination. While this can be done to a certain extent by means of classes on applied anatomy, it is my opinion that the clinical teacher should take full advantage of his excellent opportunities for teaching anatomy on the living subject, both in the wards and in the operating theatre. With regard to surgical applied anatomy, I am convinced it should be taught in the anatomical department by a practising surgeon who has been a demonstrator of anatomy. If the class were made compulsory, as it certainly ought to be, and if the teachers of clinical surgery were careful to describe and review all their operations from the anatomical point of view, then I am at one with those of my colleagues who would do away with the present classes of operative surgery. A reform such as this would do much to keep up and augment the student's knowledge of practical anatomy; moreover, it would convert what many students regard as a dry, burdensome subject into one full of life and interest.

The extension of the medical curriculum to five years was a great advance in medical education, but the full benefits of the additional year will not be realized until further modifications in the methods and arrangement of teaching have been devised. Time does not allow me to pursue this matter in detail, but I will make brief reference to systematic lectures, which have justly brought fame and renown to this school. In former days, when textbooks were few and incomplete, these lectures necessarily occupied a large place in the time table; but now that textbooks have reached such a high standard of completeness and excellence I venture to think that some of the time expended on systematic lecturing could be usefully transferred to practical demonstrations in ward and laboratory. In the rearrangement of the curriculum I doubt the wisdom of the student commencing hospital

* An inaugural address on his appointment as Regius Professor.

work during his first year. While the short time which could be put at his disposal for this purpose would be insufficient to benefit his education, it would be long enough to divert him from the prosaic, though basic, studies (the thorough prosecution of which is essential to his future efficiency) to the more alluring life of the hospital.

I did all my surgical work in the wards under the charge of Professor Chiene, whose strong and kindly individuality and great personal interest in the welfare of the student greatly appealed to me. I am glad to have this opportunity of stating that it is to his example and encouragement and to the training received under him that I owe my presence here to-day as Regius Professor of Clinical Surgery. Professor Chiene was a zealous disciple of Lister. I was fortunate in obtaining under him the important office, first of "spray clerk" and later of "instrument clerk," so that I obtained a good view of all his operations. There is no more interesting subject in the whole history of surgery than that which centres round the introduction and abandonment of the spray. The spray clerk was the policeman at the operations, his duty being to see that neither the operator himself nor any of the assistants were allowed to intervene between the spray and the wound. Hence I have always blessed the spray for having given me such a splendid introduction to the details of operative surgery.

As I intended to take five years to my undergraduate studies I was able to devote a large part of my fourth and fifth years to hospital work—the fourth in the surgical wards and the fifth in the medical wards. For the benefit of the students of the present day let me add that I worked in the wards on several evenings of each week—a custom which I regret to hear is now the exception rather than the rule. I shall do my utmost to revive it. When I was a student the curriculum was not so crowded as it now is, and one of the advantages of taking an extra year was that one could spend most of the extra time at clinical work.

Professor Chiene had been a demonstrator of anatomy under Goodsir, and it may be truly said that he was the greatest teacher of surgical anatomy in Edinburgh. I fancy it was my own enthusiasm for anatomy which appealed to my chief and prompted him to make me his house-surgeon and afterwards his university assistant. As his house-surgeon I had an opportunity of seeing him put into practice those principles of surgery which he so ably and graphically instilled into us in his systematic lectures. If I were asked what impressed me most about his work as a practical surgeon I should say it was his surgical judgement.

POST-GRADUATE TRAINING.

After I had completed my house-surgeonship I spent the next two years as a demonstrator of anatomy under Sir William Turner. Although I had already given much attention to anatomy, I felt that the teaching of anatomy and more dissecting-room work would be the best training for what the late Professor Annandale used to call an "operating surgeon." My advice to my house-surgeons who intend to make surgery their life-work is to return to the dissecting-room for a year. They will then be able to view and study anatomy through surgical spectacles, and they will find that by adopting this advice they will save themselves much anxiety.

Here again I wish to pay still further acknowledgement and tribute to my old master, Professor Chiene. To him the Edinburgh school is indebted for organizing, equipping and staffing a department of surgical pathology in connexion with the chair of systematic surgery. He may be said to have been the founder of an Edinburgh school of surgical pathology, and the work that he initiated has been still further developed by my colleague, Professor Alexis Thomson (and his assistants); as a young man he was an assistant in the pathological department under the late Professor Greenfield, and is recognized as one of our leading authorities in surgical pathology.

During the nine years that I was university assistant to Professor Chiene, besides teaching surgical anatomy, practical surgery, and surgical pathology, I had charge of the morbid anatomy department of the surgical laboratory. It was my duty to examine and report upon all the pathological material derived from Professor Chiene's wards. It was at this period that what was called the

"Naples" method of embedding early embryos in melted paraffin was introduced by embryologists. Fortunately a lectureship on embryology had shortly before been instituted in connexion with the chair of zoology, and I spent two hours a day for the next three months in the embryological laboratory, working at the development of the mamma under the late Mr. George Brook, the then lecturer on embryology. Having acquired a good knowledge of Mr. Brook's methods I began to apply them in the surgical laboratory, and very soon came to use no other method. In 1890 I gave a microscopical demonstration of sections prepared by the paraffin method, illustrative of the morbid anatomy of various surgical conditions. I mention this because the surgical laboratory of this university can claim to have been the first pathological laboratory in this country to use the paraffin method. It was mainly by the adoption of this technique that I was able to carry out my investigations on the histology and mode of dissemination of carcinoma of the mamma. These investigations, along with those of Heidenhain, laid the foundation for the radical treatment which is now employed in dealing with malignant disease of the mamma.

In the summer and autumn of 1893 the university granted me leave of absence to study under the late Professor Kocher of Berne, whose operating impressed me quite as much as his rigid aseptic technique. He was the most progressive surgeon of his generation. He was then doing operations for goitre by the hundred, and he was one of the most successful pioneers in abdominal surgery, as well as in the surgery of the extremities. The secret of Kocher's great success as an operator, apart from his aseptic technique, was that his operations were planned and carried out on strictly anatomical lines. His clinical teaching too was a model of what clinical teaching should be.

I must not leave the subject of post-graduate training without recording what I owe also to Drs. William and Charles Mayo, the founders and builders of the Rochester Clinic, the most famous post-graduate school in the world. In 1906, and again in 1911, I had the privilege of being Dr. William Mayo's guest, for a fortnight on each occasion. To give an adequate idea of how much these visits impressed me, and of how much I profited by them, would occupy the whole time allotted for my address. I was equally impressed by the great development which had been achieved in the interval between my two visits; in fact, my second visit was just as profitable as the first.

LESSONS OF THE WAR.

My last—and in many ways my greatest—teacher has been the war. While our experience during the last five years can hardly be said to have brought about any revolutionizing discovery in general surgery, it has, nevertheless, emphasized the value of many practical methods and details of treatment which we shall do well to keep before us in our civil work. The technique, for example, which has been evolved for the early excision of contaminated wounds, a procedure which has proved of the greatest value as a prophylaxis against sepsis in war surgery, has its application in the treatment of industrial injuries. The Thomas splint, which has been such a boon in the treatment of fractures of the lower extremity, should henceforth be an essential part of the armamentarium of the general surgeon.

The war experience of the pathologists and bacteriologists has likewise made equal, if not greater, additions to our knowledge; indeed, it may be said that the war has created a new epoch in bacteriology. One need only mention the researches that have been carried out on the anaerobic micro-organisms of wound infections, on trench fever, and on Weil's disease. Sir Almroth Wright's work on Nature's methods of combating sepsis has taught us how to assess the value of antiseptics, and has explained to us how rest, combined with radical operative treatment based on sound principles, is the most essential factor in the treatment of wounds, and that if these principles are thoroughly carried out it matters little whether the wound be treated on antiseptic or on aseptic lines.

The chief lesson I have learnt from the war, however, is the value of team work by young men guided by the wider general experience of their seniors. The surgery of the war has been the surgery of young men—men with keen and receptive brains, men who have been well trained in the fundamental medical sciences and who have been

able to apply their knowledge not merely to the improving of old methods of treatment, but also to the devising of new methods to meet the new conditions they had to deal with and the new environment in which they found themselves.

It is largely due to team work by the younger men that great advances have been made, not only in wound treatment, but in the early and late treatment of fractures, especially fractures of the femur, in wounds involving the joints, in injuries to the nerves, and in military orthopaedics generally; also in wounds of the lungs and pleura and their complications, as well as in injuries of the skull and brain. Special mention must also be made of the wonderful work which has been accomplished in connexion with the repair and reconstruction of the parts after severe facial injuries. In this work the dental surgeon has taken a prominent part; indeed, he has been indispensable. Lastly, much valuable information has been obtained also with regard to the nature of shock and to the methods of combating it.

PROFESSOR CAIRD.

I feel I cannot conclude my address without taking this opportunity of saying what I owe to my distinguished predecessor, Professor Caird. Lister's love of surgery was well known. Caird's is certainly no less profound. His enthusiasm for surgery and his love of teaching have been unbounded.

Fortunately, although Professor Caird has reached the age at which he must retire from the chair, he is as vigorous as ever, both in body and mind. It is to be hoped now that, freed from arduous hospital work and clinical teaching, he will find time to give to the surgical world some of the fruits of his ripe experience.

I have already referred to the splendid system of clinical teaching adopted by the late Professor Kocher. I feel sure I am correct in stating that a similar system has been followed—and with the same thoroughness and success—by my distinguished predecessor in this chair, and it will be my endeavour, as far as in me lies, to follow in his footsteps.

TWO CASES OF TRAUMATIC ANEURYSM OF THE COMMON CAROTID.

BY

R. JAMISON, F.R.C.S.,

LIEUT.-COLONEL R.A.M.C.; CONSULTING SURGEON, NORTH RUSSIAN EXPEDITIONARY FORCE.

I VENTURE to publish an account of these two cases because I think them to be of interest from a surgical point of view, and also because the patients not only survived their original wounds but also operative interference.

CASE I.—*Gunshot Wound of Neck: Arterio-venous Aneurysm of the Left Common Carotid.*

The bullet had traversed the left side of the neck horizontally at the level of the cricoid, leaving a perfectly clean wound. The man came under my notice about three weeks after being wounded, when there was a visible pulsating swelling, with its greatest prominence in front of the anterior border of the sterno-mastoid. The swelling presented the usual signs of an aneurysm, including a loud bruit, which ceased on pressure being made at the root of the neck.

Operation.—A long incision was made over the anterior border of the sterno-mastoid, and deepened until the internal jugular vein was exposed. The vein was enormously distended, having a diameter of 2 in. No doubt the division of the fascia had allowed it to expand to an extent greater than before the disturbance of the parts. There was a communication between it and the internal carotid just below its division. The internal carotid was clamped with a guarded pair of forceps with a view to seeing if the communication could be closed. However, although this proceeding lessened the tension in the vein, it had no effect on its size, and this, coupled with the dense cicatricial tissue of the bullet track, prevented a safe exposure of the main vessels. The vein was accordingly divided and tied. The clamp on the common carotid was removed, and the vessel ligatured in two places and divided between them. A somewhat difficult dissection exposed the external and internal carotids. These were ligatured at their origin from the common trunk.

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CASE II.—*Gunshot Wound of Neck: Dissecting Aneurysm of the Left Common Carotid Artery.*

The bullet passed from a little below and behind the mastoid process to a point on the left side of the trachea at its commencement. The entry wound was clean and newly healed when he came under observation, but there were signs of inflammation round the bullet. This case differed in appearance from the last only that the swelling steadily increased and was more tense.

First Operation.—The bullet, which was found lying in a little pool of pus, was extracted. The wound was left open, and at the end of a week was reasonably clean and nearly healed; the steady increase of the aneurysm, however, necessitated interference.

Second Operation.—A similar incision was made and gradually deepened until the sac of the aneurysm appeared. It was roughly fusiform, and extended from 1½ in. above the clavicle to somewhere about the level of the lower jaw. Its upper limits were not investigated. The sac was perilously thin, and appeared to consist only of some of the outer coat of the artery. The internal jugular crossed it somewhat far back. It was firmly adherent, so that the main bulging was directly forward. In order to reach the common carotid in the little available space above the clavicle without dragging on the vein, it was necessary to divide and tie the vein below the sac. The tying of the carotid was then begun; during the process the sac burst spontaneously in its upper part, and a high pulsating jet of blood shot up. A swab was pressed on the hole and controlled the bleeding. The tying of the carotid was then finished. On removing the swab for a moment the jet of blood was in no way diminished, but had lost its pulsation. The sac entirely overlay the external and internal carotids, preventing any search for them, so two swabs were placed on the hole in the sac and pressure maintained on them by sewing the inner edge of the carotid sheath firmly to the edge of the fascia covering the sterno-mastoid. This proceeding stopped the haemorrhage for the time being, at any rate, and the wound was closed.

Third Operation.—No signs of haemorrhage having occurred after the second operation, the wound was reopened five days later and the swabs removed. The sac had been obliterated entirely and no haemorrhage occurred. The wound was reclosed and a small drain put in the lower angle of the wound to give early warning of any bleeding.

Both patients were young men of nineteen or twenty, and made uninterrupted recoveries. Case 1 complained of headache for three or four days after his operation, but otherwise neither of them showed any sign or symptom of being the worse for the loss of both arterial and venous channels on the one side.

My best thanks are due to Colonel G. St. C. Thom, A.M.S., D.D.M.S., N.R.E.F., for permission to publish these cases.

TRAUMATIC RUPTURE OF THE SUBCLAVIAN ARTERY: DEATH NINE DAYS LATER.

BY

DUNCAN C. L. FITZWILLIAMS, F.R.C.S.,

LATE CONSULTING SURGEON TO THE NORTH RUSSIAN EXPEDITIONARY FORCE.

The following is an account of a case of sufficient interest to warrant publication on account of its rarity.

Semenko, a Russian mechanic belonging to H.M.S. *Josephine*, was admitted to the 53rd Stationary Hospital, Archangel, in the evening of October 4th, 1918.

History.

He was on board a small tug which was coming alongside one of H.M. ships, and was warding it off from the ship's side. To do this more effectually he had the boat-hook against the ship's side, and the near end of the pole placed under his left clavicle. He was leaning on the pole. Unfortunately for him the wash of a passing vessel caught the tug and threw it towards the ship. Immediately behind him was the cabin of the tug; he was therefore caught between the cabin and the end of the boat-hook, which pinned him to the wall of the cabin. When the swing of the boat was over he dropped on deck. The doctor of the ship was called, and he was seen also by Colonel Ormrod, R.A.M.C., who sent him up to the stationary hospital at once.

Complete absence of all pulse at the left wrist was noted. Morphine had been given to him before removal.

and his arm was secured to his side. He arrived in hospital about one and a half hours after the accident.

Condition on Admission.

He was suffering from severe shock, and was very restless. There was a large non-pulsatile swelling over the left clavicle, extending up into the neck. There was no pulse at the left wrist. He was markedly bloodless; the whole of the left side of the chest was dull, and respiration could scarcely be heard. He appeared to be moribund.

Diagnosis.

Injury or destruction of the subclavian vessels, with bleeding into the left pleural cavity.

Treatment.

It was a question whether to let him die quietly or to operate in the forlorn hope of being able to do something to save him. Eventually it was decided to operate. The electricity of the hospital suddenly gave out, which rendered matters more difficult, but an acetylene operating lamp was at hand, and an electric lamp was run off the x-ray plant next door by the ingenuity of Captain Cotter, R.A.M.C.

A light general anaesthesia was given. A long incision was made over the swelling above the left clavicle. As soon as the fascia was opened a large quantity of blood gushed out. A finger was at once inserted to control the artery against the first rib. Both the first and the second ribs had disappeared, and could not be felt with the exception of loose fragments of bone. The artery, however, was found at once, the end sticking up into the wound like a finger, pulsating feebly, completely severed. Whether it was bleeding or not at the time was not discovered. It was grasped at once with powerful forceps, which were left on. The distal end of the artery could not be found, and nothing could be made out with regard to the vein. Nothing could be seen as the field of operation was awash with blood. The wound was sewn up, and the artery forceps left protruding from the wound. The operation took a very few minutes. During this time saline was being given into a vein, two pints were run in, and he was left undisturbed on the table till his pulse had recovered some strength. He was then put back to bed, and more morphine given.

After-History.

More morphine had to be given during the night, but even then he did not sleep well and was very restless. Next day, however, he was much better, and we entertained hopes of being able to save him. He was very restless for the next two days. The foot of the bed was raised high upon blocks, and this seemed to worry him and keep him awake.

October 6th, 1918. He was dressed and the forceps removed from the artery. A long rubber tube was inserted into the wound and $1\frac{1}{2}$ pints of fluid blood siphoned out of the pleural cavity.

October 7th. He was dressed again and half a pint of blood withdrawn from the chest in the same manner, the bed being tilted to an extreme angle to allow this to be done more effectually. His arm was unfasted from his side and disinfected, after being washed, as gangrene of the arm was feared. The lower limbs were bandaged. He was constantly receiving saline by the rectum, and took a good deal of fluid by the mouth. Morphine seemed to have little effect in controlling his restlessness, and he was now given hyoscine in $\frac{1}{100}$ grain doses. He passed a better night, but showed signs of renewed haemorrhage next morning.

On October 8th he had torn off his bandages in spite of the special orderlies, and got his arm free, and was very restless and anxious about himself, continually asking if he was going to die.

On October 9th laudanum m 30, with potassium bromide gr. 45, were given and he passed a slightly better night, but managed again to free his arm, which he waved about wildly. The forearm was very swollen and tender. There was no sensation below the elbow. It was thought that a line of demarcation was forming below the elbow. The arm was again disinfected and put into a clean sock.

On October 10th his condition was much the same, but he was showing signs of exhaustion as he would not sleep, in spite of everything we could do. Morphine and bromide had been repeated with little effect; he was continually restless and a very bad patient.

On October 12th his condition was worse. The heart seemed pushed slightly to the right, and he was breathing badly. He again tore off the bandages from his arm, and this time from his wound as well. Hyoscine was given with very little effect.

He died of exhaustion early on the morning of October 13th. He really never gave himself a chance throughout.

Post-mortem Examination.

The left clavicle was found unbroken, as had been noted at the operation. The pole of the boathook had been thrust in below it. The first rib was broken far back, and detached from its cartilage at the sternum. The loose fragment had rotated inwards transversely. The second rib was broken and detached from its cartilage half an inch from the sternum. The artery was completely severed, evidently by the broken ribs, probably the first, as it rotated inwards. The crushed proximal end was completely occluded; the distal end was full of firm clot. The vein was not torn. The left lung was collapsed, and the pleural cavity still contained much blood.

It is my opinion that this man's life might quite well have been saved if he had been more reasonable and more amenable to treatment, in spite of the severe injuries he had sustained.

THE BALANCE OF COLLOID AND CRYSTALLOID IN CHOLERA, SHOCK, AND ALLIED CONDITIONS.

By BENJAMIN MOORE, D.Sc., F.R.S.,

DEPARTMENT OF APPLIED PHYSIOLOGY, MEDICAL RESEARCH
COMMITTEE.

THE JOURNAL of September 20th last (pp. 387, 394) contains two articles of first-class importance which come from sources so wide apart as France and India, and are recorded independently, but they shed such a light upon each other, and upon several outstanding obscure facts in the study of immunity, that it seems worth while to bestow some thought upon the underlying common cause of the whole series.

The first is a review of recent work by Richet, Brodin, and Saint-Girons¹ on anaphylactic shock, in which it is shown that such shock can be prevented by addition of sodium chloride to the dechaining dose of serum, or by rendering the blood hypertonic with saline before this serum is injected.

The second is a letter from Sir Leonard Rogers pointing out that while intravenous injections of hypertonic salines in cholera are of well-proven advantage similar injections of gum arabic as used by Bayliss so effectually in combating wound shock, or surgical shock, are here of no avail but rather appear to be a disadvantage.

Now these two sets of observations are by no means contradictory but most beautifully complementary, also both are in consonance with the findings of the French school on anaphylaxis and, as will be shown, with the earlier observations from India of Sutherland and McCay² that hypertonic salines inhibit haemolysis either in a natural haemolytic system or an actively created one with a specific haemolysin, as in the Bordet-Gengou reaction and the Wassermann test.

The common cause of all these phenomena is a disturbance of that delicate equilibrium between the colloids of the blood and cells (such as proteins and lipoids) and the crystalloids (such as sodium chloride) existing united or adsorbed in common solution or suspension.

Taking, first, the positive effect of a colloid, such as blood-proteins, gelatine, or gum acacia, in shock due to haemorrhage, surgical injury, or prolonged anaesthesia, as compared with the failure of simple hypertonic salines under these conditions, we find that the situation is one of a circulating fluid not merely defective in total volume but also relatively poor in colloid compared to crystalloid. Accordingly inorganic salts, or salines, given alone are here rapidly eliminated, having no colloid to anchor them, and so being treated as foreign bodies and thrown out by kidneys and intestine. But gum arabic, gelatine, and plasma proteins cannot be so expelled, and serve to anchor inorganic salts and so preserve the equilibrium of crystalloid and colloid not only in blood but in the master cells of brain and heart, where the state of aggregation of the protoplasm would soon become altered.

That there is such an interaction of adsorptive character between colloid and crystalloid is shown clearly by the definite changes in osmotic pressure following upon variations in the concentration of the salines in which the colloid is in solution. This osmotic pressure measures the degree of aggregation of the colloid, and the same colloid may show a ten-fold variation with varying concentrations

of the saline. Such variations can only be explained by union between colloid and crystalloid. This change was first shown for the serum-proteins by Moore and Parker⁸ and Moore and Roaf,⁴ and later confirmed by Lillie⁶ and others. A similar effect is obtained with gum acacia, for the measurements of the osmotic pressure of this colloid made by Moore and Roaf⁴ in distilled water gave treble the values later obtained by Bayliss⁶ in physiological saline. The obvious explanation is that given by Moore and Roaf for the serum-proteins—namely, that the solution aggregate of the colloid changes in presence of the crystalloids.

These two series of experiments upon the osmotic pressure of gum acacia in presence and absence of salt clearly demonstrate two things—(1) that a solution of gum arabic made in water, or saline, as recommended by Bayliss, and injected intravenously will at once seize upon or hold a certain amount of saline in the blood, and as a result of its presence the total salt content of the blood with which nerve and muscle cells stand in common equilibrium will rise, and (2) the most important fact, that as a result of this adsorption the state of aggregation of the injected gum will change so that the "molecular weight" or "solution aggregate" is only about one-third to one-fourth of its former value—for this is precisely what the fall in value of the osmotic pressure means on Avogadro's law.

Now the colloids of the plasma are but an intermediary to the colloids of the cells in equilibrium with them. These are still more sensitively balanced than the plasma colloids, for they are a stage more complex. Accordingly, if variation in salt concentration can alter the molecular complexity of gelatine, gum, and serum-protein, it follows that it also can and must affect the condition of complexity of cell protoplasm. There is, indeed, abundance of collateral evidence, such as incipient precipitation due to salines and the washing out of lipoids by hypotonic salines, to prove the occurrence of such changes.

Take next the case of efficiency of hypertonic salines in cholera, and inefficiency of colloidal solutions such as gums, and it is clear that this is as it ought to be, for the condition is one of excess of toxic colloids and defect of balancing electrolytes or salines. The crystallo-colloidal balance is in this case upset in the opposite direction. Electrolytes are wanted to combine with circulating toxic colloids and with colloids of tissues and prevent these linking on to each other. Gum injected under such conditions only furnishes another claimant on that side of the balance for the already denuded concentration of crystalloids to cope with. This action robs the cells still more of their salines, and sets free adsorptive situations in which toxins attach themselves, so leading to altered aggregation of protoplasm and locking of its mobility.

On the other hand, free saline in the blood in such diseases as cholera combines with toxins to form a crystallo-colloidal union, and this is an essential factor in excretion of the poison by intestine and kidney. The unattached colloidal molecule of toxin possesses no osmotic pressure, nothing to drive it through an excreting cell. When it becomes attached to a crystalloid the combination acquires a directive force like a gas molecule within a porous pot, and like this now possesses a power of diffusion.

The unattached toxin is like a drifting hulk or barge with no motive force of its own; the crystalloid from the hypertonic saline is like the tug to this barge. The tug takes the toxic colloid out through the intestinal mucosa or renal epithelium. The tug, once attached to barge, cannot readily break the towing rope and go through alone unless there is a high gradient of fall of osmotic pressure to disrupt the adsorptive bond uniting crystalloid and colloid. Whether both go through or not will depend on the size and properties of the colloidal aggregate and the width of the lock gates in the excreting cell.

In the case of gum acacia in shock the colloidal "solution aggregate" (colloidal molecule) is too large to pass out, and this retains the crystalloid; these two together produce an osmotic pressure and keep up the volume of blood for the heart to drive round. In the case of hypertonic saline in cholera the molecule of toxin is smaller and the saline tug carries it out through intestinal and kidney cell. It is, indeed, this rapid passage out of an immense navy of crystalloidal tugs which depletes the

blood of its crystalloids; this in turn depletes the nerve cells and leads to shock and collapse.

An exactly similar explanation can be given for the results obtained in prevention of anaphylactic shock by hypertonic saline, only here the colloidal constituent, or antigen, attacked, or protected, is probably lipoidal in nature (that is, a lecithin), as it is in syphilis and the Bordet-Gengou phenomenon.

There is clear evidence that the stability, or state of aggregation, of a suspension of lipoidal nature varies with the concentration of saline or electrolytes in common solution with it. It is for this reason that erythrocytes dissolve, or haemolyse, in water or hypotonic salines.

When an animal is in an anaphylactic condition the lecithins of its nerve cells and muscle cells have been rendered sensitive to the particular serum by reaction with the first dose of this injected. These cells *in situ* within the animal's body are in precisely the same position as the colloids of the serum of an animal sensitized haemolytically by injections of a given suspension of red blood corpuscles. The Bordet Gengou phenomenon of haemolysis happens in a test-tube, the Richet phenomenon of anaphylactic shock happens in the living body; this is the sole difference between them. In each case, as in practically every biochemical reaction of zymolysis, fermentation, and immunity, there is a similar triad of constituents to the reaction. In the Bordet-Gengou haemolysis these are (1) the red blood corpuscles, (2) the serum specifically sensitized to them, and (3) complement. In fixation, or deviation, of complement in the first stage of the Wassermann test the corresponding triad is (1) lecithin from any tissue, (2) syphilitic toxin which attacks lecithins (just as in the body it would attack the lecithins of nerve cells), and (3) complement. In the anaphylactic shock there are (1) lecithins of nerve cells, (2) the specific serum, (3) complement. In the action of oxidases there are (1) substance to be oxidized, (2) oxidizing ferment or oxidase, (3) a peroxide. In fermentation, (1) the sugar, (2) the endo-enzyme of the yeast, (3) the co-enzyme, a phosphate or phosphatide. In hydrolytic digestion, (1) the substrate, protein, carbohydrate, or fat, (2) the enzyme, (3) the co-enzyme acid, alkali, or neutral salt. In differential staining of any microscopical preparations, such as bacterium, tissue, or in selective absorption of particular salts in physiological growth there are (1) absorbing tissue (2) adsorbate, such as dye, etc., (3) the mordant, such as a salt of iron or aluminium. These examples are sufficient to show how universal is this peculiar colloidal reaction, with its triad of participants throughout all biochemistry.

Now, such an adsorptive reaction can be locked up or prevented either by the absence, or by the chemical fixation, of one of the partners to the reaction. Many years ago Moore and Roaf showed that this formed the physico-chemical basis of anaesthesia. Here the anaesthetic locks in with the cell colloids and reduces metabolic activity. The same happens in many poisonings, such as cyanide poisoning, where the cyanide locks into the colloid and prevents oxidation, although the blood is fully charged with oxyhaemoglobin. Similarly, locking of enzymes and prevention of their action can be shown in the test-tube, even with inorganic colloids such as colloidal platinum.

This is the explanation of absence of anaphylactic shock in presence of excess of saline, which binds in with the reacting crystallo-colloidal system and destroys that delicately poised lability which is necessary to the adsorptive reaction. Similarly McCay and Sutherland showed that the haemolytic reaction did not occur between a specific haemolysin, corpuscles, and complement if the saline content were made about double that of the animal's serum.

No doubt for each type of reaction more sensitive crystalloids than common salt may be found, and we are here at the very heart of experimental therapy. The preventive crystalloid at any given concentration will be efficacious according to the reaction constant of its affinity for one or other of the reacting substances, or, in other words, upon its specific adsorptive power, or its mordanting power. This will differ from one pair of colloid and crystalloid to another, and is the basis of that property whereby one type of cell takes up one crystalloid and another selects another. This is the reason why the main ions of the plasma are sodium and chlorine, while

those of red blood corpuscles are potassium and the phosphatic anion. It enables diatoms to take out silica for their skeletons from the minutest traces in sea or pond water, and the osseous tissues similarly to adsorb calcium phosphate.

The most striking instance of all of this delicate equipoise between colloids and crystalloids is the regulation of the amount of saline in the cells and circulating fluids of the body. From the evolutionary point of view this regulation is much more ancient than that of body temperature, and its pathological variations are probably more important than those of the temperature could we only discover as ready a means of studying them as is the clinical thermometer in the case of temperature.

This equipoise of salt concentration started in evolution at the level of the fishes, with the teleostean, and up that long range of evolution to man, through countless types and channels, there is scarcely a flutter in its value. The variations in all species may probably be said not to lie outside the limits marked in isotonic saline by 0.7 and 0.9 per cent., and in any one given species the physiological range is many times narrower.

What is the mechanism of this exquisite adjustment throughout such a wide range of the animal world, and with any variation in the external environment, from fresh pond water, or the very hypotonic fluids daily in use by man and other animals, up to the salinity of sea water, which is manifold hypertonic to the blood of all teleostean fishes? The answer is that this amount is that which is in equilibrium or colloidal adsorption with the colloids of cells and plasma. Any additional amount becomes free in the circulation, and is promptly removed by excretion. In other words, isotonic saline expresses the balance between colloids and crystalloids.

The union between colloid and crystalloid is very slight; it is a molecular union in which the units are molecules not atoms, and there are no atomic linkages. It much more closely resembles the union of salts to their water of crystallization, and such physical properties as electrical conductivity are not interfered with. Nevertheless, the union is quite definite, and without it life as it now exists would be impossible.

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THE TREATMENT OF INCIPIENT MENTAL DISEASE.*

BY

SIR ROBERT ARMSTRONG-JONES, M.D.,

F.R.C.P., F.R.C.S., C.B.E.,

FORMERLY LIEUT.-COLONEL R.A.M.C. AND CONSULTING PHYSICIAN
IN MENTAL DISEASES TO THE LONDON AND ALDERSHOT
COMMANDS; LECTURER ON MENTAL DISEASES,
ST. BARTHOLOMEW'S HOSPITAL.

THIS subject is a matter of great public importance, because the cost of maintaining the insane and the mental defectives of this country implies a vast financial burden upon the rates and taxes, now amounting to about four million pounds a year, and this burden has been gradually increasing for many years. So far as reliable lunacy statistics could inform us the total number of insane persons in England and Wales had reached, at the end of 1914, the alarming total of 140,466 persons, or 1 to every 266 of the estimated population. These were the exact numbers on January 1st, 1915. Since the commencement of the war no official record of the total numbers has been obtainable, because soldiers and sailors and airmen, as well as others serving with the forces, who may have become insane or who may have suffered from a temporary mental and nervous breakdown and who required care, have been treated in war hospitals, and have not been regarded as insane. They have not been certified, and therefore have not come under the jurisdiction of the Board of Control (Lunacy Commissioners); consequently accurate statistics of official insanity in England and Wales have not been possible. Naturally, since the above

date the total officially recorded in asylums and private establishments has considerably diminished, but the numbers must be misleading and unreliable if they are taken to reflect the exact incidence of insanity among the people.

The special point dealt with here is the treatment of insanity in its early stages, and every medical practitioner must have had experience of the difficulties presented by mental cases in private practice—not only in their actual treatment of the disorder, but also from the strong feelings aroused and expressed by the certificate and the consequent compulsory removal and detention of those certified into the various mental hospitals or into the private asylums which are recognized by the law and are the most suitable curative establishments. In order to obtain the best remedial treatment in these places, it is obligatory and compulsory for all, except the voluntary boarders, which only applies to private or paying patients, to be first certified as insane, and every doctor, as well as all the friends and relatives of a mental patient, realize the hardships which the certificate of insanity imposes upon the person certified, as also the undeserved stigma which is reflected upon him and his friends by its issue. A few of these disabilities are that the medical certificate of insanity separates the sufferer from his friends, it removes him from his home, it cuts him off from all social privileges, it removes from him his domestic rights, it takes away all his former financial control over his own affairs, it disfranchises him so long as he is under its ban, and it practically dispossesses him of all the rights and liberties which men hold dear. No other illness is more dreaded nor more costly, yet no other illness under skilled care is recovered from more quickly. The need for skilled care was so well insisted upon by Sir Henry Hallford when he was called in to treat His Majesty King George III after the failure of Dr. Willis that he was fully justified in the statement made that the care and control of a mental patient was the most responsible duty imposed upon any physician, and success in treatment depended upon qualities of head and heart such as no other disease demanded from the nurse and doctor; but success in mental cases is attended with infinite satisfaction and credit, and he was enabled by it to gain the confidence and respect of his sovereign in four reigns, for he became the confidential adviser in turn to King George IV, to William IV, and to Queen Victoria, thus exercising for himself as well as for the medical profession a reputation of distinction as well as gratitude for personal service, marked skill, and steadfast devotion.

The first cry that one hears when called upon to advise or to treat a case of mental disease is "Please don't put mother away"; "Please don't send her away to an asylum to associate with lunatics"; "I couldn't bear the idea when she got well that we should have been a party to having her certified as insane." And these are real grievances, especially to the lower middle classes, who are the real workers in the State, who bear their ills without revolt, and who often suffer in silence. The rich or the well-to-do can be received as voluntary boarders into any mental hospital or into any private establishment, but the less financially favoured, who constitute the great majority in the State, must be certified insane and detained until they have shown their right to be free, if they desire to undergo treatment, or their friends wish it. There is no place wherein to send the poor unless previously stigmatized by the certificate as lunatics.

Before the war it was so fully realized that even if recovery occurred the painful memory of association with cases worse than themselves, and the recollection of an illness with its distressing consequences would tend to precipitate a relapse, and that the stigma of a mental illness would remain for the whole of life and would be a blot upon his record, so that he would have no chances of success in the future. His detention as a lunatic would cause him to be shunned and avoided by all his former friends, and on leaving the asylum he would be isolated in a world of his own and viewed with suspicion and distrust. Owing to the nature of his illness he would be left without friends, without work, and without sympathy, even though, as in most instances, he was not to blame for his illness or misfortune. However short the detention, the disastrous consequence of certification remained; and not only did the undeserved reproach adhere to him, but it reflected also upon members of his family

* Communication to the West London Medico-Chirurgical Society during the latter part of the session 1918-19.

and upon those dependent on him. It marred their prospects as well, and certainly prevented them from being regarded favourably as to marriage, so that, owing to his illness, they descended to a lower social plane from which it often became impossible for them to emerge. So cruel were these reflections felt to be, and so undeserved yet so inevitable, that a strong effort was made before the war to obtain legislation so as to enable all mental cases to be treated in the early stages without the commitment certificate. So much impressed was the Director-General of the Army Medical Service with the reasonableness of this complaint that he decided no insane soldier or officer should be certified to be insane when suffering from a mental or nervous breakdown either until nine months had elapsed after the commencement of his illness, or unless the illness on the face of it presented incurable features or symptoms of chronicity or irrecoverability such as would be implied by cases of general paralysis, epileptic insanity, confirmed dementia praecox, or chronic delusional insanity.

Probably over 20,000 cases from among the soldiers at home and overseas presenting mental symptoms have been treated by the Army Medical Services in war hospitals during the last five years, and many of these must have recovered early, yet with the exceptions referred to not one of them has been allowed to suffer from the stigma of insanity. It is most urgently necessary—and this is only in accordance with the dictates of humanity—that the same treatment which is meted out to the mentally sick soldier should be extended to his civilian relations, as the benefits conferred upon the soldier would be extended equally to them, for in the early stages recovery is the rule.

In the statistics of Claybury, one of the asylums of the London County Council of which I had personal knowledge, the recovery rate for 1912 and 1913, the two years preceding the war, was respectively 41.95 and 38.58 per cent., whilst the average recovery rate for England and Wales was 32.3 and 31.9 respectively, and in the number of recoveries for 1913, the year immediately before the war, 70 per cent. were discharged recovered after a residence of less than nine months, and of these 60 per cent. were resident less than six months, and 17 per cent. less than three months, whilst less than a third of those who recovered did so after nine months and up to several years.

It is most strongly desired that those persons who may be suffering from their first attack of insanity should have the chance and the opportunity of recovery without being certified, and without incurring the disabilities already referred to. In order to show the need for this opportunity, it may be mentioned that no fewer than 18,000 cases of insanity occurred in one year—that is, in persons for the first time—and 90 per cent. of these were received into the county and borough asylums of England and Wales, all these being among the poorer, and financially less favoured, classes, who would deeply appreciate an escape from the certificate of insanity.

Many patients fear an indefinite detention in an asylum more than actual death, and they are themselves deeply suspicious and resentful of restraint. Such a feeling engenders hatred of the system, delays treatment, and lessens the chances of recovery. Already the poor may enter hospitals for bodily ailments voluntarily, but they cannot receive treatment for the more disabling mental illnesses without the certificate of insanity; and it is an anomaly, whilst admitting persons voluntarily for bodily complaints, to insist upon an aggression on personal liberty for the relief of mental illness. As the law stands at present, it is definitely set against the curative treatment of mental ailments. It clearly places obstacles upon the recovery of persons suffering from these diseases, and it interferes with the work of the physician who is concerned with mental healing. It is maintained that four definite points should be aimed at in any effort to better the treatment of early cases of insanity: (1) The extension of the voluntary boarder system from the rich to the poor insane and the contribution to their maintenance by the new Ministry of Health; (2) the sanction or approval of special homes for their reception and treatment, as is the case with mental defectives; (3) treatment for a period of six or nine months without certification; and (4) supplying to the patient an atmosphere of recovery, which the present asylum treatment does not do.

Discussion.

In the course of the discussion that followed, Dr. C. HUBERT BOND, one of the Commissioners of the Board of Control, made the following remarks:

I wish to dwell upon two points: one is the inference that may be drawn from the satisfactory proportion of recoveries at Claybury, and the other is the fact that all the cases out of which those recoveries occurred had, in accordance with the law, required to be certified under the Lunacy Acts before he or she could obtain admission with a view to treatment; and it ought further to be borne in mind that many of those recoveries took place within three months after admission, by far most of them within six months and but few after nine or twelve months. It is legitimate to inquire whether, and indeed to assume, that some of those who failed to recover at all might have done so had they received more prompt treatment in the earliest stages of their mental illness.

The stigma referred to as attaching to the certification of insanity is deep-rooted; it certainly delays prompt treatment; and it tends to make the treatment of the psychoses a discredited section of general medicine, instead of being, as it is, a highly important branch and a most difficult field of investigation and research.

Civilization has progressed, and much advance has been made since the original Lunacy Acts were framed and passed, largely to meet abuses—real or alleged; yet human nature being what it is, their relaxation without adequate supervision would probably be followed again by a re-appearance of at least some of those abuses which have long since disappeared; however, in view of the enlightenment of public opinion and of the intolerance of abuses to-day, my colleagues on the Board of Control as well as myself, and in fact many others who have a right to form an opinion upon this subject, and whom we have consulted, all feel strongly that an alteration in certain sections of the Lunacy Acts might now safely be made, and with great advantage to the patients whose interests they are primarily to protect. Such a modification ought to be made that may enable a person suffering from symptoms of incipient or early insanity to obtain with or without payment, according to the patient's circumstances, and expeditiously, such skilled treatment as may be necessary, but for a limited period (say six months) without the certificate of insanity. He should be under adequate supervision either (1) in one of the institutions for the insane, or (2) in a general hospital (either the large charitable or voluntary ones or those which it has been suggested some local authorities should ultimately provide), or (3) in such a place as a nursing home specially equipped and adapted for the purpose—each of these three groups of establishments to be encouraged and allowed to make special arrangements to deal not merely with an occasional patient, but with a number of such cases; or (4) as a single patient in any nursing home or private house.

So earnestly do my colleagues and myself desire to secure earlier and more prompt treatment for cases of mental illness, and if possible to break down that popular prejudice which is so prevalent in regard to mental illness, and which even denies its existence when present and delays its appropriate treatment, that if a change in the law can be secured—and this is necessary before any further steps can be taken—the Board of Control have suggested that, besides the absence of certification for a prescribed period, no notification to them of the names of the patients so treated need be made, being content with a facility to visit from time to time and see such patients, with an access to records and with certain provisos as to the forwarding of such patients' letters; but as respects private institutions and houses maintained for profit, we think that on each occasion of the reception of a patient under the proposed Act, notification of the fact (not of the patient's name) should be required, and subsequently of his or her departure.

I am not suggesting that all early cases of certifiable mental disorder could be suitably or properly dealt with under the legislation proposed, or that legal facilities should be sought to cover all early cases. My meaning will be clearer if such cases are regarded as divisible roughly into three classes: the "willing," who desire and consent to remain and undergo treatment; the "indifferent," who, owing to their mental illness, are unable to express consent or refusal; and the "unwilling,"

who would resent and refuse the restrictions upon their liberty necessary for treatment. For this third group it is considered, for the protection of all concerned, that the safeguards of the existing law should still be maintained; in other words, the freedom of action in treatment which we should like to see made legally available would not include a power of detention.

I should like to return to the subject of help from general hospitals, for it is one I have cherished for a long time, and to which I have several times made public allusion elsewhere. I would reiterate that no substantial progress can be made in the early treatment of mental disorder, and that the barriers which so unfortunately segregate the treatment of mental disorders cannot be removed, until the general hospitals agree to abandon their practice of giving the "cold shoulder"—if I may use the expression—to every case in which the symptoms are predominantly mental. I would like to appeal strongly to those in authority and to ask them to consider whether the time has not now arrived when this old policy may properly, and with all-round advantage, be reversed. I am familiar with the history for this attitude, and realize there are certain inherent difficulties in coping with it, but am confident that with sympathy and a desire to adopt a change in policy on this matter they could be overcome. The financial one might be overcome if the Legislature would empower the local authorities to subsidize the maintenance of patients suffering from early mental disorder, in special wards in or associated with a general hospital, and would authorize local authorities alone or in combination either to subsidize the provision of these special departments or to establish special hospitals of their own—the former alternative by preference. I venture to think that it is both timely and opportunely that this reference to general hospitals should be made at the West London Hospital, where some of my audience are carrying on so efficiently the work of relief.

It is highly desirable that adequate interest should be aroused in these matters, because the proper development of such facilities would naturally lead up to the establishment of psychiatric clinics, the absence of which in this country is a reflection at least upon our sympathy with the treatment of mental diseases. Their establishment would help to educate the public in matters of health, and certainly in respect of mental health. But besides that educational mission and besides their great therapeutic utility, they are urgently needed for the better education of medical practitioners and students, and for research in psychiatry. It is gratifying that at least three universities in this country have taken this matter into their serious consideration.

THE CURE OF BILHARZIA DISEASE BY INTRAVENOUS INJECTIONS OF ANTIMONY TARTRATE;

THE PROPHYLACTIC ACTION OF THE DRUG.

BY

J. B. CHRISTOPHERSON, M.A., M.D.,

F.R.C.P., F.R.C.S.,

DIRECTOR OF THE CIVIL HOSPITALS OF KHARTOUM AND OMDURMAN.

WITHOUT exception all the recent reports of cases so treated confirm the statement that antimony is a specific cure for bilharzia disease. In other words, antimony so used kills the parent worm in the tributaries of the portal vein of the patient and cures him of the disease.

But there is a wider interpretation of the formula "antimony cures bilharzia" than this, and it is the application of the larger meaning which makes the effect of the drug so complete—one might almost say wonderful.

In our paper in the *Journal of Tropical Medicine and Hygiene* of July 15th, 1919, pp. 129-144, we (J. R. Newlove and J. B. C.) show that the shells of the ova of *Bilharzia haematobia* and *mansoni* are permeable to water (they do not hatch out in urine without the addition of water), and that they are permeable also to chemicals such as formalin and potassic tartrate of antimony. The fact that bilharzia ova do not as a rule hatch out in undiluted urine and faeces indicates, it is true in negative manner, that the embryo within the ovum is

physiologically aware of the lack of favourable conditions of the medium in which the ovum is suspended, and therefore will not develop. The embryo in the ovum is "in touch" with the world without. This can only be explained satisfactorily on the assumption of permeability of the egg "shell."

The fact that the shell of the bilharzia ovum (*haematobia* and *mansoni*) is permeable to formalin, whilst that of ankylostomum is not, has a practical application, and is demonstrated in the ordinary method which we adopt at the Khartoum Civil Hospital for the examination of faeces for parasitic ova and worms: we find that after the addition to an ordinary stool of 1 oz. of 40 per cent. formalin, bilharzia ova in the stool are sterilized (will not hatch) whilst ankylostomum ova are unaffected and hatch out.

The permeability of the bilharzia shell to antimony has a still more far-reaching application.

If it is true, then my statement¹ that antimony not only kills first the parasite, *Schistosoma haematobia* and *mansoni*, *in situ*, but, later, kills the embryos in the ova deposited in the tissues, and that the patient is cured, not only of his bilharzia parasites, but that he ceases to be a bilharzia carrier and cannot propagate the disease, is a very important one, for it means nothing less than this, that we have in antimony a practical means of eliminating bilharzia as an endemic disease from Egypt and from those countries where it prevails, such as the Sudan and South Africa, or, at any rate, of converting an endemic disease of national importance into a sporadic disease of parochial importance only. For if we can stop the supply of infected ova to the intermediate host at its source by treating bilharzia patients with potassic antimonium tartrate then *Bullinus dybowskii*, *B. innesi*, *B. contortus*, and *Planorbis boissyi*, and other species of fresh-water molluscs which act as intermediate hosts for bilharziosis in Egypt, will cease to be infected, and they in their turn will be incapable of infecting the human host with bilharzia disease.

The fact that antimony given to a bilharzia patient kills the parent worms in the patient means benefit to one human being, but the fact that antimony also sterilizes the ova which have been deposited by the parent worms before death in bladder and rectum, renders the effect of antimony a hundredfold greater, for the benefit extends possibly to hundreds who might be infected by the patient, and it goes on acting all the time ova are being eliminated.

According to our own observations these deposited ova in some cases continue to be eliminated in batches for one or even two years after we may assume the parent worms have died (that is, after the completion of the course of injections).

There is another fact which suggests the permeability of the eggshell of bilharzia ova. After being deposited by the female parent worm in the bladder and the rectum the ova probably remain alive in the tissues for many months in a condition of suspended animation or development—they can only so remain alive on the assumption that the shells are permeable to the small exchange of nutriment required to keep "body and soul" together. Lying in the tissues when the injections are given, the very dilute solution of antimony in the blood slowly but surely penetrates the ova and attacks the embryos inside the shell and kills them.

If it is a fact that the deposited ova are sterilized and rendered harmless, it is a fact of the utmost importance, for in this event the patient cannot go on infecting fresh-water snails and through them other human beings, he ceases to be a bilharzia carrier and a danger to the community, and a direct means of offensive advance on bilharzia as a devastating disease is practicable in the shape of a frontal attack, and it is more than probable that by means of the prophylactic action of antimony (tartrate) bilharzia disease will be, practically speaking, banished from countries such as Egypt, where it is endemic and where it has so baneful an effect.

REFERENCE.

¹ *Lancet*, June 14th, 1919.

THE late Dr. J. Ewing Mears of Philadelphia bequeathed £20,000 to the Harvard University to be applied to the study of methods directed to the reform and cure of criminals and mentally deficient persons by surgical measures.

Memoranda: MEDICAL, SURGICAL, OBSTETRICAL.

TWO CASES OF HYPERNEPHROMA OF THE OVARY.

In a recent series of 1,000 consecutive morbid growths sent to me for examination I have met with two cases of hypernephroma of the ovary, a neoplasm which is sufficiently rare to justify a brief descriptive note. In both instances the tumour was detected in the left ovary in the course of hysterectomy for fibroids and intractable menorrhagia respectively, and appeared to be causing no symptoms. The right ovary showed nothing abnormal to the naked eye. The appearances, both macroscopic and microscopic, were practically the same in each case, so one description will serve for the two.

Each tumour was oval in shape, and about one inch long by half an inch across, and was embedded in the stroma of the oöphoron proper, its free border projecting into the peritoneal cavity. There was no definite capsule, but in sections the distinction between the white substance of the tumour and its vascular ovarian bed—from which it could easily be shelled out—was well marked.

Serial paraffin sections were cut and stained, some with iron haematoxylin and Biebrich scarlet, and others with acid rubin and Mallory's aniline blue and orange stain; the latter method, however, yielded no additional information.

Macroscopically the ovarian stroma showed no abnormality, and the tumour was seen to consist of a homogeneous mass of cells, the nuclei of which stained faintly with haematoxylin, while the cell substance did not take the counter stain at all. The cells were identical in appearance with those of the normal suprarenal cortex. The nuclei were not in mitosis and there was no evidence of conjunction between those of adjoining cells.

The origin of these hypernephromata would seem to be sufficiently clear from a consideration of the embryology of the parts. Up till the third month of fetal life the suprarenal bodies are in contact with the upper pole of the testis or ovary, and as this descends it may carry with it fragments of suprarenal tissue from which tumours may subsequently be developed. As a matter of fact, however, hypernephromata are more frequently found in the broad ligament than in the oöphoron itself.

There was no clinical or microscopic evidence of malignancy in either of these cases. A section of one tumour was shown at a pathological meeting of the West London Medical Society in February, 1918, and the other was observed quite lately and has not yet been exhibited.

London, W.C. A. KNYVETT GORDON, M.B., B.Ch.Cantab.

IONIC MEDICATION IN CANCER.

I HAVE, during this year, treated a considerable number of cases of varied character by ionic medication, and being impressed by the excellent results obtained, especially by the rapid destruction of carbuncles, I used it in an inoperable case of cancer of the rectum, and publish the following notes in the hope that those who employ the method may give it a more extended trial in treating malignant growths than is possible for one experimenter.

J. C., a man aged 74, was admitted to the Auckland Poor Law Infirmary with cancer of the rectum. His age, his bad general condition, and the large area affected, negatived any attempt at surgical treatment. The rectum, as high as the finger could reach, was filled by a hard mass, the perineum and the soft parts around the anus, extending laterally to the ischia and behind to the coccyx, were involved and indurated. There were a number of raised points commencing to suppurate, and he suffered from the usual typical attacks of severe pain. Knowing (by personal experience) that the excruciating pain of carbuncles is entirely removed by one application of zinc ions, and influenced by the known favourable effect of copper ions on lupus, I put him under treatment by copper ions in the hope of at least relieving his pain without employing opium. The first application was made on July 8th, and from that day until the twenty-fourth dose he was much relieved of pain, but in other respects remained *in statu quo*.

I then changed to zinc ions, and after one application pain had quite ceased. To-day (October 6th), after seventeen applications, his condition is as follows: The anus presents a ring of hard growth; the rectum, as far as can be reached, is soft and normal. All the induration of the perineum and surrounding area has disappeared and only one suppurating point—the largest—remains, but is much reduced in size. The old man is able to get up and walk about, and says he feels "Quite well." His general condition is much improved.

The method adopted was as follows: The rectum was packed with a tampon of wool soaked in a 2 per cent. solution of zinc sulphate, the depressions around the anus were packed so as to make the whole surface level, and a pad of sixteen layers of lint applied, covering all the diseased structures with sufficient pressure to ensure accurate and equal contact throughout. The active electrode (positive) was attached to the pad, and the indifferent (negative) to the lumbar region. The current employed was 60 milliamperes for thirty minutes on alternate days.

This case proves that in zinc ions we have an agent certain to relieve pain, and undoubtedly possessed of the power, to put it at its lowest, of not only checking malignant growth, but of destroying it. Personally, I am optimistic enough to believe that the astonishingly good results obtained in this case show that we have at our command the long sought for "cure for cancer."

I have this week commenced to treat an inoperable case of carcinoma of the uterus involving the vaginal walls by the same method, and purpose sending notes of the case after about a month's treatment.

Bishop Auckland, Durham.

MARK WARDLE.

A CASE OF FRACTURED SKULL WITH HAEMORRHAGE.

THE following case may be of interest owing to the uncomplicated recovery from a serious condition.

A man, aged 38, was admitted to hospital on February 26th, 1919, at 11 p.m., in a semi-conscious condition, with a history of a recent fall, "crushed head," and epistaxis.

There was slight swelling in the right temporal region; reflexes were present, and the patient cried out in response to cutaneous stimuli. The pupils were of medium size, equal and active, the pulse rather small and slow. Ninety minutes after admission a small quantity of blood commenced to flow from the right ear; the right pupil became inactive to light and slightly dilated. The symptoms of compression increased slowly at first, then rapidly, until there was profound coma with a slow, full pulse, abolition of reflexes, flaccidity of both upper limbs, proptosis of the right eye, and wide dilatation of right pupil.

Operation.

No anaesthetic was required, the skin incision causing no response. On turning down a temporal flap on the right side an L-shaped fissure in the calvarium was disclosed, one limb travelling horizontally forwards and one vertically downwards. The skull was trephined over the meningeal artery, close to the angle thus formed. Blood clots thereby exposed were gently removed, revealing slight haemorrhage, which became more and more free as the clots were taken away. The dura mater, seen only fitfully, was at least a quarter of an inch deep to the inner table. The blood came from two directions, above and anteriorly, but no bleeding points could be seen. The skull opening was enlarged, but the haemorrhage, which was increasingly free, could not be traced to its source, nor more than temporarily checked.

By this time the removal of the clots and the copious bleeding had so relieved the pressure on the brain that the patient became less deeply comatose and even slightly restless. Considering the haemorrhage and original compression, it was decided to ligate the right common carotid artery. The skin incision here aroused considerable response, the patient struggling with both arms and both legs. The artery was tied in continuity and the wound sutured. The head wound was lightly packed and a dry dressing applied.

Throughout the day the patient remained unconscious, except about 4 p.m., when he swallowed some milk and uttered a few words.

Next day he was able to swallow fluids at intervals, and on the day following the packing was removed and the wound sutured, leaving a small gauze drain in the lower angle. He now spoke more often and more intelligibly, and was conscious most of the time. There was left-sided paresis and the right pupil was still widely dilated. Six days later the wound was completely closed, and in a week was firmly healed. During this interval the patient's condition steadily improved, speech becoming normal and the paresis much less; the right pupil was still somewhat dilated and very sluggish, but proptosis had disappeared. The hearing on the right side was slightly impaired.

Twenty-five days after admission he was allowed up, and was discharged from hospital a week later, the only remaining defects being a very slight weakness of the left limbs, slight impairment of hearing, and an almost undetectable inequality of the pupils. The temperature, which was 96.6° on admission, rose to normal after the operation and remained so during his stay in hospital.

I am much indebted to my colleague, Dr. W. J. Hamilton, for valuable advice and assistance rendered before, during, and after the operation, and, in conclusion, desire to

acknowledge Sir James Cantlie's kindness in permitting me to publish this case, which was under his supervision.

A. L. GREGG, M.B., B.Ch.Dubl.

Seamen's Hospital, Albert Docks, E.

ABSENCE OF UTERUS, FALLOPIAN TUBES, ONE OVARY AND VAGINA, WITH ONE LARGE CENTRAL KIDNEY.

A YOUNG Parsee woman, aged 17, was brought to me for consultation as she had not menstruated since attaining the age of puberty. At the age of 15 she had an acute attack of pain in the lower abdomen for two to three days, which was taken as a sign of her approaching menses. The attack, however, passed off without any result, and she had had no similar attack since nor any signs of menstruation.

The vulva was perfectly formed, the pubis well covered with hair, and the breasts well developed. There was no vagina except for about a quarter of an inch. On rectal examination a distinct tumour was felt a little above the closed end of the ill-formed vagina. This was believed to be the uterus, but no tubes nor ovaries could be felt. As the parents were very anxious to get the young woman married it was decided that an exploratory coeliotomy should be performed, as, if there was a septum dividing the vagina from the uterus, a communication might be possible. The usual abdominal incision was made under spinal anaesthesia; on opening the abdomen I found that the "tumour" felt from the rectum was a large central kidney, slightly horseshoe shaped, but placed low down. There was no ovary or tube on the right side, but a fairly large-sized ovary on the left, with a Fallopian tube running down and disappearing into the upper end of the closed vagina. There were several small cysts in connexion with the mesentery, which were removed without difficulty, and the abdomen closed without any further interference.

The young woman is healthy in all other respects, and has never shown any other signs of functional derangements.

F. R. PARAKH, M.D., M.R.C.S.Eng.

Parakh Hospital, Khetwadi, Bombay.

Reports of Societies.

ANGINA PECTORIS.

At a meeting of the Medical Society of London, held on October 15th, the President, Mr. V. WARREN LOW, in his opening address, referred to the advances which had been made in surgery during the war, and said that much of the time of the medical societies would be occupied for some years in digesting the war experiences and in seeing how far they applied to conditions of peace. A long period of clean surgery had found the surgeon quite unprepared for the septic wounds which were incidental to the war, and had led at first to much confusion of thought and to the abandonment by many surgeons of their customary technique. But as time went on the treatment of septic wounds became more standardized and the value of free excision of infected tissue and early suture of wounds had gradually become more recognized. The war had established beyond doubt the value of prophylactic injections of antitetanic serum and had demonstrated the existence of local tetanus, hitherto unknown. Advances had been made in the study of surgical shock, the researches on which would have a permanent significance. The conservative surgery which the exigencies of the South African war had imposed had been reversed under the novel conditions of the last war, early operation or exploration after intra-peritoneal injuries having been shown to be the safe and proper procedure. It had been proved also that no mechanism which permitted operations under modified pressure was necessary in thoracic surgery. Opinions as to the wide field of usefulness of local anaesthesia had been fully justified. Great advances had been made in the treatment of fractures. Splints suitable for particular cases had been procurable; this close co-operation between surgeon and mechanic embodied a principle which should continue under peace conditions.

Dr. F. DE HAVILLAND HALL read a paper on Angina Pectoris with low blood pressure, during which he said that in the past it had been more or less assumed that high blood pressure was an invariable concomitant of angina pectoris, but in recent years attention had been directed to the occurrence of typical anginal attacks in the presence of low blood pressure. It was, however, possible that whilst the usual blood pressure was low, the cardiac attack might be accompanied by a rise of pressure; hence the relief which was sometimes obtained in these cases from the inhalation of amyl nitrite. In his experience the victim of angina pectoris had usually a blood pressure considerably above normal, and it was to an intensification of the already high pressure that an anginal attack was commonly due. On this occasion he directed attention to those exceptional cases in which anginal symptoms occurred in patients who had in the intervals a systolic blood pressure about or below normal. He had been struck by the failure of the drugs usually employed to give relief in these cases, and was convinced that a fatal termination might be accelerated if vaso-dilators were incautiously administered. The prognosis, always grave, was distinctly worse when anginal symptoms occurred in patients with a low blood pressure. The failure of nitrites to give relief in anginal pain was of bad omen, for it indicated myocardial degeneration and the tendency to death by sudden heart failure. He would insist that all indications of a failing myocardium—such as feebleness of the impulse, a feeble first sound at the apex, low blood pressure, a feeble infrequent pulse, dyspnoeic attacks, swelling of the feet, and signs of commencing oedema of the lungs—were of very grave prognostic omen, that these cases required a stimulating plan of treatment, and that vaso-dilators were useless, if not dangerous. Given in some cases of low blood pressure they might be tried, as they seemed to lighten the burden of the heart. But in these cases vaso-dilators must be used with great caution and not pushed, as an undue lowering of the blood pressure might be attended with disastrous results. It had been suggested that if within a minute or two nitrite of amyl failed to give relief a whiff of chloroform should be administered. He was doubtful of the wisdom of this procedure, especially in cases of low tension, and would prefer to give morphine subcutaneously. As a general rule, angina pectoris occurring in patients with low blood pressure required to be treated on different lines to cases in which it was associated with high blood pressure. An ounce of brandy in hot water might be given, or a mixture containing spirits of ether, aromatic spirits of ammonia, compound tincture of cardamoms in camphor water; this might be taken every half-hour for three doses if required. In cases of threatened collapse ether (m v) or camphor (gr. jss) in sterilized olive oil might be injected intramuscularly. In cases in which the chief symptom was pain, the only drug of any value was morphine in combination with atropine, which might be given in doses of $\frac{1}{4}$ to $\frac{1}{2}$ grain subcutaneously. The application of hot fomentations or of a hot-water bag to the precordium often afforded relief. If the feet were cold, hot-water bottles should be applied to them. In the intervals the patient should be dieted carefully, the amount of alcohol should be limited, and tobacco forbidden; excess in tea or coffee should be checked; dyspepsia and other conditions of lowered vitality should receive appropriate treatment. Among cardiac tonics no drug was so generally useful as arsenic; it might be combined with iron if the patient were anaemic. The addition of strychnine would help to improve the tone of the patient. Dr. de Havilland Hall supported his contention by reports of five cases. He also indicated the necessity for distinguishing between true angina and pseudo-anginal attacks occurring in neurotic individuals with low blood pressure, and recorded a case illustrating this point. Pseudo-angina was especially met with in excessive smokers. He had seen it occur in patients who had also abdominal angina.

In the discussion which followed, Dr. ALEXANDER BLACKHALL-MORISON said that in classical cases nitrites were of great value, but he doubted whether their action was peripheral, and regarded them as centrally acting stimulants. He questioned whether there was any etiological connexion between high blood pressure and angina. The cause of the pain was not known. He was in the habit of administering atropine, since he regarded angina as a variety of vagal inhibition of the left ventricle. Dr. SEYMOUR

TAYLOR suggested that angina may sometimes be concerned with the right side of the heart, and there might then be high blood pressure in the pulmonary system. He agreed that amyl nitrite should not always be used, and with the treatment advocated by Dr. de Havilland Hall for cases with low blood pressure. He had also seen fincture of musk, the animal preparation, give great relief. Dr. RICKARD LLOYD spoke of the value of physical and psychical treatment. The patient should be placed in the position of greatest physical comfort, and his attention diverted, and no drug should be administered without good reason.

Rebelsus.

THE CONDITION AND WORK OF THE BLIND.

THE welfare of the blind is at the heart of many, and to these the book on the blind of the United States¹ by Dr. HARRY BEST will be of rare value in their work. The dedication of the work reads: "To those bearing the heaviest of human sorrows but in whose souls there shineth an everlasting light, and to those who labor for them with infinite courage and faithfulness." Dr. Best may be assured that his great labour—for the production of this work of his, even though it must have been a labour of love, must have been a great labour—will lighten the labours of the many who work for the blind, and in that way help the blind also.

The book deals only with the blind of the United States. But there is no part of the recital of the condition and prospects of the blind in that country which has not its counterpart in this. The conditions producing blindness; the nature of the work of the blind; the difficulties of their position, especially of their economic position; and the means taken to improve these conditions, are very much of the same order. So that it will be as profitable for a worker in this country to study this work as it must be for a citizen of the Republic. Such differences as are to be found in the conditions there and here will be illuminating rather than confusing.

The work is divided into seven parts, which deal successively with (1) the general condition of the blind, (2) blindness and the possibilities of its prevention, (3) provision for the education of blind children, (4) intellectual provision for the adult blind, (5) material provision for the blind, (6) organizations interested in the blind, (7) conclusions with respect to the work of the blind. There follow appendices giving illustrations of raised alphabets in use for the blind, information as to the schools of the States, homes for the adults and children, and industrial establishments. To each chapter of these several parts there is attached a most exhaustive bibliography, which includes references not only to American literature, but to publications in this and other countries. The whole work is admirably indexed and summarized in the "contents" pages. Some small defects may appear to the eye of the medical reader owing to statements which are natural enough from the pen of a layman, but these small blemishes do not in any way detract from the great usefulness of the book.

Perhaps the chapter which will prove of greatest interest to the general reader is that on "Popular conceptions regarding the blind." As relatively few are called upon to associate intimately with the blind, we can hardly wonder that there are abroad many and serious misconceptions both as to the capabilities and the mentality of the blind, misconceptions which are greatly increased by the representations of blind characters in popular romances. Until the blind child or man is understood, there can be little chance of meeting the difficulties of the situation. The suppositions that linger in popular imagination are singularly conflicting. Some consider that the blind dwell in a world apart from that of common clay, that they possess a peculiarly spiritual temperament, that they are exceedingly docile and tractable of disposition, and that they are beings of singularly pure and innocent minds. Others seem to forget that they are possessed of ears and reflecting

minds, and speak of them in their presence with a strange thoughtlessness. Others treat them as though they were decrepit and even mentally deficient. Yet others credit them with a "sixth" sense—an almost miraculous power which enables them to outwit their sighted neighbours, not reflecting that he who is deprived of one sense must make up for the loss by cultivating others which each possesses but does not always trouble to realize. Again, how often are the blind referred to as the "unhappy blind," an ill-fitting appellation. We fail to realize that the blind are as human as ourselves, they are touched with the same passions and feelings as ourselves, and react to conditions of kindness or hardness just as any one of us. It is no kindness to the blind to consider them a race apart; true kindness will seek to understand the likeness in them to our common humanity, and to cultivate the talents they possess to the greatest extent possible. We believe this book will help many to do this.

CRIMINOLOGY.

MAURICE PARMELEE's book on *Criminology*² is a comprehensive and documented study of a subject that is of interest to everybody, for everybody is a potential criminal, from the point of view of social control. The book is divided into six parts. The first deals with the nature and evolution of crime, the second with the factors in the environment that make our criminals—climate, season, weather, demographic factors, economic and political stress, and the like. The third part gives a description of criminal traits and types; reading it, one is again and again tempted to quote Horace to oneself—*mutato nomine, de te fabula narratur*. The fourth and fifth parts are concerned with criminal jurisprudence and punishment; as a humanitarian the author is in favour of abolishing the death penalty for murder, but, alas! fails to give his readers that excellent French argument for both its abolition and retention—*Que messieurs les assassins commentent!* Part six is given to a study of crime and social progress. The book is well written, and makes highly interesting reading; it illustrates very clearly the increasing attention and sentimentality with which the punishment of crime is regarded nowadays by many thinking and unthinking people.

REVUE DE MÉDECINE.

THE publication of that old-established and well-known journal *Revue de Médecine* was at first curtailed, and eventually had to be suspended during the war. It has now reappeared in its thirty-sixth volume, and henceforth one number of about 120 pages will be issued each month. Its reappearance will be welcomed by all interested in progressive medicine, for it has been hitherto one of the chief organs of the publication of the brilliant clinical work that has distinguished French medicine during the last forty years.

The five years of the war have unfortunately wrought changes in its editorial staff: Landouzy has died, and R. Lépine has retired from its editorship, but the names of Roger, Pitres, Chauffard, and Vaillard on its title-page promise that it will attain the same high level that it reached in the past. The present editors recognize that certain changes have become necessary in the character of the articles that it publishes. In a foreword they point out that since its foundation medicine has become less academic and speculative but more physiological and social, and more account must be consequently taken of laboratory investigations and of the relation of bedside practice to hygiene and public health than was done in the past. The extraordinary development of specialities within recent years has also thrown upon such a journal as this the task of correlating and incorporating in the fabric of general medicine the advances of knowledge that have been acquired by such special branches. Reviews on special subjects will be consequently included from time to time, in addition to the original articles that will claim the bulk of its pages.

¹ *The Blind: Their condition and the work being done for them in the United States*. By Harry Best, Ph.D. New York: The Macmillan Co., 1919. (Post 8vo, pp. xxviii + 763. 4 dols.)

² *Criminology*. By Maurice Parmelee, Ph.D. New York: The Macmillan Company, 1918. (Post 8vo, pp. xiii + 532. 10s. 6d. net.)

The special character of the journal can be best indicated by short notes on some of the articles that are published in the first two numbers of this new volume. Pitres and Verger deal with the medico-legal problems of the traumatic neuroses, mainly in relation to the psychoneuroses of war. The problems which arose from the French law of 1898, that gave the right of compensation to those injured in industrial employment, were more or less satisfactorily solved on the principle that compensation for functional symptoms should be granted at a much lower rate than for corresponding organic disabilities. But before 1914 there was no provision for the invaliding or pensioning of soldiers who suffered with neurotic symptoms. On the advice of the Neurological Society of Paris, the Ministry of War decided to refuse discharge or gratuity to soldiers with hysterical manifestations alone, and to reduce to the lowest possible scale the temporary pensions granted to neurasthenics who were unfit for either active or auxiliary service. The authors recognize that though this principle was undoubtedly harsh in many individual cases, it was unquestionably successful in maintaining the strength and moral of the armies. Now that the war has ended those that have remained uncured are entitled to more liberal treatment, though their pensions should be on a considerably lower scale than those allotted to equal disabilities of organic origin. A large part of this article is devoted to a discussion on the nature of hysteria. It is interesting that not even a reference is made to the Freudian views that have become so popular in England; they refuse, too, to accept Babinski's pithiatric theory, though they admit that the results obtained in the French army neurological centres, in which the modes of treatment were determined by this hypothesis, were surprisingly good. Even the majority of the recalcitrant cases that had accumulated in the base hospitals recovered quickly, and returned to active service at the front, when they were again sent to these neurological centres. And it is stated that recurrences took place in only a very small proportion of them.

In Lépine's article on the influence of the nervous system on glycaemia a large number of clinical and experimental observations are collected together. Injury of the floor of the fourth ventricle produces an excitation of the liver and also of the adrenals, and as it causes a polyuria, sugar appears rapidly in the urine. The effects of cerebral concussion are similar, but as polyuria does not occur glycosuria is rare. Injury of the upper cervical cord may produce a hypoglycaemia with glycosuria, while peripheral stimulation of the sympathetic nerves may result in a hyperglycaemia.

Bard devotes a long article to the significance of the abnormal reactions to galvanic stimulation of the labyrinth in cases with cerebral lesions; and Pélu and Daguet describe their careful clinical and radioscopic observations on the immediate and late results of serous pleural effusions. Pieron's long contribution to the cortical localization of sensation is much less satisfactory. The symptoms of two of the cases which he studied suggest very strongly the coexistence of hysterical complications, while in his third case the bullet that produced the cortical injury was embedded deeply in the centrum ovale. His method of arriving at conclusions by a rough mathematical averaging of the symptoms observed in a series of 21 cases by different observers and under different conditions is unexpectedly crude. His misquotation of English and American authors from reviews of their papers indicates that our medical journals have not the circulation in France which they deserve. Bouchut contributes an interesting clinical and pathological study on the severer types of influenza; he describes very fully an acute toxic form which invariably terminates fatally, and insists on the rarity of bronchopneumonia in contrast to the frequency to oedema of the lungs, purulent bronchitis, and lobar pneumonia. These two numbers also contain papers on the chronic pneumococcal lesions of the lungs which are so frequently mistaken for tuberculosis, on chronic malignant endocarditis, and on post-traumatic asthenia and mania.

One interesting feature of the journal is an abstract in English of the main points of each paper at its end, but unfortunately some of these translations into our language are so faulty and incorrect as to be unintelligible.

PUBLIC HEALTH MANUALS.

In *Food and Public Health*³ Dr. WILLIAM G. SAVAGE deals with his subject in language so free from technicalities that even those who have had no medical or scientific training can grasp his meaning, and in so doing acquire a clear and balanced knowledge of food in its relation to the health of the community. There are probably few subjects about which the public are more apathetic or more easily misled by the faddist than in the matter of food. This little volume should be valuable to all who desire the latest and most accurate views on such questions as food as a cause of ill health or disease, chemical additions to food, bacterial diseases disseminated through foods, alcoholic and other beverages, milk and milk products, meat foods, foods of vegetable origin, and shell fish. The subject is wide, and the author is to be congratulated on the success of his survey, which in the space of 155 pages furnishes all essential information. The volume is attractively written, and is illustrated by eight half-tone plates.

In *Housing and the Public Health*⁴ Dr. JOHN ROBERTSON, C.M.G., brings to a subject which is of paramount importance at the present time knowledge acquired, not only from books and departmental reports, but also from his long and practical experience as medical officer of health of Birmingham. Dr. Robertson is no pessimist, and his conviction is that not only the physical but also the moral condition of the people will be improved by the provision of better homes, since "no single condition in the lives of the masses has such a damaging effect on health or does harm in so many other ways as bad housing." For him the first essential is to secure a town-planning scheme so that amenity and convenience, no less than proper sanitary conditions, may be obtained. The workman's house of the future should, he says, always contain a parlour, a kitchen or living room, a scullery and larder on the ground floor, and on the first floor three bedrooms and a bathroom, with w.c. and lavatory basin. This to some may seem impossible of attainment, but with anything less there can be no proper fulfilment of the requirements of hygiene and decency. The planning of the streets and the provision of open spaces are, in the author's opinion, almost as important as the sanitation of the house itself, and we note without surprise that he is in favour of the self-contained house, and condemns the flat system as unsuitable for the rearing of children. In his references to the law relating to housing he indicates that the time is opportune for a consolidating and simplifying Act in which all references to the working classes—a very vague term—should be left out, so that local authorities when building may provide for the mixing of the classes in the areas which they control. A few of the points on which Dr. Robertson rightly lays stress are: limitation to twelve of the number of houses to the acre, the provision of a w.c. and a bath, the abolition of the back entry for refuse removal, and the general "lay out" of the area. The book is well written, and should be in the hands of all who are in any way concerned with the housing schemes which are now being undertaken by so many public authorities.

Practical Sanitation,⁵ by Dr. GEORGE REID, medical officer of health for Staffordshire, has reached its nineteenth edition.⁶ It is an extremely good and useful handbook, eminently suitable in every way to be the guide of the sanitary inspector. The text is based on a series of lectures delivered by the author himself at some previous date, and the new edition brings the whole work up to the standard of the present day, save only in the matter of some legal procedures not as yet confirmed by the new Ministry of Health. The illustrations are simple, and may be followed with ease, and Dr. Reid's long experience of the actual and practical detail involved in the carrying out of sanitary works, drainage schemes, etc., is a guarantee

³ *Food and the Public Health*. By William G. Savage, B.Sc., M.D. Lond., D.P.H. English Public Health Series. London: Cassell and Co., Ltd. (Post 8vo, pp. ix + 155; 8 plates. 5s. net.)

⁴ *Housing and the Public Health*. By John Robertson, C.M.G., O.B.E., M.D., B.Sc. The English Public Health Series. London: Cassell and Co., Ltd. (Cr. 8vo, pp. ix + 159; 12 diagrams. 5s. net.)

⁵ *Practical Sanitation*. By Geo. Reid, O.B.E., M.D., D.P.H. Ninth edition. London: Griffin and Co., Limited. 1919. (Post 8vo; pp. xii + 367; numerous diagrams. 7s. 6d. net; postage extra.)

of the soundness of his teaching. Many more ambitious works dealing with this subject supply pounds of theoretical knowledge to one ounce of practice. In sympathy with the greater part of the rest of the community, Dr. Reid does not approve of the "demon plumber," and there is small doubt that many well thought out sanitary schemes would prove far more efficient in the working were the standards of skill and conscientiousness higher among all members of this trade. We are glad to learn from the author's preface that plumbers were to be found among those who attended his lectures, and cannot but hope that when the competence of both public and plumber in sanitary matters is greater the lamentable faults of the latter will be decreased. In fine, this is a valuable handbook, written with the pen of first-hand experience, and guided by a mind well trained in scientific thought.

BIOLOGICAL CHEMISTRY.

PROFESSOR HALLIBURTON'S *Essentials of Chemical Physiology*⁶ is a practical manual that has been well known to medical students for the last quarter of a century, and is now in its tenth edition. The present issue has been brought well up to date yet remains a reasonably slim volume. Its author is to be congratulated upon the unusual skill he has shown in satisfying the two main requirements of students—fullness without overgrowth. More than two-thirds of the text are devoted to an elementary course of practical work in the physiological laboratory; the remainder is occupied with an advanced course and a number of appendices designed for the instruction of inquirers who wish to go further, and desire to learn the use of more complex experimental methods such as those for the determination of hydrogen ion concentration, or the use of Barcroft's differential apparatus for the analysis of the gases in the blood. The book is well produced and illustrated, and may fairly be regarded as indispensable by the medical student.

The continued progress of knowledge about the chemistry of the carbohydrates is well shown in the third edition of Dr. E. F. ARMSTRONG'S book on *The Simple Carbohydrates and Glucosides*.⁷ It is written for chemists, chemical students, and general readers who have both a fairly up-to-date knowledge of organic chemistry and a keen interest in its advances. The chemistry of the carbohydrates comes into close touch with other sciences—physiology, botany, and zoology in particular—and Dr. Armstrong gives due weight to the connexions that have recently been made here by British, American, and Continental workers. The first and longest chapter in the volume deals with glucose, a third isomeric form of which has recently been recognized; while the last chapter, discussing the function of carbohydrates and glucosides in plants, is full of facts giving suggestive hints in a subject of the greatest practical as well as theoretical importance. The book is well written, and provides an excellent introduction to the study of the chemistry of the carbohydrates.

PROBLEMS OF FERTILIZATION.

PRIMARILY a book for the zoologist, Professor F. R. LILLIE'S *Problems of Fertilization*⁸ is a well written essay on a subject that should interest a far wider circle of readers, including physiologists and medical men. Beginning with a historical account of the subject, the author goes on to chapters dealing with the place of fertilization in the life-history, and its morphology, physiology, and specificity; he concludes that "while it is by no means certain that specificity in fertilization depends upon specific agglutination of the spermatozoön to the egg . . . the latter phenomenon furnishes an important clue for the further analysis of the problem of specificity in animals."

The last chapter deals with the problem of activation of the egg, whereby it is caused to develop; and here is developed a theory that some diffusible chemical "fertilizin"

may be necessary for the process of activation, possibly identical with the agglutinating substance mentioned above. Professor Lillie includes and criticizes in his pages the work of many other experimenters in this field, notably that of Jacques Loeb; the little book forms most interesting reading, and may be warmly recommended to readers of the classes indicated above.

NOTES ON BOOKS.

DR. A. E. COLLIE'S *Aids to Materia Medica*⁹ is a little book in which the often perfunctory nature of the medical student's knowledge of drugs and doses is fully recognized, and an attempt is made to help him through the examinations of various British examining bodies by means of tabulation and mnemonic rhymes. It is divided into five parts, dealing with the examinations held by the Conjoint Boards in England, Scotland, and Ireland, the Society of Apothecaries of London, and the Apothecaries' Hall of Ireland, the bulk of the volume being based on the schedule of the first of these. It is well arranged and printed, and the mnemonic rhymes are average specimens of their class. On the one hand, such books as this may be regarded as the *reductio ad absurdum* of pharmacology; on the other, it may be argued with perfect justice that they supply a want felt by certain medical students. Their defects are really matters for the consideration of the framers of schedules and of examiners, rather than of the reviewer.

The fourth edition of Dr. CUMBERBATCH'S *Essentials of Medical Electricity*,¹⁰ revised and enlarged, gives the medical student and practitioner an excellent practical handbook dealing with a subject of no little importance. The volume has been enriched by a good account of diathermal treatment, and the chapter on the electrical testing of muscle and nerve has been reconstructed. The book may be warmly recommended to those in search of a trustworthy and intelligible introduction to a somewhat mysterious branch of therapeutics.

The fifth volume of the *British Journal of Surgery*¹¹ contains a number of interesting papers dealing chiefly with the surgery of war. The Editorial Committee is to be congratulated upon the success with which they have selected their contributors; a special word of praise may be given to the publishers for the number and excellence of the illustrations in this handsome volume.

Dr. F. BRETT YOUNG'S novel, *The Young Physician*,¹² the work of a skilled novelist, describes the school days and professional education of a dreamy boy turned, willy-nilly, into a medical man, with grateful interludes of descriptive writing. The hero becomes qualified in the last chapter, and, thanks to the intervention of a hazel-eyed Rosie, signs on next day as a ship's doctor on the last page. We rather hope that he subsequently gave up medicine for some more congenial and less utilitarian occupation.

⁹ *Aids to Materia Medica*. By Arnold E. Collie, M.A. Cantab., L.M.S.S.A. Lond. London: Baillière, Tindall, and Cox. 1919. (Fcap. 8vo, pp. viii + 116. 3s. net.)

¹⁰ *Essentials of Medical Electricity*. By Elkin P. Cumberbatch, M.A., B.M., B.Ch. Oxon., M.R.C.P. Fourth edition, revised and enlarged. London: Henry Kimpton. 1919. (Cr. 8vo, pp. xv + 368; 76 figures, 11 plates. 7s. 6d. net.)

¹¹ *The British Journal of Surgery*. Vol. V. July, 1917, to April, 1918. Numbers 17 to 20. Bristol: John Wright and Sons, Ltd. 1918. (Sup. roy. 8vo, pp. 714; 687 figures. 36s. 6d.)

¹² *The Young Physician*. By Francis Brett Young. London: W. Collins Sons and Co., Ltd. 1919. (Cr. 8vo, pp. viii + . . .)

INFLUENZA IN SAMOA.

VALUE OF VACCINES.

IN a note published in the *Medical Journal of Australia* (1919, vol. i, p. 359) Surgeon Lieutenant Francis Temple Grey, R.N., M.B. Syd., who was the officer commanding the Samoa relief expedition, 1918, states that the epidemic arrived from New Zealand on November 7th, 1918, when natives from different parts of the group had assembled in Apia to meet friends coming from New Zealand; they went on board and carried infection to the most distant parts of the group. The incubation period was two days; the scourge reached its height on the tenth day. The ages most affected were from 18 to 35 and the old. The mortality was greater among men than women—in the proportion of 15 to 13. The incidence among the

⁶ *The Essentials of Chemical Physiology*. For the use of students. By W. D. Halliburton, M.D., LL.D., F.R.S. Tenth edition. London: Longmans, Green and Co. 1919. (Med. 8vo, pp. xi + 324. 7s. 6d. net.)

⁷ *The Simple Carbohydrates and Glucosides*. By E. Frankland Armstrong, D.Sc., Ph.D., F.I.C. Third edition. 1919. London: Longmans, Green and Co. (Roy. 8vo, pp. ix + 239. 12s. net.)

⁸ *Problems of Fertilization*. By Frank Rattray Lillie, Professor of Embryology, University of Chicago. Chicago: University of Chicago Press. 1919. (Cr. 8vo, pp. xii + 278; 13 figures. 1.75 dols.)

natives was 80 per cent. Out of a population of 36,405 the deaths numbered 7,264. Surgeon Lieutenant Grey attributes the high mortality partly to the fact that natives, although apparently of fine physique, have generally a poor chest expansion, and to their habits. The native house has a raised floor of coral and lava pebbles, a thatched roof supported on poles, and no walls, but at the beginning of the epidemic, when a native fell ill he lay down in his hut, and his family, having pulled down the blinds, which are usually lowered only in wet weather, lay down with him in sympathy. When the fever was at its height, on the third day, the natives cast off their clothes, pulled the blinds up, and many of the men went into the sea to cool themselves. This was often followed by pneumonia, although, except in children, few cases, even with precautions, escaped bronchopneumonia. At the height of the epidemic many lives were lost owing to want of food consequent on the cessation of its collection. On December 8th, 1918, food collecting was resumed, and the decline of the epidemic was popularly dated from that. Bronchopneumonia and pneumonia were considered to be rather a part of the disease than complications, for only 5 per cent. adults escaped the one or the other. Bronchopneumonia usually set in on the fourth day, and in fatal cases there was marked dyspnoea, cyanosis, and delirium. Among the whites the incidence was put at 60 per cent., and the case mortality at 2 per cent.

We have received from Surgeon Captain E. T. P. Eames, R.N., Director of Naval Medical Services, Australia, a copy of a note by Surgeon Lieutenant Grey on compulsory inoculation against Spanish influenza. The writer, as stated above, was in charge of the expedition sent to combat an epidemic in British Samoa, where he had an opportunity of witnessing the behaviour of the disease on virgin soil. The full dose of the vaccine used by him contained 125 millions of *Micrococcus catarrhalis*, and 50 million each of pneumococcus, streptococcus, and a Gram-positive diplococcus. His experience showed Pfeiffer's bacillus to be unnecessary as a constituent of a vaccine directed against the epidemic. Immunity begins to "peter out" after the fifth week, and he gave a full dose (50 million each pneumococcus and streptococcus) every five or six weeks. Only the mildest reaction was observed. He did not inoculate children or the old, unless requested, as they appeared to have relative immunity.

He recommends compulsory inoculation on the first signs of the appearance of epidemic influenza, and that the inoculation should be repeated every month or six weeks. He claims that this will decrease the incidence of the disease, mitigate its severity, and reduce the mortality to a low figure. He advances the following evidence:

1. The entire ship's company of the man-o'-war which took my expedition to the islands was inoculated. Communication with the shore at the various ports was, as far as possible, avoided, but this ideal was not entirely attained. Not one case developed.

[The ship returned to Australia in February, 1919, and in the middle of March an epidemic broke out, producing by the end of the month about 100 cases, without any deaths. He considers that this is evidence that inoculations made at the end of November and end of December gave immunity up to the middle of March and rendered the disease when it broke out non-fatal.]

2. Every member of my expedition was inoculated at least four times in three months. Not a single case developed, although the risk of infection was no small one, when it is remembered that in Samoa alone one-fifth of the entire population was wiped out by the scourge. Two officers had an illness of four to five days not as severe as the so-called influenza of normal times.

3. An interesting experiment to test the efficacy of the vaccine was provided by the Governor of American Samoa, who sent, against the wishes of British Samoa, forty natives from Pago Pago (a clean port) to Apia during the progress of the epidemic. These were isolated, inoculated, and not released until judged to be in a positive phase. Not one contracted the disease, and the Secretary of Native Affairs, who knew their names and villages, reported all clear after a lapse of one month.

4. Ship's company and passengers of the steamer which brought the expedition from Suva to Sydney were inoculated without exception. We anchored in quarantine in Sydney, and on the second day a case was taken ashore. We remained on board, quarantined another week. Although the ship was very overcrowded, not another case developed.

5. The naval dépôt at Williamstown contains a floating population of about five hundred, half of whom live on shore, and the rest, of course, have a fair amount of shore leave. All hands have been inoculated twice in the last three months. Down to March there had been only fifteen cases, all mild except

two, and no deaths. In March an influenzal epidemic broke out in the naval dépôt characterized by high infectivity, extraordinary mildness, and an average age incidence of 18.5; it caused 100 cases within a fortnight, but it was not clear that it was true influenza.

From the beginning of the year to the date of the note (June 20th, 1919) 2,875 ratings were vaccinated at the dépôt. There were 345 cases of influenza, five with pneumonic signs, but no deaths.

MEDICAL SERVICES IN INDIA.

THE Indian Medical Service, as is well known, is primarily a military service. At the time when the Royal Commission on the Public Services in India was taking evidence in that country the Service had a strength of 772 officers, of whom 475, or 62 per cent., were engaged on civil duties. Down to the beginning of April, 1915, 286 officers of the Service had been recalled from civil to military duty. The officers of the Service are partly European, partly Indian.

In addition to the Indian Medical Service other medical services are maintained in India by the Government. There is a service of Military Assistant Surgeons, which is recruited in India under the directions of the Director-General, I.M.S. Candidates are admitted on the result of an examination in general knowledge; those successful pass through a four years' course at an Indian medical college, the Government defraying the cost of their education and maintenance. Having passed the final examination they are placed for duty with British troops in station hospitals; eventually they may obtain employment as civil surgeons in certain stations. The pay began at Rs. 85 a month, rising according to rank and length of service, with a maximum of Rs. 400 a month. Recently the position of Military Assistant Surgeons has been improved and the pay increased in all ranks. At the present time the pay of Military Assistant Surgeons is as follows: 4th class (1st to 7th year) Rs. 100; 3rd class (8th to 12th year) Rs. 150; 2nd class (13th to 17th year) Rs. 200; 1st class (from 18th year to selection for promotion to senior grade) Rs. 250; a senior Military Assistant Surgeon with honorary rank of lieutenant, Rs. 350; with honorary rank of captain or major, Rs. 450. Military Assistant Surgeons in civil employ, whose duties relate to hospitals, sanitary and gaol work, can rise to civil surgeoncies, and after thirty years' service may receive as much as Rs. 800 a month. At the time of the Royal Commission the cadre of the Military Assistant Surgeons was 713, 424 of whom were on the military and 289 on the civil side.

In addition, there is a class of Sub-Assistant Surgeons, formerly called "Hospital Assistants," who also have a four years' course, their education being subsidized by the Government. According to the evidence given to the Royal Commission by the Bombay Medical Union in February, 1914, there were then 820 appointments, of which 135 were civil posts, but there were also other posts in the civil branch, the number of which is not stated. The salaries range from Rs. 35 to Rs. 110 a month after thirty years' service. Those on the military side serve with the Indian troops, those on the civil side in civil hospitals or dispensaries, in subordinate positions, their duties being of a minor nature. It is understood that the Government of India intends shortly to improve the position and pay of the Sub-Assistant Surgeons.

Finally, there are Civil Assistant Surgeons, who are medical graduates of Indian universities. Their curriculum lasts six years and its cost is defrayed by the student himself, although Government gives many scholarships. It is from this body that the resident house-surgeons and physicians of the principal Indian civil hospitals in presidency towns are chosen. A graduate of distinction of an Indian university may become an assistant surgeon when a vacancy occurs; he will be placed for duty in a subordinate position in a civil hospital, and may eventually obtain charge himself. From the body of Civil Assistant Surgeons are recruited the teachers and lecturers in many of the medical schools in India, appointments much sought after in India as in this country. In the Bombay Presidency in 1914 there were fifty-five appointments open to Civil Assistant Surgeons, all held by Indians. The salaries range from Rs. 100 a month to Rs. 300 at the end of thirty years' service, and they have the right of private practice.

We understand that improvements in the position and pay of Civil Assistant Surgeons also are in contemplation, and that an announcement regarding both classes may be expected before long.

MOTOR NOTES FOR MEDICAL MEN.

By H. MASSAC BUIST.

POINTS ABOUT THE PARIS MOTOR SHOW.

THERE is not very much to encourage the medical man in the exhibits at the first international show of passenger cars, tractors, pedal-cycles, utility motor vehicles, motor cycles and accessories opened at the Grand Palais, Paris, after an interval of six years. The display is thoroughly representative of the French industry, as well as of the Swiss. It shows, too, that the Italian and Belgian factories have got going again. The absence of German and Austrian cars is more than compensated by the increase of American exhibits; but the only names to represent the British industry are Austin, Cubitt, Daimler, Leyland, Sizaire-Berwick, Sunbeam, and Wolseley. One American manufacturer has boasted that, as he sells twice as many cars in France as any French maker, there is no occasion for him to go to the trouble and expense of exhibiting at the Grand Palais. That it should be possible for anyone to be able to make such an observation with even a shadow of truth sufficiently indicates the embarrassing situation in which the French industry finds itself after the great effort of the war.

Broadly, it has had to shun the problem of producing the cheap car. The new mass production Citroën car, mentioned in these notes early in the year, materializes tardily at this show, but at a price nothing like as modest as that originally mentioned. There are practically no examples available for report, nor is thirty-five cars a day "mass production" in the American sense. Thus new French manufacturing programmes are much akin to our own. As to the established French builders who made good in the pre-war period as well as during the campaign, Renault, the figurehead of the Gallic industry, still has the pluck to stick to the production of cars calculated to be of service to medical men; but he has had no option but to increase the price by approximately 50 per cent. Anyone who knows the circumstances of the European industry in this transition period will appreciate the great enterprise he has shown in keeping the price down as much as that. His raw materials are costing him at least twice as much as before the war—the actual rise in cost of all the materials that go to make a French car is 325 per cent.—and his labour is correspondingly dearer, therefore he must be using better manufacturing methods to be able to offer cars at such a relatively small increase in price.

These increases, however, are matters of the utmost seriousness to the medical man, whose income as a class does not average an increase of 50 per cent., far less 325 per cent., because there has been a war; but whose taxes have risen 200 per cent. or more. From his point of view, therefore, the Paris Salon, which is representative of the French industry and only suggestive of the motor industries of other countries, is a disappointment, particularly because it shows that the majority of French makers have shunned the problem of the cheap car and have taken the line of least resistance in these difficult times by making detail improvements of design on more or less conventional lines and improving the material and product in general without reference to cost, depending in the meantime on the fact that there is a ready market at any price for whatever they can produce that is worthy of their reputation.

THE INEVITABLE DEVELOPMENT OF BRAKE SYSTEMS.

Of course, there are some new-comers, some of whom have ideas in design that are at least of passing interest, but the majority of this quite small group may be ignored. They will not survive the motor slump in a year or two, even if they go the length of reappearing in the Automobile Show at the Grand Palais in 1920, which is also doubtful. As far as the current exhibition goes it indicates that the future of the French industry rests with the firms we know before the war. In the gross they have devoted attention to the larger and more powerful types of cars, which do not interest the medical man except where, in

this detail or that, they suggest features of design which may presently be incorporated in cars of the sizes and power calculated to be of service to him.

For instance, there is a tendency, in the case of larger cars particularly, to furnish brakes to all four wheels on the Perrot diagonal control system proved successful on Argyll cars years ago, otherwise totally ignored by the British industry, and employed with amazing success by Peugeot and Delage in the Grand Prix race a month before war broke out. The front wheel brake becomes more and more necessary as cars grow lighter and engines are made more efficient. The application need not be confined to any class of vehicles. The objection always brought against it is that it brings complication and adds weight; but neither need be great, and there are many features incorporated in the standard chassis which could much more readily be spared than a correct and scientific solution of the problem of giving the driver the option either of reducing the braking strains on his tyres by half, or exercising in moments of emergency twice as much braking power as he has at his command by the conventional system of design in which the effort is applied to the back wheels only. Undoubtedly we shall presently have small cars with brakes to all four wheels. The medical man needs them to keep down his tyre bill, and to increase the safety factor, especially if his practice is in hilly country. Meantime such features are only available in the larger French cars, the lead of Peugeot and Delage being followed, for instance, by a no less notable firm, Hispano-Suiza, of aero engine achievement, in its new nominal 37.2 h.p. six-cylinder model.

ENGINE FEATURES.

On the part of the leading firms there is some intelligent adaptation of aero experience, because they furnish evidence that they know precisely what features of aircraft practice not to apply to a proposition for car service. While these developments will presently become available in cars suitable in price and power for the medical man, at present both in this country and in France engines with aluminium cylinder castings and steel liners are chiefly being supplied to the more expensive cars, as instance the new six-cylinder Armstrong-Siddeley and the Napier post-war chassis, both with overhead valve engines, and the new Hispano Suiza, whose producer's ability to design an aero engine may be gathered from the fact that the total production during the war was over 50,000 aero engines, of which over 33,000 were built in France. But Hispano-Suiza neither introduces an eight nor a twelve cylinder car engine; instead, it embodies aero-engine practice in a six-cylinder car engine. Against this we have in the exhibition one toy scale eight-cylinder engine of the V type by another maker who did not achieve distinction as a designer of aero engines; and we have some followers of the pre-war lead of Delage in making small six-cylinder engine cars, as the A.C. people are doing in this country with their post-war model. The fact is, to-day it is possible to simplify a six-cylinder engine so that it is no more formidable, from the owner driver's point of view, than the pre-war four-cylinder type. Of course it has a great advantage in acceleration, but we should do wrong to conclude that it will presently oust the four-cylinder type by reason of giving a better balance; one has only to make acquaintance with the post-war Vauxhall type with Lanchester balance gear to realize that by such means it is possible to give a four-cylinder engine all the smoothness characteristic of a six.

In the main, most of the improvements seen at the Paris Show are not for medical men, for the simple reason that they are embodied in the larger and more expensive vehicles. But they interest him indirectly, because the retainable new features of the most expensive cars of one year become embodied in smaller, moderate priced cars of next season or of the one after. Other features of the Paris Show—including the displays of vehicles of the smaller sorts by newcomers from the aircraft and aero engine industries, such as Voisin, Farman, and Le Rhône—will be touched on later.

M. JEAN LOUIS CALVET of Béziers has bequeathed his estate, valued at £40,000, to the University of Montpellier, the interest to be applied annually for the best essay on the cure of cancer.

British Medical Journal.

SATURDAY, OCTOBER 18TH, 1919.

THE PREVENTIVE MEDICINE OF THE FUTURE.

SAVE for its housing activities, of which we have been told a good deal, little has been heard of the Ministry of Health since it came officially into being four months ago; but in future we may expect continuously to be reminded of its existence and its purpose.

The Ministry cannot hope to achieve all that it was established to accomplish unless it can carry with it public opinion, which needs instruction on the nature of the problems to be solved and the way in which their solution should be sought. It is too soon to ask for a statement of plans in detail, but not for a considered statement of the aspirations with which the Ministry is beginning its work. Such a statement is provided in a memorandum entitled "An Outline of the Practice of Preventive Medicine," addressed to the Minister of Health by Sir George Newman, K.C.B., M.D., chief medical officer of the Ministry. The author himself describes it as "fragmentary and provisional." This is too modest a claim; the memorandum is no doubt provisional, but so far from being fragmentary it is a comprehensive review of the development and present growth of preventive medicine, using that term in its most extended sense. We cannot profess now to examine the immense number of details which Sir George Newman has brought together in historical and logical sequence, but merely to give a general account of the scope and purpose of the essay, which will be found well worthy of careful study by all members of the profession.¹ In all that it does the Ministry must be able to command the support of the medical profession, and it will draw valuable inspiration from the Medical Consultative Council, the first meeting of which has been held this week.

The memorandum opens with a short section on the purpose of preventive medicine, which is defined as the science and art of applying human knowledge to the prevention of disease, its aim and purpose being "the removal of the occasion of disease and physical inefficiency, combined with the husbanding of the physical resources of the individual, in such a way and to such a degree that he can exert his full powers unhampered at home or in the workshop, over a reasonably long life, and with benefit and satisfaction to himself and all concerned. Its ideal is to restrict, subdue, and, in the far distant future it may be, annihilate the tendencies to marked variation in the healthy body of man. Its object is to prevent not only the spread of disease, but its occurrence: to remove its occasion. Its spirit must not be confined to sanitation or the 'public health' alone, but must pervade and inspire all branches of medicine." There follows a rapid sketch of the growth of medicine as knowledge and of the application of medicine, which together comprise the story of the rise of preventive medicine. Incidentally it is shown how the conception of prevention has widened, so that at the present day the problem is, first to rear and maintain a healthy

race of people, and secondly, to continue the attack upon infection, and by co-ordination and education to develop the attack upon all forms of preventable sickness and invalidity.

Sir George Newman is not unaware of the difficulties in the way of the realization of this conception. Among these he puts first the need for synthesis and integration, maintaining that the predominant need, both in medical education and application, is simplification and integration—first, in the thought and understanding of the meaning and destiny of medicine, and secondly, in practice, reverting thus to a topic which was the subject of his memorandum on medical education in England. He shows that he appreciates the need not only of the cordial co-operation of the medical profession, but of a better instructed public; perhaps he might have written a little more strongly on the latter. He shows himself, indeed, a disciple of Sir James Mackenzie in calling for a more intimate personal study of the beginnings of disease, of its earliest signs and of its subjective symptoms; no laboratory experiment or mechanical device can serve as a substitute for this knowledge, but to attain it we have to enlist the instructed sympathy of the public. Concerning the possibilities of the prevention of infectious disease the public knows something, although the profession is aware of the great need for a better insight into the mysteries of epidemic incidence, a matter to which Sir George Newman makes some reference.

It is chiefly in the section on the prevention and treatment of non-infectious disease that we encounter some opinions and statements which are novel in an official report. It was to be expected that the author would instance the prevention of heart disease, of rickets, and of dental caries, but we welcome a short essay on preventive surgery, as to which it is said that there is no more remarkable instance of the association of preventive and curative medicine than the recent advance in orthopaedics under the leadership of Sir Robert Jones and his colleagues. The aim of this department of surgery is well expressed when it is said to consist of two parts—reconstruction by anatomical restoration, and re-education of function by means which are partly physical and partly mental. Sir George Newman, however, is bold enough to include in this part of his essay a consideration of the prevention of mental disease, and in another part he discusses at some length, under the head of "heredity and race," the doctrines of eugenics, including the encouragement of healthy parentage and discouragement of unhealthy.

We have referred to the necessity under which the Ministry is, if it is to succeed, of enlisting public co-operation, collective and individual. Sir George Newman concludes his notes on the education of the public in hygiene by stating: "One thing is certain; no substantial advance can be made in this country in the practice of preventive medicine apart from the will of the people, which can only be guided rightly by knowledge and practice in hygiene. We have witnessed a nation organized for war; we require a nation organized for the purpose of national health."

He recognizes, of course, the need for investigation in relation to preventive medicine, and quotes the words of the Act which laid down as one of the duties of the Minister of Health "the initiation and direction of research." In furtherance of this he mentions as one of the functions of the central medical administration its duty to aid in the gaining of knowledge and the prosecution of investigations, both for the advancement and application of medical science and by instituting a medical intelligence service. He

¹H.M. Stationery Office. Cmd. 363. To be obtained through any bookseller. Price 6d.

knows, however, that though the Ministry of Health influences local authorities, in their hands will rest the main business of the execution of a national policy. He pleads for uniformity of administration in all comparable areas, and for a co-ordinated body of competent medical men charged with administration within the area.

Some space is devoted to a consideration of what is to be understood by "an adequate medical service." It would include clinics and dispensaries, hospital and residential institutions, and an improved dental service, as well as the maintenance and extension of auxiliary services, such as those rendered by the midwife, the nurse, the health visitor, the sanitary inspector, and the expert workers in electricity, massage and remedial exercises; but Sir George Newman wisely takes pains to point out to the public that the medical practitioner is the pivot, the anchor, and the instrument of a medical service. "If he is competent it has the first surety of success, if he is ineffective or ill equipped it must fail." He affirms also that the social and individual relation between doctor and patient is invaluable in the treatment of disease, and he has the courage to quote with approval the words of Sir John Tweedy when he said, "Any change, whether effected from within or imposed from without, that restrains the liberty or lessens the responsibility of a medical man, or hampers the free play of his intellectual activities, will be detrimental to the authority and usefulness of medicine, and prejudicial to the interests of public health and national welfare." What the central administration can best do is to provide a doctor with the means to help himself, through those agencies already mentioned, by increasing his facilities in the matter of laboratory equipment, consultant advice, and co-operation with medical neighbours, and also by the more general provision and better organization of post-graduate education. For too long, it is admitted, the practitioner "has struggled on against desperate, indeed almost hopeless conditions, without assistance, guidance, or co-operation which is readily available, without laboratory facilities, without nurses, without ample clinic and hospital accommodation." It is, says Sir George Newman, difficult to exaggerate the importance, both to medicine and the State, of the position of the practitioner. "No imposing institutes or hospitals will bring the healing art into the homes of the people; that can be done only by the practitioner." How true all this is, and how well it is to have such things said by the Chief Medical Officer of the Ministry of Health! But we cannot altogether forget that another branch of the same Ministry is marching to the rear with a banner inscribed "lightning diagnosis and cheap drugs."

THE NEW R.A.M.C. RATES OF PAY.

On September 13th, 1919, the new Royal Warrant was issued, laying down the pay and allowances for officers of the regular army, and in the *JOURNAL* of September 20th (p. 401) we gave an account of the new rates and conditions for the Army Medical Service. We propose now to point out certain respects in which they are unsatisfactory.

It is officially stated that the new rates for army officers are granted in consideration of the present high cost of living, and will be subject to revision either upwards or downwards according as the cost of living rises or falls. Under former Pay Warrants the R.A.M.C. received special treatment, inasmuch as recognition was given to the fact that it is a specialist corps consisting of men who have had a long and

costly professional training before they enter the army. In the latest Warrant this principle still obtains (though to a less degree) in the matter of full pay; but the rates of half pay and pension are now practically uniform throughout all branches of the service. It will be shown that this is detrimental to the R.A.M.C. Under the new scale of full pay a medical man who joins the R.A.M.C. at the age of 25, after an expensive professional education, will receive but a shilling a day more pay than a regimental combatant officer of the same age who has had five or six years' paid service and a much less expensive education. The general effect, therefore, of the Warrant will be to penalize the medical officer because he has spent some five years or more in learning his profession at his own expense. Hence the feeling of many officers of the R.A.M.C. that the new rates, unless modified in the near future, will have a disastrous effect upon the status of the corps as a whole.

The matter may be put more clearly by means of a hypothetical case: The elder of two brothers qualifies in medicine and joins the R.A.M.C. at the age of 25; the younger enters a line regiment at 19 or 20. The younger begins to draw pay as soon as he joins the army, and is eligible to retire on the same pension six years before the elder. This being so, it is asked, what will be the monetary inducement to a young man to take up medicine (as many have in the past) with a view to joining the service if he can do as well or better in the combatant ranks?

The chief grievance is in respect of retired pay. It is represented to us by many correspondents that the "rank element" of pensions is too considerable, and weighs unfairly against the medical officer.* Hitherto a R.A.M.C. officer, if he attained the rank of major, as in normal circumstances he did, has been able to retire on a pension of £1 a day after twenty years' service. This has been abolished. The scale of retired pay under the new Warrant applies alike to almost every branch of the service. In order to get an equivalent of the former pension of £365 a year a R.A.M.C. officer must reach the rank of lieutenant-colonel by the end of nineteen years' service; but in peace promotion as rapid as this cannot be looked for, and in the ordinary course of events it will take at least twenty-two years to reach that rank.

Under the new scale a R.A.M.C. officer retiring as a major after twenty years' service will only get a pension of £321 per annum (rank element £95, service element £225). He will be worse off as regards pension than the infantry officer who joins the army straight from school, since the latter will have served at least five more years, so that his service element would be £300, instead of £223, the rank element being identical. Another concrete example will show how this comes about. Let us suppose the case of two officers—one R.A.M.C., the other infantry, both promoted lieutenant-colonel at the age of 46. Four years later the infantry officer can retire with a pension of £600, while the R.A.M.C. officer will receive but £540 (rank element £240, service element £300). Should the promotion to lieutenant-colonel occur in each case at the age of 45 the disparity in pension is even greater, for at the age of 40 the infantryman will still get £600 a year and the R.A.M.C. officer £525.

We have taken the cases of officers of these ranks as illustrations, but it will be found that officers of

* It should be noted here that the gratuities formerly obtainable by majors have been replaced by pensions. Thus a major of fifteen years' service might retire with a gratuity of £1,800; he will now receive a pension of £185. A major of eighteen years' service received a gratuity of £2,500; he will now receive a pension of £255.

higher rank are under the same disadvantage. The reason is that the R.A.M.C. officer enters the army at a later age than the combatant. If we assume, as we may, that the average age on entry for R.A.M.C. officers is 25, and for infantry officers 19 to 20, the difference is seen to be at least five years. The main defects in the new Royal Warrant are to be traced to the circumstance that this fact has been ignored. We are quite clear that a blunder has been made, and that it must be speedily remedied if the R.A.M.C. is to prove attractive. Many of the points arising in connexion with the Warrant are complicated, and its provisions will demand very careful and detailed examination. The point, however, put forward here is so obvious and so important that we feel bound to call the attention of the War Office to it without delay, and to express as strongly as possible the deep dissatisfaction which exists. A fair remedy would perhaps be to credit medical officers with five years' service on entry, in fixing pensions.

THE AUTUMN PARLIAMENTARY SESSION.

THE House of Commons will resume its sittings on Wednesday and the probability is that the autumn session will extend to Christmas. The expectation that the War Cabinet would be replaced by one to be representative of the principal departments, but with smaller membership than in the later pre-war period, has not been fulfilled. Mr. Lloyd George may, however, intend to make this change on the final ratification of peace. Some months ago Mr. Bonar Law intimated that it would take place in due course, and obviously the existing arrangement is anomalous for administration on a normal footing. Finance, Labour, and Ireland will largely occupy attention during the coming week. No decision has apparently been reached whether an autumn Budget shall be introduced to impose additional taxation for the current year; this depends probably in part on the conclusion of the Cabinet as to the amount of reduction in expenditure that can be promptly effected. Already the national expenditure is far in excess of what was reckoned for, and a large deficit faces the Chancellor of the Exchequer. The provision for the Army, Navy, and Air Services was made as for a time of transition, the total cost being put at £402,000,000. But, in view of the exigencies of the situation, a ruthless cutting of these services to bring down the cost perhaps to half is promised, and already orders have been given which mark a severe beginning. Nothing is yet known, however, as to what retrenchment can be obtained in the enormous demands for the civil services. The position is very grave, but the figures which appear week by week of the immense excess of expenditure over revenue are liable to mislead the public, for the two columns have no direct relation to each other; national finance could not, of course, ever be arranged to give weekly balancing of any value for information. It is the tremendous enlargement of national indebtedness, taking months together, that causes so much concern. Two Labour bills which have had first reading are to be passed within the session. These are the bill to establish a forty-eight hours' working week, and the bill to set up a commission to provide for minimum wages. The first main proposal excludes agricultural labourers and seamen from its scheme, and this excites opposition from the Labour party. The railway strike and the labour unrest generally must come under review, and it is thought that the Government will deem it necessary to bring forward a bill for the creation of a Trades Industrial Board for the settlement of dispute by arbitration—a body, that is to say, which should have larger powers than those to be possessed by the National Industrial Council, the scheme for which is already formulated, with the idea of getting industrial peace by agreement on lines of mutual arrangement. The

report of the Sankey Commission on the nationalization of mines is almost certain to be taken as the basis for legislation which shall be either partial or complete. What is practically agreed upon is that mining royalties shall be acquired by the State subject to an allowance to be made for the provision of miners' cottages. It is uncertain whether in the present session the Government will produce a bill to carry out the policy of the Duckham minority report of the Sankey Commission, but Mr. Lloyd George has definitely stated that the Government policy follows these lines. The underlying principle is that the miners shall have a joint interest in the management of the collieries, which shall be grouped for control according to areas. Mr. Smillie, however, has declared that his union would rather have matters left as they are than that this arrangement should obtain in place of nationalization, and it is possible that the Government will leave the issue to be settled by referendum. Whether the Irish question will be dealt with in the present session depends upon what may come from the Committee of Ministers which, under the chairmanship of Mr. Walter Long, is to sit three days a week from the present week until it has produced the draft for a bill. There is no expectation that its conclusions, however broad, will satisfy the mass of the Irish people, but the real question is whether the proposal will be of such a character that Parliament may decide to pass them, and that then the Irish people, having the measure in operation, may find their salvation in working it out for themselves. The Indian Government Bill is another measure that will take up a considerable time, and some half-dozen more bills of a minor character on various subjects will have to take their chance, somewhat remote, of getting placed on the statute book before the session ends. It is understood that the National Health Services Bill is not likely to be introduced this year. Dr. Addison is too much engaged in transition work, in organizing the Ministry of Health out of the Local Government Board and other departments, to be able to undertake such a big additional responsibility at present. The housing problem must, moreover, absorb a good deal of his time, especially in view of the financial difficulties of providing brick houses, and the differences of opinion as to the value and virtues of wooden dwellings.

THE MUSEUM OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MEDICAL men and students of medicine will now find all sections of the Museum of the Royal College of Surgeons, Lincoln's Inn Fields, fully available for study. During the greater part of the war the Council of the College placed the museum and its staff at the disposal of the War Office to help in the building up an exhibition of a collection of specimens to illustrate modern war wounds and their sequelae. Altogether 3,893 specimens were received from military hospitals, besides extensive series of skiagrams, casts, and models. Of the total number of specimens received, 1,204 were sent to the museum by the medical services attached to the Canadian and Australian expeditionary forces (506 Canadian and 698 Australian). All the colonial specimens were dispatched some months ago to Ottawa and Melbourne, where they are to be mounted, described, and preserved. The "national" or "imperial" collection now remaining in the care of the College consists of 2,689 specimens; of these, 1,390 have already been mounted, described, and placed on exhibition in the museum. There still remain 1,299 specimens in store, which are now being examined and prepared by Professor Shattock and Mr. Cecil Beadles. The Medical Research Committee has given financial and other assistance in the preparation of the collection, while the War Office has engaged Mr. Cecil Beadles to help in the completion of the task which Professor Shattock and he have so well begun. In the meantime the Council of the

College has assigned one of the larger rooms of the museum for the exhibition of the imperial collection pending the settlement of its ultimate destination. As our readers are already aware, the greater part of the contents of the museum were placed in vaults for safety during the time London was exposed to air raids. They have now been restored to their place in the museum, and many minor alterations and improvements have been effected in their arrangement and display. Numerous additions have been made to the College collection in recent years.

HEALTH IN INDUSTRIES.

It is pleasing to see that the report of the Chief Inspector of Factories is once more published at full length for 1918.¹ The experience of the war has been reflected in the conditions of industrial employment. The fact has been impressed upon us that "an increase in the ordinary hours of work does not necessarily mean an increase in production, that the more the comfort and welfare of the worker is studied and provided for the greater is the output." The war dislocated industries, and the long hours spent by munition workers in the factories, although necessary in the first years of the war, could not be maintained, and were reduced. The factory life of the workers during the crisis was made brighter and better by welfare supervision. Recently hours of work have been shortened and the shifts changed, with benefit in most instances to factory owners and the workers alike. There are three different systems in operation: (1) The one-break day system, under which work commences after breakfast, and only one meal-time is allowed; (2) the two day-shift system, under which work is carried on by two shifts of workpeople, each working from six to eight hours daily; (3) the five-day week system, under which no work is done on Saturday. Working hours have been reduced from fifty-nine to forty-eight hours a week, and although there have been many complaints in regard to breakfasting before commencing work, general experience is that the change is a step in the right direction. During 1918 there were reported 53,491 accidents due to machinery and 108,663 to other causes. The fatal accidents numbered 1,579. The figures supplied cannot be compared with those published before the war. Through the operation of "Safety Committees," suggested by the Home Office a few years ago, and upon which in the large industries the management of factories and the workpeople are represented, it is stated that in one factory alone the accidents dropped 50 per cent. Favourable comments are made on "labour saving appliances" and on the systematic training of workers in weight lifting. Many of the labour-saving devices were introduced owing to the large influx of women into the factories. Miss A. M. Anderson, Principal Lady Inspector of Factories, in reporting upon welfare in factories and workshops, draws attention to the good effected by rest rooms in factories where young female workers feeling faint, or with some minor ailment, can lie down for an hour or two. The subject of "welfare" is still in its infancy, and if it is to play the beneficent part expected of it in factory life, supervisors ought to be trained for the work. Ambulance, first aid, and continuation classes are fully considered in the report. The electrical inspector draws attention to the increasing use of electrical energy in the manufacture of highly graded steels and alloys. During the four years 1915-18 there were 99 fatal cases recorded, as against 70 for the years 1911-14. Of the 99 fatal cases 14 occurred in electrical stations of public supply, and the remainder on factory premises. Of the 99 fatalities, 95 occurred with the alternating system, 19 of them being on systems of less than 250 volts. The three-phase system was responsible for 47 deaths at voltages ranging from 346 to 440 volts. The total number of cases of lead poisoning notified during 1918 was 144 with 11 deaths, as compared with 317 cases with 21 deaths in

1917. Dr. Legge comments on the fact that remarkably few cases of plumbism occurred in the manipulation of shrapnel and bullets. This, Sir Thomas Oliver informs us, is his experience also. The actual handling of metallic lead is an infrequent cause of plumbism. Only 10 cases are reported for 1918. There was a recrudescence of "phossy jaw" in phosphorus workers all through the war, 1915-18; 3 cases of arsenical poisoning with 1 death are reported for 1918, and 72 cases of anthrax with 8 deaths.

NELSON'S MEDICAL LIFE-HISTORY.

NELSON was one of those who, notwithstanding bodily infirmity, have writ their names large on the page of history. Like William III, whose life was a long disease, the strength and ardour of Nelson's spirit never failed to support his weakly frame whenever special effort was called for. The "little great man," as he was affectionately called by his friends, would have been rejected if he had offered himself as a candidate for the navy at the present day. His admission was due to the influence of his maternal uncle, Captain Maurice Suckling. But so poorly did that officer think of his nephew's fitness for the service that when reminded of his promise to take care of him he answered: "What has poor Horatio done who is so weak that he, above all the rest, should be sent to rough it out at sea? But let him come, and the first time we go into action a cannon ball may knock off his head, and provide for him at once." The high-spirited boy did not suffer this discouraging opinion to balk him of his desire, and at the age of 12 cheerfully faced life in the navy, where the hardships at that time were trying to all but the strongest. Quite early in his career his health was broken by a long period of service in the East Indies and he had to be sent home. In the West Indies, in 1780, he had so severe an attack of dysentery that on his arrival at Port Royal he had to be carried ashore in his cot, and he returned to England in such a condition that the act of moving him to and from his bed caused acute pain. While still suffering from the effects of the West Indian climate he was sent to the North Sea, where he was kept a whole winter. At the siege of Calvi in Corsica, where Southey says the climate proved more destructive than the service, all the prevailing disorders attacked him, but, according to his own theory, he had not strength enough for them to fasten on. At Calvi gravel was driven into his right eye by a shot which struck the ground near him. He made light of the injury, but he lost the sight of the eye, and the vision of the other one was so much impaired that for the rest of his life he wore a green shade over his forehead to protect the left eye from the effects of strong light. It is thought probable that if he had lived a few years longer he would have become completely blind. In the attack on Teneriffe Nelson was shot through the right elbow in the act of landing. He refused all help in getting aboard his flagship, except a rope thrown over the side. This he twisted round his left hand, saying: "Let me alone; I have yet my legs left and one arm. Tell the surgeon to make haste and get his instruments. I know I must lose my right arm, so the sooner it is off the better." The amputation was followed by a great deal of pain; the ligature, which was of silk, caused much irritation and discharge, and there was scarcely any intermission of pain, night or day, for three months after his return to England, and he was driven to take laudanum to induce sleep. A curious example of the all-embracing power of red tape, even in the case of one who had done the State such service, is afforded by the way in which Nelson was treated by the clerical officials at the Admiralty in the matter of his wounds. Not having been in England since he had lost his eye he went to the Admiralty to receive a year's pay as "smart money," but could not extract the money from the clerk because he had neglected to bring a certificate from a

¹ H.M. Stationery Office, Imperial House, Kingsway, London. Price 9d.

surgeon that the sight was really destroyed. Naturally vexed that this formality should not have been waived when, as he thought, the fact was sufficiently notorious, he procured at the same time a certificate for the loss of his arm. When he went again to the office the clerk, finding that the amount claimed was only the annual pay of a captain, said he thought it had been more. "Oh," replied Nelson, "this is only for an eye. In a few days I shall come for an arm, and in a little time longer, God knows, probably for a leg." At the battle of the Nile he was severely wounded on the head by a piece of language shot. A large flap of skin was torn from the forehead and hung over the eye with which he could still see, totally blinding him. At the approach of middle life Nelson suffered from gout, but he overcame the tendency to that disease by abstinence from animal food, wine, and fermented drink for nearly two years, restricting his diet to vegetables and milk and water. His health had suffered grievously in the Mediterranean; in describing his complaint he said, "It is as if a girth were buckled taut over my breast; and my endeavour in the night is to get it loose." After the battle of St. Vincent he felt the imperative need of rest, but as soon as he recovered sufficiently to resume duty he had to undertake work which entailed intense anxiety. The unrelaxed strain of his watch at Toulon, which lasted from May, 1803, till August, 1805, and his subsequent long pursuit of the enemy combined with the after-effects of his wound, brought him to the verge of exhaustion. On his way back to Italy he was attacked by fever, and for eighteen hours his life was despaired of. His health was so broken that he thought he could last only till after the decisive battle he felt to be impending. He was afraid of blindness, and though he was only 47, described his "shattered carcass" as in the worst plight of any in the fleet. At Trafalgar came the end. In the thick of the fight he was struck in the left shoulder by a ball fired from the mizzen-top of an enemy ship at a distance of not more than fifteen yards from the part of the deck where he was standing. The ball penetrated the chest and lodged in the spine. The immediate cause of death was haemorrhage into the cavity of the thorax from a wound of the left pulmonary artery. The account of his death given by Southey in his *Life* is supplemented in medical details by Dr. William Beatty, who ministered to the hero in his last moments, in his *Authentic Narrative*, published in 1807, and reprinted by Archibald Constable and Co. in 1895. Beatty thought that in spite of occasional illnesses Nelson might have survived to a great age but for the fatal shot from the *Redoubtable*.

HOSPITAL TEACHING UNITS.

We stated two months ago that certain London medical schools which have prepared schemes for the reconstruction of their clinical teaching had been officially informed that they could count on financial assistance through the Board of Education, based upon approved expenditure incurred in carrying out such schemes. In consequence, three or four of the medical schools in London have drafted schemes for the experimental application of the unit system. The current number of *St. Bartholomew's Hospital Journal* announces the establishment in that hospital at the beginning of the winter session of a medical and a surgical unit of the "professorial" type, with Sir Archibald Garrod and Mr. G. E. Gask, respectively, as directors of clinic. The directors will be whole-time officers, debarred from private practice, and each will have the help of an assistant director, a first and a second assistant, and two house-physicians or house-surgeons. The units will be provided with wards, with clinical laboratories and out-patient departments. A large part of the annual expenditure involved in the reconstruction has been provided by the Board of Education. The units will take their share in the treatment of patients and in the clinical teaching of the hospital. Professor F. W.

Andrewes, F.R.S., will continue to be pathologist to the hospital and lecturer on pathology in the medical school. Dr. Mervyn H. Gordon has been appointed bacteriologist to the hospital, and lecturer on bacteriology in the medical school; the office of assistant pathologist, hitherto held by him, has been abolished. Dr. R. L. Mackenzie Wallis has been appointed chemical pathologist to the hospital.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

The annual general meeting of the Society of Medical Officers of Health is being held on Friday afternoon of this week at 5 o'clock. The president, Dr. H. R. Kenwood, C.M.G., medical officer of health for Stoke Newington and Chadwick professor of hygiene in the University of London, has been re-elected for a second term of office. Dr. George Reid, M.O.H. for Staffordshire, will read a paper on some pressing public health problems. The report of the council for the session 1918-19 states that, with the termination of the war, many members have resumed their share in the work of the society, but that a considerably larger membership is needed. The new articles of association were adopted in July last, thus opening the doors of the society to medical officers of every department of the Public Health Service. The council records that a considerable measure of success has followed the issue of the joint memorandum by the society and the British Medical Association, urging local authorities to increase the salaries of their medical officials by 33 per cent. in view of economic conditions arising out of the war. On October 15th the council of the society held a conference with representatives of various bodies of tuberculosis officers. The annual dinner will be held at 7.30 o'clock at the Café Royal, Regent Street, on the same evening as the annual meeting. This is the first dinner held by the society since the outbreak of the war, and the speakers will include Dr. Addison, Minister of Health, Sir Robert Morant, and Lieut.-General Sir John Goodwin, Director-General A.M.S. The programme for the new session includes a paper, on November 21st, by Dr. W. J. Howarth on eugenics in relation to public health; a paper in January by Dr. John Robertson on slums and their regeneration; and a discussion in March on tuberculosis.

MEMORIALS TO LORD LISTER.

The memorials to Lord Lister about to be erected at University College, London, will be unveiled on November 11th. Lister entered University College in 1844 at the age of 17, and worked hard at the preliminary sciences before he became a medical student at the beginning of the winter session of 1846. He held the appointments of house-physician and house-surgeon, and spent altogether nine years at the college and hospital. His earliest original investigations were made during this period. In the first, made during 1852, which was concerned with the muscular tissue of the iris, Lister demonstrated for the first time the presence of two distinct muscles, the dilator and sphincter. The second series of observations dealt with the involuntary muscular fibres of skin. Lister took the M.B. degree of the University of London and the Fellowship of the Royal College of Surgeons of England in 1852, and in the following September went to pay that visit to Syme in Edinburgh which had so great an influence on his life.

A SERIES of demonstrations on diseases and disorders following lesions of the glands of internal secretion will be given by Professor Arthur Keith, F.R.S., at the Royal College of Surgeons of England, beginning on October 24th, when he will deal with acromegaly. The subject of the second demonstration, on October 31st, will be achondroplasia, and of the third, on November 7th, multiple exostoses. The demonstrations, which will be given at 5 p.m. on each day, are open to medical students and practitioners; first aid and ambulance students desirous of attending will also be admitted.

England and Wales.

THE HEALTH OF THE CITY OF LONDON.

THE fame of the City of London, its immense commerce, its multifarious markets, and its importance in the international finance of the world, are so conspicuous that it is something of an anticlimax to read in the summary report for 1918 of its medical officer of health that its population is estimated to be only 13,900. The facts are, of course, first, that the work of the city is mainly done by people who do not reside there, so that its population during the working day is very large; and secondly, that the activities of the port of London do not come under the notice of the medical officer of health of the City. Dr. W. J. Howarth reports that there were only 101 births within the City. The infant welfare centre is now held at St. Bartholomew's Hospital, and 285 visits were made to the homes of newly-born children. The death rate rose from 15.6 to 20.9 per 1,000, owing mainly to the epidemic of influenza. The City maintains a tuberculosis dispensary, at which there were 2,399 attendances, but of these 1,723 were of persons not resident in the City. The work carried out at the centre for the treatment of venereal diseases has increased, additional equipment has been provided, and various alterations made. The number of new patients was 528. Of these 247 suffered from syphilis, 219 from gonorrhoea, 48 from both syphilis and gonorrhoea, and 14 from conditions other than venereal. Of this total 398 patients were normally resident in London, and 206 of these suffered from syphilis. Of the 247 patients suffering from syphilis who came under treatment for the first time in 1919, 144 were men and 103 were women; and of the corresponding group who suffered from gonorrhoea, 158 were men and 61 women. The number of patients who ceased to attend the clinic without completing treatment was, for syphilis, 36 males and 15 females; and for gonorrhoea, 12 males and 6 females. The number of patients discharged from the clinic after completion of treatment was, for syphilis, 2 males; for gonorrhoea, 5 males and 4 females. A good deal of work was done in the way of meat inspection; considerable quantities were condemned, including a number of carcasses and parts affected with tuberculosis. Remembering that London is a port with easy access to the North Sea, it is a little disconcerting to read that of the 121,424 tons of fish delivered at or near Billingsgate Market, only 153 tons were water-borne. Over 2,000 tons of fish were condemned as unfit for food.

MANCHESTER ROYAL INFIRMARY.

The third of a series of Ellis Llwyd Jones demonstrations on diseases of the ear was given at the Manchester Royal Infirmary on Friday. This first course is being conducted by Sir William Milligan, aurist and laryngologist to the infirmary. Subsequent courses will be given by members of the staff of the throat and ear department. The number of entries for any one particular course is limited to ten.

CENTRAL MIDWIVES BOARD.

At a meeting of the Central Midwives Board on October 9th, with Sir Francis Champneys in the chair, charges against four midwives were heard and reports on adjourned cases were considered. Three midwives were removed from the roll, the chief faults being those of neglect in cases of ophthalmia neonatorum and ruptured perineum, and continued inability to take and record temperatures. The Standing Committee reported that the Ministry of Health had taken steps to lay the representation as to the modification of the constitution of the Central Midwives Board before both Houses of Parliament; that the Ministry approved the grant of war bonuses to the secretary and assistant secretary, and sanctioned the appointment of Mr. H. G. Westley as secretary on the terms of the Board's resolution of July 24th, 1919. A draft of a letter which the London County Council proposes to send to midwives practising in the County of London, on the subject of midwives acting in co-operation with medical practitioners, was approved by the Board.

Scotland.

MEDICAL SCHOOLS.

BOTH Edinburgh and Glasgow are overwhelmed by the number of students desiring to begin or resume the study of medicine. In Edinburgh it is estimated that as many students are being turned away as can be admitted at the present time; enrolments ceased some time ago, and it is doubtful whether all those desirous of entering can be admitted even a year hence. In Glasgow the accommodation in the schools is taxed to the utmost, and no new enrolments for the winter session are being accepted, except in the case of men returning from active service who had previously begun the study of medicine. The number of first year students is said to be 680, as compared with 612 last year, which was then the maximum. Arrangements for about 150 students are being made at the Royal Technical College, about the same number are attending the Anderson College of Medicine, and there are 60 at St. Mungo's College. For others there can be no admission to the medical classes until the spring. In Edinburgh also the first consideration is being given to the claims of service men, and with few exceptions the students commencing this session all belong to that category. Before the war the number of entrants was from 180 to 200; the applicants this year are much more numerous, but the accommodation in the university and the limited clinical facilities at the Royal Infirmary have made it necessary to limit the number of students in any one year to 350. A site for a chemical institute has been acquired on the southern outskirts of the city, near Blackford; the buildings will be begun immediately, and to them the whole of the chemical department will eventually be transplanted. The funds for this extension, estimated to cost a quarter of a million, have not yet been obtained. The scheme for establishing an institute of pathology and bacteriology in memory of Lord Lister has made progress. A site has been acquired close to the Royal Infirmary. In the promotion of this scheme the university is acting along with the medical corporations and certain other bodies. The new chair of therapeutics is a whole-time appointment, and the professor is commencing his duties this session.

We publish elsewhere in this issue a report of the address in which Sir Harold Stiles inaugurated his appointment as Regius Professor of Clinical Surgery, in succession to Professor Caird. At Aberdeen, where the classes in science and medicine opened last week, all are large. Professor Marshall, who has succeeded Professor Cash in the chair of materia medica, delivered an inaugural address, in which he spoke of the development of therapeutics.

GENERAL MEDICAL COUNCIL ELECTION.

Both Dr. Norman Walker (the sitting member) and Dr. Michael Dewar are prosecuting their candidature for election as direct representative of Scotland on the General Medical Council by addressing meetings of the profession in various parts of Scotland.

Dr. Norman Walker has held, or will shortly hold, meetings in Lanarkshire, Dundee, Aberdeen, and Inverness. He will address a meeting in Edinburgh on Wednesday next (October 22nd). Dr. Walker has insisted on the importance of the medical profession bringing its collective wisdom to bear on the problems of reconstruction. With regard to proposals for a State medical service he has expressed the view that, if that would mean that all medical practitioners were to be whole-time employees of the State, the times were certainly not ripe, and probably never would be. On the other hand, he has said that the State ought to co-operate with the profession in providing a more complete medical service, since medical science has advanced beyond the stage when any one practitioner can do everything that can be done for the health and recovery of all his patients. Events would, in his view, probably lead either to the provision of a whole-time staff of experts, organized as a branch of the civil or the municipal service, or the profession generally, with individual exceptions, would agree to undertake part-time service in

co-operation with the State, his own sympathy being with the latter alternative. His experience as convener of the War Emergency Committee, as chairman of the Central Professional Committee, as commissioner of medical services under the National Service Act, and as a member of the Highlands and Islands Medical Service Board, was that the best work is to be got from an organization in which there is a limited number of whole-time administrative officers, while the bulk of the work—that is to say, the essentially medical part of the work—is done by those whose official employment is part-time, and whose private freedom and initiation are otherwise restricted.

Dr. Dewar has spoken at meetings of the profession at Forfar, Dundee, and Inverness. His main points have been the desirability of electing a general practitioner, the reconstruction of the medical curriculum, the institution of the one-portal system, and the propriety of the compulsory inclusion of Latin in the entrance examination, with an additional language, preferably Greek.

Dr. Ebenezer Duncan of Glasgow has also issued an address. He urges that the time has come when the direct representative should be a man of large experience in general practice, resident in the western part of Scotland, but he also considers that the representative should have had some experience both of teaching in medical schools and of the examination of medical students.

Ireland.

THE PUBLIC HEALTH COUNCIL.

IN the JOURNAL of September 27th, p. 424, we announced the members of the Irish Public Health Council nominated by the Chief Secretary as Minister of Health for Ireland. The first meeting of the council was held on October 2nd, and the opening address by the chairman, Dr. E. Coey Bigger, is printed in this week's SUPPLEMENT. On the conclusion of the address, a vote of thanks to the chairman was passed, on the motion of Sir John Moore, seconded by Sir William Thompson. An informal discussion then took place regarding the nature and conduct of business to be transacted at future meetings of the council. The chairman explained that meetings would be convened by the Minister or himself when required, and generally speaking would be held at intervals of three weeks or a month, if not more often. In reply to a question by Dr. Maguire, the chairman said it would always be open to the council to invite or consider representations or opinions of the medical profession or of other organizations. It was agreed that it would not be desirable to admit newspaper reporters to the council meetings, but to furnish a summary of proceedings to the press. In a short discussion on new health legislation the suggestion was made that the council might consider the question of co-ordination of the functions of the various departments dealing with health under one department. In reply to a question as to the status of the Public Health Council, the chairman pointed out that the function of the council was to frame an Act for the improvement of the health services and conditions in Ireland, and this Act would probably involve some modification in the constitution and functions of the council. A statement upon the veterinary services in Ireland was read by Mr. Ewing Johnston, who was asked to prepare for a future meeting of the council a memorandum embodying in detail his proposals.

A HEALTH centre for school children has been fitted up in Madrid by philanthropic ladies belonging to the Comité Femenino de Higiene Popular. The children's hair is cut and their heads disinfected, and bathing facilities are provided. Teeth are attended to by a woman dentist.

DR. H. W. B. HERMES, associate professor of parasitology in the University of California, with a party of assistants, has completed a survey during the summer of the distribution of malaria-carrying mosquitos in California. The greater part of the summer's work was carried on in the San Joaquin Valley, but several weeks were spent in the mountains. The highest elevation at which malaria mosquitos (*Anopheles quadrimaculatus*) were met with at any time during the survey was 5,482 feet.

Correspondence.

THE CURE OF CRIPPLED CHILDREN.

SIR,—The communication published in the BRITISH MEDICAL JOURNAL of October 11th, under the title of "The cure of crippled children," will, I hope, receive the widest publicity, for Sir Robert Jones and Mr. Girdlestone have referred to a subject of national importance.

In Ireland, as in Scotland, and in some parts of England, osseous tuberculosis is rife amongst the children. Under present conditions the great majority of these cases must receive indifferent treatment for a short period in city hospitals, and from thence be sent to convalesce into the city slums amidst poverty and squalor, or to country homes under conditions which make recovery wellnigh impossible. Later the cases reappear with deformities, and either die or pass into the ever-widening realm of crippleddom.

Could it be but generally known that children so afflicted have a first-class chance of complete cure without any surgical operation, or, at least, have deformities effectually corrected, facilities would be provided, if not by the State, by sympathetic individuals or a charitable community.

Now is the time, by publicity and education, to stir the apathetic into action. All that is needed is an inexpensive but hospital situated outside the city (this is essential), with adequate orthopaedic appliances.

Cases requiring long detention should receive school education during the currency of their treatment.

How many general hospitals at present (apart altogether from their deplorable unsuitability in other respects) are in a position to keep a cot occupied by one case for more than a few weeks?—a totally inadequate time to guarantee the patients from a miserable future.

Those who are sceptical about the wonderful influence of a country atmosphere and open-air wards in the cure of surgical tuberculosis in children should go and see for themselves what has been done in England and abroad in this direction, and compare the results with all other forms of treatment.

In Ireland, where there is a scourge of crippling tuberculosis in children, not one single country institution is available which in any respect fulfils the required conditions.

In 1917 I was in communication with the Local Government Board of Ireland and Sir Robert Jones on this subject, and I had hopes after an encouraging correspondence that some scheme might receive the financial support of the Carnegie Trustees. The war was too distracting to those who otherwise might have helped, but now there is no excuse for maintaining a condition of affairs which is not only inhuman, but a grave loss to the man power of the country.—I am, etc.,

Dublin, Oct. 13th.

W. I. DE C. WHEELER.

TRANQUIL TRACHEOTOMY.

SIR,—Many years ago I employed a method practically similar to that advocated by Sir St. Clair Thomson in his interesting paper published in your issue of October 11th, in order to render the operation of tracheotomy as "tranquil" and as free from "mess" as possible.

The solution used for injection into the trachea was a 3 per cent. solution of cocaine hydrochloride, and mxx were injected through the anterior tracheal wall into the lumen of the trachea.

After employing the method in half a dozen cases I gave it up. From the aesthetic point of view it was perfect, from the practical standpoint dangerous. In most cases in which tracheotomy is necessary the pulmonary tissues are already water-logged, and the preservation of the cough reflex, although annoying to the operator and possibly to spectators, is a factor which makes for safety, enabling the patient to get rid of secretions which would otherwise collect and still further embarrass respiration.

Again, it is impossible in certain operations entirely to prevent the entrance of blood into the trachea. If the tracheal and upper bronchial mucosa are anaesthetic as the result of a preliminary injection of cocaine it lies there, coagulates, and for all practical purposes acts as a

foreign body, thereby increasing an already existing dyspnoea.

In the event of tracheotomy being performed as a preliminary to, say, thyrotomy for the removal of a malignant vocal cord, when, as a rule, there is no dyspnoea and no excessive secretion, the method may have some merit; but as a routine measure for all sorts and conditions of tracheotomies its advantages and disadvantages should, in my opinion, be very carefully weighed in the balance before being adopted.—I am, etc.,

Manchester, Oct. 12th.

WILLIAM MILLIGAN.

STIFF KNEE IN COMPOUND FRACTURE OF THE FEMUR.

SIR,—Mr. Bernard Roth and Colonel Broome-Giles, commenting on Captain Alexander's paper, advocate, as a measure of prevention for fibrous contracture of the quadriceps in the treatment of fracture of the femur, the application of extension to the lower femoral fragment, thus permitting daily exercise of the muscles controlling the knee. The immediate practical problem is, however, the adequate treatment of these cases of stiff knee, whether resulting from unskilled treatment of the fracture, or from the inherent difficulties of certain cases.

Captain Alexander advocates: (a) The sandbag method until 20 per cent. flexion has been produced. (b) This is to be followed by wrenching under gas (or ether), with passive movement, massage, graduated electrical contraction, and voluntary exercise. (a) I have seen the sandbag method applied in a number of cases, and in the majority flexion to 20 per cent. was certainly produced, but this was mainly brought about by the elongation of the infrapatellar tendon and its lateral expansions. Thus, if the patient was made to extend the knee, one found he could not take up all the slack of the elongated tendon. (b) Wrenching of stiff knees or other joints is surely not good orthopaedic practice. "An ounce of voluntary movement is worth pounds of passive" has become an orthopaedic maxim. Captain Alexander admits the risks, but considers that they can be obviated by taking certain precautions. He, however, says, "the following day (after wrenching) the patient may complain of pain alongside the patellar ligament, and where the muscle scarring is most dense, and the knee may be slightly swollen." I have also found tenderness and pain at the insertion of the patellar tendon into the tibia, and have seen very marked swelling follow wrenching. Injury is thus caused by the wrenching, but are the intramuscular and extramuscular adhesions broken down? What results from the sudden forcible strain is injury to the tendon insertion, to the muscle (fibrous structures and muscle fibres), and to the joint structures. The injury is of a mild degree certainly, and Captain Alexander considers this justifiable since a greater degree of flexion is produced. But, as he points out, this flexion is not a real increase of range of voluntary movement—the patient after the wrenching cannot extend the knee beyond an angle of 165 degrees. Can adequate re-education of function be secured in these cases without continuous extensile strain on the quadriceps, or wrenching of the knee? I have treated a number of cases without recourse to either of these methods, and with fair results. The principles of the methods employed are based on those laid down by Dr. Colin Mackenzie, and Professor Amar—in his book on functional and vocational re-education of infirmities of the locomotor apparatus. They may be outlined as follows:

(a) If there is marked dense scarring binding down the quadriceps to the femur—as frequently happens—a plastic operation is usually necessary. This should not be undertaken until it is seen how much softening of the scar tissue and improvement of muscular power and range of movement can be obtained by non-operative measures.

(b) Voluntary exercise on the minimal or submaximal load principle is the essential means of "cure." As Captain Alexander points out, "an overworked muscle does not develop, it atrophies." The patient's skilled efforts can be greatly aided by physiotherapeutic measures.

(c) Contrast baths and massage before and after exercise are of distinct value. Diathermy or ionization does undoubtedly soften scar tissue. These measures, if skilfully used, help the patient to secure a longer habit length of the quadriceps.

(d) In the early stages, when the muscles are markedly weak, postural rest by suitable appliances is essential. The appliance should be worn continuously between periods of exercise, and should be discontinued only when the muscles are able to perform their postural function.

(e) Passive movement by the surgeon may help, as Captain Alexander suggests. Gradual slight strain by splints or the sandbag method is of help in stretching the contracted fibrous structures in the muscles. This strain should not be kept up for long, as it leads to muscular fatigue and even to injury of structure. At first, one to two hours a day is enough.

Flexion to 45 degrees at least is what is aimed at, but the increased range of movement is useless, even harmful, unless it is secured by a graduated re-education of function of all the muscles controlling the stiff knee. Recovery is by a process of adaptive growth in the injured muscles and other skeletal structures, and there are no safe short cuts in Nature's processes of growth.—I am, etc.,

Aberdeen, Oct. 2nd.

CHAS. FORBES, O.B.E., M.B.

THE VENEREAL PREVENTION COMMITTEE.

SIR,—The establishment of a Venereal Prevention Committee, as indicated by the manifesto published in the JOURNAL of October 4th, is a practical step. Its practicality lies in the directness of its aim. Committees, societies, councils, and organizations have been formed for dealing with the venereal question before. The prevalence of syphilis and gonorrhoea at the present moment indicates how ineffective they have been. Their failings have consisted of want of cohesion, the indefiniteness of the goal for which they were striving, and differences of opinion as to the methods by which it should be reached.

Under the present conditions one must agree that in civil life early disinfection centres are inadequate, and will remain so until the conditions alter. The element required to make them effective is that of force. The only way in which this can be brought to bear is by legislation insisting upon compulsory notification and treatment. While in the army I proved the value of this. When acting as A.D.M.S. North Persia, and latterly when senior medical officer in Baku, the following measures were adopted:

Antivenereal propaganda among the troops was effected by weekly lectures by medical officers. The men were extremely receptive. Early treatment centres were established in each battalion, with a general one at the military hospital for those men who either did not belong to a battalion or who were diffident in approaching their own medical officer. I have published the results elsewhere; but it is sufficient to state here that, from being a serious problem, venereal disease became almost negligible.

My experience of the packet system has not been such as to make me an enthusiast. To the intoxicated man, the optimist, the careless person, or to the sexual athlete whose prowess outstrips his supply of medicament, packets are nearly useless if given before the act. To get the full benefit from the prophylactic packet its contents must be used with great care and thoroughness—two things remarkably absent from the make up of the average soldier. A mere smear of calomel ointment in the dark to the outside of a redundant prepuce is futile. The main objections are due to ignorance and to want of training, and so can be remedied.

Since at the present moment compulsion cannot be used, there is, as the manifesto indicates, only one method left—namely, "immediate self-disinfection." The committee do well to concentrate upon this. What is wanted is energy, strenuous propaganda, and the arousing of a public demand that the means of disinfection should be made immediately available.

The male part of the population is primarily concerned, and the best place for written propaganda is undoubtedly on the walls of the public lavatory. I have already suggested that this should consist of something after the following style:

Venereal Disease.

Every time you have sexual intercourse with a woman who is not your wife you run the risk of venereal disease. You can avoid the disease in one way. In every public water-closet is an automatic machine. By putting a penny in the slot you will obtain a packet with the necessary materials. Apply them according to the directions and you will be safe.

Among the directions should be one pointing out the importance of the time factor, and recommending that if more than twelve hours have elapsed, recourse should be had to an early treatment centre or a medical practitioner. The main theme of the directions should be *thoroughness*.

One other point is that strict supervision should be exercised to see that the propaganda bills do not become defaced or illegible. They should be placed at the level of a man's eye where he is bound to see it. I took the trouble to measure the height at which some of the bills of the National Council for Combating Venereal Disease were placed in a railway lavatory, and they were almost eight feet from the ground. Few men would notice them.

The Committee for Venereal Prevention deserve the whole-hearted and energetic support of every member of the medical and lay public. Can they but secure the co-operation of the press and the various health authorities they will deal a severe blow to the gravest national menace.—I am, etc.,

London, Oct. 4th.

E. T. BURKE, M.B., Ch B.

LOCAL CLINICAL LABORATORIES.

SIR,—May I say a few words in advocacy of the large laboratory "at a distance," which most of your correspondents are inclined to decry?

In the laboratory of which I am medical superintendent—I have no wish to advertise it, so do not give its name—the desirability of consultation between the clinician and the pathologist is always borne in mind. Forms are issued for brief notes on the clinical history of the case to accompany the specimen, which are nowadays almost always filled in by the sender, and when these are essential for an opinion on the clinical significance of the pathological findings, this is withheld until the doctor has been communicated with. In practice I do not find any real difficulty here, and the laboratory has 2,000 medical men and over 200 public health authorities on its books. Incidentally, the report on every specimen is signed by the actual observer, who is invariably a qualified medical man with clinical as well as pathological experience, so that the pathologist is a definitely responsible person. I admit that when specimens are sent to institutions where the reports are not signed by a medical man, there is no guarantee that the clinical significance of the findings is borne in mind; the work may be done by a laboratory assistant without the sender being any the wiser.

The main advantage of a central laboratory, however, lies in its size. It is obvious that the larger the output the greater are the facilities for accurate work and also for research, which is the life blood of pathology. It is also possible to install appliances that make for accuracy, the cost of which would be prohibitive to a small laboratory. Another advantage lies in the fact that many specimens require the work of observers who are skilled in more than one branch of pathology. How many local laboratories would be able to support a chemical pathologist, bacteriologist, and histologist? and yet all are often required for one specimen. How often is a really deep knowledge of all three branches contained in one man? In a large laboratory much useful work is done in consultation between these different members of the staff over the teacups when the tired eyes are rubbed and the welcome cigarette lighted.—I am, etc.,

September 22nd.

CLINICAL PATHOLOGIST.

MEDICAL MEN IN PUBLIC LIFE.

SIR,—I hope medical men will not be discouraged from entering public life by the letter which appeared in your issue of October 4th signed by Dr. Edward Jepson. His experience of opposition by his confrères in Durham is quite contrary to mine in Swansea and Tunbridge Wells. In the former town, where I was a member of the council and the old school board, I had their best support, and when I left the town I was the recipient of a very handsome testimonial from them, which was presented to me at a dinner where such kindly and appreciative speeches were made that I am ever grateful to my professional brethren of that town and neighbourhood for their great kindness to me; and they filled up my cup of gratitude by giving my wife a beautiful bureau, in addition to the silver bowl which was handed to me by the chairman of the Division. Dr. Morris of Neath.

And now, when I have just been elected to the mayoral chair of Tunbridge Wells by a unanimous vote of the town council, the local Division of the Association has sent me its congratulations in a very warm-hearted manner.

I am sure, as I said in a previous letter to you, that any medical man who takes his part in public affairs will have the hearty support and kindly approval of his brethren.—I am, etc.,

Tunbridge Wells, Oct. 10th.

H. A. LATIMER, M.D.

THE PATIENT UNDER CAPITATION.

SIR,—Is it too late to reconsider our attitude towards the question of capitation fees in insurance work as opposed to fees for work done? A universal capitation fee may appear to some to be a *sine qua non*, to others a detail, which, having been settled once in principle, is not worth dragging again into the arena of medical politics. To both of these classes I would venture to appeal not to be satisfied to allow this question to remain as it is, for assuredly, to my mind, there is in this very policy an insidious germ which may eventually grow into a bond imprisoning the profession under State control. I am not here discussing the adequacy or otherwise of any particular fee which may be granted us, I merely want to point out the danger we run by blindly accepting the capitation principle.

The working of the National Insurance Act is differently viewed by doctors all over the country. In some places men are perfectly satisfied with it, in others the reverse; but can we honestly say that from the patient's point of view it is a success? I am afraid not.

When patients are catered for on a contract basis there is a lack of that stimulus to do our best which, however much we may deprecate it, tends to numb our conscience and tempts us to get through the job as quickly as may be and pass on to something else. Payment in advance has something of the same tendency and shares with contract payment this unenviable attribute.

To get into the habit of doing less than our best is lowering the dignity of our profession, and I contend that the imposition upon us of the National Insurance Act has had that effect.

Turning now to another and even more serious aspect of the question, I am of opinion that contract work such as at present obtains knocks the bottom out of that kindly feeling which ought and used to exist between doctor and patient. We all know what this is, and I maintain that this relationship, this confidence, this power for good which the family doctor wields—an asset of incalculable value in our treatment of the sick—is jeopardized by the principle of contract service.

Before the Act (with some exceptions—club practice, etc.) every patient was a private individual, and in cottage work 2s. 6d. was a satisfactory if small remuneration. I believe it would have been better if we had worked the Act on these lines. We should have continued to be free, to give of our best, and our relationship with our patients would not have been disturbed. But we have chosen (or been driven) to accept in its place a form of service which undoubtedly has advantages from a time-saving point of view, but which, as I remarked, contains a dangerous germ. For are we not, by accepting this principle, making it easy for the authorities—by whom we are being ever more and more controlled and coerced—to still further increase that control, and as they spread the insurance net wider and wider to lead us finally to a State medical service?

I think we are, and I think, therefore, that we ought carefully to reconsider our position afresh before we are bereft of the moiety of freedom we still possess.—I am, etc.,

September 22nd.

ANTI-CONTRACT.

ROYAL NAVAL MEDICAL SERVICE.

SIR,—The correspondent in your issue of October 4th (p. 454) very ably states the new conditions of naval medical pay. It was, however, not the pay that was criticized but the pension. In regard to the pension, his only remark is "the rates of retired pay have been substantially increased," a statement which all senior medical officers now serving hold to be untrue.

Now to consider this new pension scheme. The Admiralty has adopted the principle of equal pensions for all branches. If this carried with it something approaching equal oppor-

tunity for drawing the higher scales of pension there would be no criticism. Many of your correspondents have referred to this point, but no one has yet shown the injustice in a concrete and definite way. I therefore give the following figures as taken from a recent Navy List:

Executive Commanders:
2 in 3 attain Captain's list and higher pension of £300.
Paymaster Commanders:
1 in 9 attains Captain's list and higher pension of £300.
Engineer Commanders:
1 in 10 attains Captain's list and higher pension of £300.
Surgeon Commanders:
1 in 16 attains Captain's list and higher pension of £300.

This means that at present over 90 per cent. of surgeon commanders are retired on the lower pension of £600, and are classed for pension with the failures in the executive branch; for I do not think that any naval officer will deny that a commander at 50 is a failure professionally, although it may be due to reasons out of his own control, such as ill health, etc. There can never be this "equality of opportunity," as the navy will always require far more captains in proportion to commanders than surgeon captains in proportion to surgeon commanders.

It was probably owing to this lack of equal opportunity for higher promotion that a medical officer's pension in the past was relatively higher, and not to his supposed earning capacity ashore, which after the age of 50 is a rapidly decreasing asset.

If justice is to be done, the *maximum* pension of surgeon commanders should be raised 25 per cent.—that is, to £750 per annum.

I presume that something will be done to remove the present strange anomaly whereby a surgeon commander retiring at 54 with possibly thirty years' service receives only the same pension—£600—as one who retires at 48 with perhaps only twenty-one years' service.—I am, etc.,

October 18th.

ANOTHER MEDICAL OFFICER.

. We have received a letter on this subject from a correspondent who omits to enclose his card.

THE R.A.M.C. AS A CAREER.

SIR,—I read with great interest the address given by Lieut.-General Sir John Goodwin, K.C.B., and also your article on the subject of temporary commissions in the R.A.M.C., both of which appeared in the JOURNAL of October 11th.

The speech of the Director-General was excellent, and his description of the commanding officer of a military hospital is an ideal which ought to be realized under the present régime, for General Goodwin obviously recognizes the necessity of the medical officer of the future being "a good doctor" as well as "a good officer."

During my period of military service undoubtedly the best surgical division I was connected with was one which was in charge of a regular major R.A.M.C., who was also a F.R.C.S.Eng. One of the weak points in the administration of the Army Medical Service during the war, and one which to a great extent led to its unpopularity, was the fact that many of the senior regular R.A.M.C. officers, especially those who were re-employed, were so ignorant of clinical work that they were unable to judge correctly the value in a professional aspect of the temporary officers serving under them.

Now, why are medical men who have served in the R.A.M.C. not responding to the call and rejoining? I cannot see how they can be expected to do so; my experience is that those who have returned to their practices or civil appointments are much too busy to give the matter a second thought, and having obtained their "freedom," are not likely to give it up again. The R.A.M.C. was much too unpopular a service with the majority of temporary officers for many of them to care to rejoin. The reasons why it was unpopular with temporary medical officers are well known; the following may be mentioned: (1) The way in which they were treated by the senior regular R.A.M.C. officers and by the War Office; the want of consideration as to station, leave, duties, etc.; the small number of rewards (honours and mentions) given. As an example of the last, those temporary officers who served in Great Britain only will have nothing to show, not even the Victory Medal, although they probably worked harder than many did in France. (2) Their position with regard to the nursing staff. Temporary medical officers had no

control over the sisters, in fact, were treated as their equals, and if any trouble occurred it was the medical officer who "went to the wall," for obvious reasons.

I have been seriously thinking of rejoining, but my age is over 40, and I do not feel inclined to serve again as a captain probably under men younger and less experienced than myself, and give up my present post for a period of six months, losing it in consequence.

If I were offered the rank of major, to which my service during the war fully entitles me, I would rejoin for ten years, and I believe there are others in my position who would do the same.

If the Director-General wants medical officers he must assure intending applicants that they will be treated with sympathy, consideration, and justice; for, after all, mistrust of the War Office is at the bottom of the present trouble.

The only remedy I can suggest for the present state of affairs is for the War Office to follow the example of the Admiralty. In 1897, when there was a shortage of naval executive officers, a number of experienced officers were entered from the merchant service as "supplementary lieutenants," with special pay and retired pay; they were employed chiefly as navigating officers, but I believe the scheme was quite a success.

If the War Office decided to enter a number of supplementary R.A.M.C. officers they might be employed chiefly in clinical work. I feel sure that the attempt to obtain a sufficient supply of temporary medical officers under the present arrangement is doomed to failure.—I am, etc.,

October 12th.

NEMO.

"THE CULT OF INDIVIDUALISM."

SIR,—We regret the necessity of again asking for space in your columns, as we thought we had already explained in our previous letter the objects of the Federation.

We should like to point out in answer to Dr. E. R. Fothergill's letters, which appeared in your issues of September 27th and October 11th, that the Federation has not been started in antagonism to the British Medical Association, but simply to carry out a particular piece of work which that Association for some reason or another has not undertaken.

With regard to Dr. Fothergill's second and third questions, we would state that no powers are sought, but that the aim of the Federation is to achieve unity in the profession as a whole, and to co-operate with other bodies of an ancillary nature.

We wish to correct an error which, by inadvertence, appeared in our letter published in your columns of October 11th. We therein stated that the chairman of the Federation was not present at the Steinway Hall meeting, whereas he was present during the early part of the meeting, but left early, and took no part in the formation of the Medical Parliamentary Committee.—We are, etc.,

MALCOLM MORRIS,
Chairman.

CHARLES BUTTAR,
Honorary Secretary.

N. HOWARD MUMMERY,
Organizing Secretary.

The British Federation of Medical and Allied Societies,
20, Hanover Square, W.1, Oct. 14th.

THE BRITISH FEDERATION OF MEDICAL AND ALLIED SOCIETIES.

SIR,—"What actually took place" at the Steinway Hall meeting can hardly be stated by persons who were not present, and when the representatives of the British Federation who write in your issue of October 11th enter on this field, they deal not in evidence but in hearsay. I will not presume to pit my memory against their information, but will refer your readers to the accounts of the meeting which appeared in the medical journals of October, 1918. There it is plainly stated that the committee (1) was appointed "to further the election of medical men as members of Parliament," and (2) was directed "to report to a subsequent general meeting of the profession." The committee has not discharged this reference, nor has it reported to a "general meeting of the profession." To say that it has done a number of things for which it had no authority, or that it sought some tribunal other than that to which it was pledged, cannot

redeem its neglect of the one thing for which it was appointed; indeed, these unauthorized adventures are an additional condemnation. If the British Federation endorses and approves this curious fashion of dealing with pledges publicly given it is well to have the fact on record. It is suggested that now the federation is in existence nothing relative to its origin matters. But surely it is important to know of any organization whether it cultivates a high standard, or a modest one, in the interpretation of its promises.

Until the Steinway Hall committee has either met its obligations, or has acknowledged its negligences and excesses, the British Federation cannot escape the shadow of this unhappy association. It is not, Sir the irregularity of its birth which mainly excites suspicion; the flaw is rather in the qualified record of some of its sponsors.—I am, etc.,

London, W., Oct. 14th.

C. O. HAWTHORNE.

RELEASE OF R.A.M.C. TEMPORARY OFFICERS.

SIR,—In the hope that you may still be interested in the lot of temporary officers R.A.M.C., I send you an account of my own case at the least possible length.

My age is 33, and I am single. I have been on foreign service continuously since the beginning of April, 1915. In civil life I was assistant to a general practitioner, with a view to partnership. The position has been kept open for four and a half years by my principal, who has himself been on foreign service. Applications for my release have been made once by the Local Medical War Committee, thrice by my partner, and thrice by myself.

I am at present employed in the army as one of four medical officers at a special centre with less than 200 beds, but I am not employed as a specialist. My average hours of work during the past nine months have been one and a half a day.—I am, etc.,

September 24th.

A. A. A.

THE INQUIRIES OF LIFE INSURANCE OFFICES.

SIR,—Lately I have had a number of applications from different assurance companies asking for an answer to a series of questions in reference to patients whom I have attended. These questions are of a searching character, and seem intended to do away with the ordinary medical examination conducted by their own medical referees, though this is not an aspect with which I am concerned at present. What I do wish to ascertain is the feeling of the medical profession in regard to these inquiries.

I may say that, so far, I have refused to answer them without the express permission in writing of the patient; this, with one exception, has been given.

I should much like the opinion of the profession at large as to what line should be adopted.

(1) Whether it should be absolutely refused as a matter of vital principle in our dealings with our patients; or

(2) Whether we ought to answer the queries, and so give information of a most intimate character to the insurance companies that they could not possibly obtain by any other means, thus jeopardizing the chance of insurance of those who have trusted us.

My feeling is to refuse absolutely, though I have supplied the information in several cases after receiving the written permission of the patient to do so, but I hate it.

I have always been offered a fee of half a guinea, this I refuse, and ask for a guinea fee, which has always been paid.—I am, etc.,

Preston, Oct. 11th.

CHARLES RIGBY, M.B.

SCHOOL MYOPIA.

SIR,—In his letter on school myopia Mr. Bishop Harman states that he has evidence at his disposal that close eye work produces myopia. May I invite him to publish this evidence?

Some of us who have worked for years at this subject have been unable to reach this positive conclusion.—I am, etc.,

Glasgow, Oct. 8th.

JAS. ALEXANDER WILSON.

The Services.

HONOURS.

The following honours and promotion have been granted for war services; the appointments are dated June 3rd, the King's birthday:

To be K.C.M.G.

Temporary Major-General Sir Bertrand E. Dawson, G.O.V.O., C.B., A.M.S.

Colonel and honorary Major-General R. F. S. Henderson, C.B., retired pay, late R.A.M.C.

To be K.B.E. (Military Division).

Captain and Brevet Lieut.-Colonel (temporary Colonel) Sir Harold J. Stiles, R.A.M.C.(T.F.).

Lieut.-Colonel W. Thorburn, C.B., O.M.G., R.A.M.C.(T.F.).

Lieut.-Colonel E. N. Thornton, C.B.E., S.A.M.C.

To be Honorary Colonel under Article 77 Royal Warrant.

Lieut.-Colonel A. E. Morris, retired pay, late R.A.M.C.

ORDER OF THE BRITISH EMPIRE.

The following promotions and appointments to the Order of the British Empire have been awarded in recognition of distinguished services rendered during the war in the Royal Air Force:

C.B.E. (Military Division).—The late Major Archibald Henry Hogarth, O.B.E.; Miss Josephine Letitia Denny Fairfield, M.D.

O.B.E. (Military Division).—Major Edward Cecil Clements, R.A.M.C.(T.).

The following are the statements of services for which the decorations announced in the *London Gazette* of March 8th, 1919, were conferred (continued from p. 482):

Bar to the Military Cross.

Temporary Captain John Rodger, M.C., R.A.M.C., attached 1st Battalion Border Regiment.

For conspicuous gallantry and devotion to duty. During the attack, October 3rd to 8th, 1918, on Gouy and Le Catelet, he was in charge of bearers and forward posts. Under considerable shell and machine-gun fire he went forward visiting regimental medical officers, reconnoitring for forward posts, and supervising the evacuation of wounded from the forward area, keeping up a complete chain of evacuation. By his energy and zeal he saved many lives. (M.C. gazetted September 16th, 1918.)

Captain (acting Major) James Bethune Scott, M.C., R.A.M.C. (S.R.), attached 16th Field Ambulance.

For conspicuous gallantry and untiring devotion to duty during operations near St. Quentin, between September 18th to 25th, 1918. He was bearer officer with the 16th Infantry Brigade. He personally kept touch with the regimental aid posts in spite of heavy hostile machine-gun and rifle fire. It was mainly due to the skilful dispositions of his bearers that the wounded of this brigade were evacuated so speedily and satisfactorily. (M.C. gazetted October 18th, 1917.)

Temporary Captain David Campbell Suttie, M.C., R.A.M.C., attached 1/2nd (North Midland) Field Ambulance.

Near Bohain he had charge of the bearers and bearer relay posts along the Bohain-Vaux Andigny road during the attack on October 17th, 1918. He used great skill and judgement in choosing his bearer posts, and also in keeping in touch with regimental medical officers in front. He set a fine example to his men by his fearless devotion to duty, and it was mainly through his efforts that the great majority of the wounded were brought in to the advanced dressing station. (M.C. gazetted January 1st, 1917.)

Temporary Captain Gwelym David Watkins, D.S.O., M.C., R.A.M.C., attached 2nd Battalion West Riding Regiment.

During the operations on October 24th, 1918, on the high ground east of Verchain, he displayed great courage and devotion to duty in establishing his aid post as close as possible behind the front line troops. Very shortly after the first objective had been gained he proceeded to search for wounded with organized stretcher parties under continuous shell fire; and by his prompt attention and splendid organization many lives were undoubtedly saved. (M.C. gazetted January 1st, 1918.)

Temporary Captain William Brockie Wilson, M.C., R.A.M.C., attached 1st Battalion Devon Regiment.

For gallantry and devotion to duty during the operations near Braistre, October 20th to 23rd, 1918. During this period his battalion came under very severe enemy shell fire and a very severe gas bombardment. He worked unceasingly for thirty-six hours in his regimental aid post, where the gas was strong, and it was absolutely due to his pluck and inexhaustible energy that the evacuation of the casualties of two battalions was carried out without a hitch. (M.C. gazetted December 2nd, 1918.)

Military Cross.

Captain Leslie Thomas Alsop, 10th Field Ambulance A.A.M.C., attached 39th Battalion, Australian Infantry.

On September 29th, 1918, east of Ronsoy, he established a regimental aid post close to Gillemont Ruins, then held by the enemy, and, under heavy fire, tended the wounded. For forty-eight hours he was continuously at work organizing stretcher parties and dressing the wounded.

Captain Joseph Ringland Anderson, Australian A.M.C., attached 45th Battalion, Australian Infantry.

For conspicuous gallantry and devotion to duty during the attack west of Bellenglise, north of St. Quentin, on September 18th, 1918. During a protracted advance he established his regimental aid post well forward in the open, and continued with cool courage to attend the wounded under heavy shell fire. His efforts saved many lives.

Captain (a/Major) Henry Merril Barrett, No. 2 Field Ambulance, C.A.M.C.

During September 27th, 28th, and 29th, 1918, he was in charge of clearing and evacuating wounded. During Bourlon Wood operations. During this period he displayed cool courage under fire and keen devotion to duty, establishing his advanced dressing station close to advancing infantry, and making reconnaissances of forward roads under shell fire, thus enabling ambulances to get forward and save life.

Temporary Captain Harold John Bensted, 140th Field Ambulance, R.A.M.C. (attached 138th Field Ambulance).

For gallantry and untiring energy during the period October 16th to October 27th, 1918, and attacks delivered in the neighbourhood of Courtrai. He personally directed the collection and evacuation of wounded from regimental aid posts of different units. On one occasion he worked continuously for forty-eight hours, maintaining touch with regimental medical officers and forming new lines of evacuation of wounded under most difficult conditions of open warfare and rifle and machine-gun fire.

Temporary Captain Gideon Albertyn Beyers, S.A.M.C., attached 1st Battalion, South African Infantry.

During the operations from October 8th to 19th, east of Beaurevoir, and at Le Cateau, he showed great energy and gallantry in attending the wounded under heavy shell and machine-gun fire. On October 8th he worked incessantly for nearly twenty-four hours attending to a very large number of cases. On October 17th to 18th he again did splendid work, and did not spare himself in any way, and was the cause of saving a great number of lives.

Captain William Johnstone Binns, A.A.M.C., attached 33rd Battalion, Australian Infantry.

For conspicuous gallantry and devotion to duty during the operations near Bony, from September 29th to October 2nd, 1918. Throughout he was untiring in his efforts, and worked with the greatest zeal. Altogether he established four different aid posts, all close to our leading troops. He attended wounded in the open under heavy fire, and by his fine devotion to duty saved many lives.

Temporary Captain Gavin Stiell Brown, R.A.M.C., attached 1/4th Battalion Leicestershire Regiment, T.F.

For conspicuous gallantry and devotion to duty whilst tending wounded on the morning of the attack of September 29th, 1918, near Bellenglise, under very heavy shell fire. He showed an absolute disregard for personal danger, both at that time and subsequently during the action.

Temporary Captain (acting Major) Samuel Burnside Boyd Campbell, 108th Field Ambulance, R.A.M.C.

For conspicuous gallantry during the attack east of Ypres on September 29th, 1918, and subsequent days. He was in command of all the stretcher-bearers of the divisional field ambulance for twelve days, and the fact that all wounded were rapidly collected and cleared was largely due to his energy and efficient organization. Throughout he showed fine devotion to duty.

Temporary Captain John Sowers Clark, R.A.M.C., attached 15th Battalion Royal Irish Rifles.

For conspicuous gallantry and devotion to duty. On October 14th, 1918, near Dadizelo, his aid post was partially blown in and the entrance blocked. He at once set to work under shell fire, and cleared the entrance and removed the wounded who were there to a safer place. Throughout he behaved splendidly in attending and helping the wounded under the most trying conditions at all times.

Temporary Captain George Oliver Connell, R.A.M.C., attached Head Quarters Royal Engineers, 41st Division.

For marked gallantry and devotion to duty at Courtrai on the night of October 19th-20th, 1918, when he went forward with a field company of Royal Engineers to the bank of the River Lys, remained with them throughout the bridging operations, and though in an exposed position and subjected to intense enemy shelling, dressed the wounded, and by his fine devotion to duty saved several lives.

Captain Lambert Douglas Densmore, C.A.M.C., attached No. 1 Field Ambulance.

For conspicuous gallantry and devotion to duty during the Bourlon Wood operations, September 30th, 1918. He went forward to collect and evacuate considerable numbers of wounded who were lying in the vicinity of the Douai-Cambrai road, east of Heyne-court, and succeeded in evacuating them to the advanced dressing station.

Temporary Captain Cedric Lewis Dold, R.A.M.C., attached 1st Battalion South Wales Borderers.

Throughout the operations near Pontreux and Thorigny, on September 29th to 30th, 1918, he carried out his work with great gallantry and devotion to duty. He constantly visited the front line under heavy machine-gun and shell fire to personally superintend the evacuation of the wounded, and never spared himself for a moment in anything that could promote the welfare of the battalion.

Temporary Captain (acting Major) James Angus Doull, 103rd Field Ambulance, R.A.M.C.

For conspicuous gallantry and devotion to duty on October 14th, 1918, as divisional bearer officer. He personally directed the clearing operations, and, by his powers of organization, successfully cleared over 400 casualties. He kept in close touch with all regimental aid posts situated in the vicinity of Gheluwe and the area east of the village, conducted bearer reinforcements, and encouraged his detachment to further efforts under constant heavy shell fire.

Temporary Captain (acting Major) Stanley Fenwick, 16th Field Ambulance, R.A.M.C.

For conspicuous gallantry and devotion to duty during the operations near St. Quentin, September 17th to 26th, 1918. He was in command of a field ambulance which was evacuating from a divisional front. Under heavy shell fire he supervised the removal of patients to a place of safety, thereby saving many lives. He also visited all posts of the line by day and night, controlling and directing the bearers in their duties of evacuation.

Captain Albert Grant Fleming, C.A.M.C., attached 4th Canadian Infantry Battalion.

During the attack of September 27th, 1918, he displayed great gallantry and devotion to duty. He established his aid post for the attack in the extreme eastern portion of Inchy within 400 yards of the enemy outpost line, and occupied this position during the night,

despite a heavy high explosive and gas bombardment, in order to be as close as possible to the attack.

Captain (acting Major) William Douglas Frew, R.A.M.C. (T.F.), attached 131st Field Ambulance.

For conspicuous gallantry and devotion to duty near Rambouillet Farm on October 20th, 1918. He was in charge of the bearer subdivision of his ambulance. Although his ambulance car post was heavily shelled he kept it going during the day, supervising the bearing and loading of wounded. He also led parties of bearers through heavy fire along the ravine leading to Montay, getting wounded men through this way to the car post.

Temporary Captain Codanda Madich Ganapathy, I.M.S., attached Gren. I. A.

On September 20th, 1918, north-east of Sift, Egypt, he showed great gallantry in attending to the wounded under heavy artillery and machine-gun fire throughout the day, showing a complete disregard of personal danger. To his untiring efforts many men owe their lives.

Temporary Captain George Alexander Conner Gordon, R.A.M.C., attached London Regiment.

For conspicuous gallantry and devotion to duty during operations on September 19th, 1918, near Sivri Tepe, Egypt. As regimental medical officer he attended the wounded through out the day, often under heavy fire. Though wounded, he continued to carry on until relieved on the morning of September 20th, having covered a distance of over five miles on very rough ground. He set a fine example to those with him.

Temporary Captain Edward Harold Hertslet Granger, R.A.M.C., attached 1st Battalion Leicestershire Regiment.

Throughout the operations, September 18th to 26th, 1918, near Holnon, he was conspicuous for his gallantry and devotion to duty. On September 18th for an hour, during a heavy enemy artillery barrage, he attended to the wounded and assisted them to a place of safety. On September 19th he established an advanced aid post and attended to the severe and urgent cases throughout the day under heavy shell fire.

Temporary Captain Zachariah Albert Green, R.A.M.C., attached 7th Battalion Wiltshire Regiment.

For great gallantry and devotion to duty during operations south of Le Cateau on October 18th and 19th, 1918. He continuously attended to wounded with the greatest skill and devotion to duty, and on several occasions under very heavy shell fire. His untiring energy, coolness, and total disregard of danger were admirable throughout.

Temporary Captain Alfred Purvis Hart, No. 2 Field Ambulance, R.A.M.C.

For great initiative, gallantry, and devotion to duty at the advanced dressing station, east of the church at Rejet-de-Beaulieu, during the exceptionally heavy bombardment on November 4th, 1918. He repeatedly dressed wounded men and superintended the evacuation of casualties even when his dressing station was blown in by shell fire. He undoubtedly saved many lives.

Temporary Lieutenant William Hickey, R.A.M.C., attached 8th Battalion East Surrey Regiment.

For conspicuous gallantry and devotion to duty as battalion medical officer on September 18th, 1918, near Ronssoy. Early in the attack he established his aid post at a main cross road and remained there for several hours under heavy shelling. He then went forward and attended to the wounded in the open wherever he could find them. His devotion to duty saved many lives.

(To be continued.)

The Military Cross has been conferred by Major-General Sir W. E. Ironside, K.C.B.—in pursuance of powers vested in him by His Majesty the King—upon Lieutenant John Morrison, R.A.M.C. (S.R.), for conspicuous gallantry and devotion to duty in North Russia. The following is the official record for which the distinction has been conferred:

He has done exceptional work since joining the battalion. He superintended the successful evacuation of wounded on October 12th, 1918, at Seltso under shell fire, at short notice. He accompanied the attacking forces when Toppa was attacked, and gallantly carried on his work under close enemy fire. By his energy and devotion to duty throughout these operations he was the means of saving many lives.

FOREIGN DECORATIONS.

The following decorations and medals have been awarded by the Allied Powers for distinguished services rendered during the course of the campaign.

Conferred by the President of the French Republic.
Légion d'Honneur.—Commandeur: Lieut.-General Sir Charles H. Burtchall, K.C.B., C.M.G., K.H.S.
Croix de Guerre.—Colonel Charles Mackie Begg, C.B., C.M.G., N.Z.M.C. Majors George Waterston Miller, D.S.O., T.D., and George F. Whyte, R.A.M.C. (T.F.). Captain and Brevet Major (acting Lieut.-Colonel) Gilbert Henry Dive, D.S.O., R.A.M.C. Captains Sidney Martin Hattersley, M.C., R.A.M.C., Tom Ramsden Kenworthy, M.C., Herbert B. Pope, M.C., and Frank Wigglesworth, M.C., R.A.M.C. (T.F.). Temporary Captains Arthur Cecil Laing, and Edwin Fitzgerald O'Connor, R.A.M.C.

Ordre du Mérite Agricole.—Officer: Major Arthur Edmund Stewart Irvine, D.S.O., R.A.M.C.
Médaille des Epidémies (d'Or).—Captains Charles Frederick Morris Saint, C.B.E., and Richard Woodward Swayne, O.B.E., R.A.M.C. (T.F.). Temporary Captain William Arthur Anderson, R.A.M.C.
Médaille des Epidémies (en Vermeil).—Captain John Dale, O.B.E., R.A.M.C. (T.F.).
Médaille des Epidémies (en Argent).—Colonel George Dansey-Browning, C.B.E., late R.A.M.C.; Captain and Brevet Major (acting Lieut.-Colonel) Gilbert Henry Dive, D.S.O., R.A.M.C.;

Captain Robert Dunlop Goldie, R.A.M.C.(S.R.); Temporary Captain (acting Major) Thomas Clark Ritchie, O.B.E., R.A.M.C.

Médaille de l'Assistance Publique (en Argent).—Major George Edward Ferguson, R.A.M.C.; Captains Walter Fitzpatrick, R.A.M.C.(T.F.), and Thomas James Kelly, M.C., R.A.M.C.; Temporary Captains Carlyle Aldis, Alexander Baldie, and Henry Charles Semon, R.A.M.C.

Conferred by the King of Hellenes.

Greek Military Cross.—2nd Class: Captain and Brevet Major (acting Lieut.-Colonel) Maurice Joseph Williamson, M.C., R.A.M.C.; Captain (temporary Major) Thomas Henry Peyton, D.S.O., R.A.M.C.(T.F.R.). 3rd Class: Temporary Captain William Henry Hooton, R.A.M.C.

Conferred by the President of the Portuguese Republic.

Military Order of Avis.—Grand Officer: Major-General John Joseph Gerrard, O.B., C.M.G. Commander: Colonel Alfred Bertram Soltau, C.M.G., C.B.E., A.M.S.(T.F.); Major John Humphrey Barbour, R.A.M.C.

The distinction awarded to Captain William Grahame Cobb (of Zungeru, Northern Nigeria), in recognition of gallantry and devotion to duty in the field, was the D.S.O., and not a bar to the D.S.O. as stated in our issue of October 19th, 1918.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following candidates have been approved in both parts of the examination in Sanitary Science:

M. Avent, A. C. B. Biggs, P. C. P. Cloake, M. E. DeLafield, J. A. Doull (Major R.A.M.C.), A. A. Martin, R. W. Meller, A. F. Rook (Captain R.A.F.M.S.), Sir E. N. Thornton, K.B.E. (Lieut.-Colonel S.A.M.C.).

UNIVERSITY OF LONDON.

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL.

THE following elections to scholarships, each value £50, have been made:

Pathology and Pharmacology Scholarship, H. A. Osborn; Anatomy and Physiology Scholarship, R. C. Lightwood; Arts Scholarship, A. L. Moorby; Science Scholarship, L. I. Hyder.

UNIVERSITY OF GLASGOW.

THE following candidates have been approved at the examinations indicated:

M.B., CH.B. (M., Materia Medica and Therapeutics; P., Pathology).—W. R. Allan (P.), A. R. Black (P.), A. W. Borland (M.), A. K. Bowman (M., P.), D. E. Brown (M., P.), D. F. Cappel (M.), T. C. Christie (M., P.), D. F. Craig (M., P.), W. Davie (M., P.), M. Douglas (M.), P. A. Faichney (P.), H. G. Halliday (M.), D. R. Hamilton (M.), J. A. Hamilton (M., P.), G. Harvey (P.), B. Isaacs (M.), L. M. Johnston (P.), W. Jope (M.), W. M. Knox (M.), J. W. McConville (P.), W. R. McCrae (P.), J. A. McCrossan (P.), F. McIlwee (M., P.), P. M. K. McKillop (P.), P. M. Luskie (P.), M. J. Miller (M., P.), J. M. L. Mitchell (M., P.), J. T. Moffat (P.), W. G. Niblock (P.), Tyndra Nath Ray (M.), J. Shulman (P.), A. Smith (M., P.), W. A. M. E. Stewart (M., P.), J. M. L. Strang (M., P.), W. R. P. Templeton (M.), D. W. Tobias (P.), J. W. Walker (M., P.), R. J. Watson (P.), A. F. Whyte (P.), J. H. Wilson (P.), P. A. Wilson (M., P.), W. Wilson (M., P.), J. Young (P.), Alice A. Alexander (M.), Edith A. Allan (M.), Martha L. Anderson (M.), Marion O. Boyd (P.), Muriel J. Brown (M., P.), Catherine M. Buchanan (M.), Margaret G. Carrick (M.), Jessie D. Christie (M., P.), Margaret B. C. Craig (M., P.), Isabella C. Darling (P.), Margaret Davidson (M.), Vina C. MacK. Donaldson (M., P.), Christian D. H. Eason (P.), Mary A. Grant (P.), Beryl Grieve (P.), Mary Hendrie (M., P.), Nora G. Henry (M., P.), Isobel R. Hill (P.), Jane S. Knight (M., P.), Frances B. C. Livingston (M., P.), Moira E. N. MacAlpine (M.), Janet S. S. MacKay (M.), Mary McQuaker (M.), Laura M. D. Mill (M.), Elizabeth W. Miller (M.), Edith M. Neilson (M., P.), Catherine A. B. Pettigrew (M.), Annie G. Pollock (P.), Joanna T. Rae (M.), Annabella A. Reid (P.), Isobel Reid (M.), Rebecca E. Roultson (M.), Isobel M. Smith (M., P.), Margaret Sprunt (M.), Helen Y. Stoddart (P.), Janet E. Wilson (P.), Jeanie L. D. Wilson (M.), Grace M. Young (M., P.).

(Old Regulations).—D. S. Buchanan (M.), J. A. F. Gibson (M.), D. M. Macmillan (P.).

(Medical Jurisprudence and Public Health).—A. P. Agnew,

A. G. Aitken, J. L. Anderson, J. Baird, B. Barrowman, A. M. Beaton, M. Brown, A. Campbell, J. G. Campbell, A. J. Cronin, D. R. F. Davidson, W. N. Duguid, W. J. Ferguson, R. Fletcher, J. Frew, W. A. Galbraith, R. MacL. Gardner, F. D. Gillespie, E. D. Gillespie, O. Glen, C. N. Gordon, A. Gray, J. L. Halliday, T. O. Howie, J. Hurwich, T. T. Hutchison, G. Jamieson, W. E. Kennedy, W. M. Knox, B. Levine, A. L. M. Adam, H. J. Macbride, A. M. M. Clure, J. Macdonald, E. Macfarlane, J. Macfarlane, E. W. McGhee, D. L. Macintyre, W. McKendrick, K. Mackenzie, H. H. MacKinnon, A. H. McLean, A. MacLellan, J. P. McMillan, P. MacMurray, J. C. McNaught, A. M. C. MacQueen, M. F. G. Main, A. Markson, C. Melville, G. A. Mitchell, L. Mitchell, N. M. E. Montgomery, C. W. Murray, G. Paterson, J. Paterson, W. J. Payne, J. Prentice, D. Reid, K. Reid, K. M. Rodger, J. Sachs, T. S. Sargent, W. H. Scott, H. E. Seiler, J. Shanks, A. W. Sinclair, L. Sive, A. G. Smith, D. C. Smith, F. C. Speechly, J. Stirling, H. A. Summers, C. N. Temple, J. N. Tennant, G. Todd, J. R. Turner, J. D. Whiteford, G. S. Wilson, J. J. Wyllie, Annie M. Alexancier, Marion B. Armstrong, Muriel O. S. Balfour, Margaret Bennett, Margaret W. Blackwood, Lillias E. B.

Buchanan, Edith M. Davidson, Simonne Denil, Elsie F. Farquharson, Christian M. Fleming, Agnes M. Gibson, Margaret E. Gibson, Agnes S. Glover, Mary B. Grant, Margaret Gray, Isabel E. R. Jeffrey, Margaret L. Johnston, Anne T. Kellogg, Jane C. MacDonald, Mary J. Macfarlane, Jean MacL. Mackintosh, Alexandrena M. MacLennan, Marie J. McNaught, Marjorie Mitchell, Janet D. Montgomery, Mary Russell, Marguerite L. Solanders, Cecelia Shiskin, Mary Shiskin, Alexandra W. Smyllie, Mary Stevin, Christina S. Stoddart, Margaret M. Stuart, Dorothy M. Summers, Helen B. Sutherland, Dorothy B. Thomson, Mary O. Walker, Lilian J. T. White, Mary L. Wilson, Helen F. Wingate, Agnes H. M. Young, Elizabeth Young.

(Old Regulations).—J. B. Sweet, R. R. Waters, R. H. Williamson.

• With distinction in Materia Medica and Therapeutics.

† With distinction in Medical Jurisprudence and Public Health.

ROYAL FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.

THE following have, after examination, been admitted Fellows: A. A. Barlow, J. D. Brownlie, D. K. Henderson, J. B. M'Dougall, A. Patrick.

Obituary.

J. P. GREANY, M.D., M.Ch.R.U.I.,

Surgeon-General, I.M.S. (ret.).

SURGEON-GENERAL JOHN PHILIP GREANY, Bombay Medical Service (ret.), died at Ealing on October 7th, aged 68. He was born on July 21st, 1851, educated at Queen's College, Cork, and graduated M.D. and M.Ch. in the Queen's University, Ireland, in 1874. Entering the I.M.S. as surgeon on March 31st, 1875, he became surgeon-major on March 31st, 1887, surgeon lieutenant-colonel on March 31st, 1895, colonel on January 11th, 1903, and surgeon-general on June 20th, 1905, retiring on October 1st, 1908. After ten years' service in the army, he entered civil employment in July, 1886. For several years he was civil surgeon of Poona, the most popular station in the Western Presidency. On promotion to the administrative grade he served as A.M.O. of the Aden district and Sind district successively, till he was appointed head of the Bombay service as surgeon-general with the Government of Bombay. He received a good service pension on May 22nd, 1907.

On his retirement he settled at Ealing, and showed an active interest in the work of the British Medical Association. He was formerly a member of the Council of the Metropolitan Counties Branch, the representative of the Indian Medical Service on the Central Council, and chairman of the Naval and Military Committee of the Association. At the beginning of the late war he was for some time in charge of the military hospital at Southall, but had been ill for a long time past, having never recovered from the shock caused by the death of his elder son, the late Captain J. W. Greany, of the 5th Battalion Wiltshire Regiment, who, after distinguished service with his regiment in Gallipoli, where he gained the D.S.O., was transferred to Mesopotamia, and reported wounded and missing in the unsuccessful attempt to relieve Kut on April 9th, 1916, and not heard of again.

DR. SAMUEL WRIGHT died at Portrush on September 19th. He studied at Queen's University, Belfast, and qualified in 1913; he served as house-surgeon in the Grimsby Hospital, and subsequently as assistant school medical officer of the Birmingham Education Committee. On the outbreak of war he volunteered for service, and did heavy work in different parts of the Western front. At Neuve Chapelle he sustained an injury to the heart, but, though he never fully regained his health, he remained in the service till 1918. On returning home he rallied and took the D.P.H. Belfast, but his health broke down again. Much sympathy is felt for his widow by a large circle of friends.

CAPTAIN CHARLES NEWBERRY COBBETT, R.A.M.C., died suddenly at Broadstone, Dorset, on October 7th, aged 58. He was educated at University College, London, and at Edinburgh University, where he graduated M.B. and C.M. in 1883, and M.D., with commendation for his thesis, in 1890. Before the war he was in practice at Edmonton, Alberta, Canada. He took a temporary commission as lieutenant in the R.A.M.C. on June 28th, 1915, and was promoted to captain after a year's service. He was recently employed under the Ministry of Munitions.

DR. FRANCISCO ZAYAS Y JIMÉNEZ, a leading physician of Havana, died in May last at the age of 93. He was well known as a writer and had gained a considerable reputation as a poet. He was also an active politician and was a member of the Cabinet formed by Spain in the last days of its rule in Cuba. He also took an interest in agriculture, especially in tobacco and sugar planting.

Medical News.

SIR GEORGE NEWMAN has been nominated by His Majesty, with the advice of the Privy Council, a member of the General Medical Council in the place of Sir Arthur Newsholme resigned.

THE St. Thomas's Hospital old students' dinner, postponed from October 1st, will take place at the Connaught Rooms, Great Queen Street, W.C., on Wednesday, January 14th, 1920. The chair will be taken by Sir George H. Makins, G.C.M.G., C.B., President of the Royal College of Surgeons of England.

THE University College Hospital old students' dinner, postponed from October 3rd, will be held on Friday, October 31st, at the Imperial Restaurant, Regent Street, at 7 for 7.30.

AT the Bootle Borough Court on October 7th a prosecution was instituted under the Venereal Diseases Act, 1917. The defendant, according to the report in the *Bootle Times*, was Miller Murray, of the Knowsley Medical Hall. The charge against him was that, not being a duly qualified medical practitioner, he unlawfully treated for reward a person suffering from venereal disease. Dr. W. N. Clemmey, medical officer of the venereal disease clinic at the Borough Hospital, said that the patient had got into a very serious state by the time he arrived at the hospital and an operation was necessary. The defendant denied that he had treated the person for venereal disease. The chairman said that the bench considered the case proved, but in view of the fact that it was the first brought under the Act in Bootle, a penalty of about one-fourth of the maximum would be imposed. The judgement was that the defendant should pay a fine of £20, or go to prison for three months. On an appeal from the defendant he was allowed fourteen days within which to find the money.

HITHERTO local libraries have scarcely justified the enthusiasms of their early promoters, but, if the ideals of the new School of Librarianship—the first attached to any university in this country, which has just been established at University College, London—are fulfilled, the library will be no longer a mere distributing centre for lighter reading, but a focus of the intellectual life of the community. Sir Frederic Kenyon, the director and principal librarian of the British Museum, who opened the school on October 8th, impressed upon its sixty or seventy students the principle that librarianship should not be thought of in terms of shelves and indicators, but should be regarded as public service—very valuable public service, in view of the passing of political power to large numbers of only partially educated people, who may be saved from many mistakes in the use of that power through having access to a library with its works on history and political economy, to mention only two subjects. Sir Frederic deplored, not the lack of knowledge, but the lack of respect for knowledge among the official classes. He himself had heard a Cabinet Minister in a laughing and not at all in a penitent way confess himself a Philistine in matters of education. But the speaker found encouragement in the fact that the younger and more progressive leaders of industry were realizing that expenditure on education might be as profitable as any of the other expenditures which figured on their balance sheet. He paid a tribute to the Library Association for the part it had taken in bringing about the foundation of the school, and in particular to Sir John MacAlister, the president of the association, who is consulting librarian to the Royal Society of Medicine.

THE London County Council has decided to approach the Minister of Health with a view to securing representation on the Central Midwives Board. It has been proposed that the number of members of the board shall be increased from nine to twelve. The present representation of the Royal British Nurses' Association will cease, and members will be appointed, one each by the Minister of Health, the Incorporated Midwives' Institute, the Association of Municipal Corporations, and the Society of Medical Officers of Health.

MR. ARTHUR DOUGLAS COWBURN, M.R.C.S., L.R.C.P., barrister-at-law, has been appointed deputy coroner for the Western District of London.

DR. J. S. CRONE, J.P., deputy coroner for West Middlesex, has been elected president of the Irish Literary Society, London.

DR. T. N. KELYNACK has been appointed by the Lord Chancellor to the Commission of the Peace for the county of London.

THE London County Council has recommended Mr. J. P. Orr, C.S.I., formerly chairman of the City of Bombay Improvement Trust, to be Director of Housing, at a salary of £2,000 a year.

AMONG the names added to the Commission of the Peace for the County of Banff are those of Dr. E. I. Spriggs of Duff House, Dr. McArthur of Gardenstown, Dr. Andrew Brown Murray of Banff, and Dr. Reid of Portsoy.

IT is estimated that there are 1,200 stammering children in attendance at London elementary schools. An experimental class for treatment has proved successful, and the London County Council now proposes to form five classes, each of twenty children.

THE KING has accepted a copy of the memoir of the late Captain William Howard Lister, D.S.O., M.C., R.A.M.C., written by Dr. Walter Seton. It has been privately printed by the Medici Society, and copies are obtainable from the senior clerk, University College, London.

A GENERAL meeting of the Medical Officers of Schools Association will be held at 11, Chandos Street, on Friday next, October 24th, at 4.30 p.m., when Dr. A. A. Mumford will read a paper on the standardizing of physical efficiency during growth, and a discussion on the subject will be opened by Colonel Martin Flack, R.A.F.

THE Association of Infant Welfare and Maternity Centres has arranged a conference of medical officers of such centres to discuss the feeding of infants and young children in view of the shortage and high price of cow's milk, with special reference to the use of dried milk and patent foods. It will be held at Bedford College for Women, Regent's Park, N.W., on Friday next, October 24th, at 6 p.m.

THE Ministry of Health has issued a circular to local authorities calling their attention to the obligation upon them to make a survey of their district, and to prepare and submit to the Ministry a scheme for the exercise of their powers. The Ministry has also issued a statement showing briefly the principal provisions of the new Act and indicating the increased responsibilities of local authorities in the matter of housing.

THE Enham Village Centre, established by the Village Centres Council, of whose executive committee Lord Henry Cavendish Bentinck, M.P., is chairman, will be opened by the Minister of Pensions on Wednesday, October 29th. Enham is near Andover, and the village centre received its first patients last May. It comprises a medical block, workshops and gardens, where now nearly one hundred disabled men are undergoing treatment and training.

THE late Dr. F. J. Smith, physician to the London Hospital, left £11,960. Dr. Thomas Torkington Blease of Altrincham left £82,819.

AT a meeting of the London Association of the Medical Women's Federation, held on October 7th, at 11, Chandos Street, Mrs. Flemming, M.D., was elected president for the ensuing year and gave an address on "The future of the association." She referred to some of the work done by the London Association in the past and discussed the need for its continuing existence. In four years' time the number of medical women would be doubled and increasing numbers would increase the need for association and union among them. Women were favourably placed in two ways—first, in that their practice was, as a rule, narrowed and chiefly or solely concerned with women and children. A stream was kept in a narrow channel when required to do work, and the very fact of their observation being directed to one part of the community should enable women in the end to achieve more. The second way was that in this association women were connected with those practising on different lines, while other medical societies often included only those practising along one line. The association had in the past done some work in the investigation of subjects such as menstruation and the menopause, but the results would be wider when their numbers increased and all medical women gave their best. All scientific discoveries took place by many pressing forwards, each with a little more vision until a great mind received sudden illumination which then enabled all to move forward with a long stride.

Letters, Notes, and Answers.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Atiology, Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Mediscra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

SCHOOLBOYS' WEIGHT.

DR. ROBERT E. LORD (Colwyn Bay) sends the following statistics of the weight of schoolboys during term. They relate to a school composed almost entirely of boarders, with a few day boarders, and concern merely one term of the year, which happens to be the healthiest term but also that for examinations.

Weights of 183 Schoolboys at Beginning and End of Summer Term 1919.

Form.	Number Recorded.	Stationary.	Gained Weight.		Lost Weight.	
			No.	Average Gain.	No.	Average Loss.
				lb. oz.		lb. oz.
VI	12	1	6	2 11	5	2 5
VA	20	0	8	1 7	12	2 10
VB	28	1	13	2 13	14	2 3
Shell	16	0	9	3 5	7	2 3
Remove ...	20	0	16	2 6	4	1 11
IVA	26	2	11	1 14	16	2 8
IVB	24	2	14	2 7	8	1 12
III	27	2	18	3 6	7	3 1
Preparatory	10	2	3	2 0	5	1 2
	183	10	95	2 10	78	2 4

Looking over the records of my own family for some years past (he continues), I find that my eldest son gained weight in practically every term while he was at a preparatory school and at a public school; my second son lost weight or was stationary every term while at the same preparatory school, and gained weight in every term while at his public school, though playing games hard; my third boy has lost weight during each term at again the same preparatory school, but without loss of health. I think the inconclusiveness of these observations represents very fairly the position of affairs, and I do not think that any rule can be stated.

INCOME TAX.

"T. M." has decided to accept a lump sum of £500 in lieu of claiming an annuity of £50 as compensation for a diminution in the emoluments of his office as a result of a reduction in the area for which he acts as M.O.H.

*. In our opinion no liability to income tax attaches to the £500. The £50 per annum would be liable, because income tax attaches to annuities as such, but the lump sum does not seem to us to constitute an assessable emolument of office. If the office had been swept away entirely there could have been little if any doubt on the point, and the reduction in area seems to be governed by the same principles.

LETTERS, NOTES, ETC.

MEMORIAL TO HUGH OWEN THOMAS.

WE have received from Mr. Paul Bernard Roth a note strongly supporting the suggestion of Sir John MacAlister to issue a complete edition of Hugh Owen Thomas's writings, and offering to guarantee £50. Mr. Roth is good enough also to send some notes on the bibliography of Mr. Thomas's writings, which will be compared with others in our possession.

AN ELDERLY PRIMIPARA.

DR. GEOFFREY PRICE (Kineton, Warwick) informs us that he recently attended in her first confinement a woman aged 42 years and 6 months. The child weighed 10 lb. at birth. Both mother and child are going on well.

REMUNERATION OF PUBLIC HEALTH OFFICIALS.

"BITTEN" writes: The BRITISH MEDICAL JOURNAL has been and still is very effective in keeping the standard of salaries of those engaged in the public health service above a certain minimum, and this prompts me to write urging you to regard a matter affecting very closely the question of remuneration. A point which is apt to be overlooked when a post is advertised is that of "travelling expenses" in connexion with the office. The advertisement usually says "all necessary travelling expenses will be paid" unless in cases where a lump sum

is given. The interpretation of the extent of travelling expenses unfortunately seems to vary. In one instance travelling expenses include an amount to cover the cost of meals if these have to be taken in an official's absence from home on duty. In others travelling expenses are simply travelling expenses—cost of transit. Now in these days of high prices, it is no small matter for one with £400 or £500 a year to have to pay 2s. 6d. for lunch or 1s. for tea when out. If he is in lodgings he is paying twice for his meal unless he has made special terms with his landlady. If he is married, he is paying, say, 2s. 6d. for a meal which would not have cost him 2s. 6d. had he been at home. The extra cost to be met by the unfortunate servant in having his lunch out is thus caused entirely by the exigencies of his work. Naturally the location of his work alters circumstances. If he is an officer of a corporation he can usually get home; if of a county, then it is many chances to one that he will be far from home at lunch time. I would make this suggestion, that public authorities should be uniform in this matter. If some can pay 2s. 6d. to 3s. for lunch and 1s. 6d. to 2s. for tea, what is there to hinder others?

*. The point our correspondent makes is worthy of consideration. It is, we believe, the rule that in the military and civil services of the State a subsistence allowance is made.

THE UNASSIGNED INSURED.

"PANEL PRACTITIONER" inquires whether an Insurance Committee or the Commissioners "have, or can assume, legal power to force a panel practitioner to accept an insured person, or to continue to have on his list an objectionable person after due legal notice has been given to an Insurance Committee as to the practitioner's desire to have such insured person removed from his list on January 1st, 1920."

*. Under the Insurance Acts and Regulations both the medical practitioner and the insured person have free choice. The Acts, however, provide that every insured person must have medical attendance, etc. Such being the case, it follows that if, say, a "chronic" is refused by all the practitioners in the area, he would be debarred from a right given him by the Acts. Therefore, in every area there is a scheme for the allocation of unassigned persons (a person refused by a doctor is unassigned until upon a practitioner's list). This scheme is agreed between the Panel Committee and the Insurance Committee, and provides a procedure by which any such person is assigned to some practitioner. There can, therefore, be said to be legal power to force a panel practitioner to accept an insured person. In some areas some practitioners only agree to have a limited list and are thus outside the scheme, and are not liable to have anyone assigned to them. Such practitioners have no share in the money available for the medical benefit of unassigned persons.

TREATMENT OF INOPERABLE CARCINOMA WITH SELENIUM.

DR. E. WATSON-WILLIAMS (Clifton, Bristol) writes: As several inquiries have reached me about the selenium I have been using, the following may be of interest:

Crookes's Laboratories, Limited (22, Chenies Street, W.C.), prepare two forms for intramuscular and intravenous injection respectively. The strength is identical—0.05 per cent.—and the "solution" is isotonicized with glucose. The bulk of my observations have been made with the "intramuscular solution," which seems quite harmless and efficacious given intravenously.

The Clin Laboratories, Paris (agents, F. Mertens, 64, Holborn Viaduct, E.C.), have presented me with a quantity for experimental purposes; strength, 0.02 per cent. My experiments do not allow me to compare the two preparations.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 46, 49, 50, 51, 52, and 53 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 47, 48, and 49.

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ATROCITIES OF WAR.*

BY

SIR JOHN BLAND-SUTTON, F.R.C.S.ENG.,
SURGEON TO THE MIDDLESEX HOSPITAL.

VAE VICTIS! It is difficult to conceive a shorter sentence that contains so much meaning. Woe to the vanquished! The modern term, Atrocities, or Horrors, has an alarming significance in Christian countries where men are exhorted to love their enemies!

The Old Testament abounds in descriptions of atrocities practised on prisoners of war. We are all familiar with one striking example in which the first King of Israel, Saul, showed mildness to the vanquished Amalekites, and the dramatic reproof he sustained when the prophet Samuel hewed Agag, King of the Amalekites, in pieces for sacrificial purposes.

When the mighty captain Joab took Rabbah, the metropolis of the Ammonites, he wisely sent for David to decide the fate of the garrison and be responsible for the atrocities. After Joab had brought forth the spoil of the city in great abundance, the inhabitants were collected, and he put them under saws, and under harrows of iron, and under axes of iron, and made them pass through the brick-kiln (2 Sam. xii. 31). This was done not only to the people of Rabbah, but also to the inhabitants of other Ammonite cities. This method of treating prisoners of war was not peculiar to the Israelites. The slaughter and torture of the vanquished regularly followed the capture of strongholds in those days. The date of some of these conquests and wars can now be fixed. After the discovery of the remarkable slabs, cylinders, and tablets of Assyria, enthusiastic and clever men set themselves the task of deciphering the peculiar cuneiform inscriptions so common on these monuments, and from them much has been learned regarding military, social, and religious matters connected with the powerful nations surrounding the Kingdom of Israel. Moreover, the evidence now available shows that the severe punishment inflicted by David on the Ammonites was the common sequel to the capture and sack of a citadel. Modern civilization has taught men to respect brave enemies, but this was not practised during the pre-eminence of Babylonia and Assyria.

The greatest and most powerful monarch of Assyria was Ashur-nasir-pal (B.C. 885-860). The chief source of information concerning his reign is the long cuneiform inscription on slabs which formed the pavement of the entrance to the temple of "Ninib" at Nimrud; and on the colossal human-headed bulls, and lions, excavated by Layard and now exhibited in the British Museum.

Ashur-nasir-pal had the walls of his palace, and the temple he built in the city of Calah (Nimrud), covered with records of his conquests, and strings of titles descriptive of his greatness and power. It is the description of the atrocities inflicted on the people conquered by Ashur-nasir-pal that concerns us most. The records of the eighteen years of his reign show that there was scarcely a year in which he was not at war. The way in which prisoners were treated is briefly set out in regard to the fortified city of Tela. After its capture, 3,000 fighting men were slain; their goods, oxen, and sheep carried away, and many captives burned with fire. Many soldiers were

taken alive. The hands and feet of some were cut off; of others the nose, ears and fingers. The eyes of many men were put out. One heap was made of the living, and another of heads. The heads of some were bound to vines round about the city. The young and maidens were burned in the fire, and the city was annihilated.

As an example of Ashur-nasir-pal's vengeance the following is a good example:

The city of Suru revolted and killed the governor. The King collected chariots and hosts and took the city. He built a pillar near the city gate and flayed all the chief men and covered the pillar with their skins. To be flayed alive is a horrible form of punishment, and it is difficult to conceive the kind of crime that fits it. Boys and men learn from Ovid that Marsyas, the Phrygian flute-player, was flayed alive for presumption. Although he repented because he did not think that playing on Minerva's reed deserved such vengeance:

Apollo from his body stript his hide.

His body was one wound, blood every way

Streamed from all parts: his sinews naked lay

His bare veins pant: his heart you might behold. (*Sandys.*)

A few years ago I interested myself in African drums, and ascertained that some fetish drums were covered with human skin. I got no proof that the skin was removed from living bodies.

Recently, in the Natural History Museum at Nantes, I had an opportunity of looking at the tanned skin of a soldier, killed by the Vendéans in 1793; he requested his comrades to have a drum covered with his skin, so that he might continue to be a terror to those "brigands do royalistes" after his death.

In the Nineveh Gallery of the British Museum there are bas-reliefs representing an assault on a fortified city by Assyrian soldiers. One of the slabs shows how badly the vanquished suffered at the hands of their conquerors. The heads of the prisoners, and probably of the slain, were cut off and presented to the King, much in the same way that big game hunters collect the heads of slaughtered beasts as evidence of their skill and courage.

The heads of the slain represented on the bas-relief (Fig. 1) have marked Jewish features (Museum Guide). It is probable that the atrocities

perpetrated by the Hebrews on the Ammonites were no worse than the punishments and atrocities inflicted on them when in turn they did not happen to be victorious. Saul committed suicide after the disastrous defeat at Gilboa for fear the enemy should abuse him. The Philistines cut off his head and fastened his body and the bodies of his three sons to the walls of Beth-shan.

In those ancient times a king who went to war was glorified in the eyes of his subjects by the number of the enemy slain in battle. This is well expressed in the familiar couplet: "Saul has slain his thousands and David his ten thousands." The history of the ancient civilizations of Palestine, Babylonia, and Assyria and the neighbouring countries makes it certain that atrocities did not end with the capture of a city. The inhabitants of the conquered countries suffered cruelly, and there are good reasons for the opinion that many horrible atrocities, perpetrated on captive Jews, were intensified by hatred of the Jewish religion, which differed so materially from the idolatrous worship of Ashur and Ishtar in Nineveh. Every country has its own religion, and the Jews clung to their religion with remarkable tenacity.

Antiochus IV (Epiphanes), King of Syria, endeavoured (B.C. 150) to suppress Judaism, and established the worship

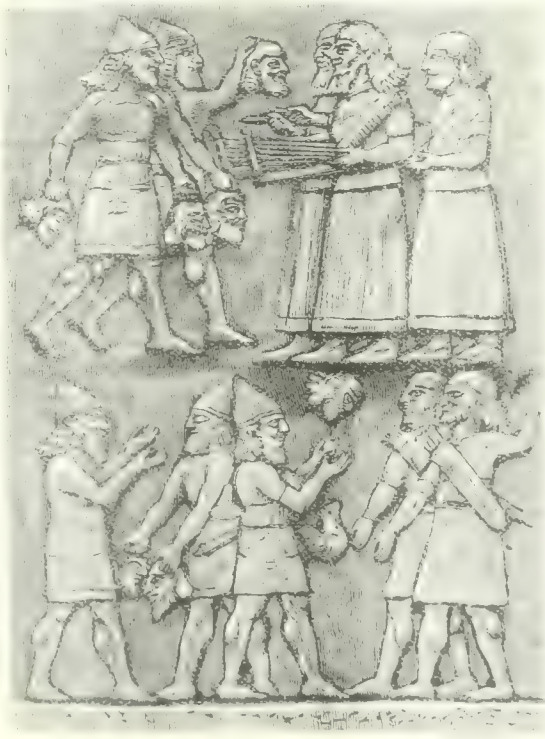


FIG. 1.—Bringing in the heads of the slain. Assyrian bas-relief. British Museum.

* Inaugural address to the Midland Medical Society, Birmingham, October 16th, 1919.

of Greek gods at Jerusalem. Women were terribly punished for allowing their boys to be circumcised. The most horrible form of mutilation on record is that inflicted on seven brethren in the presence of their mother, in one day, because they refused to eat pork (2 Macc. vii). The tyranny of Antiochus IV led to the Maccabean rebellion.

At the period when Ashur-nasir-pal inflicted such ferocious punishments on the people he conquered by force of arms, Assyria had reached not only a state of great prosperity but a high civilization. A neighbouring country, Egypt, had not only attained a higher civilization but practised similar atrocities on a grander scale; there are pictorial records of the atrocities which may be read and studied by any intelligent tourist who makes a journey to Luxor, on the Nile. Ramses III was a king as vain of his conquests as Ashur-nasir-pal. He reigned in Egypt about 1100 B.C., and conquered the Libyans in two great battles. His reign was afterwards a period of peace and quiet, and Ramses became a great builder of temples and worshipped especially the Theban Amon. He built a large temple on the western bank of the Nile at Thebes. The place is now known as Medinet Habu. The temple, about 500 feet long and 160 feet wide, stands in a conspicuous position about half a mile from the Memnon Colossi. The sculptures, wall-pictures, and hieroglyphics record the King's campaigns against the Libyans, the Syrians, and the negroes. They are of importance for the history of Egypt and Mediterranean lands. The figures in the pictures, cut into or painted on the walls, are almost life-size, except that of Pharaoh, who is represented as a giant fighting and trampling on his foes. The scenes of the mutilation of prisoners show the methods. On one wall the captors are engaged cutting off the hands and feet of the captives. The heaps of amputated hands and feet are depicted, and scribes record the numbers, like clerks checking goods in a merchant's office (Fig. 2). The severed limbs numbered 12,535.

This method of removing hands and feet was practised in the Sudan as late as 1890. Father Ohrwalder was a captive in the Mahdi's camp ten years (1882-1892); he wrote an account of his captivity, and the brutality practised at Omdurman. Thieves were punished by removal of the right hand and the left foot. The loss of the hand hampers him in thieving, and the removal of the foot hinders him in running away. The amputations were performed by a butcher. A cord was tied round the forearm just above the wrist, and the hand was dexterously detached with a knife. The stump was then dipped in boiling oil or fat, and then smeared with a mixture of tar and grease. In about two months the wound healed. The foot was removed at the ankle in a similar way. Some died from the shock of the amputation, and a few later from secondary complications. Ohrwalder mentions that many recovered, for there was an enormous number of cripples in Omdurman.

In 1898 I had an opportunity of examining a spy at Luxor who had been punished in this way by the Khalifa. He was released when Kitchener's troops occupied Dongola. The cut surfaces had slowly granulated. The styloid processes of the radius and ulna and the malleoli were covered with thin scar tissue.

Thieves seem to have been treated with more consideration than prisoners of war. In the case of a thief, when his hand or foot was cut off the bleeding was checked by the ancient plan of dipping the stump in boiling oil. This privilege did not apply to captives taken in battle, and many bled to death.

In some parts of Africa (Uganda) mutilation is dreaded because the people believe that in the next world their ghosts will be similarly maimed. A man whose hand is cut off believes that his ghost will bear the stigma of a thief. There is no evidence that the ancient Egyptians believed in such fancies. Though religious they were practical, and often removed the genital organs of prisoners of war, for an obvious reason. On one of the walls at Medinet Habu soldiers are represented in the performance of this mutilation. The proceedings are drawn with the same realism as operations in a book on operative surgery. The victim is held down; the knees bent and the legs drawn aside by assistants, whilst the operator standing between the limbs removes the external genitals with a knife. He makes a curvilinear incision on each side and then sweeps off penis, scrotum, and testicles and casts them in a heap as in the case of hands and feet. Prisoners tied in line, like cattle arranged for slaughter, await their turn. There was method in treating prisoners of war in this way. Many died. The survivors, minus hand or foot, were useless as soldiers, and, without genitals, useless for propagation.

The hands and feet and other severed parts, after being counted and recorded, were dedicated to Amon, or to Khons, in the temple, from the same motives that we hang captured flags and banners in conspicuous places in our cathedrals.

The pictures in this temple interested me in 1898, because a similar act had been performed within a few hundred miles of this temple as recently as 1896, when the Abyssinians inflicted a crushing defeat on the Italian forces in the hills north of Adowa (Adua). After the battle a number of prisoners were treated in the same way as the soldiers of Ramses III treated the unfortunate Libyan captives

some three thousand years previously.

The effects of the atrocities on the Italian soldiers were carefully described by Dr. T. Fiaschi, surgeon to the Sydney Hospital, New South Wales. Fiaschi went to the assistance of his countrymen at the hospital of Asmara, Abyssinia. The Abyssinian soldiers cut off with swords the right hand and left foot of the captured men. Many bled to death because the stumps were not allowed to be dipped "in boiling melted butter." Some of the native Mohammedans who were thus mutilated in despair drowned themselves in a water-hole. Some bandaged the stumps with strips of clothing, and were eventually rescued by their wives. Later, when hospital help was available, the condition of many sufferers was improved by secondary amputation performed by Italian surgeons. Fiaschi found that the forearm stump as a rule healed naturally. The leg stump required reamputation, save in a few instances where the soldiers, in cutting off the foot, had hacked off the malleoli. He estimates that of 1,500 black soldiers mutilated at Adowa 500 survived; the remaining 1,000 died from haemorrhage, starvation, and suffering. Removal of the genitals was not so freely practised on the living as removal of hands and feet.



Fig. 2.—Scene from a wall of the temple at Medinet Habu, showing scribes recording the number of hands cut from prisoners of war. (From a photograph.)

Many of the sufferers among the white soldiers were privates or petty officers. This kind of mutilation was done mainly by the Gallas—Abyssinian irregular mounted horsemen, brave men but notorious for cruelty in war.

Fiaschi's descriptions of the methods employed in mutilating the prisoners of war, wounded and unwounded, black and white, corresponds with those depicted on the walls of the temple at Medinet Habu. The object of the mutilation by the Gallas was to take the parts removed to their women. The Gallas rode about with these disgusting trophies transfixed on their spears. The greater number of the dead were eviscerated. It is well known that men can survive the complete removal of the external genitalia even when it is carried out in the rude fashion depicted on the walls of the temple at Medinet Habu.

A religious sect in Russia known as Skopski practise complete removal of the external genitals of the male as an initiation ceremony. The act is known as the Royal Seal. This extraordinary sect was founded by Andrew Selivanof (died 1832), and the initiation ceremony of removing the external organs of generation is founded on the famous argument on divorce. "For there are some eunuchs which were so born from their mother's womb; and there are some eunuchs which were made eunuchs of men; and there be eunuchs which have made themselves eunuchs for the Kingdom of Heaven's sake" (Matt. xix, 12). That the Skopski remove the male genitalia completely is proved by a specimen in the Museum of the Royal College of Surgeons, showing the effect on the prostate of this curious religious act. Religious enthusiasts in England occasionally endeavour to make themselves eunuchs, but attempts at self-castration are rarely successful.

MUTILATION OF THE CORPSE.

To murder a person and dismember the dead body from sheer hate is a practice repugnant to most minds, but it is widespread and a common mode of expressing contempt and hatred. The treatment of Guy Fawkes and his co-conspirators shows that the State endorsed the mutilation of the bodies of traitors. After these men were hanged, their heads were cut off, the bodies drawn and quartered, and the heads set up on the gates of the city—for the rooks and crows.

Tyburn gallows stood near the Marble Arch, and I have often looked at the rook that perch and build in the tall trees in Connaught Square hard by the tablet that marks the spot where the gallows stood, and wondered if they are descended from the rooks that may have pecked out the eyes of Perkin Warbeck, Jack Sheppard, Jonathan Wild, and the like; or sniffed the skeletons of Cromwell and Ireton when they were exhumed and hung on the gibbets.

Whilst expressing horror at atrocities committed by Turks, infidels, and savages on the quick and the dead, it is worth mention that early in the fifteenth century the Welsh under Glendower committed atrocities on English soldiers. Shakespeare represents the Earl of Westmoreland informing Henry IV of these facts in unmistakable terms:

There came
A post from Wales laden with heavy news;
Whose worst was, that the noble Mortimer,
Leading the men of Hereford to fight
Against the irregular and wild Glendower,
Was by the rude hands of the Welshman taken,
And a thousand of his people butchered;
Upon whose dead corpse there was such misuse
Such beastly shameless transformation,
By those Welshwomen done, as may not be
Without much shame, retold or spoken of.

Even as late as the Wars of the Roses it was a common saying—

Priests pray for enemies, princes kill.

Certainly they cut off the heads of important men slain in battle and exhibited them. The Earl of Salisbury revolted against Henry IV, and lost his life. The gory head of the earl was welcomed into London by a procession of

abbots and bishops, who went out singing psalms and thanksgiving to meet it.

For civilized countries respect for the dead body is almost a fetish. The corpses of royal persons, and the rich, are often wrapped in lead and encased in polished oak. The bodies of common mortals are put in coffins made of elm, because it is cheap and withstands water better than other kinds of wood. In the formal Christian burial service we read, "though worms destroy the body," yet with singular perversion coffins are, as a rule, buried beyond the depth at which earthworms flourish.

The frequency with which man, savage and civilized, mutilates his enemy, in frenzy and in spite, is part of his animal nature. Here is a curious example from otters:

FRACTURE OF THE OS PENIS OR BACULUM.

Many mammals, especially the carnivorous, have a bone in the penis. It is also present in squirrels. Oldfield Thomas noticed that the os penis in squirrels shows such striking differences in the various species that he finds it a more reliable guide in classifying the members of this difficult family than their teeth. He thinks it is more convenient to call this bone the baculum—a little stick.

Otters have a bone in the penis, and the two divergent knobs are invested with the reflexion of the prepuce which covers the glans. The end of the urethra emerges in the interspace of what may for convenience be called the terminal condyles of the bone (Fig. 3).

Mr. Gerald Uthwatt, a keen otter-hunter, collected the "penis bone" of otters for a hobby, and noticed, not infrequently, that the bone is broken and healed. It is difficult to account for such fractures unless we know the habits of these animals. When male otters fight, each combatant tries to seize the external genitals (cods) of its adversary. Otters possess powerful jaws and sharp teeth, and their ability to break the baculum, notwithstanding its hardness, need not be a matter for surprise. A similar fracture has been observed in a seal. T. N. Arnold shot a seal in the Caspian Sea. The baculum of the animal had been broken, but the fragments had firmly united. The bone had been broken at a spot corresponding to that in the otter. S. Alphéraky sent a short account of the specimen, and a drawing, to the Zoological Society, London. He found it difficult to offer an explanation of the cause of the injury. Surely male seals are as quarrelsome as otters! This is a mild atrocity of war compared with the awful vengeance man suffers at the hand of man!

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THE SPREAD OF INFLUENZA IN AN INDUSTRIAL AREA.

BY
ANDREW GARVIE, M.B., CH.B.GLAS.,
HALIFAX.

EXCEPTIONAL opportunities have perhaps been afforded for making the observations set forth in this paper, both by reason of certain characteristics of the neighbourhood and by reason of the temporary shortage of medical men; and because a similar opportunity might not early arise again, these observations are placed on record.

The area in which they were made contains a population of about 11,000, mainly drawn from the artisan class, and while being a portion of Halifax, it is separated from the town proper by a deep ravine in which runs a railway and small river; a bridge forms the only main connexion with the town.

By reason of open spaces and workshops, seven separate divisions of this area can be recognized which lie on a slope rising westwards and northwards from the main connexion to the town. Westward there are Range Bank and Claremont districts, the latter being divided into Claremont proper and Horley Green; and northward from the bridge there are Haley Hill, Woodside, Akroydon, and Boothtown districts. There are three undenominational schools in the area, but there is only one Roman Catholic school and church. There is a considerable and well scattered Catholic population.

There are no houses of entertainment in any of the districts, the favourite place of entertainment common to all districts, with the exception of Akroydon, being a music hall situated at the farther end of the bridge, and while there are considerable shopping facilities in all districts, there is the usual week-end shopping in the town proper. It may therefore be taken that the adult population in those districts only intermingle freely in the factories and in places of entertainment, and it will thus be seen that there was opportunity for analysing the supposed factors in the spread of the epidemic.

During the epidemic five classes of patient came under observation, namely:

1. Insurance patients; mainly industrial workers.
2. Private patients; mainly dependants of insurance patients.
3. Insurance patients of service doctors.
4. Private patients of service doctors.
5. Poor Law patients.

The main object of investigation during the epidemic is not given in this paper; but because those investigations meant following the subsequent history of patients affected I abstained from including the patients of service doctors, as I did not know how soon I would be able to relinquish their care. Similarly of the Poor Law patients, a considerable number were patients of colleagues who had suggested their removal to the Poor Law hospital, and they were only seen formally by me to certify their fitness for removal.

The statistics, therefore, are confined to my own practice. It has to be noticed that five colleagues, whose practices extend into this neighbourhood, had been called up for military service, and with an individual panel of well over 2,000, increased by about 40 per cent., it may be taken that a fairly intimate knowledge of the epidemic in this neighbourhood was gained.

There have been three separate periods of the epidemic. The first occurred in July, 1918; the second reached its maximum of infection about November, 1918; and the third its maximum about the middle of March, 1919.

The statistics given in this paper refer to the two later periods, for unfortunately, being an early victim of the

July epidemic, note-taking was interrupted, and at that time, assistance being unattainable, work was cut down to a minimum.

It was, however, noted that:

1. Individuals affected were chiefly of the insurance class, and infection seemed to be associated with the workshops.
2. The majority were able to attend at the surgery.
3. The wives and children were not affected to any extent, or, if so, it was so slight that they did not consider it worth while to call in a medical man.
4. Illness led to very short incapacity.
5. There were no deaths.

During the second and third waves 768 patients were seen; of these, 555 were private and 213 were insurance patients. Of the private patients, 504 were visited in their homes and 51 attended at the surgery. Of the insurance patients, 115 were visited and 98 seen at the surgery.

The total number of deaths which could in any way be attributed to influenza was 19; of these, 9 were amongst the private patients and 10 amongst the insurance.

Of 223 housewives visited, 2 died. There were no deaths amongst either private or insurance patients who were first seen by me in the consulting-room. There was therefore a death rate of approximately 1.75 per cent. amongst the private patients visited, and approximately 8.5 per cent. amongst the insurance patients. It is to be noted that the death-rate amongst housewives was less than 1 per cent.

Among the insurance patients, 3 were removed to the Poor Law hospital, and among the private patients 9, but I am without any exact data with regard to the ultimate course of these cases.

While possessing figures of the total number of cases diagnosed as suffering from lobar and lobular pneumonia, they are not given in this paper. Any practitioner knows there is nothing more difficult than to diagnose with absolute certainty the presence, or absence, of pneumonic consolidation in many of the cases of influenza. We are all aware of the practitioner who, when a patient complains of a pain in the side, safeguards himself from any eventuality by an easy diagnosis of pneumonia—one practitioner, commenting on the large number of

cases of bronchopneumonia, informed me they could be distinguished from lobar pneumonia by the absence of dullness—and while an actual death rate can be taken as a criterion of the gravity of an epidemic, I do not see that there is anything to be gained by supplying figures which might be regarded as very debatable.

As the total number of cases seen was less than one in ten of the population, it is not suggested that from these figures any idea can be formed of the total number of people affected in the area. I was made aware of a large number of cases by people informing me that influenza

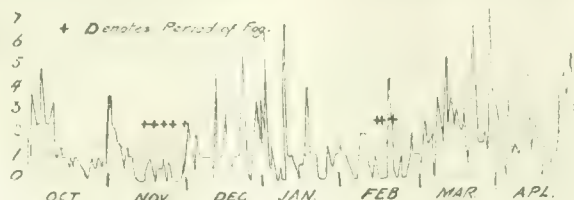


CHART 1.—Wind force to Beaufort scale.

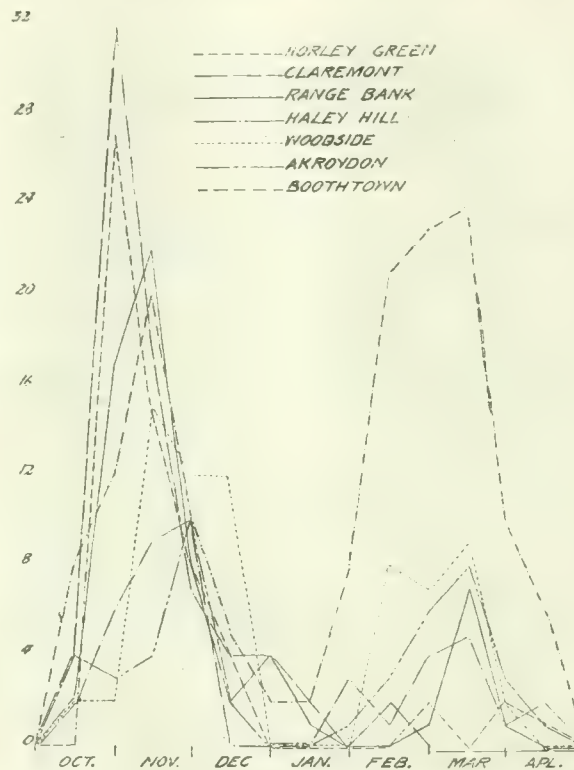


CHART 2.—Private patients visited.

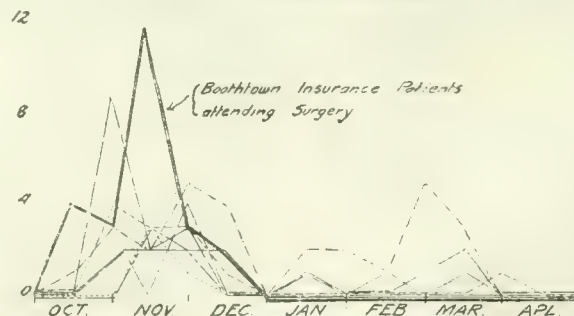


CHART 3.—Insurance patients visited.

was present in the house, and that if any of the occupants became worse they would call me in. On the other hand, it may be taken that those figures do bear a definite relationship to those cases in the epidemic which led to any anxiety.

The high death rate amongst the insurance patients visited as compared with private patients visited is to be noted. It might be urged that this was probably due to insurance patients failing to seek the services of a physician unless seriously ill. This suggestion would be scouted by any physician who has had experience in industrial areas, but, apart from that, the relationship of women and children able to visit my surgery to those visited in their homes was 51 to 504, but amongst the insurance patients it was 98 to 115, showing that amongst them I saw a much higher proportion of the milder cases, and therefore it is not likely that the insurance patients showed any hesitation in calling for attendance. A probable explanation of this high death-rate will be discussed later.

The "Household Wave."

When the epidemic first broke out in October infection appeared to be present in all districts, but the two exacerbations here described presented a curious phenomenon which calls for investigation, and which, for purposes of description, is described as the "household wave." On reference to the diagram this will be recognized as a slow advancing wave of infection, which commenced in Claremount district, later on passing through Range Bank, then Haley Hill and Woodside districts, almost disappearing about the new year, and again appearing with marked intensity in the Boothtown district in the early months of the year. It was in association with this "household wave" that the more serious cases occurred, both amongst the private and insurance patients (Charts 2 and 3). It was during its presence that nearly all the deaths occurred, and for this reason it appears that the phenomena underlying this household infection call for the most serious consideration.

As Boothtown was the last district to be visited by the "household wave" there was sufficient time for observations to be made before the onset of the wave, and it is worth noting what occurred in this district. Actually, the first cases with symptoms of the epidemic occurred here in early October, mainly among school children. On reference to the diagram of insurance patients it will be noticed that there was a considerable number of insurance patients affected who were able to visit at the surgery; a smaller proportion had to be visited. It will be noticed further that when the "household wave" visited Boothtown, insurance patients affected, with one exception, were so ill as to call for visitation.

Classification of Cases.

For purposes of analysis I have divided all patients affected into two classes, so far as any one neighbourhood is concerned:

- A. Sporadic cases.
- B. Cases associated with the "household wave."

Each class had its characteristics:

1. Sporadic cases occurred mainly among the wage-earning members of the household.
2. A sporadic case had little tendency to affect other members of the household, whereas in the presence of the "household wave" usually the whole house was more or less affected with the illness.
3. Sporadic cases were seldom seriously ill; one death occurred in Boothtown, October to December, and one in Claremont, January to April.
4. During the passing of the "household wave" "clumping" of the houses affected was a marked feature. In illustration of this I will give two cases; any one house in the list is within a stone's throw of any other house in the list:

(1) Cases during the October-December period:

Schoolboy	...	2, A. St.	...	October 30th.
Office boy	...	69, H. Rd.	...	" 30th.
Schoolboy	...	11, P. St.	...	" 28th.
Worker...	...	5, S. St.	...	" 28th.
Housewife	...	67, H. Rd.	...	" 28th.
Baby	...	13, P. St.	...	" 29th.

(2) Cases in February:

Housewife	...	159, C. Rd.	...	February 17th.
Housewife	...	143, C. Rd.	...	" 18th.
Housewife	...	137, C. Rd.	...	" 18th.
Housewife	...	15, I. St.	...	" 20th.
Housewife	...	124, C. Rd.	...	" 21st.
Schoolgirl	...	8, R. Pl.	...	" 22nd.
Housewife	...	28, M. St.	...	" 23rd.
Clerkess...	...	18, M. St.	...	" 24th.
Mechanic	...	26, M. St.	...	" 24th.
Railwaysignalman	...	1, M. St.	...	" 25th.
Mechanic	...	1, R. St.	...	" 26th.
Housewife	...	24, M. St.	...	" 26th.
Weaver...	...	4, H. St.	...	" 27th.

It will be noted that all ages and types of patient are included in these groups.

5. Among sporadic cases there appeared to be no tendency to affect houses in the vicinity.
6. So-called "complications" of the influenzal attack were much more common amongst those affected in the "household wave" than amongst the sporadic cases.

Consideration of the "Household Wave."

It has already been pointed out that the population intermingles very freely at work and places of entertainment, and there is one school to a considerable Catholic population. If the epidemic had been spread through any of these channels it seems natural to assume that all areas would have been affected at the same time, but this did not occur. The characteristic feature of the spread was the movement from one neighbourhood to another.

Atmospheric Conditions.

It will be noticed that a definite period of time elapsed between the disappearance of the wave in Haley Hill and its appearance in Boothtown. This may have been due to atmospheric conditions, and I am indebted to Mr. Green, librarian, for supplying me with the following observations in regard to the velocity of the wind and the presence of fog during the epidemic:

During the period November 11th to December 2nd there were twenty-one periods of calm (two periods of observation each day and Sundays not observed) the wind never exceeded light air and there were five days on which fog occurred. This period will be noticed to coincide with the crest of the November epidemic.

During the whole of December there were only seven periods of calm, no fog, and winds varying from light breeze to strong occurred during twenty-two periods.

From January 5th to 17th there were eight periods of calm and nine periods of light air (0 and 1 on Beaufort scale), and on the 9th there was a moderate gale (7 on Beaufort scale).

During February, when it will be again noticed the epidemic was at its maximum, there were thirteen periods of light air and twenty-three periods of calm, with three days of fog. On the 17th there was a fresh breeze.

From March 10th until the end of the month only four periods of calm were recorded and six periods of gale occurred.

From the details supplied I have prepared the diagram shown by taking the average velocities for the two periods of each day (Chart 1).

The diagram of the influenza spread is not traced in sufficiently short periods to allow accurate comparison, but the diagram seems to justify the opinion held by many, that strong winds are the best known preventive of the spread of the epidemic. And here it may be asked, If strong air currents are beneficial in breaking up the virulence of an epidemic, why should they be considered harmful as a means of breaking up the virulence in the unit of the spread, that is to say, in the home?

Very early in the epidemic it struck me as curious that generally the first member of the family affected appeared to escape with the mildest attack, and that serious illnesses usually developed among the other members of the family. I made observations of this in a large number of cases; the assertion is obviously rather difficult of proof, but to find probable confirmation of it I have analysed the cases where death occurred.

* In subsequent parts of this paper the term "secondary stage" is used in preference to "complications," and, so far as this paper is concerned, the use of this term may be accepted. I think, without reasons being given for its use.

Increase of Severity from First Case in a House: Number of Deaths.

No. of Case.	Relation-ship to Infection in House.	Remarks.	No. of Case.	Relation-ship to Infection in House.	Remarks.
1 ...	1st	Lived alone.	12 ...	1st	Sporadic.
2 ...	4th	Six in one bed-room.	13 ...	1st	
3 ...	2nd		14 ...	2nd	
4 ...	3rd	Brothers; six inmates residing in one roomed cottage.	15 ...	2nd	
5 ...	3rd		15 ...	2nd	
6 ...	2nd		17 ...	1st	Nursed sister who was said to have been seriously ill with influenza and pneumonia.
7 ...	3rd				
8 ...	2nd				
9 ...	2nd				
10 ...	1st	Sporadic.	18 ...	2nd	
11 ...	2nd		19 ...	1st	

During the winter, lines of dealing with the epidemic were sought, and as the amount of knowledge increased, added to the experience gained during the summer epidemic, more or less definite lines were adopted, and as the lines disagree in many ways with the current teaching in regard to this, the thought which prompted them may be given.

It scarcely seems credible that the human organism is devoid of any protective mechanism against the attacks of an air-borne virus inimical to that organism, short of development of an immunity acquired through the presence of the virus or its products in the tissues or circulating fluids of the body. If such protective mechanism exists it is inherited, and it is natural to assume that that protective mechanism will give the best reaction in an environment in which the mechanism has been evolved, and short of that, in the normal environment of the individual. The natural environment of man is inherited, his normal is usually acquired. Reversion to inherited is beneficial to the organism; thus, the acquired environment of a large number of the men called up for military service was the factory and the workshop, and the result of placing them in the inherited environment of the open-air life of military service need not be laboured here.

Infection in a normal environment should therefore be preferable to infection in an abnormal, both by reason of easier recognition of the virus, and if the normal environment can be maintained, by better reaction of the protective mechanism. The natural environment of man is the open-air life; the lesser modification of this is the factory, school, or places of entertainment, and the larger is the average industrial home. It was the realization of this fact which made me refrain, contrary to the advice of the Royal College of Physicians, from advising insurance patients who consulted me at the surgery to confine themselves too much to bed. In this connexion I may mention the case of a demobilized soldier. I had been in attendance at a house, and I noticed the man sitting by the fire, looking very ill; he had a temperature of 103°, and I advised him to go to bed. He replied, "Aw mak nowt o' bed; aw'll cure mesen." The next day when I called he was out, and two days later when I called he was shaving himself; he looked well, and was grinning all over his face. It appeared that on the first day he had gone for a walk of about five miles; on the second day he awoke "feeling stiff all over" and "no better," so he went for a walk of about eight miles, and finished up by going into a public-house and having "fourteen gins." "Aw kept on callin' and they kept on bringin'; aw got drunk, but aw'm alreight nah." He gave credit to the combination of remedies.

Whether the patient stayed away from work or not was left very much to his own feelings, and no patient who consulted me at the surgery ever passed into the "secondary stage." Those cases were sporadic, presumably received infection in normal environment, and reaction was good.

In the case of the "household wave," the first affected usually appeared to receive a more serious affection than the sporadic, but not so serious as those subsequently affected in the same house. The illustration of this is

to be found in the high visiting and low consulting lists in relationship to the "household wave." Investigations were made, mainly in the hope of finding some means of breaking the malignancy of the "household wave," but much remains obscure.

The reason why subsequent cases were more serious than the first in any one home is probably due to three factors:

- That density of infection has probably a definite relation to intensity of attacks.
- That the usual household precautions in the presence of illness leads to greater abnormality of the environment, and thus lowers the sensitiveness of the protective mechanism of other inmates.
- That those same precautions probably prevented any attenuation of the virulence of the micro-organism when passing from host to host.

But why the first case in the household was, on the average, more serious than the sporadic, and why the "clumping" should occur, is difficult to understand. Casual observation might lead one to suppose that the spread was due to actual contagion from one house to another. At first I regarded it simply as due to "neighbourliness," but later on became convinced that this could at most only be a partial explanation of the spread. In many of the households affected in a "clump," a suggestion of being in any of the other affected houses was absolutely denied. It will further be noticed that within one particular "clump" two or three houses commenced on the same date, and further, owing to the general fear of the epidemic, spread by newspaper reports and other methods, if the epidemic was known to be present in a house, the house was usually shunned by neighbours. In many cases the houses were not in direct contact but separated by the breadth of the street or by garden walls. It was easy to be supplied with a probable source of infection, as easy as for the average parent to trace the ailments of childhood to vaccination, for during the whole winter in populous areas there must have been very few who were not time and again in contact with infective persons; but why people within small radii of one another, of all ages, of different occupations, not coming in actual contact with one another, should develop synchronous attacks, still remains a mystery to me.

Ventilation of Sick-room.

With the lull at the New Year opportunity was afforded for a preliminary review of observations, and from that time onward, when called to visit, the first thing considered was the condition of the atmosphere. The people were advised to open the windows, remove screens, and if possible a through draught was sought after, by opening front and back windows and intermediate doors. This ensured that at least during one period of the day the atmosphere of the room was changed. It was impressed upon the occupants that the need for open windows and through draughts was as great for them as for the patient. To illustrate this two cases may be cited.

In the first, the patient lived in a one-roomed cottage along with two children, aged 10 and 3; catarrhal symptoms were present in the child aged 10. After visiting in the forenoon, I was called to see the woman late at night and found she had developed severe bronchial symptoms. The room was hot and stuffy; there was no ventilation, owing to the fact that the window was enclosed in one frame not made to open. A rolling pin was borrowed from one of the neighbours and a pane of glass was smashed out. On the following day the air of the room was cool and comparatively fresh, both patients showed improvement, and the child aged 3 did not develop the symptoms.

In the other case a family of ten (eight adult) resided in a house with three bedrooms, the whole family sleeping within a circle of 12 ft. When first visited two were in bed and the mother was obviously infected. Serious warning was given of the danger in such a household, but fortunately, in this case I knew that any instructions given would be carried out; every window was opened and all inside doors, and remained open during the period of infection. None of the rest of the family developed symptoms. Two developed symptoms three months later; five have escaped so far.

This advice appeared to be in such direct opposition to that given in the newspapers and by the local health authorities, that it led to much discussion, and, for me, waste of time, but it was a pleasing feature that in the later stages of the epidemic people seemed more ready to appreciate the value of the open window.

As much of the prejudice appeared to be traceable to the memorandum issued by the Royal College of Physicians, and to the more or less garbled summaries issued by local authorities, presumably on the advice of the Local Government Board, one is now justified in asking if the data on which that memorandum was based can be supplied, and if the statement that "draughts are harmful" was really the subject of careful investigation, or if the College was simply lending moral support to current superstition. I scarcely think that the harm from the advice "on the first feeling of illness or rise in temperature" (how many of the population possess thermometers?) "the patient should go to his bed at once" was balanced by the subsequent advice to "call in a doctor." If home conditions were ideal no one could take exception to the advice. The rest in bed would increase the ratio between the anabolic and katabolic processes in the body and thus raise the resistance of the individual cell; but that which may be good advice to a community where a high standard of living obtains may be detrimental where the standard of living is low. To advise people, who to avoid draughts normally place pads along window-sills, screens around beds, and even stuff paper into key-holes, that they should on the first symptom of illness leave their normal environment, go home to bed, and avoid draughts, is surely advising them to court disaster. This was not the intention of those who framed the memorandum, but this was the practical result of their advice.

As there are indications that the epidemic has not entirely exhausted itself, and that, given suitable climatic conditions, there may be a recurrence during the coming winter, attention may be called to the preventive measures suggested by the health authorities. In regard to the closing of places of entertainment or restriction of the hours of continuous performances in picture houses, I was unable to find a single case where infection could be definitely traced to this source. It can be seen that the place of entertainment could have no relation to the influenzal wave in this neighbourhood. To close these places can only increase the hours of congestion in the home, and to limit the hours of continuous performances can only increase the congestion of individual performances. The ludicrous suggestion as to the wearing of masks and even goggles was fortunately not adopted, for, if there be any advantage in wearing them, that advantage would be lost in the place where the wearing of them appears to be most necessary.

Toward the end of 1918 a stock vaccine was placed at our disposal and application was made for this, but I found it was suggested for use in prophylaxis. The use implied certain moral obligations to supply the Local Government Board with certain statistical information, which obviously to me could not be given. During the evening on which I received the vaccine I spent a quarter of an hour trying to persuade a husband to be inoculated, but he finally declined. He did not develop the symptoms. Theoretically, or under military discipline, vaccines may be of great value, but the time is not yet when we can line up masses of the civilian population and tell them to roll up their sleeves.

The value of the notification of pneumonia has already been commented upon.

Any medical man can realize and sympathize with the embarrassment of a department in the midst of a popular clamour to "do something," but it is to be hoped that that will not overrule the detached judgement. Much could be done, however, by the compulsory opening up of fever hospitals for the reception of cases where there is overcrowding in a house or where the early symptoms of the "secondary stage" are present. Cases removed to the Poor Law hospital appeared to do well; two insurance patients with lobar pneumonia and acute mania, which I regarded as hopeless when removed, made good recovery. This, I think, is associated with the phenomenon of the higher mortality among insurance patients; the environment of the house is more abnormal to the worker than to the housewife, whose mortality was remarkably low. There is, however, a certain prejudice to all Poor Law hospitals which will not be easily removed. Two of my cases who died informed me that while they would be willing to go to the fever hospital they would rather die than go to the "union." In the case of one—a pregnant woman who

was confined before her death—I felt sympathy for her point of view.

Apart from this I cannot suggest any steps which central authorities could take to break up the epidemic. It is difficult to see how the house-to-house spread can be prevented. Houses and habits cannot be altered by panic legislation in the midst of an epidemic. If people would follow their usual routine and realize the benefit of strong air currents there would be little fear of dangerous infections.

Much has been written about the relation of the general health of the community to the epidemic. There may be some relation, but so far as the suggestion that war conditions led to an impairment of the general health of the community, I am without evidence. During the two months preceding the epidemic there was a small visiting list as compared with previous years; there was the usual routine of the consulting insurance patient, but even amongst them there was nothing to indicate any marked impairment of health.

In regard to the after-effects of the epidemic, while it may still be premature to form an opinion, during the last three months I have only seen one of the observed cases with an illness which appears to be directly traceable to the infection, and during this summer there has been exceptionally little illness. In this fact may be found the true explanation for the small practice of the demobilized officer.

I am fully aware how little importance will be attached to the views here expressed, by those who frame regulations, but with the experience gained in over 1,000 cases, and with many hours spent in analysing the observations made, I cannot help but express the view that if public health authorities cannot be a help to the general practitioner, they should at least refrain from being a hindrance.

THE SCOPE OF CERTAIN GASEOUS DISINFECTANTS IN THE PROPHYLAXIS OF INFLUENZA.

By ALEXANDER GREGOR, M.D., C.M.,

MEDICAL OFFICER OF HEALTH, BOROUGH OF FALMOUTH; CAPTAIN R.A.M.C.(T.F.); LATE SPECIALIST SANITARY OFFICER.

Since the publication of my note on the epidemiology of influenza among gas workers (BRITISH MEDICAL JOURNAL, March 1st, 1919) evidence has been accumulating that people working in an atmosphere containing certain gases obtain a marked degree of immunity during outbreaks of influenza. Shufflebotham (BRITISH MEDICAL JOURNAL, April 19th, 1919, p. 478) has brought forward an interesting series of figures pointing in the same direction. In the present paper my object is to describe some experiments undertaken with a view to determining the value of SO_2 and NO_2 respectively for the present purpose, and in doing so I may mention that latterly, through the kindly offices of the Medical Research Committee, I have been able to co-operate with Dr. Benjamin Moore, F.R.S., and Mr. Webster of their staff, whose report may be expected at an early date.

The problem for investigation may be summarized in two questions:

1. Is there any epidemiological evidence to show that workers in fumes are less attacked by influenza than others?

From all statistics at present at our disposal we venture to answer this proposition in the affirmative.

2. Is there any evidence to show that the fumes emanating from these manufactures have any influence on the vitality of bacteria in the post-nasal secretion of persons inhaling them?

It goes without saying that if a practical measure for preventing the spread of influenza by means of a disinfectant gas is to be elaborated, the concentration of this gas must be such that while exerting the requisite action on the secretion of the upper respiratory passages of those inhaling it, no untoward effect is produced. It may be stated at once that throughout the following experiments with SO_2 and NO_2 gases the concentration of these gases in the air of the room was so small as to be comfortably outside the limits of their toxic action.

Emphasis must also be laid upon another point in this relation. *A priori* it is exceedingly improbable that sterilization of the secretions of the upper respiratory passages can be effected by even prolonged inhalation of disinfectant gases in such low concentration as are now under consideration. It must be realized, however, that the problem is not one of sterilization, but of checking the spread of influenza; and it is conceivable, and even probable, that a moderate degree of disinfectant action on the secretion of the upper respiratory passages, while falling considerably short of complete sterilization, may nevertheless be of very great value in limiting the spread of infection, particularly if the action is such as to render this secretion even moderately unfavourable to the multiplication of the invading micro-organism.

Bacteriological Experiments.

The methods used were suggested by Gordon and Flack in their paper on the disinfection of meningococcus carriers.¹ Their investigations were confined to the use of the steam spray, though they pointed out at the same time that a disinfectant could conceivably be conveyed to the nasopharynx by means of gas. There is evidence from many sources that the use of the spray with high pressure steam did much towards the reduction of mass infection in meningococcal infection among troops, and now an attempt is here made to show that even better results can be obtained by using gases. The difficulties of applying the spray to masses of the civil population in times of epidemic are almost insurmountable, whereas in the form of gas a certain degree of disinfection of the upper respiratory passages could be brought to practically every home.

For the purpose of the valuation of the plates used in some of the experiments, the following standard has been adopted:

- ++++ = Growth profuse, colonies confluent.
+++ = Growth profuse, colonies less confluent, discrete colonies fairly evident.
++ = All colonies discrete.
+ = All colonies discrete and very small.
(+) = Very, very few colonies, all pin-point.
- = Sterile.

(a) Experiments in the Works.

Forty-three workers (some full time, others partial) were swabbed, and the results according to the above standard are set out in the following table:

	Gaswork Fumes.	HNO ₃ Fumes.	Acetone Vapour.	SO ₂ Fumes.	Total.	Per Cent.
++++	2	1	0	0	3	6.9
+++	4	3	0	1	8	18.6
++	0	0	0	1	1	2.3
+	5	5	0	1	11	25.5
(+)	6	4	5	1	16	37.2
-	1	2	0	1	4	9.3

In addition three non-workers were exposed to the SO₂ fumes in the roasting house of the tin mine for a period of 45 minutes.

Result: No. 1 ... (+)
No. 2 ... 3 colonies
No. 3 ... (+)

Nos. 2 and 3 were further experimented on. Swabs were taken twenty hours after the above forty-five minute exposure.

Result: No. 2 ... +++
No. 3 ... ++

Swabs taken forty-four hours after—

Result: No. 2 ... +++
No. 3 ... ++

On another occasion four experimenters were swabbed after having been in the atmosphere of the roasting house of the tin mine for about an hour and a half. The result was a distinct diminution of the post-nasal growth, and the following values were placed on the plates three hours after exposure:

No. 1	...	...	...	...	++
No. 2	...	...	...	...	++
No. 3	...	...	...	...	++
No. 4	...	...	...	...	+

The concentration of SO₂ in the atmosphere happened to be very dilute on this day.

(b) Laboratory Experiments with SO₂.

Two experimenters were employed; one was exposing plates and culture tubes to SO₂ fumes, and he was swabbed at different intervals after his exposure, with the following results:

One hour after	...	...	...	(+)
Sixteen hours after	...	...	...	(+)
Twenty-four hours after, on two occasions	...	...	...	++

On another occasion one was exposed for eight minutes and swabbed an hour after. Result: All colonies discrete and very small.

Another was exposed for fifteen minutes and swabbed an hour after. Result: Sterile.

The laboratory fumes were much stronger than those in the roasting house of the tin mine, but they could be easily borne without much discomfort, and tolerance was established in a very short time limit.

As a contrast to the laboratory experiments the results obtained on the workers in SO₂ fumes may be given *in extenso*:

Five workers, divided into two classes were swabbed. Class A consisted of three men always working in fumes; Class B of two men partially working in fumes.

Class A, No. 1...	.. (+)	Class B, No. 1	... ++
No. 2...	.. +	No. 2	... +++
No. 3...	... -		

Laboratory Experiment with Nitrogen Peroxide (NO₂).

The nitrogen peroxide fumes were inhaled for about ten minutes by two experimenters. Swabs taken about an hour afterwards gave the following results:

No. 1...	... -	No. 2	... (+)
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On another occasion four experimenters were exposed daily for five days, and swabs were taken at various intervals afterwards up to fifteen hours. It may be said, without going into individual detail, that all plates showed a very marked decrease in growth, though none were sterile.

For the sake of comparison the detailed results of the swabbing of fifteen workers in NO₂ fumes are given. Of these, two men swabbed during work=(+). In thirteen men just commencing a shift after twenty-four hours' rest (some whole-time fume workers, some partial) the following results were obtained:

In 1	...	...	...	...	++++
In 3	...	...	...	...	++++
In 0	...	...	...	...	++
In 5	...	...	...	...	+
In 2	...	...	...	...	(+)
In 2	...	...	...	...	-

These results, obtained by swabbing workers, must be considered satisfactory, and, taken in conjunction with the experiments carried out in the tin mines and in the laboratory with SO₂ and NO₂ among non-workers, leave but little doubt that the fumes under review have a marked effect in inhibiting the post-nasal microbial growth of those exposed to them. Plates have only to be compared with what may be styled the "normal post-nasal plate," now so well known to all workers in cerebro-spinal fever, to note the vast difference in growth. In all the workers except three the growth was diminished, and in no less than sixteen the few colonies were just visible, and four plates were actually sterile. Among non-workers exposed in works, and in the laboratory experiments, the same results were obtained. Two plates were sterile and one nearly so (three colonies). Taken as a whole, 74 per cent. of the workers had their nasal passages well disinfected. Practically the same results were achieved among non-workers exposed at the respective works, and under similar conditions reproduced in the laboratory. It is not claimed that every nasopharynx will be rendered sterile by exposure to gas, nor is such necessary, but it is claimed that certain gases have a powerful inhibitory action on post-nasal flora, and that such action is quite sufficient to render many workers in those gases immune to disease which invades the body through the upper respiratory passages. Further, it is claimed that the same results cannot be achieved by the use of antiseptic and alkaline gargles, douches, and hand sprays, and other favourite methods now in vogue. It is needless to point out the difficulties that every worker in infectious diseases which have their origin in the upper respiratory passages has experienced in getting rid of his carriers and in preventing the spread of the disease, and until Gordon evolved the high pressure steam method of disinfection the case seemed hopeless, and the unfortunate carrier had to be left to fight his own battle against the invading micro-organism. Disinfection by gas, however, is an advance on steam, and is much simpler and easier of

application. It must be noted here that the nasal secretions of the experimenters were always acid.

Summing up all the evidence under this heading, we are justified in coming to the conclusion that gases have a profound inhibitory influence on the post-nasal flora of workers, and also in non-workers exposed both in the works and also under laboratory conditions.

Is there any evidence to show that fumes emanating from those manufactures have any action on inoculated plates and on microbes suspended in different liquid media?

The method of inoculating and exposing plates was that suggested by Gordon in the BRITISH MEDICAL JOURNAL of July 1st, 1916. A twenty-four-hour old broth culture of *Staphylococcus epidermidis* was used, and an equal amount of the germ was sown on each plate. The results of the plate exposures are shown graphically in the accompanying charts, except the plates exposed to SO_2 fumes, which are dealt with separately. The charts seem to indicate that the fumes of the oxide of iron purifiers have the most powerful inhibitory effect on microbial growth, a sterile plate being obtained with a ten-minute exposure (Figs. 1 and 2). The most remarkable result, however, is that shown in Fig. 3, where the plates were exposed on a

Charts showing Time of Exposure to Fumes Required to Kill Germs on Inoculated Plates.

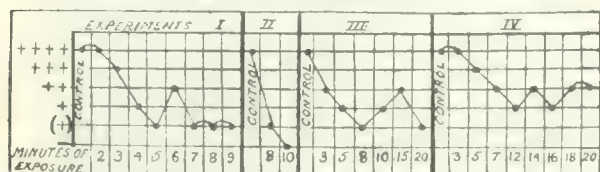


FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

Experiment I.—Exposure in gas purifier (oxide of iron) while being discharged for cleansing.

Experiment II.—Exposure to fumes from heap of oxide of iron, twenty-four hours after discharge from purifier.

Experiment III.—Exposure in the open yard, surrounded by the different buildings where the various processes of gas making are carried on.

Experiment IV.—Exposure in nitrogen peroxide fumes during the manufacture of the acid.

plank lying on the ground in the open yard of a gasworks while the routine work of the day was being carried on. Experiment IV was carried out in the nitric acid retort house. The plates were exposed in the general atmosphere of the shed and direct to the fumes issuing from the retorts, and where the men were working. In general a certain variation is observed in most of the results with regard to the time of the exposure, but this can easily be accounted for by the fact that the fumes are practically discharged into the open air, and therefore subject to great irregularity of atmospheric dilution.

The action of SO_2 fumes on inoculated plates is entirely negative, as shown by the following experiments:

Experiment 1.—(a) In the Tin Mine.

Ten plates were exposed to the fumes emanating from the ovens in the roasting house of the tin mine for periods varying from five to thirty minutes.

Result of all plates ... +++++

Experiment 2.—(b) In the Laboratory.

Sulphur dioxide (SO_2) fumes were generated in the laboratory, and six inoculated plates were exposed for periods varying from twenty to forty-five minutes.

Result of all plates ... +++++

From these results it was evident that Gordon's method of testing inoculated plates is not adapted for the case of SO_2 fumes.

The method of using inoculated plates was therefore abandoned and attention was directed to bubbling the gas through the suspensions of organisms in liquid media. The following experiments were carried out with different gases:

Experiment 3.— SO_2 . (a) In the Tin Mine.

Gas bubbled through a saline suspension of *Staphylococcus epidermidis* at the time the men were at work for twenty minutes gave a very marked reduction of colonies after nine and ten hours' incubation, as compared with the control.

Experiment 4.—(b) In the Laboratory.

Half an ounce of sulphur was burned in a room of 1,000 ft. cubic capacity. The resulting atmosphere was borne without

the slightest discomfort, and very little irritation was noted in the respiratory passages. This atmosphere was sucked through three wash-bottles containing different media and each inoculated with one loopful of a known suspension (Bottle I contained a saline suspension; Bottle II a broth suspension; and Bottle III a broth and horse serum 10 per cent. suspension). The three bottles were bubbled simultaneously, so that each had the same dose of gas. Bubbling was kept on for twenty minutes and the bottles then placed in the incubator.

TABLE I.

	BOTTLE I.	BOTTLE II.	BOTTLE III.
Reaction after exposure	Slightly acid	Distinctly acid	Distinctly acid
	No. of Colonies per c.cm.	No. of Colonies per c.cm.	No. of Colonies per c.cm.
Control before bubbling	7,300	8,000	8,000
After incubation for			
1 hour ...	60	9,000	7,800
2 hours ...	60	Sterile	8,000
3 ..	Sterile	14	8,200
4 ..	—	28	9,600
5 ..	—	14	8,500
6 ..	—	Sterile*	9,400
7 ..	—	—	10,300
9 ..	—	—	11,400*

* Bottles I and II were still sterile at the end of twenty-seven hours. The number of colonies per c.cm. in Bottle III remained about 11,400 up to twelve hours; at the end of twenty-seven hours they were uncountable.

The result of this experiment shows that even in a very rich medium the passage through it of an atmosphere feebly diluted with SO_2 was sufficient to inhibit the growth of microbes. The third part of the experiment was therefore carried further and a control used.

TABLE II.—Broth with 10 per cent. Horse Serum.

	Control (Serum Broth).	Serum Broth treated with SO_2 .
	No. of Colonies per c.cm.	No. of Colonies per c.cm.
Controls before bubbling	21,700	18,200
After incubation for		Dose of gas (10 mins.).
1 hour ...	27,000	16,500
2 hours ...	25,000	15,100
3 ..	25,000	21,500
4 ..	29,000	29,000
5 hours ...	35,000	Dose of gas repeated (10 mins.).
6 ..	All plates after this period uncountable	17,800
7 ..	—	16,100
8 ..	—	3,700
9 hours ...	—	Dose of gas repeated (10 mins.).
		Sterile, and remained so a period of 15 hours

From this it is evident that, no matter how rich the medium is, a weak atmosphere of SO_2 has the power of killing the microbes, and further, that repeated small doses are more efficacious than one long dose. Judging from the figures it would appear that the medium was sufficiently impregnated by the second dose to inhibit all growth.

Experiment 5.— NO_2 . (a) In Cordite Factory.

A saline suspension through which the atmosphere of the HNO_3 house was bubbled for two hours yielded sterile plates after six hours' incubation, and they remained sterile at the end of twenty-four hours.

Experiment 6.—(b) In the Laboratory.

The experiment with the three media was carried out using the same technique as in the case of SO_2 .

TABLE III.

	BOTTLE I.	BOTTLE II.	BOTTLE III.
Reaction after exposure	Slightly acid	Distinctly acid	Distinctly acid
	No. of Colonies per c.cm.	No. of Colonies per c.cm.	No. of Colonies per c.cm.
Control before bubbling	57,600	53,100	50,720
After incubation for			
3 hours ...	45,920	—	22,400
6 " ...	20,800	60,800	24,960
9 " ...	Sterile	Uncountable	Uncountable

Note.—Bottle I contained a saline suspension; Bottle II a broth suspension; and Bottle III a broth and horse serum 10 per cent. suspension.

Experiment 7.—(a) In the Works.

Experiment with fumes from spent oxide of iron turned out of "coal-gas purifier" exposed to the atmosphere in the process of revivifying for repeated use. This gas was bubbled through a saline suspension for twenty minutes and placed in the incubator.

Number of colonies after 4 hours' incubation	20
" " after 6 " "	sterile
" " after 8 " "	sterile

Experiment 8.—(b) Chlorine Gas in the Laboratory.

This was bubbled through a saline suspension, with the result that the plates were sterile after six and eight hours' incubation.

Plates of swabs from two experimenters exposed showed no diminution in growth, and as the effects of the gas on them were so disagreeable no further trials were made in this direction. Twenty-four inoculated plates which had been incubated for twenty-four hours and showed varying growths of the organism were placed in an airtight box. A massive dose of chlorine gas of a strength of between 1 in 1,000 and 1 in 2,000 was introduced to see if further growth could be inhibited. The box was left at room temperature for twenty-four hours. On opening the box at the end of this time a distinct odour of chlorine was perceptible, but notwithstanding this and the massive dose given there was a distinct increase of growth on all the plates.

9. Other Experiments in the Laboratory.

Six sterile plates were exposed in an ordinary room for two hours. At the end of twenty-four hours' incubation they yielded a total of 53 colonies, an average of 8.8 colonies per plate. The room was then gassed with NO_2 for two hours. During this gassing period an inoculated plate was exposed, and yielded only 24 colonies, and it was noted that the agar was distinctly yellow. At the end of two hours' gassing a further six plates were exposed for two hours, and these yielded at the end of twenty-four hours' incubation 21 colonies, or an average of 3.5 per plate. This experiment was repeated with the following result: Six sterile plates gave 32 colonies, or an average of 5.3 per plate. This was reduced to 17, or 2.8 per plate after gassing.

Practically parallel findings were obtained with SO_2 , before and after treatment of the atmosphere, the growths being about halved. From all these experiments no doubt remains but that these fumes, both in the factory and in the laboratory, have a powerful inhibitory influence on the growth of microbes.

Practical Application of these Investigations.

An attempt was now made to bring the results into practice. There was an outbreak of influenza at a camp during this time, and it was resolved to try to disinfect the men *en masse* with NO_2 , and a drying room was set aside as an inhalatorium. To generate the gas, strips of copper and HNO_3 were used. The concentration of nitrogen peroxide in the air was so graded that the odour was by no means irritating or disagreeable to bear, and the men were kept in it for fifteen minutes. No one made complaints as to any ill after-effects. The battalion was unfortunately in the process of disbandment, and as a consequence discipline was somewhat lax. It was impossible to keep accurate records, and the men

subjected themselves to the treatment voluntarily. Notwithstanding this, some 400 men were passed through the inhalatorium during a period of five days. Many of the men were being sent away in drafts to the disbandment centre; it is much to be regretted that no figures are available as to the effect of the treatment on the incidence of the epidemic. But one fact was clearly established—namely, that it is quite practicable to expose bodies of men to a dilute atmosphere of NO_2 in the same way as the steam spray without the slightest discomfort or harm to the individual.

The next experiment was carried out on a body of civilians. A gang of navvies building a dry dock was housed in a large disused grain shed in the docks. The ground floor was used as a mess-room and kitchen, with rows of gas stoves. There were no windows for light and ventilation, which was obtained through two large double doors. A stair led up from the mess-room to the men's sleeping quarters, which were far from ideal, being a replica of the mess-room, with the exception that there were three double doors through which goods were hoisted. These were kept open during the day when weather conditions permitted. The men slept on bed-boards and the usual army mobilization standard of 400 cubic feet was allocated to each man. There were fifty men in occupation and they kept the quarters quite clean. Two cases of influenza were reported late one evening, and they were removed to the hospital on the following morning. They may be classed as severe, but uncomplicated. With the willing co-operation of the contractor and the navvies it was agreed to use SO_2 gas as a prophylactic. Half an ounce of sulphur per each 1,000 cubic feet space was burned slowly in the sleeping quarters while the men were going to bed and on rising in the morning. This dilution caused no discomfort and little irritation in the nasal passages, and the double dose was continued for fourteen days, and no other case occurred. The numbers are far too small to draw any definite conclusion as to the value of the procedure, but the result is striking when all the conditions under which the men were living are taken into account, for it may be said with confidence that these were ideal for the spread of any spray-borne disease. Just as in the case of the NO_2 gas with soldiers, this experiment brings out the fact that it is quite practicable to disinfect large bodies of the civil population with gas in times of epidemic. The *modus operandi* of the disinfection was carefully explained to the men, and they entered enthusiastically into the experiment.

SUMMARY.

1. Workers in gas fumes have shown a certain amount of immunity during the recent waves of influenza, as compared not only with other classes of the community, but also in one instance with those working in the same factory but not in a fume department.
2. Post-nasal swabs taken from employees at the time of working, and also after being twenty-four hours off duty, showed either a very marked decrease in the growth of microbes in nearly every instance or were sterile. The same observation holds good in regard to non-workers experimented on in the works and in the laboratory.
3. With one exception—namely, SO_2 —plates inoculated with the *Staphylococcus epidermidis* and exposed to the fumes of the factories showed a marked diminution in growth, and in one instance sterility was attained.
4. SO_2 had no action on inoculated plates. But when this and other selected gases were bubbled through suspensions of organisms, in various liquid media, the growth was completely inhibited.
5. It has been definitely proved that groups of men can be exposed to NO_2 and SO_2 gases for lengthened periods during epidemic times without the slightest discomfort or harm to anyone.
6. There was no evidence of nasal irritation and consequent increased flow of mucus among the workers. Further it was noted that among non-workers exposed in the works, in the laboratory, and in the inhalatoria, any initial irritation caused by the fumes quickly disappeared, and that tolerance was quickly established.
7. The nasal secretions after exposure were always found to be acid.
8. It is suggested that the mode of action of NO_2 and SO_2 fumes may be that as the secretions of the upper

respiratory passages are rendered acid a medium is formed which is inimicable to microbial growth.

Note on Immunity from Second Attack.

Navy.—Of 321 cases in patrol in the July epidemic, 2 had return attacks in the October-November epidemic.

Army.—A company of Royal Garrison Artillery had 25 cases in July. None of these were attacked in the October-November epidemic. In a battalion: Of 21 cases of the July epidemic traced none were attacked in that of October-November.

N.E. Works.—From July 10th to 23rd, 13 males and 59 females were attacked; from October 16th to 29th, 29 males and 61 females. Two males and four females were attacked in both epidemics.

From the above figures it would therefore seem that an attack conferred immunity for a certain time.

REFERENCE.

¹BRITISH MEDICAL JOURNAL, November 18th, 1916

INTUSSUSCEPTION DUE TO POLYPUS OF SMALL INTESTINE.

BY

E. C. BEVERS, M.B., B.Ch.Oxon., F.R.C.S.Eng.,

HONORARY SURGEON, RADCLIFFE INFIRMARY AND COUNTY HOSPITAL, OXFORD.

THE following case is of interest in view of the number of attacks spread over a long period.

History.

L. H., aged 5, had been under the care of Dr. Watts of Haddon Close. He reported that this boy had suffered all his life from acute intestinal paroxysmal attacks, preceded by vomiting, and followed by tenesmus with the passage of blood and slime. They varied in severity, lasted from twenty-four to thirty-six hours, and occurred about every six weeks. The pain during several of the attacks was most marked in the right iliac fossa. They were thought at one time to be due to chronic constipation, but they persisted even when the bowels had been carefully attended to. On two previous occasions the child had been admitted to hospital, but in each instance the attack passed off, and there seemed to be no direct evidence of intussusception.

Operation.

On April 18th, 1919, he was admitted to the Radcliffe Infirmary under my care. The pulse was 120 and the temperature 99° F. He was then suffering severe abdominal pain; there was some distension, and a mass could be felt in the transverse and descending colon. On examining the rectum a little blood came away on the finger.

The diagnosis of intussusception was made and operation at once undertaken. An incision was made in the middle line below the umbilicus, and the apex of the intussusception found to be in the descending colon. Reduction was easy at first until the appendix appeared, when there was a hitch, due to a lump which could be felt in the caecum, and which refused to pass back through the ileo-caecal valve. Time and patience overcame this difficulty, and reduction was eventually obtained.

The mass, which was about the size of a walnut, was situated in the small intestine eighteen inches from the ileo-caecal valve, the bowel wall being dimpled on the anti-mesenteric border, where it was attached. A longitudinal incision was made in the bowel, and a sessile polypus ligatured and removed. The incision in the bowel wall was closed transversely, and at the same time a very long appendix was removed.

After-History.

The child made a good recovery, but six weeks after the operation there was a slight attack of abdominal pain which soon passed off. The polypus proved on examination to be an adenoma.

The intussusception was of the entero-colic type, the small intestine with the polypus at its apex passed through the ileo-caecal valve for some distance, the caecum, appendix, and colon being subsequently drawn in. The remarkable feature of the case is the attacks of pain, which appear to have occurred at intervals ever since birth. It is probable that in the previous attacks the intussusception was confined to the small intestine, the polypus approaching to or reaching the ileo-caecal valve, but not passing through it until the final attack.

THE National Academy of Medicine and the Surgical Society of Rio de Janeiro are compiling a catalogue of all medical publications that have appeared in Brazil within the past hundred years. This catalogue will be distributed at the celebration of the Centenary of Independence which is to be held in 1920. A Congress of Medicine will be held at the same time in Rio de Janeiro under the direction of Professor Fernando Magalhães, president of the Sociedade de Medicina e Cirurgia.

A CASE OF STRANGULATED HERNIA WITH VOLVULUS.

By BASIL HUGHES, D.S.O., F.R.C.S.,

MAJOR R.A.M.C.(T.F.).

THE following case is of interest for several reasons: First, volvulus occurring in a hernial sac is rare; secondly, the symptoms were remarkably mild considering the condition that existed; and thirdly, the patient gave no trouble during convalescence and the wound healed by primary intention despite the offensive nature of the sac contents.

W. R. was admitted to No. 39 Stationary Hospital on February 14th, 1919, suffering from left-sided strangulated inguinal hernia.

History.—He had had a small left-sided hernia for some months. The day before admission to hospital, after a bout of coughing, the hernia came right down into the scrotum, causing pain and vomiting.

Condition on Admission.—He vomited a brownish inoffensive fluid; he did not seem particularly distressed and he had not an abdominal facies. The temperature was 99° and the pulse 66, good, regular, and steady. He had passed neither flatus nor faeces since the previous day. The abdomen was distended, not particularly tender, but he complained of some pain in the epigastric region. No visible peristalsis was observed. There was a large tender tumour occupying the left inguinal canal and the left side of the scrotum, and the skin of the scrotum at one spot was red and tender. There was no impulse in the mass on coughing; there was definite fluctuation and the tumour was resonant to percussion.

Operation.—The usual incision for the radical cure of hernia was made, but continued a little way on to the distended scrotum. On opening the sac a quantity of blood-stained and very foul fluid escaped. A large gangrenous mass of omentum clothing a loop of gangrenous large intestine was present. The internal abdominal ring was next enlarged, and both bowel and omentum pulled down until healthy tissue was reached. It was then found that the bowel was twisted on itself at the internal ring and that a true volvulus existed. Healthy bowel was pulled down with difficulty. The gangrenous omentum was removed and the gangrenous bowel resected, end-to-end anastomosis being performed. This done, the anastomosed bowel was returned and the radical cure of the hernia was completed, a small glove drain being left under the skin owing to the infected condition of the contents of the sac. The abdomen was then opened by a left pararectal incision, as I was not wholly satisfied as to the true state of affairs. It was then ascertained that the portion of the bowel dealt with was the pelvic colon, that the anastomosis was satisfactory, but that there was fluid present in the peritoneal cavity which was blood-stained but inoffensive. No peritoneal drain was employed.

Curiously enough the wounds healed by first intention, though the inguinal wound was red and looked like suppurating forty-eight hours after the operation. The glove drain was removed at the end of forty-eight hours and the stitches on the tenth day. The bowels moved on the fourth day, and the patient made an uninterrupted recovery.

THE MOVING-WATER BATH.

BY

LIEUT.-COLONEL A. D. WEBSTER, V.D., O.B.E., M.D.

THE effects, both reflex and mechanical, of moving water are apparent in sea-bathing. The pressure and impact of the waves are stimulating, flushing the skin and calling into more or less activity many muscle groups. The surging and the spray below a waterfall have a similar action and reaction. These effects and results have been happily obtained and applied to many morbid conditions of wounded soldiers. It has been found that the muscles of the injured part are invigorated and their nerve connexions restored more rapidly under the influence of moving water. Earlier mobilization is secured.

The temperature of the water is a prime factor and its maintenance a necessity. This temperature need not be very high (cool 65° to 70°, tepid 80° to 85°, or warm 95° to 100° F.), but the effect of the moving water gives the impression through the skin nerves that the temperature is lower than it actually is.

The effect on the tissues resembles that produced when salt has been added to the water or carbonic acid gas generated. The moving water in the bath may be electrified for additional effect, the current being taken from a dry cell faradic or galvanic battery, or the sinusoidal current may be employed.

The Apparatus.

The apparatus is depicted in the drawings: it consists of (1) a bath suitable for the attachment of the apparatus; (2) a motor regulating the movement of the water from a simple wavy motion to one of great turbulence; (3) a heater by which the temperature of the water is maintained or varied as required; and (4) a battery for electrification of the water.

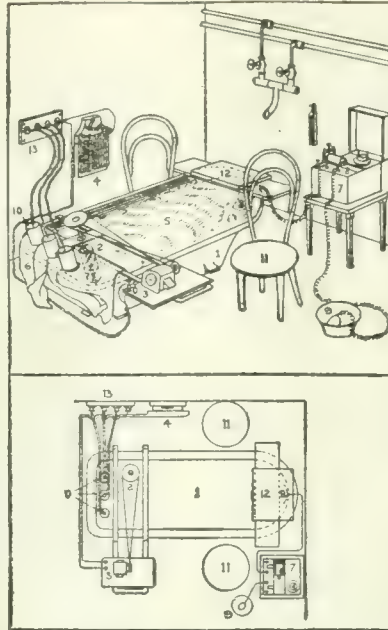
Action and Uses.

The combined effects of the moving water, of constant or varying temperature, and of the electricity are found to be most useful in speeding up the processes of restoration and repair in those cases in which the orthopaedic surgeon has done his part.

The surging water affords at a higher temperature the stimulation and invigoration of a bath at a lower degree. This effect is enhanced or varied by saline and other medication of the water, or by the addition of electricity.

The bath may be used—

1. For its hyperaemic effects.
2. For its restorative effect—(a) To limbs, recovering from severe muscle, bone, or nerve wounds. (b) To function, after orthopaedic surgery. (c) To rhythmic return, in the various neurasthenic types.
3. For its general regulating and invigorating effects—(a) In soldier's heart. (b) In V.D.H., by flushing the skin and muscular areas without fatigue. (c) In neurasthenia, gauged to the tolerance of the patient;



a mild wavy motion of the water and the small galvanic or rapid sinusoidal current soothes the neurosis, and more natural sleep is the result. (d) In returning health an agreeable constitutional.

*Index to Reference Numbers on Diagrams.**Primary Essential:*

1. A bath tub.

Movement of Water:

2. Turbine propeller, with guard.
3. Motor to drive propeller.
4. Resistance to regulate speed of motor.
5. Surging water in bath tub.
6. Partial waterproof cover to prevent splashing over by turbine propeller.

Electrification:

7. Ordinary galvanic and faradic dry-cell battery.
8. One pole electrode immersed in the moving water.
9. One portable pole by which connexion is made in various ways.

Heating:

10. One, two, or three heaters in operation as required to maintain or raise temperature of water.

General Accessories:

11. Chairs for patient receiving treatment of right or left arm.
12. Removable cork seat for patient receiving treatment of leg.
13. Wall connexions for electric motor and heaters.

Methods of Application.

The patient may sit on either chair for treatment of right or left arm, on removable seat at head of bath for treatment of leg, or lie as in ordinary bath, the portable pole (9) being suitably adapted to each case.

NOTE.—The water may be medicated as required. The moving-water bath is to be seen working at the premises of Messrs. Fraser, Walker and Co., 82, George Street, Edinburgh.

* The propeller may be operated by hand or other means.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A SPORADIC CASE OF ENCEPHALITIS LETHARGICA.

A WOMAN, aged 27, married, with one child, had been treated for fourteen days for slight deafness and noises in the left ear, and an occasional dizzy feeling on getting up in the morning. On the evening of the fourteenth day she was suddenly seized with severe pain at the back of the head, radiating down the cervical spine. The temperature was 102°, pulse 92. There was no vomiting; the pupils and knee-jerks were normal; neither Babinski's nor Kernig's sign was present. This condition remained till the morning of the fifth day, when she complained of diplopia and stiffness of the neck and back. There was an external strabismus of the right eye; the pupils reacted to light and accommodation but were slightly dilated and unequal, the left being more dilated than the right. The retraction of the muscles of the neck and back had increased. Kernig's sign was well marked on both sides.

Two days later the squint in the right eye had disappeared, but there was internal strabismus of the left eye, with dilatation of the pupil. The right pupil was normal, and both reacted to light and accommodation. The retraction of the neck remained. Babinski's sign was present on the right side, but not on the left. There were no sensory changes. This condition remained till the patient died on the tenth day. Two days before death there were spasmodic contractions of the muscles of the face and neck, with difficulty in swallowing. There was also incontinence of urine and faeces.

The temperature varied throughout from 102° to 104°, reaching 107° just before death, with a corresponding pulse. There was no vomiting nor paresis. The optic discs were normal throughout. The patient was in a

lethargic condition from the second day onwards, but was not unconscious till the day before death. The fluid obtained by lumbar puncture on the fifth day was under increased pressure, but not turbid. No micro-organisms nor leucocytes were found on examination.

The diagnosis was confirmed by Sir Henry Davy of Exeter, who was asked to see the case. No other case of the kind had occurred in the district, nor had the patient left her home for some months.

Permission for a post-mortem examination could not be obtained.

E. R. CHAMBERS, M.R.C.S., L.R.C.P.

South Molton, North Devon.

NASAL OBSTRUCTION AND DENTAL DECAY.

DR. W. H. BOWEN, in the BRITISH MEDICAL JOURNAL of October 4th, 1919, notes that dental decay sometimes follows on mouth breathing. In 1917 I pointed out to an officer of low category that he was a mouth breather because of a deflected nasal septum. By practice he became a nasal breather, and was transformed from semi-invalidism to health.

I met this officer eighteen months later, and he assured me of his continued good health, and, pointing to his now well distended active nostrils, said "That is why." Then he added: "I saw the dentist to-day—the first time for two years—and asked him why I no longer had toothache in three of my remaining six teeth. The holes are big and the edges look black enough to give me lots of pain. The dentist examined my teeth and said 'The surfaces of these cavities are healed over.'" The officer then added: "Two of these teeth were worrying me a lot just about the time you showed me I was a mouth breather." He then said: "I was never out of the dentist's hands from my boyhood until the time I had the luck to meet you and got your tip. I have made no change in my life except I breathe through my nose."

CHAS. J. HILL AITKEN, Captain R.A.M.C.

British Medical Association.

CLINICAL AND SCIENTIFIC PROCEEDINGS.

NORTH OF ENGLAND BRANCH.

THE first scientific meeting of the winter session was held at the College of Medicine, Newcastle-on-Tyne, on October 17th, and was a great success, the attendance numbering 110. Professor RUTHERFORD MORISON gave an address on cancer (with a demonstration on the epidiascope), which will subsequently be published in the JOURNAL. Professor J. A. MENZIES gave a demonstration on urine tests in relation to life assurance.

Cardio-diagnosis.

Professor DAVID DRUMMOND gave an address on the interpretation and significance of certain signs and symptoms of heart mischief.

He first dealt historically with the progress of cardiology and traced the chief advances to their sources. Discussing dilatation, Professor Drummond took exception to the practice of diagnosing every heart case presenting symptoms as cardiac dilatation, chiefly because the patient was necessarily alarmed by the diagnosis, and also because the term "dilatation" had little or no significance from the diagnostic and prognostic points of view, as proved by the fact that many cases of dilatation were purely functional and physiological. As a matter of fact doctors were too apt to confound dilatation with heart failure, whereas there were many cases of dilatation without symptoms of cardiac inefficiency, and, on the other hand, cases of serious heart failure without dilatation. The cause of dilatation was explained chiefly as the result of two factors—depressed tonicity, and increased pressure on a chamber during diastole. The diagnosis was not always easy. It was based upon detection of increase in the size of the heart—upwards above the third rib; to the right of the sternum; and outwards towards the left along the fifth and sixth interspaces, as the case might be. Towards the right pointed to dilatation of the right auricle, and towards the left either the right or left ventricle; if the former, the visible apex would probably be exhibited as a tucking-in movement with each systole, and if the left ventricle, an outward thrust. Pulsation in the veins of the neck was often present and might be a valuable sign, whilst auscultation also came to our aid. It was common to meet with a blowing and sometimes musical systolic bruit over the right ventricle and audible in the pulmonary area; but it must be recollected that the quality of loudness was no measure of the degree of dilatation; on the contrary, in cases of the most marked dilatation the murmur, if audible at all, might be short and low pitched, and easily missed. Reference was also made to the irregularities and other symptoms of dilatation, which were of the greatest diagnostic importance.

Next the diagnosis of hypertrophy was referred to, and exception was taken to the use of the term "compensation" as intending to indicate that with improvement in the patient's condition the bulk of the heart muscle invariably increased, as though the whole process was mechanical.

The more intelligent use of palpation as opposed to percussion was strongly advocated in diagnosing hypertrophy. The patient should always be examined lying down, and, as far as possible, after a short rest. Much valuable information could be gained from pressing the hands firmly over the heart, and especially at the end of a full expiration. In this way the heaving thrust of the hypertrophied heart could be felt. Mistakes were often made in cases of nervous excited hearts, as the systolic thrust simulated hypertrophy, but by a simple manoeuvre the distinction could be made: whereas in genuine hypertrophy the thrust was best felt at the end of a prolonged expiration, in the nervous case, on the other hand, the heart seemed to recede from the pressing hands when the chest was emptied, the thrust being best marked as the patient drew a long breath. It was also very important to observe the position of the apex beat when the patient moved from his back on to his left side; in hypertrophy the apex would pass outwards and downwards into the

interspace below, whereas in the case of the pseudo variety it travelled along the fifth interspace towards the left. Another common error was the diagnosis of hypertrophy in children with bruits and nervous action, for many young people were condemned on discovering that the apex was as far out as the nipple, or perhaps further, forgetting that the apex was naturally further out in children than adults. It was also apt to be forgotten that the heart travels outwards physiologically under excitement and even slight exertion.

Murmurs were next dealt with, and particular reference made to functional bruits, many of which might be said to be negligible. Unfortunately these murmurs caused hopeless confusion in the minds of practitioners, and this fact was made very evident during the war, when large numbers of eligible recruits were either totally rejected or classed C3 on account of the discovery of a bruit. Of course, great advance had been made since then, and many had learnt to appraise functional bruits at their proper value, but there was still great room for improvement. Professor Drummond advocated the practice of examining patients lying down, and, if possible, after a period of rest, as this led in many cases to the cessation of the abnormal sound. It was also important to observe the behaviour of the murmur under the test of alteration in the position of the patient—standing, lying on the left side, etc. Then, again, drawing and holding a long breath sometimes caused the murmur to disappear; and, above all, firm pressure of the stethoscope on the chest at the site of maximum intensity very often had the same result.

Post-graduate Instruction.

At the conclusion of the scientific meeting a general meeting was held to discuss the desirability of having a more comprehensive scheme of post-graduate instruction. There was an attendance of sixty at this meeting, and the President of the Branch, Dr. ANDREW SMITH, was in the chair.

It was stated at the outset that the Newcastle-on-Tyne Medical School was very sympathetic towards post-graduate instruction, and that the school had attempted to form such classes in the summer of the present year. As, however, only a few doctors sent in their names the proposed scheme fell through; hence the medical school, while willing to co-operate, first required that a sufficient number of practitioners should indicate their intention of joining the proposed course of instruction before anything further was done.

After a free discussion, in which a number of practitioners joined, it was agreed that post-graduate instruction was absolutely necessary; and that the meetings should be held once a week throughout the winter, from 2.30 to 5.30 p.m. A member of the University of Durham College of Medicine Council who was present stated that the original committee who drafted the syllabus, etc., for the proposed course in July was still in existence.

It was agreed that a representative committee of general practitioners be formed to co-operate with the college committee in order to discuss the kind of teaching, draw up a syllabus, settle the day of weekly meeting, etc. The following were elected members of the committee: Drs. Dagger, Lachlan Fraser, Chalmers, Charles, McKellar, and G. E. Lloyd; with Dr. Andrew Smith, Dr. James Don, and Mr. R. J. Willan (convener).

Mr. Willan hopes that doctors interested in the matter will write to him expressing their views.

Two years ago Dr. George W. Gay established at the Harvard Medical School a permanent fund, the income of which is to be expended annually for two or more lectures to the advanced classes on medical ethics and proper methods of conducting the business part of medical practice.

IN his thesis for the medical doctorate of Amsterdam Dr. Vos gives an interesting account of the shortcomings of the milk supply of that town, together with suggestions for its improvement from the hygienic point of view. Put briefly, they amount to this—that before it is distributed to the public all milk should be passed through central establishments, run on hygienic lines, in which large quantities of milk (say 70,000 litres) could be pasteurized and sent out for consumption daily. He would also form co-operative associations of dealers in milk, to ensure their assistance in the important work of securing a supply of nothing but pure milk.

Reports of Societies.

THE PRE-CANCEROUS UTERUS.

A MEETING of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine was held on October 9th, with the President, Mr. J. D. MALCOLM, in the chair.

Dr. GORDON LEY read a paper on a case of indirect traumatic rupture of the uterus during pregnancy.

The patient was a primigravida, aged 22, in the twenty-first week of pregnancy. When standing on a station platform she felt faint, fell off the platform on to the metals, was picked up and sent home in a taxi. When seen by her doctor an hour later she was suffering from nervous shock, and complained of pain in the hypogastrium. The same evening the hypogastric pain had increased, the temperature was 97.6°, pulse 110. When seen by Dr. Gordon Ley, fourteen hours after the accident, the pulse was 140 and the patient complained of agonizing abdominal pain. The respirations were rapid and the patient restless; the abdomen was distended, rigid and tender, and in the left lumbar region was an ill-defined swelling, the size of an ostrich's egg. The uterus could not be felt. On vaginal examination the cervix was closed and the pouch of Douglas bulged slightly. A diagnosis of haemoperitoneum, probably from rupture of the uterus, was made. On opening the abdomen three or more pints of blood were found in the peritoneal cavity, the ovum was unruptured, and lay in the left kidney pouch. The uterus had contracted, and on its anterior wall was a laceration 3 in. long, running from the right cornu obliquely downwards to the left. The uterus was sutured with catgut in two layers and the abdomen closed. The patient made an uninterrupted recovery.

Dr. Ley commented upon the rarity of indirect traumatic rupture of the uterus during pregnancy.

A paper on the Pre-cancerous Uterus was read by the secretary, in the absence through illness of Dr. F. J. McCANN, its author. Dr. McCann deplored the growing tendency to relegate the clinician to the background and to look to the laboratory alone for a solution of the cancer problem. He maintained that no real progress would be made until the clinician could seek out and identify pre-cancerous changes in organs as definite clinical entities. He then described two cases, one in which scrapings from a curettage for "fungous endometritis" were pronounced innocent by a high pathological authority, and the patient died of uterine cancer five years after; while in the other, a single woman aged 54, a cervical polypus, declared to be innocent, was removed, and she died eight years later from uterine cancer with secondary hepatic deposits. Dr. McCann emphasized the necessity of the study of after-results in this connexion, as, had he not seen both women again when the growths were too advanced for operation, he would have assumed that the previous treatment had effected a complete cure. As to the predisposing causes of uterine cancer, Dr. McCann regarded parity as the most important of these, and thence concluded that cervical injuries were factors. He considered gonorrhoeal endocervicitis, if persistent, to be also a predisposing factor. He suggested that as several years elapsed before a hot clay pipe produced cancer of the lip, or before the traumatism of childbirth produced cervical cancer, it was during these years that it was necessary to be on the look-out for pre-cancerous changes. He enumerated the changes before the menopause which, in his opinion, should give rise to suspicion. The list included erosions, fissures, chronic endocervicitis, and chronic hypertrophy of the cervix, and in the body fungous endometritis and chronic metritis; also the presence of intrauterine polypi. He recommended that erosions should be excised, and that fissures, even of long standing, should be repaired; he considered that a woman approaching the most common cancer age (46 to 53) from whose cervical canal a chronic discharge continued to flow, incurred the risk of subsequent development of cancer within the cervical canal. To eradicate the disease and to prevent the development of cancer he advised the performance of a supravaginal amputation of the cervix, or in certain circumstances of uterine enlargement and menstrual disturbances, a pan-hysterectomy with conservation of the ovaries. In such women he also recommended supravaginal amputation of the cervix for chronic hypertrophy. As to uterine conditions, he suggested hysterectomy in women nearing the menopause for marked fungous endometritis, and also for chronic metritis, as many patients suffering from these

conditions subsequently became the victims of malignant disease. He differentiated between fibroid and adenomatous polypi, the presence of the latter being another indication for hysterectomy if occurring in the body. After the menopause Dr. McCann advocated a still wider application of radical operative measures to any uteri showing signs of pathological activity, and stated his conviction that many lives would be saved by such methods as he had indicated.

Dr. LAPHORN SMITH considered Dr. McCann's paper valuable and timely; if it led to the earlier removal of part or the whole of the affected organ it would prove of great value. He stated that the mortality from cancer was increasing, that almost all were agreed that it commenced as a local disease, and he believed it to be due to a micro-organism which had found suitable feeding ground and multiplied rapidly. He regarded laceration of the cervix as a predisposing cause, and if it were the general practice to see that every lacerated cervix was repaired soon after the usual injury at the first confinement, and that union was obtained without scar tissue, there would be a considerable saving of lives. He believed that masses of scar tissue and hypertrophy of a portion of the vaginal cervix, resulting from lack of repair to the cervix in a woman near the menopause, might be termed a pre-cancerous condition, because it presented conditions favourable for the growth of cancer if infected. He advocated the treatment of such cases by amputation of the cervix.

Dr. HERBERT SPENCER was in complete disagreement with the author on two of his chief recommendations—excision of erosions on the plea that they give rise to cancer, and hysterectomy in cases of mucous polypi of the body. He pointed out that erosions were common in virgins, and often recovered under simple local applications. Cancer of the cervix was extremely rare in virgins, and even in nulliparae he did not think he had seen half a dozen cases. He had watched his own patients for many years after removal of corporal mucous polypi, and had not seen cancer develop in a single case. He regarded the author's recommendation on these two points as quite unjustified by any evidence he gave.

Dr. WILLIAMSON regarded the recognition of pre-cancerous conditions as a matter of the utmost importance. When a lesion, trivial in itself, was clearly shown to be a precursor of cancer a radical operation should be undertaken. But when they looked for the evidence upon which Dr. McCann based his drastic treatment there was none which a scientific society could accept. If Dr. McCann wished his deductions to be accepted he must prove (1) that women who grew adenomatous polypi were more prone to cancer than women who did not; (2) that an appreciable proportion of the women from whom adenomatous polypi were removed subsequently developed cancer. But Dr. McCann produced no evidence to prove either of these things. Dr. Williamson agreed that child-bearing was the predisposing cause of cancer of the cervix, because that rested on scientific proof, but he was by no means certain that lacerations were the exciting cause. The evidence pointed to chronic infection and continued irritation as more potent factors. In his opinion a lacerated cervix with ectropion and glandular overgrowth, the site of chronic infection, should be repaired in young women and amputated in women approaching the menopause.

Dr. GIBBONS gathered that the gist of the paper was that if the uterus was not physiologically sound it was better to remove it lest cancer develop. He considered this a very sweeping recommendation which should not be allowed to pass unchallenged. Those present must have curetted hundreds of times for chronic endometritis, polypus, and like conditions, but because such uteri were for the time being pathological it seemed extraordinary advice to give, that they should be removed lest carcinoma develop, for in the majority of cases treatment put the uterus in a healthy state again. Before making such definite statements of pre-cancerous conditions there ought to be abundant statistics showing in how many cases carcinoma developed and how long elapsed before signs of malignancy occurred. He felt that he had formed the same impression as other speakers, and unless he had wrongly interpreted the paper he felt that it called for criticism.

Dr. ELLISON believed that the paper was a plea for the earlier removal of uteri when, at or after the climacteric, a diagnosis of polypus, endometritis, or chronic metritis

was made. He said it was generally accepted that from the climacteric onwards the uterus should atrophy, and he had heard Dr. McCann state that any activity of the uterus after the climacteric should be considered as a danger signal on the road to cancer, and treated by removal of the uterus. He did not think that in such cases a diagnostic curettage should be relied on, as in early cases the malignant growth might have been missed by the curette.

The PRESIDENT expressed regret that Dr. McCann was not present to reply to the debate; the question raised was of the greatest importance, but it seemed that at present the existence of a definite pre-cancerous stage was not recognizable. He gathered that Dr. McCann advised the immediate treatment, by removal if necessary, of all conditions which might constitute an irritation of uterine tissue. The debate had shown the difference of opinion which existed amongst members concerning the importance as causes of cancer of some of the conditions which Dr. McCann regarded as pre-cancerous. Dr. McCann's argument appeared to be that cancer did not arise without a previous irritation, but in some cases there was no evidence that cancer of the breast or uterus had been preceded by any inflammatory process, or injury, or pre-cancerous state. It appeared to Mr. Malcolm that when a discharge or haemorrhage was present in patients after the menopause, without any apparent cause, hysterectomy was the proper treatment, because the risks of waiting in such cases were great; but he was not persuaded that in younger women such cases as fissure or chronic hypertrophy of the cervix required active treatment on the ground that they were liable to become cancerous.

Reviews.

BACTERIOLOGY AT LARGE.

TEXTBOOKS of bacteriology dealing with the special branches of this extensive science are many in number, and not rarely excellent in design and execution. To mention names in such a context as this would be invidious; but it is certain that nowadays students and practitioners of medicine have at their disposal at least half a dozen—and probably a dozen—British or American textbooks in which the bacteriology of surgery and medicine is adequately described. A similar state of affairs prevails, though in a less degree, in such kindred branches of the science as the bacteriology of brewing, of agriculture, of the dairy. In addition there are in various languages systematic treatises in which a more or less complete account of the whole science is given for the benefit of the more general student and the bookworm. In other words, it may be said that the bibliographical flora of bacteriology is vigorous and abundant. But, owing to the extent of the field it covers, the diversity of this flora is apt to be insufficiently appreciated by the students who take out a course of bacteriology as part of their professional education as medical men, brewers, scientific farmers, or experts in public health, as the case may be. The textbooks habitually placed in their hands deal only with the appropriate single branch of the larger science, and can hardly aim at giving a proper representation of bacteriology as a whole. In this way no more than a narrowed view of the science can result, and depth of knowledge without due breadth will be obtained.

For this reason we welcome the appearance of the second edition of *Microbiology*,¹ edited by Professor MARSHALL, and written by himself and five-and-twenty other contributors; it is a sound and comprehensive introduction to the science of bacteriology, designed for the use of students at colleges and technical institutions of all sorts. It covers a great deal of ground in a small compass—if such a feat be possible without a mixture of metaphors. It is divided into three parts. The first of these deals with the morphology and culture of microbes; the second with their physiology—here the student has a simple yet comprehensive account of the whole subject

extending to nearly 250 pages. The rest of the book is given to applied microbiology, and describes the bacteriology of the air, water and sewage, the soil, milk and milk products, special industries, plants, insects, and, in a final division 200 pages long, the microbiology of the diseases of man and domestic animals. The text is clearly written, free from literary airs and graces, and full of the facts the student wants. Perhaps the best sections in it are those dealing with agricultural microbiology, a subject the importance of which is far better recognized in the United States of America than in our own country. The illustrations are less good than the text, and no scale of magnification is given in the majority of them. There appears to be no reference in the volume to Beijerinck's ultramicroscopic virus of the mosaic disease of tobacco plants, a disease of some commercial importance, it is said, nor to the recently described bacillus of venereal granuloma, to mention a couple of instances in which Professor Marshall's admirable textbook might perhaps be made even more complete than it is.

The book may be strongly recommended to all students in search of a comprehensive introduction to the science of microbiology. It fills a definite lacuna, and supplies a long-felt want.

TRAUMATIC SHOCK AND TRAUMATIC TOXAEMIA.

TRAUMATIC shock has been studied by surgeons—more particularly military surgeons—at any rate since the eighteenth century, and more recently for several decades by physiologists in their laboratories. Yet its pathogenesis still remains obscure, the more so, perhaps, because it is now shrouded in clouds of theories. Terms such as "nervous commotion," "depression of the vital processes," "arrest of innervation," "acidosis," "acapnia," "fatigue of the bulbar centres," "exhaustion of the vasomotor centres," "vaso-paralysis," "circulatory collapse," "stasis in the splanchnic area," and many others, have been freely used in explaining the origin of traumatic shock, but nothing like a final or satisfactory account of the way in which it arises has been given.

Professor QUÉNU of Paris has devoted much attention to the subject during the recent war, and has now expounded his own views and theory, to which we have at various times called attention, in a book² that should be of interest to surgeons and physiologists alike. Briefly, he holds that the *fons et origo* of traumatic shock lies in the wound itself, and is due to the absorption of protein substances from the injured tissues; in other words, shock is an intoxication by toxalbumins from the patient's wound. A full account of Professor Quénu's own contributions to the literature of the subject is given in his pages, together with summaries and criticisms of many recent papers on the subject by other authors. He defines traumatic shock as "a syndrome characterized by low arterial tension, frequent and very feeble pulse, a low temperature, pallor and hypo-aesthesia of the skin, and shallow respiration." All are agreed that loss of blood is a factor strongly predisposing to shock, as are cold and nervous exhaustion. Professor Quénu lays particular stress on the severity of shock in cases where extensive or multiple lacerations or contusions of muscular tissue have taken place. He asserts that the occurrence of shock at the time of wounding is rare, and that it usually appears some hours later, unless, indeed, severe haemorrhage or extensive injuries to the peritoneum and the absorption of fluid therefrom have occurred; extensive laceration of the peripheral nerves, is not in itself a cause of the early appearance of traumatic shock. He applies the term "primary shock" to that which occurs within five or six hours as a rule, and "secondary shock" to that which occurs after that; it is commonly complicated by septic processes and absorption—a more complex and grave condition with which his book is not primarily concerned. It may be added that Professor Quénu provisionally distinguishes the following six varieties of shock: Shock by fatigue and cold, nervous shock (or shell shock), haemorrhagic shock, toxic shock (with which his book mainly deals), septic shock, and complex shock caused by the co-operation of two or more of the other varieties. The term "shock," as

¹ *Microbiology; a Textbook of Micro-organisms General and Applied*. Edited by C. E. Marshall, Professor of Microbiology and Director of Graduate School, Massachusetts Agricultural College. Second edition. London: J. and A. Churchill. 1917. (Post 8vo. pp. xxiv + 900; 186 illustrations. 12s. 6d. net.)

² *La toxémie traumatique à syndrome dépressif (shock traumatique) dans les blessures de guerre*. By E. Quénu. Paris: F. Alcan. 1919. (Sup. roy. 8vo. pp. 142. Fr. 5.60.)

he remarks, is ill chosen, but one too firmly fixed in the literature for replacement; tentatively he suggests "the hypotensive syndrome" or Kirmisson's "traumatic toxæmia" as incomplete substitutes for it.

In debating the nature of the toxic substances causing shock Professor Quénu, as he admits, enters the domain of speculation. In 1917 he described them as "toxalbumins"; he now thinks that they may be the products of autolysis of the injured muscles, and that there is evidence to show that the amount of non-protein nitrogen is increased in the circulating blood of patients with traumatic shock, as is the proportion of ketonic bodies in their urine, which may be evidence of lessened activity on the part of the liver.

The treatment of traumatic shock, to which he gives the last and longest chapter of his book, is still, he says, empirical and far from satisfactory. For the most part it consists in the application of warmth and endeavours to arrest hæmorrhage and raise the lowered arterial blood pressure. He highly recommends the intravenous injection of about a drachm of camphorated oil, which, it is said, had not given rise to signs of embolism. While he holds that the transfusion of blood is excellent in cases with severe anaemia, he considers it to be of little use in traumatic shock pure and simple. He advises operation at the earliest possible moment in cases in which shock is likely to supervene, and when it has supervened, operation (particularly amputation) should not for that reason be postponed in the hope that the patient will rally. Professor Quénu has hopes, at present unrealized, that in the future effective antitoxins for the poisons producing traumatic shock will be discovered.

TEXTBOOKS OF BIOLOGY.

THE eighth edition of MARSHALL'S well known *Junior Course of Practical Zoology*,³ a book familiar to many generations of medical students as the laboratory companion of their zoological studies, has been revised by Professor GAMBLE of Birmingham. Its successive editors have succeeded in keeping this excellent volume small and in preserving the characteristics of its earliest editions unimpaired. It may be warmly recommended to the attention of the students of medicine and morphology, for whom it is designed.

The third edition of DAVISON'S *Mammalian Anatomy, with Special Reference to the Cat*,⁴ revised, alas! in accordance with the Basle anatomical nomenclature, presents the student with a clear and concise elementary manual of the subject, well illustrated and brought up to date. It should be of service to a large body of students in the laboratory and out of it.

BORRADAILE'S *Manual of Elementary Zoology*,⁵ now in its second edition, is a full and well written manual, suited to the needs of students preferring a broadly designed account of the subject and not afraid of knowing more than their examiners may ask them. It emphasizes the unity of life, a point often overlooked by elementary students confronted with the apparent diversity of the many types of living creatures presented for their dissection and study. The book is well illustrated, and should be widely read by medical and morphological students.

Professor SMALLWOOD'S *Textbook of Biology*⁶ gives a clear but inevitably somewhat superficial account of the subject designed to meet the needs of students in general, medical and technical courses. It is very well illustrated; the author is perhaps more successful in presenting the general aspects of the science than in his description of detail.

³ *A Junior Course of Practical Zoology*. By the late A. Milnes Marshall, M.D., D.Sc., M.A., F.R.S., and the late C. Herbert Hurst, Ph.D. Eighth edition, revised by F. W. Gamble, D.Sc., F.R.S. London: John Murray. 1918. (Post 8vo, pp. xxxvi + 515; 235 figures. 12s. net.)

⁴ *Mammalian Anatomy, with Special Reference to the Cat*. By Alvin Davison, Ph.D., Ex-Fellow of Princeton University, etc. Third edition, revised by Frank A. Stromsten, D.Sc. Princeton. Philadelphia: P. Blakiston's Son and Co. 1918. (Post 8vo, pp. 243; 115 figures.)

⁵ *A Manual of Elementary Zoology*. By L. A. Borradaile, M.A. Second edition. London: H. Frowde, and Hodder and Stoughton. 1918. (Cr. 8vo, pp. xiv + 616; 419 figures. 16s. net.)

⁶ *A Textbook of Biology*. By William Martin Smallwood, Ph.D. Harvard. Professor of Comparative Anatomy in the Liberal Arts College of Syracuse University. Third edition, enlarged and revised. Philadelphia and New York: Lea and Febiger. London: Baillière, Tindall, and Cox. 1918. (Roy. 8vo, pp. xiv + 306; 235 figures, 8 coloured plates. 10s. 6d. net.)

NOTES ON BOOKS.

DR. A. F. TYLER'S short treatise entitled *Röntgenotherapy*⁷ is intended to be a reliable textbook for the beginner. It is divided into two main portions: the first deals exclusively with apparatus and technique; the second consists of a short account of numerous cases of various descriptions, profusely illustrated with the usual photographs taken before and after treatment. This part is practically merely a picture gallery, but it serves in some measure to indicate and visualize the scope and the results of x-ray treatment. The description of apparatus is good; the use of the interruptless transformer and the Coolidge tube, together with the methods of protection and filtration, are clearly set out; there is also a useful account of the various methods of estimating dosage. The author divides his actual treatment into the superficial and deep therapy, and gives lists of diseases for which the one or the other is suitable; details of exact condition of tube, filtration and dosage are accurately recorded. The book is simply written and the directions are given plainly. A beginner who is using, or is going to use, the combination of an interruptless transformer and Coolidge tube should find it a useful guide.

Dr. DOBBIE'S translation (from the Swedish) of KLEEN'S massive textbook on *Massage and Medical Gymnastics*⁸ provides a very complete account, both theoretical and practical, of a somewhat neglected branch of therapeutics. Here the reader will find how medical, surgical, and gynaecological cases may gain benefit from the treatment, and also how various diseases of the eye, nose, throat and ear may profit thereby. The author has a wide acquaintance with the literature of the subject, and shows a soundly critical spirit in his quotations from it. The translation has been well done; the book forms stimulating reading.

PROFESSOR AUSTIN'S little book on *Induction Coils in Theory and Practice*⁹ gives a short and adequate account of the subject with which it deals, demanding only a moderate knowledge of mathematics. It is not specially designed for the use of x-ray workers, but contains a quantity of information that should be of service to them; primarily the book is one for students of elementary electricity.

SIR STCLAIR THOMSON'S presidential address¹⁰ on Dr. J. C. Lettsom and the foundation of the Medical Society of London is now printed in a pamphlet giving a most interesting glimpse of medical life and social activity in Georgian days. Lettsom was born in 1744, and died in 1815; during his last forty years he worked and warmed both hands before the fire of life with the greatest vigour. This short but sympathetic account of his life should interest a wide circle of medical readers and laymen.

MR. W. PERRETT'S *Some Questions of Phonetic Theory*, Chapter V,¹¹ is a pamphlet in which he attacks and seeks to confute Helmholtz's view that the cochlea constitutes a series of resonators; he holds that there is no resonance in the internal ear. The book should be of interest to physiologists and musicians.

We have received a copy of the forty-third volume of the *Transactions of the American Gynecological Society*,¹² for the year 1918. It contains the lists of officers and Fellows and the regulations usual in such annual volumes, and a number of interesting papers affording good evidence of the scientific activity of American gynaecologists.

⁷ *Röntgenotherapy*. By A. F. Tyler, B.Sc., M.D., Professor of Clinical Roentgenology, John A. Creighton Medical College, London: Henry Kimpton. 1919. (Med. 8vo, pp. 162; 111 figures; 13s. net.)

⁸ *Massage and Medical Gymnastics*. By Emil A. G. Kleen. Translated by Mina L. Dobbie, M.D., B.Ch. London: J. and A. Churchill. 1918. (Roy. 8vo, pp. xiv + 618; 182 figures. 21s. net.)

⁹ *Induction Coils in Theory and Practice*. By Professor F. E. Austin, E.E., Hanover, N.H., United States of America. London: E. and F. N. Spon, Ltd. 1919. (Demy 8vo, pp. 64; 45 figures. 5s. net; 5s. 3d. post free in the United Kingdom.)

¹⁰ *John Cockley Lettsom and the Foundation of the Medical Society*. Being the Presidential Address delivered before the Medical Society of London on October 8th, 1917. By Sir Stclair Thomson, M.D., F.R.C.P. Lond., F.R.C.S. Eng. London: Harrison and Sons. (Demy 8vo, pp. 63; illustrated. 2s. 6d. net.)

¹¹ *Some Questions of Phonetic Theory*. Chapter V. The Perception of Sound. By Wilfrid Perrett. Cambridge: W. Heffer and Sons, Ltd. 1919. (Post 8vo, pp. 39. 2s. net.)

¹² *Transactions of the American Gynecological Society*. Vol. 43. For the year 1918. Philadelphia: Wm. J. Dornan. 1918. (Med. 8vo, pp. ix + 480; illustrated.)

THE LONDON SCHOOL OF TROPICAL MEDICINE.

ANNUAL SCHOOL DINNER.

THE annual school dinner of the London School of Tropical Medicine was held at Princes Restaurant, Piccadilly, on October 16th. Dr. ANDREW BALFOUR, C.B., C.M.G., presided, and the company, which numbered nearly one hundred, included not only past and present students, but also several merchants and bankers interested in Eastern trade.

Dr. ANDREW BALFOUR, in proposing the toast of "The London School of Tropical Medicine," said that it owed its origin to that far-seeing statesman, Mr. Joseph Chamberlain; from very small beginnings it had now attained a respectable stature. During the present session forty-four students had been enrolled. In 1902 the speaker had the good fortune to be appointed director of the laboratory which formed Mr. Wellcome's gift to the Sudan Government; having read Sir Patrick Manson's manual, and seen something of the so-called tropical diseases—malaria and dysentery—in South Africa, he imagined that he knew something about tropical medicine. Fortunately someone gave him an introduction to Sir Patrick, who very soon asked him if he had undertaken a course of study in the London School of Tropical Medicine. In a short time he realized that he could do no better than follow the implied advice, and accordingly he became a student, and had never repented it. By that time the seed which Sir Patrick Manson had sown had become a sapling, and was bearing promise of a tree, to which the old birds of the tropical world were beginning to flock. A good teaching foundation was being laid even then, and any man keen to learn got good instruction. That research must ever be the handmaiden of education was a truth recognized by those responsible for the welfare of the institution, and especially by Sir Patrick Manson. It was the custom in olden times to emblazon on shields the famous deeds of men and cities. If such an escutcheon were conferred upon the school what would be seen upon it? In one corner there would be a stretch of the dreary landscape which characterized part of that aforesaid deadly area, the Roman Campagna, dim and faint in the evening light. Set in it would be a little hut, so constructed that it was mosquito-proof, and peering out from behind the wire mesh they would recognize the well-known features of Dr. Louis Sambon and Dr. George Low. The panel would not be complete without an inset showing an infected anopheles rampant, biting those fearless volunteers, the late Dr. Thurburn Manson, who unhappily was early lost to science, and Mr. George Warren, still a familiar figure at the school. Adjoining this panel there would be a space for depicting the beauties of those pearls of the Antilles, the Leeward Islands, and again Dr. Low would be seen, this time exploring the mysteries of filariasis. Then the scene changed, and for a background there would be the sky of Africa and the varied flora of Uganda. Once again Dr. Low's visage would be figured upon it, and along with him Dr. Castellani and Dr. C. Christy. There would be tsetse flies on this panel, and trypanosomes, doubtless stained vividly with the Leishman stain. Yet other panels would be devoted to Dr. Leiper hunting cyclops on the West Coast, and making notable discoveries regarding guinea-worm both abroad and at home, and to the same observer traversing half Africa and adding greatly to our helminthological knowledge. Later he would be found investigating the relation of ankylostomes to wells, and discovering that a certain biting fly formed the intermediate host of *Filaria loa*. A section would be given to Dr. Wenyon, journeying hither and thither on the Nile, extending our knowledge of protozoology, and eventually invading Mesopotamia, before the British army did so, in an endeavour to find how oriental sore was transmitted. Dr. Bayon would be found investigating sleeping sickness, and Dr. Manson-Bahr at work both in Fiji and Ceylon, clearing up points relating to filariasis, dysentery, and sprue. Again would be seen the ubiquitous Dr. Leiper, this time accompanied by Dr. Atkinson, roaming through Chinese rice fields in search of trematodes, and incidentally confirming the work of the Japanese on the schistosome of the Far East. Yet another division of the shield would be bright with the green of the Egyptian delta, and seamed by representations of

canals and irrigation channels. Here also would be found Dr. Leiper and his colleagues, Dr. Gordon Thomson and the late Dr. Cockin, groping both for water snails and the truth which lay hidden in those molluscs, a search which ended triumphantly, and settled once for all the vexed question of the life-history of the human schistosomes. A blank space upon the shield would soon be filled; the background alone could now be painted. It was that of atolls and coconut trees, a beautiful picture of the South Pacific, and it would soon have a representation, let them hope, of Dr. O'Connor adding another chapter to the somewhat scanty knowledge of human filariasis. More quarters were, therefore, of no use for such a shield as that of the London School of Tropical Medicine. It was covered with devices which told of good work accomplished for science, for the empire, and for the benefit of mankind. Nor must they forget that some portion of it had to be reserved for the deeds and discoveries of those who, working on their own or for other institutions, yet claimed the school as their Alma Mater. Those who followed the history of tropical medicine would know that the list was a goodly one. He would only refer to the late Dr. Catto's discovery of *S. japonicum*, and the work of Dr. Christopherson of Khartoum on the cure of bilharziosis by antimony given intravenously. Surely there was no more romantic and honourable coat of arms than that which Sir Patrick Manson's creation could now boast!

One of the great disadvantages of the school had been that of topographical position. In some ways the site was wisely chosen, for such clinical material could not have been obtained save at the docks, whither came ships bearing not only merchandise but also diseases—Chinamen with beri-beri, lascars with ankylostomiasis, and so on. But from the point of view of easy access for the student and teacher it was disadvantageous. The way thither might be described in the terms which a Scottish elder applied to a heretical brother, as like a November day, short, dark, and dirty, save that in consumption of time the journey from Fenchurch Street was by no means short. The Red Cross, being anxious to do something for tropical medicine, had recently contributed £100,000 for the establishment of a hospital at what was now known as the Endsleigh Palace Hotel (Gordon Street, W.C.). This should be a place where not only medical men, but any sanitary inspector destined for the tropics could be trained in the elements of his work. Dr. Sambon and he had dreamed dreams of a floating school, but unless some philanthropist were forthcoming, he feared that that was impracticable at present, though in any case travelling scholarships might be instituted. A social club was another contemplated venture. The school had a great future; this country, which was the centre of the British Empire, was in a sense the clearing-house of the tropics. He hoped that those who came after would keep the torch of Patrick Manson alight, and also that successive rulers at the Colonial Office would view the London School of Tropical Medicine with something of the late Mr. Chamberlain's understanding.

Sir HAVELOCK CHARLES, whose name was coupled with the toast, said that the school was started by a man who exemplified Lord Fisher's dictum that the happiness of life was in its struggle, its continual fight. Sir Patrick Manson had to struggle long before the success of the school was established, but it could now be seen that it would have been a disaster had he not persevered. Sir Patrick established the school on the only site he could get; but the site had its disadvantages, and for some time it had been the endeavour of certain of those attached to the school to secure another less remote site. The site the school now had was second to none. The lower part of the building would be assigned to the school and the upper part to the hospital, thus providing what was absolutely essential to every tropical school—a combination of work in the laboratory and work in the ward. It might seem that in one respect the school would be less fortunately placed than at the Albert Dock Hospital, where the sick came directly from the ships. But the Secretary of State for India had promised that every employee of the Government of India—from the engine driver to the commissioner—sent home by the medical board should be entitled to go to this hospital for advice, and it was hoped that the Colonial Office might be induced to follow the same policy. The quickening spirit of the hospital was in its staff, not in its building. He hoped that the

staff in the future would be increased. Every lecturer would have an understudy, and both lecturer and understudy would be properly remunerated. The school had been an example, and similar institutions had been established or were in course of establishment in various quarters of the globe. In India two schools were now in working order, one at Calcutta and the other at Bombay. A large research institute was also to be established, with a million sterling as capital. The school was much indebted to its secretary, Mr. Michelli, and to Sir Perceval Nairne. Finally, he used his authority as dean to call upon Sir Patrick Manson, whose name was not on the toast list.

Sir PATRICK MANSON said that in enumerating the deeds done by the teachers and scholars of the school, the chairman had omitted to state what he himself had accomplished. He classed Dr. Balfour along with Sir Samuel Baker and one or two others as among the makers of modern Egypt, doing mightier works than Moses ever did in the same region. There was no more brilliant exponent of tropical sanitation than Dr. Balfour. He had made important discoveries himself, and had stimulated others to discover. The speaker supported the suggestion for the formation of a club in connexion with the school. He rejoiced in the decision of the Government of India to send many patients to the hospital for treatment, and he trusted that the Colonial Office, which he was sure was alive to the importance of the school, would follow this example.

Captain A. W. CLARKE, C.B.E., Deputy Chairman of the Seamen's Hospital Society, proposed the health of the guests. Tropical medicine, he said, was more than a branch of medical science; it was one of the most important pillars of imperial administration. Perhaps something of the debt the empire owed to India, British Africa, and far away Fiji for their loyalty in the war might be repaid by ensuring to them the results of the continued and enlarging study of tropical medicine in this country. The work of men like Manson, Ross, Leiper, and many others found its full fruition in little villages in Nigeria and up-country dispensaries in India, although the people who benefited had most likely never heard the names of the distinguished scientists in question.

Sir CHARLES McLEOD, in responding, said that he felt quite sure that there would be no difficulty in securing funds to put the institution on the highest plane of efficiency. He had been interested in the building of a hospital at Port Said, and from his experience would like to suggest that Port Said would be a place for the London School of Tropical Medicine to set up a laboratory station. He personally—and he was sure many other guests that evening connected with the East—would help on the financial side to bring that matter to a head.

Sir JAMES CANTLIE, with his customary flow of happy phrases, proposed the health of the chairman, and Dr. ANDREW BALFOUR, in responding, said that he attributed any success which attended his work in the Sudan to three factors: first, to his training at the London School of Tropical Medicine; secondly, to three individuals, Sir Reginald Wingate, late Governor-General of the Sudan, Mr. James Currie, late Director of Gordon College, and Mr. Wellcome, the donor of the laboratory which he had directed; thirdly, to the loyal support of an able staff, including certain officers of the Royal Army Medical Corps. He proposed a toast not on the list—namely, the rank and file of tropical workers, including the laboratory assistants—most important officials, and too often forgotten.

Dr. H. B. NEWHAM, C.M.G., in responding, said that if commanding officers in the combatant service had been able to speak in terms of greatest respect for their subordinates, the medical branch could also bear witness to the sound work done for them by their helpers. He had been struck in particular, while himself a patient, with the honest and serious work done by the hospital orderlies. The same thing was true of laboratory assistants. As a whole, they were poorly paid; and it was very desirable, for the success of the work as a whole, that they should be satisfactorily recompensed.

THE College of Physicians of Philadelphia announces that it is prepared to receive on or before May 1st, 1920, essays which may be on any subject in medicine, but unpublished, in competition for the Alvarenga prize. The prize is of the value of 250 dollars.

CONFERENCE OF THE SOCIETY FOR THE STUDY OF INEBRIETY.

A CONFERENCE of the Society for the Study of Inebriety was held in London on October 14th, under the presidency of Sir ALFRED PEARCE GOULD. In addition to the presidential address and the Norman Kerr Memorial Lecture, two discussions took place—one on the scientific basis of drink control and the other on alcohol in relation to recreation, refreshment, and public-houses.

The Scientific Basis of Drink Control.

Lord D'ABERNON, who opened the first of these discussions, said that in addressing the society three years previously he had commented on the insufficiency of trustworthy data regarding the action of alcohol on the human body. This reproach had to a great extent been removed since then, in particular by Dr. E. Mellanby's researches, carried out at the instance of the advisory committee of the Central Control Board, on the conditions capable of modifying the intoxicating action of alcohol. The results of these and some cognate studies by other investigators were clear enough to indicate the main principles to be followed under any scientifically sound system of liquor control. The use of beverages of excessive alcoholic strength had to be discouraged, and the drinking of alcohol on an empty stomach had to be avoided, as had also continuous or frequently repeated drinking. The governing principles of control on a physiological basis were thus dilution (including the important kind of dilution effected by food) and discontinuity of drinking hours. He described Dr. Mellanby's experiments to determine the alcoholic content of the blood in dogs after the administration of identical doses of the drug in dilute and in concentrated solutions; these experiments showed that with dilute solutions the maximum level of alcohol in the blood was lower and more slowly reached than was the case when the drug was taken in concentrated form. Dr. Mellanby had also shown that when alcohol was taken in the form of beer its intoxicating action decreased to a much greater extent than could be explained by the mere fact of dilution, so that the presence in beer of some retarding or correcting element must be surmised. Alcohol taken with food was absorbed far more slowly and the level which it reached in the blood was much lower than when taken on an empty stomach. The theorist might argue from these conclusions that distilled spirits should be prohibited unless diluted to the strength of beer, and that no alcohol should be served except for consumption with meals; certainly on physiological grounds there was justification for the prohibition of the cocktail, for it combined the objectionable features of highly concentrated alcohol and worst time of consumption—namely, when the stomach was empty. Violent applications of theoretical principle might, however, prove in practice too drastic an interference with personal taste and established custom, and it might be more statesmanlike to pursue the objective more gradually and quietly. Discontinuity of drinking hours as established by the Central Control Board aimed at preventing or minimizing the risk of cumulative doses in the body. The association of the two complementary principles of dilution of liquor and curtailment of hours was essential to any scientifically sound system of drink control. The decrease in intemperance since 1915, as measured by the statistics of arrests and alcoholic mortality, was far greater than the reduction in the consumption of alcoholic beverages, and his inference was that the question, "How the nation drinks" was more important than the question "How much it drinks."

Dr. H. M. VERNON (Oxford) followed with a description of some tests which he had carried out upon himself, speed and accuracy in typewriting being taken as the measure of nervous efficiency. He produced curves showing a sharp rise in the number of errors within a quarter of an hour of taking 60 c.cm. of alcohol in the form of 20 per cent. whisky; in less than half an hour the mistakes had risen to some six times the number which occurred under normal conditions. The same kind of result was produced with 5 per cent. whisky, but in the case of 3 per cent. beer and cider the increase in the number of errors was slow, and even 90 c.cm. of alcohol

taken in these forms brought the line nowhere near intoxication level. He thought such liquors might be regarded as practically non-intoxicating.

Dr. ROBERT SIMPSON (Plymouth) urged that the rate of absorption would not reduce to any extent the ultimate effects of the alcohol. Whether a drug was given in a concentrated form rapidly or in a more regulated form slowly, the effect at the last would be the same. He maintained that alcohol taken in small quantities at regulated intervals, even though there might be food in the stomach, would, if long enough repeated, have the same physiological effect as the violent potation.

Other speakers in a rather animated discussion were a prohibitionist from the United States and one or two British prohibitionists, who fell foul of Lord D'Abernon, as well as a brewer, who gave him eulogy. An appeal to medical men was made by Dr. W. COLLIER (Oxford), who, after referring to the memorial on the subject which the British Medical Association had adopted, begged medical men to take a more active part in informing the public on the drinking habit in relation to physiology. Lord D'ABERNON endorsed this appeal. In other countries, notably in France, the medical profession had given a direct lead to the public, pointing out what it considered to be the most reasonable and in-ocuous way of consuming alcohol. During next year the country would have to settle upon either a permanent or a temporary drink policy, and the medical profession should be prepared to give a considered opinion.

The Norman Kerr Memorial Lectures.

Dr. MARY SCHARLIEB, C.B.E., delivered the eighth Norman Kerr Lecture before the society in the evening. Her subject, as announced, was the relation of alcohol and alcoholism to maternity and child welfare, but a large part of the lecture consisted of a general historical survey of liquor control during the war, and the effect which the national awakening to the importance of sobriety had upon the military issue. The war at first encouraged alcoholism among women, but by July, 1917, a big decline in female drunkenness was reached, although women were entering industry in large numbers. This change was brought about by the action of the Central Board of Control and later by that of the Food Controller. This action took the form of restrictive measures applied to the sale of alcohol, constructive measures to increase opportunities for non-alcoholic refreshment, and (by the Food Controller) restrictions on output and the release from bond of alcoholic liquors. No doubt each sex, said Mrs. Scharlieb, had its own special temptation in addition to those common to both, and the periods of pregnancy, lactation, and the menopause made very special demands on the resolution and fortitude of many women, but here again the best defence was of the constructive order. It was the duty of the community to make adequate provision for the comfort and health of the expectant and the nursing mother. In speaking of the problem of sobriety in times of peace, the lecturer made the last of the many appeals which had been addressed during the day to the medical profession. The members of that profession, she declared, must come out into the open and let all the world know that they were true to the teaching of physiology and pathology. They must teach their patients that alcohol was not a food; that, habitually used, it served no useful purpose in the body; that it was sometimes, but not often, indicated as a remedy, and, when so used, must be given with the same precautions and sense of responsibility as any other remedy. On the pathological side, they should show that they recognized the excessive or improper use of alcohol as one of the chief causes of ill health, premature mortality, inefficiency, and social degradation. They should also recognize and teach that alcoholism prepared the way, made more deadly the attack, and interfered with the treatment of other diseases, especially the venereal diseases, the acute infections, and the degeneration of organs. The medical profession should be honest in giving death and sickness certificates, and not hide the fact of alcoholism under its secondary results, such as gastritis and cirrhosis of the liver. It was to the medical profession that the public looked for guidance in these matters. Mrs. Scharlieb concluded by advocating the nationalization of the liquor trade, a view which did not commend itself to a section of her large audience.

THE FUTURE OF POST-GRADUATE EDUCATION.

THE opening address of the session at the Post-Graduate College, West London Hospital, was delivered on October 16th by Sir GEORGE NEWMAN, K.C.B., M.D., chief medical officer of the Ministry of Health.

He congratulated the college on the post-graduate courses it had maintained for something like twenty-five years. It had the advantage of being organically connected with a hospital; many years ago he had participated in Sir Jonathan Hutchinson's scheme, both at the Polyclinic and at King's College; the reason why that scheme was not a complete success was because it was centralized in an institution which was not a hospital. The courses at the West London Hospital included teaching in the ward, special clinics, and practice in the laboratory, and he did not see how any post-graduate course could be considered complete or even satisfactory which did not embody these three provisions. While medical education in England was ahead of medical education in America and Germany, it was only just ahead, and the reason for the close rivalry of these other countries was to be found to a great extent in their system of interne appointments after qualification. At the West London Hospital a system did obtain whereby post-graduates might be appointed as clinical assistants for three or six months, acquiring the full advantage of hospital practice and clinical instruction.

Necessity for Graduate Teaching.

The overcrowded state of the medical curriculum rendered post-graduate teaching necessary. The curriculum should be lightened at both ends, first by requiring that the student who entered the medical school should have already received instruction in the preliminary sciences at the secondary school, and then, on his leaving the medical school, by loading on to a post-graduate course three or four specialties, over and above his ordinary medicine and surgery. Post-graduate teaching was also rendered more necessary by the continual advance of medicine. New methods were always arising, as in the treatment of venereal diseases, and new applications, such as those of orthopaedic surgery to a large group of maladies and malformations. Again, there was the integration of preventive medicine into ordinary medicine. This brought with it new work for which the fifth-year students, until two or three years ago, were not equipped. The introduction of the preventive spirit into medicine rendered post-graduate teaching all the more important. Every practitioner also required revision of ideas and methods, even though he might not know that he required it. It was to be feared that the bulk of practitioners in the country did not greatly desire to attend such courses; they had become somewhat set in their habits and modes of thought. Further, as medicine advanced it became clear that more "team work" was necessary, and this necessity also had not, until recently been brought to the attention of the fifth and sixth year men. Finally, owing to the demands of public opinion, the sphere of medicine in relation to the State was ever enlarging. Whether it was right or wrong for the State to meddle in medicine or for medicine to be the servant of the State—and there was much to be said on one side and something to be said on the other—the intervention of medicine in government, local and central alike, materially affected the whole question of medical practice. School medical service, insurance service, tuberculosis and venereal services, the emergence of the Ministry of Health—all these things meant that the practitioner must have a rather different social attachment from that which he had had in the past.

He held that the Government should never so bring its influence to bear upon affairs as to depress the individuality of the practitioner or to remove his opportunity of rendering his peculiar personal service. He had sometimes been criticized for appearing to exclude the practitioner from certain Government services, and it was true that he thought the practitioner should not waste his time over a certain amount of Government work. The inspection of school children, for example, should be by Government authority; treatment, as far as possible, should remain the province of the private practitioner.

For all these reasons the time was coming when some kind of training after qualification would be regarded as

a necessity for every medical graduate. The essentials of a post-graduate course were, first, clinical practice; then certain specialities, such as ear, nose, throat, women's and children's diseases; and thirdly, laboratory work, for it was important that the practitioner should be able to understand the main facts elicited by the laboratory, and be able to submit his specimens in a competent way. A great many specimens sent up from the country to the central laboratories were worthless, and the information supplied to the pathologist so meagre that it was impossible for him to aid the practitioner in anything beyond the mere outlines of diagnosis. A place should be found in the post-graduate course for instruction in the early diagnosis of disease, particularly those three or four diseases which were the main cause of invalidity. The returns of sickness benefit under the Insurance Act (taking a three-year average) revealed that 270,000 working years were lost per annum through absence from work on account of sickness, and this did not include maternity, sanatorium, or disablement benefit. Preventive medicine had not only to do with drains and infectious diseases, but with the great body of preventable or largely preventable disease. He had worked out the records of five typical insurance practices in as many cities in order to discover what the maladies were which caused this great invalidity. Briefly, they were dyspepsia, bronchitis, and all sorts of minor maladies. The burden of invalidity due to dyspepsia was prodigious. Would it not be well for post-graduates and practitioners generally to have more assistance in arriving at the early diagnosis of alimentary conditions? The same thing applied to early mental aberrations, to the applications of orthopaedics to simple malformations, to the early stages of disease of the eyes, and of tuberculosis, particularly among children, and possibly also to war neuroses.

The Need for State Aid.

In all the medical schools the installation of a system of proper, efficient, and continuous post-graduate instruction should be made a matter of grant. A medical school should not receive from the State substantial grants year by year unless there was provision—separate from that assigned to the medical students proper—for the men who had passed their final examinations. Post-graduate teaching should be given at the hospital, made as accessible as possible, and at a reasonable fee. A great many hospitals all over the country could be used. In every county, cottage, and isolation hospital it should be possible for the practitioners of the vicinity to obtain further clinical practice and experience. It had been found, particularly in London, that the consultant on the hospital staff was often able to give only the residuum of his life and strength to hospital teaching. Some method must be devised by which it would be made to pay him to give the major part of his energies to hospital work and the smaller part to private practice. This would not cover all consultants, many of whom would continue to prefer their lucrative practice; but the man who elected to give his main strength to teaching should be adequately and continuously paid, so that it was worth his while to give to his teaching something more than a casual attention. In the new clinical units which would be formed out of this arrangement some provision for post-graduate teaching should be included. It was evident also that in various parts of the country a system of hospitals and clinics for insurance and other practice would be established. The country had no hospital system; it had hospitals but no co-ordination of hospitals, and, although voluntarism in hospitals should be retained as a valuable thing, a good deal of organizing and unifying was necessary in order to bring about a hospital and clinical system. Here would be a golden opportunity for the introduction of post-graduate courses. In every county in time there would be a network of hospitals and clinics, in association with which a thoroughly sound system of post-graduate teaching might be constructed. He believed that any such post-graduate undertaking would have to be built on what he thought were the entirely admirable lines of the course at the Post-Graduate College of the West London Hospital.

THE large silver Carnegie medal for heroism has been awarded to Captain Ottavio Calamita, a medical officer of the Italian army, for saving a soldier from drowning in the dangerous canal of Mirano at the risk of his own life.

MOTOR NOTES FOR MEDICAL MEN.

By H. MASSAC BUIST.

FURTHER FEATURES OF THE PARIS SHOW.

THE Paris Motor Show no doubt gave the medical man the impression that post-war motoring is for rich men only, so studiously had the French firms, old and new, avoided an attempt to produce a cheap car, alleging that it is impossible in Europe in this transition stage owing to the depreciated value of currency whereby the raw materials of production have to be imported under unfavourable terms, by reason of the high shipping rates, and because the labour situation is so dishearteningly unstable. Nevertheless, there are not lacking signs that there is a sufficient proportion of firms with ideas and enterprise presently to compel those who will not break new ground either to retire from the industry or to show more pluck. Though all established French and Italian houses were represented at the Exhibition, which closed on October 19th, there is really no justification for occupying space by describing the bulk of their exhibits, which followed purely conventional pre-war practice. From a feature introduced here or there, such as the partial use of aluminium for engine details, it would appear that even these conservative ones have tried to break away; but that, for the rest, they have got so stale, possibly as the result of war exhaustion, that they are barren of ideas.

Taking the exhibits in the gross, it is positively amazing to discover that in quite 90 per cent. of examples there has not been the slightest attempt to lighten weight. Indeed, most appear to have built heavier than ever. Evidently war experience has shown the Continental industry, as it has our own, the need to provide more rigid frames; but we do not find any evidence, such as Armstrong-Siddeley, Daimler, or Napier, furnish in this country, of the solution of the problem by using higher grade materials, a more simple design, and a deeper channel section alike for the longitudinal and for the transverse frame members. Renault duplicates the longitudinal members over the rear part of the chassis, which strikes one as a complication, though for the rest this pioneer French manufacturer stands out prominently as having eliminated a number of features from his pre-war chassis schemes that were never complicated. He is singular, too, in retaining the slipper type of bonnet with dash in front of the radiator.

ENTRY OF THE AIRCRAFT INDUSTRY.

In this country we are to expect one or two notable contributions from the aircraft industry, such as that of the Avro Company, which is going to show us one version of how to build a relatively low-priced, medium-sized car of light weight but ample strength. Of the members of the French aircraft industry three have started motor manufacturing and were represented at the Paris Exhibition, Henry and Maurice Farman, Gnôme et Rhône, and Gabriel Voisin. None of them attempts to build a light car or a cheap one. The two former build large six-cylinder, overhead valve-engined vehicles of conventional chassis scheme, retailing, without coachwork, respectively at 48,000 and at 45,000 francs; and the last-named displayed a four-cylinder, sleeve-valve-engined chassis of the middle size, with a bore measurement of 95 mm. and a piston travel of 140 mm. In none of these machines has an attempt been made to solve the motor problems of the hour, the brake schemes being conventional, while the only feature suggesting the influence of the aircraft industry is the amplitude of the equipment on the dashboard. Aircraft were elaborated during the war until there were so many "gadgets" for the unfortunate pilot to watch that the truth is the majority never paid the slightest attention to any one of them. Yet here we find complication being added to complication at the period when the motor carriage industry, unlike the aircraft, is supposed to have settled down to something like a practical proposition. The medical man is certainly the last who wants to have his thoughts taken off his work by being required to keep an eye on a dozen different instruments on the dashboard as he drives about town or country visiting his patients. True, one of the three new-comers we are discussing offers some compensation in the guise of a steering wheel without a lever on it.

because the throttle and magneto controls have been placed among the squad of "gadgets" on the dashboard; but one cannot see that it is any easier to work the throttle or magneto from the dashboard than from its usual place on the steering wheel. Indeed, of the two the conventional practice is the handier.

The only thing these new-comers from the French aircraft industry have to offer in the way of a fresh note is in the amplitude of the valance they supply, more or less on the American style, in the region of the front dumbirons, and of the mudguard in general, all of which scarcely looks like making motor history. But their advent is welcome, first, because they have the habit of developing design rapidly; secondly, because, as competitors for the relatively small market that offers in high-powered costly cars, undoubtedly they will cause the old-established firms, who are revealing such disheartening lack of enterprise, to bestir themselves and engage some brilliant young men with ideas, in substitution for their present presumably exhausted staffs of designers.

A SPANISH CONTRIBUTION.

The publicity department of the Citroën enterprise, which was due to achieve so-called mass production early this season, has been manifest to such good purpose that one would imagine it had been attained already. The driving of a certain number of cars to the Salon as representing a day's alleged output may, however, be regarded as mere *réclame*. A great deal has to be done before the promise of 100 cars daily materializes. Moreover, the price is higher than was proposed originally. Nor is there anything remarkably original in the design of the vehicle, so that it calls for no further consideration on the present occasion, particularly as it is understood that no examples are available yet for export to this country.

A new car comes from Spain, the price of the Barcelona-built four cylinder engine 16-20 h.p. Elizalde machine being fixed provisionally at 22,050 pesetas. The fact that of the two examples staged one has an overhead valve and the other a side valve engine, the bore and stroke measurements being identical, suggests that the manufacturers have scarcely made up their minds as to precisely what they would be at. It is observable, however, that in this novelty the problem of brakes has received serious attention. Not only has the foot-controlled set been furnished to all four wheels; the front suspension has, besides, been specially adapted to take the brake reaction, the scheme being a combination of short semi-elliptic with short cantilever front springs. Established firms in the motor industry prominent in fitting brakes to all four wheels, however, such as Delage, Hispano-Suiza, Piccard-Putet, Gnome et Rhône, and Bellanger, do not deem it needful to court complication in this way. They merely build the front details of their cars very strongly. Moreover, all three use wire wheels, which are largely going out of fashion in the British industry by reason of the cleaning difficulty.

SOME OF THE SMALLER EXHIBITS.

As showing that some members of the Continental industry are giving attention to the matter of the small car, however, it may be mentioned that the following 4-cylinder vehicles were staged: 9 h.p. Alba (65 by 130 mm.); 6 h.p. Buchet (60 by 100 mm.); 8 h.p. Buchet (65 by 110 mm.); 6 h.p. Bugatti (65 by 100 mm.); 6 h.p. Charron (68 by 100 mm.); 8 h.p. Clement-Bayard (60 by 100 mm.); 6 h.p. Majola (59 by 90 mm.); 6 h.p. Mathis (58 by 100 mm.); 6 h.p. Philos (60 by 100 mm.); and 8 h.p. Zebre (55 by 105 mm.). For the most part medical men will be interested in vehicles of a slightly larger class, among which is a novelty in an 8-cylinder water-cooled nominal 8 to 10 h.p. Suère car with 45 mm. bore and 90 mm. piston travel dimensions; three forward speeds; Michelin disc wheels and Delco electrical gear for starting the engine, firing the mixture in the cylinders and lighting the vehicle, which has consequently no magneto. The construction of this V-type engine is ingenious. The cylinder blocks are cast integral with the vertically split crankcase, each half of which consequently carries a block of 4 cylinders, the Delco apparatus being accommodated in the V between them.

Perhaps the most popular vehicle in the nominal 10 h.p. class is the 4-cylinder monobloc Peugeot of 66 mm. bore

measurement and 105 mm. piston travel. In this machine, too, we find the idea of casting the crankcase and cylinder block in one piece; but, as this is a vertical engine, of course only the upper half of the crankcase is embraced in the combination. The chassis is standardized with electrical engine-starting and vehicle-lighting gear, and the now usual French method of unit construction for the engine clutch and gearbox is exploited, the control of the last-named detail being in the centre, not at the side, of the chassis. In the main the worm-drive is not as popular in France as in this country, but it is employed in this Peugeot model on the proper principle of accommodating the worm below the back axle. The rear suspension is by cantilever springs which are not mounted in the general way, the aim of the departure being to ensure the combination of rigidity where that is desirable with flexibility.

The four-cylinder 10 h.p. Majola is a model unusual among the small vehicles displayed, in that it has overhead valves, the inlet and exhaust series being set diagonally in the combustion chamberhead and worked by a single camshaft, which is driven by a silent chain from the crankshaft. It will be observed, therefore, that the method of driving the crankshaft does not accord with either successful racing-car practice or aircraft construction; not that there need be any reason to anticipate trouble on toy scale constructions of this type. The chain need not stretch, provided weight is not deemed a matter of importance, therefore a chain of ample strength is employed.

ODDS AND ENDS.

Like the Peugeot car, the Mathis above-mentioned, which is built in Alsace-Lorraine, has the gear control and hand-brake lever at the driver's left hand. Each valve cap serves to cover an inlet and an exhaust valve. Both sets of brakes act on the back wheels. In the larger Mathis model the hand-brake lever is on the driver's right. Broadly speaking, one sees in chassis of this sort, as in the Buchet and in other small cars, that, as a result of five or six years' development, a greater robustness of construction has been sought. Perhaps another way of putting it is to say that the necessary strength is provided by using more of the same grade of materials instead of newer, lighter, and higher grade materials. The Charronette light car now has the radiator in front of the engine instead of in the front of the dash. Such problems of the Voisin Sulky, reminiscent of the motor buckboard of ten years ago, with two-cylinder air-cooled engine, are merely illustrative of the wide variety of small vehicles of unconventional sorts tentatively on the market, but are not otherwise of concern to the medical man. In the new Clement-Bayard, as in the Peugeot light car, the cylinders and top half of the crankcase are cast in one. The Clement-Bayard engine has a separate head, and there are no valve caps, while a banjo type of rear axle and propeller shaft casing is employed in combination with a single transverse semi-elliptic rear spring. The engine, clutch, and gearbox are of the unit construction, and the change speed control is centralized. The 13 h.p. Unic car of 80 mm. bore measurement by 130 mm. piston travel is really an example of a modern middle-sized car, and is incidentally interesting in that double cantilever rear springs are employed.

Another note of the Salon is the introduction of some middle-size six-cylinder cars; as instance the 15 h.p. Lorraine-Dietrich with a camshaft inside the crankcase, the enclosed overhead valves being worked by rockers. This machine has the left-hand position for steering. The greatest novelty in steering gears is that furnished to the Bellanger de luxe chassis with eight-cylinder V-type engine, wherein the problem of providing a pronounced rake to the steering pillar is made difficult by the position of one block of cylinders.

Broadly speaking, the Renault and Peugeot small cars proved the most popular in the show. The medical man will find all the cars of interest displayed at Paris staged at Olympia, London, in a fortnight's time.

A BILL has been introduced into the Chamber of Deputies of the Republic of Uruguay providing for the organization of a Pan-American Congress to discuss measures for the combating of influenza. It is proposed to hold the congress at Montevideo in the coming winter.

British Medical Journal.

SATURDAY, OCTOBER 25TH, 1919.

THE ANNUAL MEETING IN CAMBRIDGE, 1920.

THE Annual Meeting of the British Medical Association will be held next year in Cambridge under the Presidency of Sir Clifford Allbutt, Regius Professor of Physic in the University of Cambridge. For reasons explained below the meeting will begin at the end of June—several weeks earlier than usual.

The last annual meeting was held in Aberdeen at the end of July, 1914, under the Presidency of Sir Alexander Ogston. It had been intended to hold the next meeting at Cambridge in 1915 and Sir Clifford Allbutt was elected President. He has retained that office, to the great advantage of the Association and of the profession, during the war, but it was not found possible to hold an annual meeting, although the statutory annual general meetings of the Association and of the Representative Body were held each year in London for the discussion of medico-political matters.

Not only did the immense strain of the war upon the medical profession make it inadvisable to attempt to hold the usual yearly conference for the discussion of scientific and clinical subjects, but the University of Cambridge was so denuded of staff and accommodation that it was, for the time, unable to maintain its invitation. During the war, therefore, no annual meeting with Sections was held, and when the matter came up for consideration after the armistice it was found that, while Cambridge was not in a position to arrange for the meeting to be held there during the summer of 1919, there was a strong desire that the Association should hold early in the year—while medical officers of the Dominion Forces and of the United States Army Medical Corps were still in this country—a special meeting to discuss scientific and clinical matters of common interest to all members of the profession, and particularly the medical and surgical lessons learnt during the war. The Rector of the Imperial College of Science, South Kensington, placed that fine building at the disposal of the Association, and a meeting, with three sections—medicine, surgery, and preventive medicine and pathology—was held there during the second week of April, with a success which was apparent to all. Subjects for discussion in each section were selected and the addresses of the openers were printed beforehand and supplied to those who intended to speak. In this way time was found for a large number of speakers and the discussions were spirited and informing. A very large number of demonstrations were arranged also, and the crowded attendances showed that the pains lavished on them by the demonstrators were fully appreciated.

Meanwhile the invitation from Cambridge holds good, or perhaps it might more properly be said, has been cordially repeated. At a meeting last week of the Arrangements Committee, consisting of

representatives of Cambridge and of the Association at large, in equal numbers, the general plan for the meeting next year was laid down. It was arranged that there should be four principal sections meeting daily on the three days set apart for sectional meetings. These sections are those of medicine, of surgery, of physiology and pharmacology, and of neurology and psychiatry. It was arranged also that certain other sections should meet, each on one day—namely, pathology and bacteriology, obstetrics and gynaecology, tropical medicine, naval and military medicine, radiology and electro-therapeutics, venereal disease, medical sociology, and medical education. While the number and diversity of sections will thus be greater than at the April meeting, it is intended to preserve as far as possible the features which contributed so much to the success of that conference. Accordingly special efforts will be made to give the meeting at Cambridge an objective character by the organization of numerous afternoon demonstrations, for which purpose the magnificent laboratories of the University will be at the disposal of the Association through the courtesy of the several professors and the University authorities. Furthermore, the rules for the conduct of discussions, which worked well at the special meeting in London, will in general be applied to the sections at Cambridge—an arrangement calculated to promote lively and profitable debates.

In fixing the date and arranging the general plans of the meeting the Committee was largely guided by the advice of the representatives from Cambridge. They explained that the special circumstances of the University make it impossible to hold the Annual Meeting at the usual time of year—that is, at the end of July; it must be held during the short interval between the end of the May term and the summer medical examinations, and the beginning of the long vacation residence, when only would the university, college and municipal buildings and the lodging accommodation of the town be available for members of the Association. Moreover, during term time the pathological and other laboratories are fully occupied with the class work of the great numbers of students now in residence. It was accordingly decided that the meeting should begin on June 25th and end on July 3rd. The Annual Representative Meeting will commence on Friday, June 25th, and will be continued on the following week-days. On the evening of Tuesday, June 29th, the President, Sir Clifford Allbutt, will deliver his address to the Association. Wednesday, Thursday, and Friday will be devoted to discussions in the sections in the mornings and to clinical and laboratory demonstrations in the afternoons. In this way members attending the Annual Meeting in Cambridge having the same spirit as those who attended the April meeting in London will find the day fully occupied, and will be able to devote the evenings to social functions, where they will form or renew friendships.

Cambridge, it is hardly necessary to say, lends itself well to such a programme. The University buildings, freely placed at the disposal of the Association, all stand near each other; the laboratories are numerous and well equipped, and their staffs are determined that everything in their power shall be done to make the meeting a success.

The British Medical Association is indeed fortunate in resuming this part of its activities within the precincts of the great University of Cambridge, in which modern learning is not less honoured than ancient, and under the presidency of a leader and teacher so admired and loved as Sir Clifford Allbutt.

RED CROSS WORK IN PEACE.

By subscribing to the Covenant of the League of Nations this country accepted the Article by which the signatory powers agreed to encourage and promote the establishment and co-operation of authorized voluntary national Red Cross organizations for the improvement of health, the prevention of disease, and the mitigation of suffering throughout the world.

The need of a single national authority to co-ordinate voluntary agencies and encourage and train voluntary workers is one of the lessons of the war. There was a time, before the war, when difficulties arose between the British Red Cross Society and the Order of St. John, to the detriment of the work of both. The strong opinion that these difficulties should be removed and that the two organizations should work together, not in rivalry but in co-operation, led to the appointment by the War Office in March, 1914, of a committee to inquire into the relations between the two societies. The outbreak of war put an end to the inquiry, for the two societies at once agreed to form a joint committee. The work done both at home and abroad by this Joint War Committee was so good that everyone will have been prepared for the project outlined in the letter of Sir Arthur Stanley, of which we gave an account recently, for the formation of a Joint Committee of the two societies to organize Red Cross work in peace.

Not the least of the merits of Red Cross work is that it springs from that noble attribute of mankind, sympathy with suffering, which, like the quality of mercy, blesseth him that gives and him that takes; it is in this spontaneous voluntary offer of personal service that lies the special character of Red Cross work. The idea, at its first conception by Henri Dunant at Solferino in 1859, was to mitigate the sufferings of war by voluntary effort, by giving to the impulse of pity an organization possessed of the necessary material and enjoying international recognition. Like other great ideals, it appealed so strongly to the conscience of mankind, and gathered force so quickly and widely, that the need for voluntary effort diminished since all nations set to work to perfect their official machinery for dealing with the wounded and sick in war. For the British wounded in this war the British Red Cross and the Order of St. John, working together through their Joint Committee, supplemented the efforts of the Army Medical Service, in the early days especially, by the prompt supply of stores and appliances in the interval before the official machinery could get to work on its larger scale. The Red Cross, by adapting itself to new circumstances, and readily and rapidly meeting new wants, showed that it was fully endowed with the flexibility which is the hall-mark of voluntary effort.

The medical profession was sorely strained by the demands made upon it by the immense scale of everything in the war, but the nursing service would have been overwhelmed but for the voluntary workers who, by an inaccurate but convenient contraction, are spoken of as V.A.D.'s. The long casualty lists, the large convoys of wounded that in such rapid succession were brought to every town, made a vivid appeal to the imagination and turned the thoughts of women to the alleviation of so great a mass of suffering. The number of V.A.D.'s rose by leaps and bounds to 90,000 under the British Red Cross Society, and 30,000 under the Order of St. John. The Covenant provides that this splendid effort shall not be allowed to die away. Suffering in peace, though it does not make the same appeal as was made by the casualty lists in each day's newspaper, is not less

real, and the sufferers are even more numerous. In Sir Arthur Stanley's sketch of the work the Joint Peace Committee proposes to encourage and direct special importance attaches to the proposals with regard to tuberculosis, home nursing, and child welfare. All three may profitably be combined for the assistance of crippled children. The partially trained must not be encouraged to believe that she can take the place of the fully trained nurse, but we feel confident that in any scheme directed by the Joint Peace Committee this risk will be avoided. Experience proves that women instructed in particular kinds of work can be very useful in many directions where patient, intelligent, personal service is needed. A good instance of the sort of work which voluntary aid workers in peace can qualify themselves to undertake is afforded by a study of the statistics, given on the authority of Miss Hunt of Baschurch, by Sir Robert Jones and Mr. Girdlestone in their paper on the cure of crippled children, published a fortnight ago (p. 457). It appears that among a population in Shropshire and Staffordshire of 671,307 there were 1,130 cripples—a proportion of 1 to 594. By early and well-directed treatment many of these cripples can be cured, and it is certain that almost all can be benefited. The organization needed to deal with the mass of suffering and disability will have to provide not only skilful surgical treatment, but must also be prepared to seek out the cases and provide for continuous supervision over long periods. In this work the voluntary aid of women sufficiently trained to appreciate the general principles of treatment and endowed with perseverance and sympathy is needed. They would work with and under trained nurses and be subject to medical supervision.

In order that the public may thoroughly understand the situation the new committee would, we think, do well to issue an official history of the two organizations. The Order of St. John of Jerusalem in this country was born again during Queen Victoria's reign, and revived some of the customs and ritual, as well as the name, of the mediaeval order. The British Red Cross Society, which was preceded by a National Red Cross Society, was incorporated during the reign of her successor. The history might define the objects and purposes with which the societies were created, and give a list of the awards and honours bestowed by each, of the services rendered, and of the tests of knowledge applied, together with lists of the various publications of each society. The new responsibilities of Red Cross work in peace make it desirable that such a record should be at hand for the information of inquirers, and to facilitate the work of education authorities. The existing V.A.D. organization for war is not itself sufficient for the scheme now proposed, but it will serve well as a nucleus for the larger body now proposed to be maintained in order to carry out the aim of international Red Cross work in peace. In addition to the workers embraced in the two organizations there are, we believe, many thousands who have received training under schemes of county councils; they should be brought within the new organization, which should continue to be based on a county system in all branches of its work, and conducted on thoroughly democratic lines.

THE HARVEIAN FESTIVAL

THE Harveian Festival was, for the first time since 1913, celebrated with full honours by the Royal College of Physicians at London on St. Luke's Day (October 18th). The Harveian Oration has been delivered each year, but the other ceremonies have been intermitted. On this

occasion the oration, delivered by Dr. Raymond Crawford dealt with the forerunners of Harvey in antiquity. As will be seen when the full text is published in an early issue, the speaker supported the thesis that in the matter of the circulation of the blood Harvey's indebtedness to any but Aristotle was negligible. The fuller knowledge now possessed of the writings of men of science of ancient days demanded, he said, a readjustment of traditional beliefs, for too much had been claimed for the ardent anatomists of the Renaissance and too little conceded to the master minds of antiquity. The oration was delivered in the library, and the speaker's development of his theme was closely followed by a large and attentive audience. Afterwards the President presented the Baly Medal to Dr. Leonard Hill, and in doing so recalled the circumstances of its foundation. William Baly was assistant physician to St. Bartholomew's Hospital, a Fellow of the Royal Society as well as of the Royal College of Physicians, and had attained a leading position in London when he was killed in a railway accident in 1861. Five years later Dr. Dyster presented a sum of money to the College to found a medal in Baly's memory, to be given every two years to the person deemed to have most distinguished himself in the science of physiology, especially during the two years preceding the award of the medal. The first recipient was Richard Owen; among others were William Sharpey, Charles Darwin, Sir David Ferrier, Sir Michael Foster, Dr. W. H. Gaskell, Sir Edward Sharpey Schafer, Professor E. H. Starling, Professor Halliburton, Dr. J. S. Haldane, Professor Gowland Hopkins, and Professor W. M. Bayliss. But the medal is not restricted to British subjects, and has been awarded at various times to Claude Bernard, Carl Ludwig, R. Heidenhain, M. Schiff, Professor Pavloff (the Russian physiologist), and Professor E. Fischer. Harvey, in giving the College his patrimonial estate of Burmarsh, in Kent, in 1656, just a year before his death, enjoined that once every year a general feast should be held within the College, and that on that day an oration should be delivered exhorting the Fellows and Members to search and study out the secrets of Nature by way of experiment, and also, for the honour of the profession, to continue in mutual love and affection among themselves, ever remembering that *concordia res parvae crescunt, discordia magnae dilabuntur*. It has been the practice of the College to obey this injunction by holding a dinner of the Fellows, to which guests are invited, on St. Luke's Day. Such a dinner was held on October 18th. The President (Sir Norman Moore), in proposing a toast to the guests, dealt briefly with the changes and terrible events of the years since 1913, and remarked incidentally that the College had been prevented from celebrating as it would have wished the quatercentenary of its foundation, which fell on September 23rd, 1918. In happy sentences, illumined by many historical references, he showed how the College had always manifested its attachment to literature. He reminded his hearers that Linacre—who, with the aid of Cardinal Wolsey, obtained from Henry VIII the charter of incorporation—was one of the earliest Greek scholars in this country, and the friend of such men as Erasmus, More, and Tunstall. Ever since the College had shown its attachment to learning, and had never wanted among its Fellows men of literary distinction and wide scholarship. The toast was acknowledged by Sir J. J. Thomson, President of the Royal Society, who vindicated the claims of medicine to be accounted an independent science, bringing to its task for the prevention and relief of human suffering special methods of observation and experiment, upon which the art of the physician is founded. The toast was acknowledged also by Mr. J. O. Bailey, the editor of *Cowper*. The health of the Harveian orator was given in a brilliant and sympathetic speech by the senior censor, Sir Wilmot Herringham, and briefly acknowledged by Dr. Crawford.

MEDICINE IN INDIA.

SIR HAVELOCK CHARLES has sailed for India in connexion with his duties as Medical Adviser to the Secretary of State. His visit, which is made at the request of Mr. Montagu, will last several months, and during it he will be able to make himself fully acquainted with existing conditions in the various parts of India, including the facilities for research and the present position and future prospects of the Indian Medical Service, and will have the opportunity of conferring with the Director-General I.M.S. on the steps which must be taken to end present griefs and bring contentment. We are well aware that the unrest in the service is widespread and affects seniors as well as juniors. There are, no doubt, many causes; one is the feeling of uncertainty as to the future status of the European services in India if effect is given to the policy embodied in the Government of India Bill, with regard to which a Joint Select Committee of the two Houses of Parliament is now taking evidence. Anxiety due to this cause is not peculiar to the Indian Medical Service, but it labours under certain particular disadvantages. The increases in pay sanctioned have not in practice fulfilled expectations, and the cost of living in India has seriously increased during the last year or so; a related cause of dissatisfaction has to do with pensions rates. A most pressing matter is that it is now and has been for years, practically impossible for officers to obtain leave—in most instances long overdue—or to exercise their right to retire. Under the strain of continuous service many officers are breaking down in health, and there is urgent need to find means of affording relief. There are proposals for offering short-term commissions at a high rate of pay, but without pension rights. Whether such an offer would meet with adequate response—for we believe 200 officers would be necessary—we do not know; but, having regard to the circumstances of the profession in this country, success is doubtful, and at the best such a plan can only be a palliative; what is really needed is the offer of such terms to the permanent establishment as will make it possible to form a leave reserve sufficient to ensure officers getting both study leave and ordinary leave when due. This would probably mean an addition of over 25 per cent. to the cadre. The effect of the war on the supply of medical men has been such as to induce young men to scrutinize the terms offered in the public services very closely, and it is a commonplace to say that the attitude of the Government of India is viewed with profound distrust. It has made the mistake of delaying improvements which might have produced the desired effect, and the further mistake of trying to drive a hard bargain. Finance departments are apt to forget that a medical officer, as we pointed out last week in connexion with the R.A.M.C., enters Government service as an expert, having fitted himself for his special duties by the expenditure of a good deal of capital, and, what is more important, five or six years of life. In the adjustment of his pay, emoluments, and pension rights in their relation to other branches, such as the combatant, where officers enter at an early age and after a much shorter period of preparation, this must constantly be borne in mind. We hope, and indeed anticipate, that Sir Havelock Charles's mission will be crowned with success, for the service never had a better friend, nor one who has a higher ideal for it. During his visits to various parts of India he will come into direct personal contact with medical officers of all branches, and will be able to learn the views of the responsible advisers, both lay and medical, of the Government of India. On his return he will be in a position to advise the Secretary of State from recent experience of the actual present day conditions in changing India. The desire and intention of the Secretary of State is that the causes of unrest in the Indian Medical Service shall be removed, and there is, we are assured, every hope that the obstacles in the way of bringing contentment will be cleared away, so that on

the one hand the Government of India may be enabled to obtain the type of medical man best suited to Indian conditions, and, on the other, that such men may find in the service the best outlet for their talents. The desire, indeed, is to make the Indian Medical Service even better and more attractive than it has been in the past. Sir Havelock Charles is due to reach Bombay in the middle of November, and will probably not return to this country before March. The Committee to inquire into the administration of the army in India is sailing next week, and will probably spend the whole winter in India, taking evidence at Delhi. It may perhaps be anticipated that it will desire to hear Sir Havelock Charles before he returns home. We understand that Sir Michael O'Dwyer, until recently Lieutenant-Governor of the Punjab, has taken the place of Lord Esher as chairman.

INFLUENZA AGAIN

SIR GEORGE NEWMAN, in the memorandum outlining the principles and practice of preventive medicine, of which we gave some account last week, rightly says that there is need of a more intimate personal study of the beginnings of disease and of its earliest signs—the beginnings of disease, that is to say, in the individual; there is equal need for the study of the beginnings of epidemics. When the central and local health authorities are faced with such an epidemic of influenza as that which prevailed last year, the problems are so complicated by the number of cases—there were 104,738 deaths from this cause in England and Wales in 1918, and the attacks must have been numbered in millions—that they become insoluble by any means at our disposal. There are signs now, in London at any rate, of the beginnings of an epidemic presenting many of the symptoms characteristic of influenza, and believed by many practitioners to be in fact that disease. Sir George Newman says that for the control of any infectious diseases the first need is to know the infecting germ and its ways biologically. At present we do not know the nature of the infecting germ of influenza. There is evidence that it can pass through bacteriological filters of a relatively coarse grain, but of its place in the biological tree and of its qualities nothing is known. It has been proved that a large number of organisms occur in influenza, and that some of them—a haemolytic streptococcus, for example—probably give increased virulence to the disease at various periods of its epidemic prevalence. There is also a suspicion of the occurrence of symbiosis between Pfeiffer's bacillus—which is frequently present and is by many still regarded as the true cause of influenza—and other organisms. Thus Gibson and Bowman, in their paper on the bacteriological flora of the respiratory tract in cases of influenza, published in one of the recent reports of the Medical Research Committee, relate the following experiment, which graphically illustrates this fact: "Streaks from an emulsion of Pfeiffer's bacillus were made on a blood agar plate about a centimetre apart, and at right angles to these streaks were made with a culture of *S. viridans*. Where the lines crossed it was found that Pfeiffer's bacillus had grown much more profusely than along the streaks." This suggests a line of inquiry which may be profitable, but at present it must be admitted that the first condition in the control of an epidemic is not fulfilled in the case of influenza. All that can be said is, again to quote Sir George Newman, that "the risk of infection depends on close personal contact and possible 'drop infection,' but the severity seems related to lowered resistance and possibly increased virulence." The risk of contracting the infection is increased by the aggregation of susceptible persons in ill-ventilated and overcrowded conditions. Unhappily the immunity conferred by one attack of influenza is of short duration, so that sufferers of last year cannot expect with any confidence to be immune if the epidemic develops this year. No doubt it

is true that the habit of living as much as possible in the fresh air, and taking reasonable physical exercises, an ample food supply, daily attention to the toilet of the nose and throat, and the avoidance of fatigue, chill, and of alcoholic excess, are the best means the individual can employ to protect himself, but for the present we fear it must be said that no municipal regulations are of any avail. If the Ministry of Health has more encouraging information in its possession we hope it will at once be made public.

MEDICAL TERMS IN THE NEW ENGLISH DICTIONARY.

AFTER a somewhat long interval—due, of course, to the war—another, or rather two other, instalments of the New English or Oxford Dictionary¹ have come from the Clarendon Press. Each is a double part, and each brings to a close a large section of the whole work, for one of them concludes the first half of Volume IX, and the other brings to an end the second half. In each there are not a few medical terms of importance, and some of them are of more than usual interest. In the former part the rubrics run from *stratus* to *Styr*, and the words number 2,295. The medical terms may be subdivided into two groups—the medical terms proper (not very numerous), such as *streptococcus*, *streptococcolysin*, *streptothrix*, *stylostomoid*, *stylohyoid*, *strophulus*, *stroma*, *struma*, *strophanthus*, *stupe*, and *strychnine*; and, second, the ordinary words with distinctive medical meanings in special usages, such as *stricture*, *streak* (as in streak-culture, a bacteriological term), *stria* and *striation*, *stridulous*, *strind* (equivalent to strain), *stringent*, *stump*, *stupor*, *stylet*, and *styptic*. A rare word is *streaking*, with its special meaning of laying out a corpse; it signifies stretching and is, indeed, another form thereof. It has always been a characteristic of this Dictionary that ordinary words with special medical meanings have been clearly defined and copiously illustrated, and Sir James Murray's successors in the editorship have in this part fully maintained the reputation of the past. *Stroma*, in its etymology, is interesting; it comes from the Latin *stroma*, a bed covering, and that in its turn from the Greek *στέρωμα*, anything spread or laid out for lying or sitting upon, and so it arrives at its modern English use of "the fibrous connective sustentacular tissue or substance of a part or organ" or of "the spongy colourless framework of a red blood corpuscle or other cell." *Struma* is defined in its different medical senses, and is illustrated by a number of apt quotations which show its relation to the King's Evil and the origin thereof. Under *strychnos* there is given the passage in Pliny's Natural History (Holland's delightful English translation), which reads: "Some call this hearbe by another name, *strumus*, and others give it the Greeke name *Strychnos*." A quotation of 1836 tells of the discovery of "a whole vegetable family, the bitter *strychni*, possessing the property of stimulating the spinal marrow to an extraordinary development of its functions." *Sty*, meaning an inflammatory swelling on the eyelid, has a curious derivation, being probably a back formation from *styony*, interpreted as "sty-on-eye." The word which covers most space (twelve pages of three columns) is "strike," and it also has a medical meaning—namely, to attack or afflict with a disease. The second part runs from *sweep* to the mysterious word *Szmikite* (a hydrous sulphate of manganese, named after Szmik, a Hungarian). There are almost no medical terms proper in this part until the *sy's* are reached, unless an exception be made in favour of the obsolete *swime* (dizziness) and *swine-pox* (a name for chicken-pox); but under the *sy's* there is a whole crowd of words, such as *sycosis* (Greek *σῦκος*, a fig), *symbiosis*,

¹ *A New English Dictionary on Historical Principles*. Edited by Sir James A. H. Murray, Henry Bradley, W. A. Craigie, and C. T. Onions. *Stratus*—*Sty*, vol. ix; *Sweep*—*Szmikite*, vol. ix. Oxford: At the Clarendon Press. London, Edinburgh, New York, Toronto, Melbourne, and Bombay: Oxford University Press; Humphrey Milford. August, 1919. Two Double Parts, 5s. net each.

symplysis, *sympptom*, *syringomyelia*, *syphilis*, *systole*, and many more. Several of these words have most interesting and yet little known derivations. How many, even among the neurologists, are aware that the term *Sylvian*, as applied to fissure, aqueduct, and fossa in the brain, is derived from François de la Boë Sylvius, a Flemish anatomist who lived between 1614 and 1672, and not from Jacques Dubois, latinized as Jacobus Sylvius, a French anatomist living between 1478 and 1555? Few, likewise, realize that the commonly used term *synovia* was an invention, probably arbitrarily formed, of Paracelsus, and was applied by him to the nutritive fluid peculiar to the several parts of the body, and not specially to the fluid of the joints. The etymology of *syphilis*, explained in the JOURNAL a few years ago, is succinctly stated in the following statement in the Dictionary: "Modern Latin *syphilis*, originally the title (in full, *Syphilis, sive Morbus Gallicus*) of a poem, published 1530, by Girolamo Fracastoro or Hieronymus Fracastorius (1483-1553), a physician, astronomer, and poet of Verona, but used also as the name of the disease in the poem itself; the subject of the poem is the story of a shepherd, Syphilus, the first sufferer from the disease, the name *syphilis* being formed on the analogy of *Aeneis*, *Thebais*, etc." Surely the editors of the *New English Dictionary* are masters of the lexicographic art and science.

THE COMING ELECTION TO THE GENERAL MEDICAL COUNCIL.

In our advertising pages there have appeared Notices of Election signed by the President, Sir Donald MacAlister, K.C.B., as returning officer for the forthcoming election of direct representatives of the medical profession on the General Medical Council. An election will be held of four members to represent the registered medical practitioners resident in England and Wales, one member to represent practitioners in Scotland, and one member to represent practitioners in Ireland. In each case every registered medical practitioner is qualified to be nominated as a candidate. A separate nomination paper is necessary for each candidate; it must state his name, registered address, and registered qualifications, and must be signed by not fewer than twelve registered practitioners resident in the part of the United Kingdom concerned, together with the registered address and qualifications of each signatory. Every registered medical practitioner resident in England and Wales is entitled to take part in nominating four candidates; every practitioner in Scotland may take part in nominating one candidate; and every practitioner resident in Ireland may take part in nominating one candidate. Every nomination paper—accompanied by a declaration in writing, signed by the person nominated acknowledging that he consents to be nominated—must be delivered on or before November 1st, 1919, addressed in the case of England and Wales to Mr. Norman C. King, the Registrar, the Medical Council office, 44, Hallam Street, London, W.1; in the case of Scotland to Mr. T. H. Graham, the Registrar, 20, Queen Street, Edinburgh; and in the case of Ireland to Mr. Richard Roe, at 35, Dawson Street, Dublin. Nomination papers may be obtained from these addresses.

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH.

THE annual dinner of the Society of Medical Officers of Health was held (after an interval of five years) at the Café Royal on October 17th, with the President, Professor H. R. Kenwood, C.M.G., in the chair. Nearly a hundred Fellows and guests were present. The toast of "His Majesty's Forces" was proposed by Professor A. Bostock Hill, who spoke of the debt owed by the empire to the medical departments of all branches of the Forces, and added that the civilian profession had learnt much of value from the Army Medical Service. Lieut.-General

Sir John Goodwin, D.G.A.M.S., in his reply, spoke of the immense influence of medicine upon the course of the war, and more particularly the part played by preventive medicine. He had expressed the opinion in the second year of the war that if all preventive measures were stopped by one side or the other, hostilities would come to an end in a very few weeks. One of the greatest advances had been the education of combatants in the importance of sanitation. The toast of "The Ministry of Health" was proposed by the President, who remarked that after a protracted ante-natal period the Ministry had now been born. Dr. Addison was prevented by indisposition from attending, and the reply to the toast was undertaken, at his request, by Sir Robert Morant, who prefaced his eloquent and stimulating speech by asking that his words should not be taken as an official utterance of the Ministry. He felt no doubt that in the unification of divergent services the medical voice would be heard all through the new Ministry; but the lay side, too, had to be encouraged. Medicine must not hope for short cuts, but must be ready to persuade the public to let the expert view have its proper place. Sir Robert Morant touched also on his personal debt to his old and trusted friend and colleague, Sir George Newman. He spoke in conclusion of the even greater difficulty in the way of local unification of the public health services; in this also the medical profession must play its part by working up public opinion. The toast of the Society was proposed by Sir George Newman in a brief speech, and the President responded. Dr. G. F. Buchan proposed the health of the guests. The Dean of St. Paul's replied in a few witty words, and was followed by Sir George Makins, who said he represented the curative side—that is, "those who have to deal with your failures." The real unity of both branches was illustrated by the work of Simon and Lister.

THE NEW R.A.M.C. TEMPORARY CONTRACT.

In addressing a meeting of the profession at Aberdeen on October 16th, in pursuance of his candidature for election as direct representative of the profession in Scotland on the General Medical Council, Dr. Norman Walker took occasion to refer to the progress of demobilization and to the present needs of the R.A.M.C. While nearly all the practitioners who had joined the R.A.M.C. had, he said, been released to return to their practices, there were a few who had not, and there were a number of young men who had served for several years whom it was not possible for the army to spare because of the difficulties of relief. He regretted very much the breakdown of the arrangements which were entered into between the authorities and the Professional Committees on Armistice Day, under which the young graduates who had been released from combatant service in order to complete their medical education would automatically have joined the army, and he felt it was up to those men to give the six months' service, which was all that the Army Medical Department now required. He had discussed the situation recently with the Director-General, and he was authorized to say that anyone in or out of the army who signed the new six months' contract would be released that day six months in whatever part of the world he might be. This should be widely known, for he found that there was an uneasy feeling in some quarters that release might not be permitted at the end of the period.

At a conference of the leading urologists of the allied and neutral nations held recently in Paris, Mr. E. Hurry Fenwick, C.B.E., consulting surgeon to the London Hospital, was elected president of the Société Internationale d'Urologie, in succession to Professor Guyon. We are glad to be able to record this evidence of international amity in science, and it will be particularly gratifying to British surgeons that one of their number should have been chosen as the successor of so distinguished a master as Professor Guyon.

England and Wales.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.
The first meeting of the session was held at the General Infirmary, Leeds, on October 17th, when 112 members were present. The opening address was given by Sir T. Clifford Allbutt, K.C.B. In the graceful English of which he is a master he sketched the early history of the society which he was instrumental in founding, and the characteristics of some of the prominent practitioners of the district who were associated with him. He reviewed the present position of the medical profession, particularly as it affects the general practitioner, and made a strong appeal for the retention of that intimate relation with patients which is such an important factor in the work of the family doctor. A vote of thanks to Sir Clifford Allbutt was proposed by Sir Berkeley Moynihan, seconded by Dr. Eddison, and carried with acclamation. Subsequently a number of cases and specimens were shown to the meeting by Dr. T. Wardrop Griffith, Dr. Rowden, Dr. Hellier, and others.

WILLIAM TAIT SEWELL MEMORIAL FUND.

The colleagues and friends of the late William Tait Sewell decided last June to take steps to perpetuate his memory in the University of Durham College of Medicine, Newcastle-on-Tyne, and the Royal Victoria Infirmary. Sewell was educated at Newcastle and took his medical degree in 1904. After holding various resident appointments he determined to devote himself to pathology and bacteriology, and in 1909 became assistant in the Bacteriological Department of the University of Durham College of Medicine. Later he became assistant pathologist to the Royal Victoria Infirmary, and eventually lecturer in pathological histology in the College, and pathologist to the Children's Hospital. He was a good teacher and was beginning to do excellent original work. When the war broke out he was a captain in the Durham University O.T.C. and was in command of the College of Medicine Company, but being anxious to join the Expeditionary Force he was transferred to the Royal Inniskilling Fusiliers. He fell in action leading his men on July 1st, 1916, in the attack on Thiepval. It is intended that the fund now being raised should be used for the foundation of an annual medal and prize in clinical pathology. Any friend or colleague of the late Dr. Sewell wishing to subscribe to the fund is requested to forward his subscription without delay to the Honorary Treasurer of the Fund, Mr. Thomas Dunn, University of Durham College of Medicine, Newcastle-upon-Tyne. It is proposed to close the subscription list in the beginning of November, after which a meeting of the subscribers will be called to determine the precise form the memorial should take.

WELSH BOARD OF HEALTH.

In accordance with the expectations held out to Welsh members during the discussions on the Ministry of Health Bill, arrangements have now been made to extend considerably the functions of the Welsh Board of Health. The work to be immediately transferred includes all the functions of the Housing Department of the Ministry of Health in Wales. Mr. A. Lloyd Thomas, the Housing Commissioner for Wales and Monmouth, becomes a member of the Welsh Board of Health and his staff is transferred from the London to the Cardiff establishment. Arrangements have also been made to transfer to Cardiff an important part of the work of the Ministry in relation to public health. In view of the extent and importance of the functions involved the actual transfer cannot take place immediately, but the necessary preliminary arrangements have already been made.

Scotland.

SCOTTISH CONSULTATIVE COUNCILS.

A DRAFT Order in Council has been laid before Parliament this week providing for four consultative councils in Scotland to advise the Scottish Board of Health on medical and allied services, National Health Insurance (approved societies' work), local health administration and

general health questions, and Highlands and Islands. The duties and constitutions of the councils resemble those assigned to the corresponding councils in England. The membership of each is not to exceed twenty, and must include persons of both sexes. The councils will be authorized to appoint committees for special purposes, and to include in them persons who are not members of the council. The councils must meet at least three times in each year.

GENERAL MEDICAL COUNCIL ELECTION.

Dr. Norman Walker, in pursuance of his candidature for re-election as direct representative of the medical profession in Scotland on the General Medical Council, addressed a meeting in Dundee on October 15th.

Emeritus Professor MacEwan, who occupied the chair, said that Dr. Walker's record of work on the Council encouraged his constituents to return him again as their representative. Dr. Walker gave some interesting official figures dealing with the registrations of practitioners and students during the past twenty-five years. In 1894—twenty-five years ago—1,426 names were added to the Register. The numbers grew less until in 1911 only 1,042 names were added. The figures rose again to 1,526, but nearly 300 of these were colonial and foreign registrations connected with the war. In 1917 the number dropped to 1,134, and in 1918 to 1,077; for this year it was doubtful if the figure would reach 1,000. A tragic increase was shown in the numbers removed by death. In 1915, 774; 1916, 983; 1917, 801; and in 1918, 946. Only on two previous occasions had the number topped 700. Many of these were of course the direct casualties of the war; not a few were indirect casualties from overwork at home. The number of students registered in 1918 was 500 greater than the previous record of 1891, when the impending institution of five years' curriculum was responsible for an exceptional entry. The schools had a unique opportunity of raising the standard required of their graduates. After discussing other matters in which the Council was concerned Dr. Norman Walker said:

Before I sit down I want to refer to a subject on which, Mr. Chairman, I do not lightly enter. Nothing but a sense of duty leads me to raise now the question of the position of our profession in the event of future wars. No one who went through the anxieties of a parent can contemplate the idea without horror; but it must be faced, and those of us who hoped and believed that this war was the last must sadly admit that the millennium seems a long way off yet. The medical profession has been under the limelight during this war; it has come through with flying colours, but it has been at the cost of much hardship, some of it avoidable. I am not alluding only to the hardships endured by individual doctors but to those of the community as well, and I am not going to cry over spilt milk. But I feel very strongly that we should not have to go through the same experiences again, and I see only one way to avoid it. After things have settled down—say in a year's time—the Government should appoint a commission, on which the services and every section of the civil medical profession should be represented, to survey the whole problem of naval, military, and civil medical service in the event of another war, and to draw up a skeleton plan combining the maximum of utility with the minimum of waste.

At a meeting in Aberdeen on October 16th the chairman (Professor Cash), in introducing Dr. Norman Walker, referred to the valuable services which Dr. Walker had rendered during the past twelve years in his capacity of direct representative for Scotland to the General Medical Council. Not only in the council chamber but in the essential preliminary work conducted by the various committees, of many of which he was a member, whilst he was chairman of two of them, Dr. Walker had proved himself an energetic representative, guided by sound judgement and wide insight into the manifold duties which devolve upon the Council. Whilst the chairman could not entirely unite with all the proposals which it contained, he recognized the high value, in general, of the programme which Dr. Walker had projected, dealing with the problems of reconstruction, including a progressive policy in certain aspects of medical education. In view of Dr. Walker's excellent record of service, his wide experience and devotion to the progress of his profession, the chairman expressed the hope that his constituents would return Dr. Walker to the Council for a further period of office.

Dr. Walker prefaced his remarks with a brief tribute to the memory of the late Professor Stephenson, to whom

more than to any one else, he owed his original election to the Council.

Dr. Walker said that in the series of addresses he was delivering he had a large number of subjects to select from; selection was not always easy, but no one, he thought, would complain when he selected education as peculiarly suitable in Aberdeen. He repeated the figures which he had given the previous day in Dundee as illustrative of the opportunity which was open to the Scottish universities to raise the standard of medical education. After referring to the impending elevation of the standard of the preliminary examination, he said that he thought he was warranted in intelligently anticipating no long delay before the next step, under which students would be allowed to sit for examination in elementary chemistry, physics, and biology immediately on entering the university. It was his duty, as acting Chairman of the Examination Committee, to make a specially close study of the returns submitted by the different schools, showing the numbers passed and the numbers rejected at each of the professional examinations. There were remarkable differences in the percentage of rejections in different places; but on close study it was usually found that where the percentage of rejections was small it occurred in one of the smaller schools where the association between the teachers and the students was close and intimate and where the professor, who was after all the best judge of the student's real capacity, was an examiner. There was no school, he thought, which showed a smaller percentage of rejections than Aberdeen, and he had no doubt that this was due to the causes he had referred to. He feared that the great inrush of students would interfere with this intimate knowledge, unless the universities and schools recognized the importance of increasing materially the number of their teachers. He did not suggest that a number of new chairs should be established, because he did not believe the present large entries would be kept up; but an addition to the staff was urgently needed in almost every department of every school. He went on to say that there were one or two things which, as their representative, he felt it his duty to refer to at all his meetings. The first was the importance of doctors satisfying themselves that their names were on the *Register*. He explained how, under the provisions of Section 14 of the Act, names were removed, and mentioned that at the last contested election in Scotland between 200 and 300 papers were returned through the Dead Letter Office, and secondly, the Penal Cases Committee—of which he had been for several years a member—was being criticized in certain quarters because, at its direction, the Registrar had written to certain medical men, against whom complaints had been made, informing them of the fact. The letters were written wholly in the interests of the doctors, and the effect was, in the great majority of cases, that nothing further was heard of the complaint, which was based on a misunderstanding.

Dr. Dewar has also been continuing his electoral tour, and during the past week has addressed meetings of the profession at Perth, Kirkcaldy, Glasgow, and Dumfries. Dealing with the reconstruction of the medical curriculum, he said that it would be of great advantage to students to shorten the courses of systematic lectures and devote the all too limited time to practical tuition and study in laboratories and at the bedside. In midwifery especially every graduate should be equipped with a practical knowledge of the manipulations required in the conduct, not only of ordinary, but also of the more complicated cases. Every graduate who proposed entering general practice should have a short period of training under an experienced general practitioner to learn the relationships between the public and its medical advisers, before launching into practice on his own account. He expressed the opinion that a whole-time State medical service could not be a matter of practical politics for a long time to come. Such a service would not be good for the public or the advance of the profession. An extension of medical benefits to the dependants of insured persons would be a second step towards the introduction of a State service; but before this extension could be brought about satisfactorily an enormous expenditure would be incurred by the necessary inclusion of consultants and specialists, the greater public use of existing hospitals, and the estab-

lishment of new hospitals and laboratories all over the country. In the present financial position of the nation such an expense would not be tolerated by the public. In the previous week Dr. Dewar addressed a well attended meeting in Aberdeen.

Dr. Ebenezer Duncan has recently issued a full address. In it he informs the electors that he has been for many years a general practitioner in Glasgow, and before that had had some experience of medical practice in country districts and mining villages. He mentions that he has been a lecturer in two Glasgow extramural schools, and says that as a member of the committee of management of the Conjoint Board and its present chairman, he is familiar with the proposed reorganization of the medical curriculum and the alterations recently advocated in professional examinations, questions closely connected with the work of the General Medical Council. He enumerates the reforms he advocates as follows:

1. A minimum age limit of 18 years for registration as a medical student.
 2. Raising the standard of the preliminary examination of all medical students to that of the preliminary examination for arts and science students in the Scottish universities.
 3. The elimination from the medical curriculum of elementary chemistry, botany, and physics, which should in future be studied in secondary schools. An examination in these subjects should be passed by the student before commencing medical studies.
 4. Less systematic lecturing and more practical teaching, including compulsory tutorial classes.
 5. The elimination of systematic lectures on materia medica, the time so obtained to be devoted to instruction in pharmacology, toxicology, and therapeutics.
 6. Toxicology being relegated to the teacher of pharmacology, one-half of the session of the class of forensic medicine should be devoted to instruction in preventive medicine and public health.
 7. Clinical classes to consist of not more than twenty students. Where infirmary accommodation and clinical lecturers are insufficient to permit of this, the clinical material in Poor Law hospitals and more clinical lecturers should be utilized.
- Lastly, with regard to the present system of examination for qualifying degrees and diplomas in medicine and surgery, evidence given by their teachers of excellence in class work and in class examinations should be taken into consideration by the examiners in grading the examinee for pass marks, especially in doubtful cases.

Ireland.

PRESIDENCY OF THE ROYAL COLLEGE OF PHYSICIANS.

At the annual meeting of the Royal College of Physicians of Ireland held on October 18th Dr. James Craig was elected President. Dr. Craig is King's Professor of Practice of Medicine in Trinity College, Dublin, visiting physician to Sir Patrick Dun's Hospital, and Physician-in-Ordinary to the Lord-Lieutenant of Ireland. Dr. S. T. Gordon was elected Vice-President. The censors elected were Drs. S. T. Gordon, A. R. Parsons, Wm. Boxwell, and J. Spencer Sheil. Sir J. W. Moore was re-elected the representative of the College on the General Medical Council.

OPENING OF THE WINTER SESSION, BELFAST.

The opening address at the Medical School, Queen's University, Belfast, was delivered by Mr. A. B. Mitchell, O.B.E., F.R.C.S.I., in the King Edward VII Memorial Hall of the Royal Victoria Hospital on October 16th. Professor Lindsay occupied the chair. In welcoming the students Mr. Mitchell commented on the large increase in their numbers, and said that in consequence the staff of the hospital had been enlarged and new facilities for clinical study provided. The war had, for the first time in the history of the British empire, afforded an opportunity of estimating the health of the country, and the country had not stood the test well; not one adult man in three could be labelled class A1. This showed that there was ample scope for the work of the large numbers of medical students, both men and women, who were now in training. Referring to the Ministry of Health and the new consultative committee of medical men, two of whom were graduates of Queen's University, he said that it would be the duty of the profession of the future to take a much more prominent position than in the past, and that the medical societies would have to act as consultative bodies for the various public boards. The Poor Law and the

hospital systems of the country were bound to be changed; they were inadequate, and the character of their work had altered. "Teau work" was suited to hospital practice, but was expensive and almost impossible in private; therefore the tendency was for treatment to become more and more institutional. In conclusion, Mr. Mitchell emphasized the fact that students should never forget that the school looked to its graduates to uphold its reputation and traditions in every corner of the globe.

ELECTION OF SENATORS, QUEEN'S UNIVERSITY, BELFAST.

At a recent meeting of convocation, held on October 15th, eight vacant seats were contested by thirteen candidates. Among the members elected were the following medical men: A. B. Mitchell, O.B.E., F.R.C.S.I., William Calwell, M.A., M.D., J. Walton Browne, B.A., M.D., and R. W. Leslie, M.D., LL.D.

Correspondence.

THE CURE OF CRIPPLED CHILDREN.

SIR,—The plea for a national scheme for the treatment and care of crippled children, by Sir Robert Jones and Mr. Girdlestone, published in the *BRITISH MEDICAL JOURNAL* of October 11th, induces me to record what is being done in Rochdale and district for such cases.

The work is carried on by a body known as the Crippled Children's Union. The union is managed by a general committee consisting of representatives of the general public and the public health and educational authorities. The committee has an office in the town, and employs a secretary at a small salary to look after the office work, interview parents, and see to the general organization of the union, the repair of appliances, etc. She attends at the office at stated hours.

The union has a country hospital at Norden on a pleasant moorland site, ten minutes' walk from one of the car routes out of Rochdale. The hospital, which has accommodation for fifty patients in open-air wards, together with the necessary staff, was built, equipped, and presented to the union by the president, Mr. Walter Scott, in memory of his wife.

I act as honorary surgeon to the union and the hospital. All cases before being taken up by the union are submitted to me and reported on. Experience teaches that almost all cases need hospital treatment at the outset.

Every case has a card on which are written the name, address, and age of the child, together with the diagnosis and type of treatment, and at each visit to the honorary surgeon a brief note is made as to progress and when the case must next be brought for inspection. This acts as a reminder to the parent, and enables the surgeon to see at a glance what has been done, and whether the case is being brought for inspection according to instructions. A visitor from the committee of the union is appointed to each case, whose duty it is to visit the case periodically when at its own home and see that the instructions of the surgeon are being properly carried out, and generally to encourage and help the parents. Assistance in the way of food or medicines is also given if thought advisable. I see these cases at my own house at times convenient to the parents, so as to place no obstacle in the way of their attendance, and no case is allowed to escape from observation so long as any treatment is necessary. At the country hospital, "The Memorial Home for Crippled Children," we have a matron and head nurse experienced in the care of orthopaedic cases, together with the necessary nurses and probationer nurses. As we are dealing with children only, we encourage probationers to come to us at from 18 to 20 years of age and spend two years with us before going on to general training elsewhere. Two teachers attend daily for the education of the children of school age.

The expenses are defrayed partly from a small endowment fund, partly from subscriptions, and partly from grants received from the Board of Education. I am, etc.,

Rochdale, Oct. 19th.

W. HIRST BATEMAN, M.B., Ch.B.

SIR,—As one who has been engaged for more than ten years in orthopaedic work amongst school children I welcome the excellent scheme outlined by Sir Robert Jones and Mr. Girdlestone. This scheme, however, seems

to me to fall short of the best in its provision for the treatment of the tuberculous cripple.

However good the fixation and nursing of these cases may be, the chief agents of cure are sun and climate, and it is certain that if the treatment is to be carried out in regional hospitals some of these hospitals will be situated in surroundings which are not the best for the purpose.

I know only too well, for instance, the handicap of having to treat cases of active surgical tuberculosis at an institution within four miles of the heart of Manchester. The improvement in the general health and the local lesion during our very brief summer is very striking, but it is painfully outweighed by the loss and relapse which follow on the eight or nine months of fog, dull days and sunless drizzle which we "enjoy" during our winter here. To treat these children under such conditions when better may be obtained is not merely a loss of time and money but is rather a deplorable waste of opportunity.

In my opinion we shall not do justice to these cases until, following the example of France at Berck, we build large hospitals in the best climatic conditions we have.—I am, etc.,

Manchester, Oct. 14th.

E. D. TELFORD.

TRANQUIL TRACHEOTOMY.

SIR,—It is with due diffidence I venture to support Sir William Milligan in his letter on this subject. In over a quarter of a century of practice I have had some considerable experience of this operation done for all sorts of conditions, and I agree with Sir William that, however careful one is, it is practically impossible to arrest all hæmorrhage before opening the trachea, at least in urgent cases. Moreover, it is, I believe, the general experience that the bleeding, which is almost entirely venous, promptly ceases when the tube is inserted and free respiration is established.

On not a few occasions I have had to do tracheotomy when breathing has completely stopped, although in all these cases after prompt insertion of the tube and performance of artificial respiration, breathing was restarted. In one during a fit of coughing a large plug of diphtherial membrane had been sucked into the trachea and caused instant suffocation. Fortunately I was at hand, and in less than a minute had opened the trachea, which was evidently still sensitive, as the contact of the forceps set up a cough and the piece of membrane was coughed out through the opening. If such a trachea had been rendered insensitive by cocaine no such life-saving action would have been possible, and I feel quite assured that Sir William Milligan is right in drawing attention to the danger of rendering the trachea insensitive in these cases. I would even go so far as to say that in my opinion the sensitiveness of the trachea is our greatest ally in the operation of tracheotomy, and that any advantage to be gained in regard to ease of operation is far outweighed by the increased danger to the patient from the failure to expel—and the more violently the better—any foreign material that finds its way into the air passages.—I am, etc.,

P. R. COOPER, M.D., B.Sc., F.R.C.S.

Altrincham, Oct. 21st.

SIR,—As Chevalier Jackson puts it, the cough reflex is "the watch-dog" of the larynx, and should be respected. But the method I have described for checking the explosive cough, which often occurs as soon as the trachea is opened, has a very temporary and transitory effect, just as we all know it has when a weak solution of cocaine is sprayed into the pharynx to facilitate laryngoscopic examination. Cough during a tracheotomy does not make for safety; it tends to congestion, hæmorrhage, and danger. The tranquillity secured by the intratracheal injection of a few drops of a 2½ per cent. solution passes off within half an hour.

Sir William Milligan was unfortunate in the six cases in which he tried it. I cannot agree with him that in most cases requiring tracheotomy "the pulmonary tissues are already water-logged," though possibly this condition may come on when tracheotomy is unduly delayed. One would naturally avoid its use in a bronchitic or emphysematous patient who chanced to require tracheotomy. The fifty odd cases in which I have employed it had no symptoms of being "water-logged," and in none

of them, nor in the practice of my pupils, have I heard of any drawbacks. The effect of the cocaine passes off and the cough reflex reasserts itself by the time the patient gets back to his bed. Considerable experience, therefore, justifies me in recommending it in the large majority of cases.—I am, etc.,

London, W., Oct. 21st.

STCLAIR THOMSON.

CREMATION AND MEDICAL FEES.

SIR,—Cremation is increasing in this country, and as it is likely to become much more general in the near future, I venture to bring forward a matter as to which some recognized line of practice should be agreed upon while the movement is still in its infancy.

Before the cremation of human remains can take place the Cremation Act, 1902, and the Rules and Orders, 1903, require that two medical certificates (Forms B and C) should be given by two registered medical men who have seen and examined the body after death. Form B must be filled in and signed by the medical man who attended the deceased during his last illness, and Form C by a registered practitioner of not less than five years' standing and who either holds certain other qualifications or is appointed for the purpose by the cremation authority.

These certificates should furnish precise and accurate information, but impose no responsibility for the actual cremation. That rests solely with the medical referee, whose duty it is, before he authorizes the incineration, to review all the certificates, and to see that the Cremation Act has been complied with.

To what fee are these two medical men signing Forms B and C entitled? On the one hand it should be adequate, for they have rendered a service to the community, and on the other it should not be excessive, for that tends to strangle cremation by adding largely to the cost, and leads relatives desiring that the remains should be disposed of in that way to abandon the idea, and revert to the older established custom of burial.

It is on this question that the opinion of the profession is sought, and in framing an answer it should be remembered that the profession when giving a death certificate for burial receives nothing for the service it renders to the State, whereas if cremation became general that anomaly would no longer exist.

Personally I think the position would be fairly met by each of the medical men charging his usual fee for a professional visit. I should be glad to hear expressions of opinion from practitioners on the subject.—I am, etc.,

HERBERT T. HERRING,

Medical Referee, London Cremation Society.

Harley Street, W., Oct. 20th.

THE R.A.M.C. AS A CAREER.

SIR,—The eloquent address of Sir John Goodwin, published in your issue of October 11th, p. 469, displays all those qualities of fervour and genius that one would expect from so brilliant and successful an officer. At the same time it has doubtless occurred to many of your readers that a small "corrigens" to his stimulant might serve a useful purpose. Such a dose is supplied by the following three facts, which are well known to all who have experience of the common round of military medicine:

- In time of peace there can never be a sufficient number of sick soldiers to give much bedside work to medical officers. All the serious clinical work is in the hands of a very few officers, and this work is narrow in scope when compared with their civilian brethren's activities.
- "Administration" and "hygiene" in the army are mere euphemisms for clerking and conservancy—except, again, in the case of a very few posts.
- A tropical climate can never be anything but highly unsuitable for married women with children.

I am, etc.,

THROUGH THE MILL.

October 12th.

THE PATIENT UNDER CAPITATION.

SIR,—It is not clear whether "Anti-Contract" (p. 510) is or is not a panel doctor. His letter reads as if he may be, yet who could be a panel doctor if he acted as "Anti-

Contract" suggests? A panel doctor must give satisfaction to his panel patients or else new ones will not come to him. It is surprising how soon a doctor's faults or good points get known in a working-class area. Again he looks for his private practice to the families of his panel patients. His whole financial success depends on his good treatment of his panel patients, for he will not increase his panel and get these others if he does not show himself attentive to his panel patients. Therefore, either "Anti-Contract" is not a panel doctor, or else he has but a very small panel.—I am, etc.,

October 18th.

"CONTRACT."

THE CAPITATION RATE.

SIR,—The parallelism between the position of the railway workers in the recent negotiations with the Government and of panel practitioners will, I trust, not have been missed by the medical profession, as from it several lessons of considerable value may, I think, be gleaned.

In the first instance, there was considerable dissatisfaction by both with the pre-war rates of remuneration. It is obvious that the low wages paid to the lowest grade of railway workers could not be defended, and very little more could be said in favour of the pre-war 7s. paid (less deductions) to insurance practitioners, though I know that the stress of competition would induce some of them to be content with it. In the negotiations with the railway workers Mr. Lloyd George admitted that the cost of living to-day was 125 per cent. higher than in pre-war times. That means that the purchasing power of two "Bradburys" and a quarter is to-day only equal to that of the pre-war sovereign. It also means that our 7s. must be multiplied by $2\frac{1}{4}$ for its purchasing power to be equal to what it was before the war. That is, that equal value to-day can only be obtained by 15s. 9d. Then there is the admittedly increased work entailed by the condition of discharged soldiers and sailors, which has been estimated by the Insurance Acts Committee to be equivalent to a capitation fee of $2\frac{1}{4}$ d. But many practitioners have neglected to send in proper returns, so it would, I am sure, not be excessive to put this at 3d., and so we get 16s. as the proper equivalent of the pre-war 7s. That would do no more than bring us to the pre-war condition of affairs, which many of us then considered a niggardly payment. Anyhow, it was not a payment which was calculated to induce men to give of their best. I do not know what lines the negotiations between the Insurance Acts Committee and the Government have taken; but to accept anything less than 16s. at present would be a tacit admission that 7s. was very good and satisfactory pay in the old days, and I do not think the profession as a whole would endorse that view.

In the second place, we must look at the terms of final settlement with the railway workers. These contain two important provisions: (a) That there shall be a reduction in their rate of remuneration proportionately to, and *pari passu* with, the reduction in the cost of living; and (b) that no matter how much the cost of living shall fall, the reduction shall not fall below an agreed minimum, which will be very well above pre-war wages. It has occurred to me that something on those lines would be agreeable to the medical profession, and I cannot see why the Government, having done it for one class of workers, should not do it for another. The important point is, what shall be the minimum? I fancy that 12s. 6d. has been favoured by most Panel Committees as the right figure, and personally I should be well satisfied with it. I therefore suggest we should be paid 16s. while the cost of living remains at its present figure, and that it should be reduced to 12s. 6d. as the cost of living comes down. This, I suggest, should be in three equal instalments of 1s. 2d.; the first to come off when the cost of living has come down to 100 per cent. higher than the pre-war cost, the second when it comes down to 75 per cent., and the third when it comes down to 50 per cent. After that no reduction at all.

This, though not nearly so good as the railway workers have received (of course our voting power is not nearly so great as theirs), would be a settlement likely to remove all feelings of dissatisfaction with the work which has been so prevalent in the past, and at the same time one which, I believe, could be met without increasing the present rate of contribution by the workers.—I am, etc.,

Ashton-under-Lyne, Oct. 11th.

SAML. CRAWSHAW.

RURAL PRACTITIONERS' REMUNERATION.

SIR,—The otherwise fruitless railway strike appears to have done a good turn to the rural practitioners. Dr. Cox, during his enforced stay in North Wales, has increased his experience of the difficulties of travelling which the "really" rural doctors have to contend with, and will, I am sure, exert his influence on their behalf. He does not tell us how the Mileage Fund Committee "can easily obtain first-hand information" of the difficulties of other districts presenting special features, but no doubt provision will be made for obtaining that information.

It is particularly gratifying to me to know that the surface of the roads is to be considered, as I have had the misfortune to break three springs and the front axle of my car during the last twelve months, owing in every case solely to the appalling surface of what are euphemistically called "roads." The time element (walking, crossing fords, opening and shutting gates, etc.), is also an important consideration and, we are assured, will not be lost sight of.

I trust those rural men who have been asked to provide certain figures for the assistance of the committee have already done so, since, judging from past experience, the authorities are evidently in need of statistical assistance.

Also, the committee might well consider the advisability of making a small grant to cover the cost of sending medicine by rail, post, etc., to distant panel patients in scattered areas.

After six years of insurance work, surely it is not asking too much that these points should receive attention, and thus put the really rural man on some kind of level as regards remuneration with the urban practitioner.—I am, etc.,

Rothbury, Northumberland, Oct. 13th. ARTHUR S. HEDLEY.

SIR,—The following description may be of interest. The nucleus of this practice is formed by two almost equally sized villages facing one another across a broad mud-bottomed creek. To reach the other (in whichever you live) you can:

A. In summer:

- (1) Row across, between half tides, by boat and then walk.
- (2) For a short time at low tide (except with slack tides) cross on foot by a stone "fosse" just higher than the mud. If the tide catches you, you then have to walk by route (3).
- (3) Drive, cycle, or walk 1.75 miles round the head of the creek. This includes two single-figure gradients in each direction.

B. In winter:

- (1) All boats have to be laid up on account of south-westerly gales.
- (2) Tide dodging by the "fosse" is often dangerous.
- (3) Two of the hills have often such dangerous surfaces in wet weather that only chains will enable motor wheels to grip.

Note the distance, which cuts out even the present meagre mileage allowance.

Our best road here is only classed as a secondary one, and the expenditure of energy, time, and money in doing any distance by any means in any direction here is more than twice that of any suburban area. This is freely admitted by every practitioner who visits us. I will merely hint at the difficulties of outlying farms along grassy rubble-surfaced tracks.

Surely under such conditions the mileage limit might be lowered after proper investigation by the county Insurance Committee. Though this practice is somewhat unique, similar conditions as to the roads are common throughout the West Country.—I am, etc.,

Newton Ferrers, Oct. 15th. W. F. BENSTED-SMITH.

THE BRITISH FEDERATION OF MEDICAL AND ALLIED SOCIETIES.

SIR,—The Executive of the Federation request the kind publication of the following communication from Sir Henry Morris, Bt., F.R.C.S., the original Chairman of the Medical Parliamentary Committee.—We are, etc.,

CHARLES BUTTAR,
Honorary Secretary.
N. HOWARD MUMFERY,
Organising Secretary.

The British Federation of Medical and Allied Societies,
5, Vera Street, Cavendish Square, W.1, Oct. 20th.

8, Cavendish Square, London, W.1,
October 16th, 1919.

Dear Sir,

I have read in the *Lancet* and *BRITISH MEDICAL JOURNAL* of Saturday last the letter signed by yourself and two other office-bearers of the British Federation of Medical and Allied Societies, and also that of Dr. C. O. Hawthorne.

Dr. Hawthorne accuses the members of the temporary committee elected at the general meeting of the profession held at the Steinway Hall on October 1st, 1918 (which committee soon adopted the title of Medical Parliamentary Committee) of having broken two pledges given at that general meeting. These so-called broken pledges he describes as follows:

I. That the committee, having been appointed to draw up a scheme with a view to secure an increased medical representation in Parliament on the assurance that no executive action would be taken until the scheme had been approved by "a further meeting of the profession," had not fulfilled its pledge to report to such a meeting. He enumerates several "gratuitous exercises" of the committee "without the sanction of the meeting which called the committee into existence"; which "exercises," he says, "cannot be accepted as a substitute for the particular engagement which the committee definitely undertook."

Now the chief thing for which the committee was elected was to find out which medical men were willing to stand for Parliament, and to assist them as to their choice of constituencies, and in finding speakers to help them in their candidatures. This the committee did, so far as was possible, in the very limited period between its formation and the date of the general election.

II. That the chairman of the original meeting "assured the meeting that the committee would not concern itself with the electoral affairs either of Scotland or of Ireland. . . . Yet at the general election the committee supported the claims of the candidates for the Scottish Universities constituency, and it co-opted a representative from a body which called itself the Scottish Universities Parliamentary Association."

Your conjoint letter gave a somewhat distorted explanatory reply to the first charge, and no reply whatever to the second.

It must be admitted that the temporary (or Medical Parliamentary) Committee did not call a further or second general meeting open to the whole profession such as that at Steinway Hall on October 1st, 1918. The meeting at the Central Hall, Westminster, was no "further" or "second" meeting of that description. It was a first "Conference of representative bodies," to which invitations were issued by the Medical Parliamentary Committee; and to this "Conference," instead of to an open meeting of the profession, the past activities and proposed scheme of future activities of the committee were reported.

It was fully understood at the original meeting, as stated above, that the committee would proceed at once to assist medical candidates for Parliament at the approaching and at future elections. It broke no pledge, therefore, in at once setting about the purpose for which it was called into existence.

But on considering the unfavourable experience of two other general meetings, held at the instigation of certain groups of the profession, which followed on the meeting of October 1st, 1918, there was thought to be ample justification for the Medical Parliamentary Committee calling "a further meeting of the profession"—as Dr. Hawthorne claims it was pledged to do—but in the form of a meeting, either of those who had taken the trouble to vote for the committee at the October 1st meeting, or of representatives of the various organized medical societies and institutions, rather than summon, in the face of what had transpired at the two meetings just referred to, another meeting open to the whole profession.

This decision was arrived at, you will remember, after the whole question had been fully considered and discussed by the Medical Parliamentary Committee, and it would have been wiser, in my opinion, to have freely admitted in your letter the deliberate departure from the intention expressed at the October 1st meeting and to have defended and justified the course actually adopted by the committee.

Dr. C. O. Hawthorne is mistaken in his interpretation of the significance of the chairman's reply in regard to Scotland and Ireland. What the chairman said was that there was no intention, at any rate at the outset, of including either Scotland or Ireland in our English medical parliamentary movement, because both these countries were prone to insist on having and organizing their own independent societies. In no other way did the chairman commit himself as to Scotland and Ireland.

One of the candidates for the Scottish Universities constituency, to whom Dr. Hawthorne alludes—a resident in London—was elected on to the temporary committee at the general meeting on October 1st, 1918, as a representative of the Royal Institute of Public Health. Naturally he was included in the list, drawn up by the committee, of medical men suitable for a seat in Parliament. The other candidates for the Scottish Universities constituency, to whom Dr. Hawthorne refers in his very reproachful and denunciatory criticism of the committee, was also a resident in London, and was also, of course, included in the same list.

No other action whatever was taken by the Medical Parliamentary Committee in "the electoral affairs either of Scotland or Ireland"; neither canvassing, nor platform oratory was rendered by the committee in any university or other constituency in either Scotland or Ireland. What, then, becomes of the second charge of "broken pledges"?

Lastly, the gentleman described by Dr. Hawthorne as having been "co-opted a representative from a body calling itself the Scottish Universities Parliamentary Association" is also a resident in England, and he represented members of the association resident in England.

As an advocate of the formation of a medical federation for parliamentary purposes solely, and chiefly in the interests of the general community, I regret that Dr. C. O. Hawthorne was not thoroughly answered by you and your co-signatories, and that his charges of "breaches of promise" were not fully refuted. But, if I may venture to say so without presumption, I think that in future the best and only answer to give to carping and jealous critics of the Medical Federation as compared with other associations is the statement contained in the fourth and part of the fifth clauses of the "summary" of my article "On a plea for medical unanimity and public spirit," published in the *Lancet* of February 1st, 1919.

I remain,
Yours very truly,
(Signed) HENRY MORRIS.

P.S.—I am writing as ex-chairman of the Medical Parliamentary Committee and as chairman of the General Meeting of October 1st, 1918, at which that committee was elected. You are at liberty to make what use you like of this letter.

The Honorary Secretary of the British Federation of Medical and Allied Societies.

GENERAL MEDICAL COUNCIL ELECTIONS.

SIR,—At the request of the medical profession in Blackpool I have consented to be nominated as a Direct Representative for England on the General Medical Council, and my nomination form has been sent to the Registrar. It has received the support of thirty doctors in Blackpool; no refusals; more could have been obtained. It is significant, and I believe it expresses the views of many other Divisions in regard to the action of the Association. The chairman, secretary, and representative of the Blackpool Division were the first to subscribe their names and to canvass. My candidature is my earnest protest, which is supported by my nominators, at the action of the British Medical Association in again nominating all four of the representatives for England, thus practically excluding the free election by the medical profession of representatives who are not members of the Association. The Medical Act of 1886 was intended to give equal opportunity for all medical practitioners to nominate and elect any one eligible. Since the British Medical Association has adopted the policy of nominating all four, no one has been, nor is likely to be, the free elected representative of the medical profession in England. Acting as a caucus, it uses and abuses its power, which is not honourable and is unworthy of the traditions of the recent past of the British Medical Association. Their candidates have safe nominations—no great demand on their purses, time, or personal canvass. The JOURNAL and a host of officials in all the Branches and Divisions are at their service free of expense. Before this policy was adopted the elections were full of interest and keen rivalry, but at the last election in 1911 the lowest successful candidate only received 7,113 votes. This was less than one-third of the electors, proving that their action is causing widespread apathy, which will increase. This will be a pity.—I am, etc.,

JOHN BROWN, M.D.,
Late M.O.H. Bacup.

Blackpool, Oct. 20th.

Universities and Colleges.

UNIVERSITY OF OXFORD.

At a congregation held on October 16th the following medical degrees were conferred:

D.M.—D. Davidson.

B.M.—L. G. Brown.

UNIVERSITY OF CAMBRIDGE.

The Raymond Horton-Smith prize for the best M.D. thesis during the past year has been awarded to Edgar Douglas Adrian, M.D., M.K.C.P., Fellow of Trinity College.

At a congregation held on October 17th the following medical degrees were conferred:

M.D.—G. C. Johnstone.

M.B. AND CH.B.—A. B. Pavey-Smith; *R. W. B. Gibson.

M.B.—*J. W. Pidgeon.

* Admitted by proxy.

UNIVERSITY OF LONDON.

We are asked to call attention to the fact that the last date for the receipt of applications for the William Julius Mickle Fellowship has been extended to November 15th. The Fellowship, which is of the value of £200, is awarded annually by the

Senate to the man or woman who, being resident in London and a graduate of the University, has in the opinion of the Senate done most to advance medical art or science within the preceding five years, and has therein shown conspicuous merit.

Further details can be obtained on application to the Academic Registrar, University of London, South Kensington, S.W. 7.

UNIVERSITY COLLEGE HOSPITAL MEDICAL SCHOOL.

The two Goldsmid entrance exhibitions, offered annually for competition in September, have been awarded to Mr. J. H. Porter and Miss E. M. Turner.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY Council was held on October 9th, when Sir George Makins, President, was in the chair.

The late Mr. Thomas Pickering Pick.—A vote of condolence was passed to the relatives of Mr. Pick, who died at the age of 78 on September 6th, 1919. Mr. Pick was a past Vice-President and past Member of the Council and of the Court of Examiners.

Donations.—A vote of thanks was passed to Mr. Scoresby Routledge for his gift to the College of a collection of skulls and skeletons, representing about fifty individuals, from Easter Island.

Meeting of Fellows and Members.—The annual meeting will be held on Thursday, November 27th, at 3 p.m., when the annual report of the Council will be presented to the meeting. Fellows and Members can obtain copies of the report on application to the secretary. A printed copy of the agenda will be issued on or after November 24th to any Fellow or Member who may apply to the secretary of the College.

The First Thomas Vicary Lecture.—This will be delivered by Sir John Tweedy on Wednesday, December 3rd, at 5 p.m., when the Lord Mayor-elect (Sir Edward Cooper, Master of the Barbers' Company) will be present. The title of the lecture is "The Surgical Tradition."

The Bradshaw Lecture.—The Bradshaw Lecture will be delivered by Sir Charles A. Ballance on Thursday, December 11th, at 5 p.m., on "The Surgery of the Heart."

Annual Report of Council.

The annual report of the Council relates briefly the activities during the year ended July 31st, 1919, as recorded from time to time in our columns. It may be noted that the President and Mr. Raymond Johnson have become members, with representatives of the Royal College of Physicians and the Ministry of Pensions, of a committee to reconsider the schedule of diseases and injuries at present existing in the Pensions Ministry Warrant, and the whole question of the assessment of pensions and the determination as to when a pension should be made permanent. The Minister of Pensions also asked the College, in conjunction with the Royal College of Physicians, to institute some form of inquiry into complaints occasionally made regarding the professional skill, attention afforded, and treatment of disabled soldiers, by medical referees and other employed medical officers of the Ministry, with a view to advising whether the medical practitioner in question is or is not a fit person to continue to hold his appointment. In consequence a small board of two physicians and two surgeons has been set up, the chairman to be a physician when a medical case is in question, and a surgeon when a surgical. Mr. J. Herbert Parsons and Mr. Stephen Mayou have been nominated as representatives of the College to assist the Commissioner of Police of the metropolis, in consultation with his representative, and a representative selected on behalf of the drivers, in drawing up two standards of ocular efficiency for drivers of public motor vehicles, a high standard to be applied to all new entrants and a lower standard to men who have been continuously licensed for three or more years.

Appended to the report is a Roll of Honour containing the names of Fellows, Members, and Licentiatees in Dental Surgery who were killed in action, or lost their lives from wounds or disease contracted while on active service abroad with H.M. Forces. The list contains the names of 22 Fellows, of whom one was serving in the combatant forces; of 308 Members, of whom 14 were serving in combatant forces, and of 11 Licentiatees in Dental Surgery, of whom all but two were serving in combatant forces. The names of two members of the College subordinate staff are added to the list.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

At a meeting held on October 15th the following appointments were made:—President: Dr. George Mackay. Vice-President: Dr. R. McKenzie Johnston. Secretary and Treasurer: Mr. Alexander Miles.

The following have been admitted Fellows:

D. Aiken (Captain A.A.M.C.), G. H. Alabaster (Captain R.A.M.C.), R. M. Allan (Captain A.A.M.C.), John Anderson, R. O. L. Batchelor (Captain R.A.M.C.), W. G. Bendle, H. A. Bodkin, T. Chalmers, L. D. Cohen, J. R. Dick, L. D. Englerth, W. D. Galloway, H. V. A. Gatchell (Major R.A.M.C.T.F.), John Guthrie, H. H. Hepburn (temporary Captain R.A.M.C.), Pown-Kan Liang, K. S. Parker (Major A.A.M.C.), W. J. Porteous (Captain N.Z.M.C.), J. J. Power, R. V. De A. Redwood, A. Stewart (temporary Lieut.-Colonel R.A.M.C.), J. A. West, E. G. Williamson (Captain M.C.U.S. Army), D. Wood (Captain A.A.M.C.).

Obituary.

MAJOR SAMUEL WILSON McLELLAN, M.C., late R.A.M.C., died at Liverpool on October 16th of septic poisoning, following a prick on the finger from a blackberry thorn, which he received recently while on his honeymoon. He was educated at Liverpool University, where he graduated M.B. and Ch.B. in 1906 and M.D. in 1908; he took the D.P.H. in 1911 and the F.R.C.S. Edin. in 1909. After acting as house-physician and medical registrar of Liverpool Royal Infirmary and as obstetrical assistant, he went into practice at Birkenhead and held the appointments of honorary assistant physician to the Liverpool Hospital for Consumption and Diseases of the Chest and of pathologist to the Royal Southern Hospital at Liverpool and to the Liverpool Children's Hospital. He took a temporary commission as lieutenant in the R.A.M.C. on August 13th, 1914, a few days after the war began; he was promoted to captain on August 13th, 1915, on completion of a year's service, and to acting major on October 8th, 1918, being demobilized this year. He received the Military Cross on September 22nd, 1916, the *Gazette* stating that "He brought up stretcher-bearers during the attack, and, though wounded and rendered unconscious by a shell, he resumed work immediately on recovery, and carried on under very heavy shell fire. He worked without stopping for thirty hours."

Medical News.

A GENERAL meeting of the Cambridge Graduates' Medical Club will be held at the house of the Royal Society of Medicine, 1, Wimpole Street, W., on Monday, November 3rd, at 5 p.m.

THE first meeting of the new session of the Röntgen Society will be held at the house of the Medical Society of London, 11, Chandos Street, Cavendish Square, W., on Tuesday, November 4th, at 8.15 p.m.

THE first meeting of the Lancashire and Westmorland Tuberculosis Society will be held on Thursday, October 30th, at 3 p.m., at the Houldsworth Hall, Deansgate, Manchester, when Dr. G. Lissant Cox, Central Tuberculosis Officer, Lancashire County Council, will deliver his presidential address. The attendance of medical men interested in tuberculosis is invited.

THE National Hospital for the Paralysed and Epileptic, Queen Square, Bloomsbury, W.C., will celebrate Founder's Day on Monday afternoon, November 3rd. There will be a service in the chapel at 3 o'clock, when the Vicar of Kew will give an address. Tea will be served in the board room and hall, and the wards and other features of the hospital will be open for inspection from 3 to 6.

AT the next meeting of the Surgical Section of the Royal Society of Medicine, on Wednesday, November 5th, there will be a discussion on secondary deposits in bone mistaken for primary tumours. Members willing to show specimens are asked to communicate with Mr. Herbert Paterson.

THE opening of the eighty-fifth winter session of the Middlesex Hospital Medical School took place on the afternoon of October 15th, when Sir Robert Hill, Medical Director-General of the Navy, distributed the prizes and Sir John Bland-Sutton gave an illustrated address on the third eyelid. The annual dinner was held that evening at the Holborn Restaurant, with the Earl of Athlone in the chair. In proposing the loyal toasts, the chairman announced that the Prince of Wales would preside over a dinner to be held in connexion with the hospital on November 20th. Sir John Bland-Sutton proposed the toast of "The Hospital and Medical School." It was six years, he said, since they had held such a function, and during that time the country had passed through the biggest crisis that it had had to face since the battle of Hastings, which finished on October 14th, 1066. He welcomed those who had returned from military service, and spoke of the admirable way in which the weekly board, with scarcely any honorary staff and with diminished exchequer, had managed to run the hospital, so that good service was rendered to civilians, soldiers, and refugees. The chairman, in acknowledging the toast, said that owing to the need for repairs and renovation it had been necessary to close the hospital for several months. It was, however, opened on October 1st, and strenuous efforts were being made to ensure the success of the special appeal to enable them to meet the heavy expenditure incurred. It was proposed to enlarge

and modernize the out-patient department. Mr. A. E. Webb-Johnson, C.B.E., D.S.O., and Surgeon Rear Admiral Sir Robert Hill also responded to the toast. Lieut.-General Sir Arthur Sloggett, in replying to the toast of "The Guests," proposed by Dr. Essex Wynter, congratulated the members of the hospital on the work they had done and the high reputation they had won during the war. The medical service was the greatest success of the war, and its prestige had greatly increased during the war. He remembered the time when the army doctor was not much thought of, but that was entirely changed now, and he hoped the school would send the best of its young men into the service. Dr. W. Pasteur proposed the toast of "The Chairman," after whose acknowledgement the proceedings terminated.

DR. WILLIAM McDOUGALL, F.R.S., M.Sc., reader in mental philosophy at Oxford, has been elected professor of psychology at Harvard in succession to the late Dr. Hugo Münsterberg.

A HOSPITAL is to be established in Paris in commemoration of men of the United States army who fell in France during the war. It will be supported by contributions from Americans, and its object is to supply aid to indigent French and Allied patients and to train nurses.

THE fifth of the series of pictures illustrating the history of Reading Abbey, presented to the Reading Art Gallery by Dr. Jamieson B. Hurry, was unveiled last week. It represents the visit of Heraclius, Patriarch of Jerusalem, to Henry II at Reading Abbey in 1185. In acknowledging a vote of thanks, Dr. Hurry said that he hoped the pictures would arouse a sense of local patriotism and help in the education of the rising generation.

A NEW schedule of articles to be brought within the operation of the Profiteering Act issued on October 18th includes all drugs except quinine sulphate (which is controlled), medical preparations, including tooth powders, talcum powders, and Fuller's earth; medical and surgical appliances and dressings, including thermometers, and weights and measures, weighing instruments, and measuring instruments. Complaints of profiteering in respect of any of these articles may be made at once.

ON October 4th the French Society for the Study of the History of Medicine held its first meeting after an interruption of five years. The president of the society, Professor Jeanselme, gave a photographic demonstration of medical manuscripts in the Bibliothèque Nationale. Afterwards M. Roger, dean of the Faculty, announced that it had been decided to form a museum of the history of medicine, and invited gifts from the members. Publication of the *Bulletin* of the society will be resumed in January next. The secretary of the society is M. Fosseyeux, 3, Avenue Victoria, who will receive the subscriptions of members (12 francs a year). Members are entitled to receive the *Bulletin* and all the publications of the society.

THE late Mr. Francis Fletcher of Sutton Coldfield, manufacturing chemist, directed by his will that the ultimate remainder of his estate of £39,000 shall be given to the University of Birmingham to provide scholarships for boys and girls desirous of entering the medical profession. Certain conditions are attached to the bequest, one being that the scholars must be children of industrial class parents earning a daily or weekly wage not above 5s. a week, to be selected from those attending elementary schools; or boys from grammar schools and girls from municipal high schools who have won their way from the lower grade schools, but these must be sons or daughters of bona fide working men and women. The testator's purpose is to afford to such children opportunities of a career in the medical profession, "as in my opinion there are potentialities of the born doctor being found amongst such children, in which case it would be in the interest of medical and surgical science, also to the benefit of humanity."

THE Village Centres Council and its work have been mentioned more than once in this journal. The Enham Centre, near Andover, for the curative treatment and training of disabled ex-service men, received its first patients in May this year, and since then the number of residents has steadily increased. The opening ceremony will take place on Wednesday, October 29th, at 2.30 p.m., when the Right Hon. Sir Laming Worthington Evans, Bt., M.P., Minister of Pensions, will declare the Centre open. It is hoped that visitors will travel to Enham in time to see round the Centre, its gardens, medical block, and workshops, where nearly a hundred disabled men are now undergoing treatment and training. The chairman of the executive committee is Lord Henry Cavendish Bentinck, M.P., and the vice-presidents of the council include Sir Rickman Godlee, Sir John Goodwin, Sir Robert Jones, Sir Alfred Keogh, Sir George Makins, Sir Norman Moore, and Sir Frederick Trowes.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the *BRITISH MEDICAL JOURNAL* are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the *JOURNAL* be addressed to the Editor at the Office of the *JOURNAL*.

The postal address of the *BRITISH MEDICAL ASSOCIATION* and *BRITISH MEDICAL JOURNAL* is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the *BRITISH MEDICAL JOURNAL*, *Athology*, Westrand, London; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate*, Westrand, London; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra*, Westrand, London; telephone, 2634, Gerrard. The address of the Irish Office of the *British Medical Association* is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

DISINFECTATION OF BOOKS.

"J. M. R."—The books to be disinfected are hung on wires in such a manner that the surface of the leaves are exposed. Where the bindings are not likely to be affected dry heat can be used. Where dry heat is contraindicated the books are hung in a cupboard or similar compartment into which there is transmitted 2 per cent. formaldehyde vapour. The books are subjected to this for four or five hours.

PAIN IN ARTHRITIS OF THE SPINE.

DR. FLORENCE STONEY (London) writes in reply to "Spes": I had a patient with severe arthritis of the lumbar spine, in whom the pain had been rendered much worse after wrenching by a bonsetter. He lost all pain after a course of sodium salicylate ionization followed by massage; the negative pole was placed over the spine, the large positive pole elsewhere. The pain of arthritis in other joints similarly yields to salicylic ionization.

LETTERS, NOTES, ETC.

MEDICAL POSTS IN MALAYA.

A CORRESPONDENT writes from the Federated Malay States: In the interests of our profession may I be allowed space to warn men against accepting posts in the Federated Malay States unless they fully realize local conditions?

1. Posts are usually offered with a salary stated in pounds sterling.
2. The salaries are actually paid in Straits dollars.
3. The exchange value of a dollar is 2s. 4d., but its actual purchasing value is, roughly, 1s.
4. Thus a salary quoted at £600 a year is worth only about £300.
5. All expenses have gone up as much as, if not more than, they have at home.

If these five points be kept in mind it should save men from buying their own experience too dearly. Speaking from experience, not only my own, may I strongly advise men to accept as a minimum the following terms in order to be able to live, instead of vegetating—(1) 600 dollars a month, with annual increments of 50 dollars; (2) free furnished bungalow; (3) free transport; (4) free passage both ways; (5) an agreement terminable by six months' notice. On these terms a doctor has the chance of putting by a little money each year and living in a manner befitting a professional man.

R.A.M.C. AND STATE SERVICE.

"G. P." writes: The difficulty of getting men to join the R.A.M.C.—regular or temporary—to which you call attention gives rise to reflection. Week after week advertisements appear in your columns for assistant school medical officers at salaries of £400, rising to £500. From the fact that these salaries continue to be offered one concludes that they are sufficient to attract some kind of men to the work. Yet the prospects of promotion or increased pay (above the limits offered) and of pension are practically nil. Moreover, before the war the British Medical Association resolved that £250 should be the minimum pay for assistant school medical officers, so that, in present circumstances, £500 should be the minimum and not the maximum. During the war we were told that after serving in the R.A.M.C. men would wish for State service. The terms offered by the R.A.M.C., defective though they are, are immensely better than those offered to assistant school medical officers. Moreover, while the R.A.M.C. officer travels first class, most assistant school medical officers are made to travel third class. Private practitioners work with a car, as do the manufacturing chemists' travellers who come to visit them, yet only last week one county authority advertising for assistant school medical officers specified motor-cycle and side-car for travelling. Thus the local authority has so little concern for the health of its assistant school medical officers that they are quite willing to let them be wet to the skin and frozen to the bone, travelling by motor-cycle over long distances in all weathers. In short, while the conditions of "labour" are everywhere

improving, those of assistant school medical officers show no sign of it. If this is "State service," any man worth his salt will prefer to become a general practitioner.

SCHOOLBOYS' WEIGHT.

W. A. writes: My son went to a public school at the age of 12½ years. On his return after the first term he looked so thin and the loss of weight was so apparent that I kept a record of his weight at the beginning and end of each term from July, 1911, to April, 1914, when he left school. In five terms there was a loss of weight averaging 1 lb. 6 oz. (highest 3 lb., lowest 8 oz.). One term he gained 1 lb. 4 oz., and in the last two terms he gained 4 lb. and 6 lb. I attribute the loss of weight during the first two years to the plainness and unappetizing nature of the food supplied. No jam, cake, or fruit was provided, and boys, unless very hungry, will not eat much bread-and-butter as served at school. The breakfast consisted of porridge three days a week, and nothing but bread-and-butter on other days. I consider that the interval between breakfast and dinner (five hours usually) is too long. If breakfast is at 8 dinner should be at 12, or else a lunch at 11. I think that at all schools jam or plain cake should be provided at tea, and cheese or soup for supper, also that fruit should form part of the diet when in season. I regard the tuck-box as an abomination, and think it most unfair that the parents should have to supplement the diet after paying the high boarding fees charged at most schools. I do not agree with the theory that loss of weight is caused by the sports, which, by promoting appetite, should have the opposite tendency. A healthy boy should gain steadily in weight all the year round, and if he loses weight at school there must be something wrong with the dietary.

ANAESTHESIA IN TONSIL AND ADENOID OPERATIONS.

DR. C. JEPHCOTT (Chester) writes: I was much interested in the correspondence in the *JOURNAL* in June and July on the administration of anaesthetics for the removal of tonsils and adenoids. Personally I have for some time used the two bottle method even in the days of light anaesthesia, always finishing with ether. Dr. Schofield, in the *JOURNAL* of July 12th, advocated gas, and this I have used with older children; but after reading Mr. W. H. Bowen's article in the *JOURNAL* of October 4th I should like to bear the experience of others who may be using ethyl chloride, for this would undoubtedly be a great time-saver in hospital work.

CHRONIC RENAL DISEASE.

CAPTAIN CHAS. J. HILL AITKEN, R.A.M.C., writes: In Sir James Galloway's article on chronic renal disease it is stated "the patient was therefore on a low diet, and told us he was hungry, and would willingly take more food. . . . The remarkable feature of this change for the better—following the fuller diet—was the rapidity with which the favourable conditions made their appearance."

The following case occurs to my mind. Seventeen years ago an old lady with cardiac disease and dropsy was left in my charge as locumtenent. She was very ill, and all she would say to me was, "I want beer! I want beer!" Her anxious relatives said to me, "Beer will kill mother; she must not have it." At my next visit the patient was much worse, and still asking for beer. I told the family their mother was dying, and that they might as well gratify her last dying wish. She got beer, and was up and out in less than ten days. I attributed this marvellous recovery entirely to freedom from the grinding unrest of this lady, who day and night worried because she was refused beer.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 39, 40, 44, 45, 46, and 47 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 41, 42, and 43.

THE Home Secretary announces a vacancy of a medical referee under the Workmen's Compensation Act, 1906, for the Bury and Rochdale county courts, in Circuit No. 5. Applications to the Private Secretary, Home Office, by November 8th.

THE following appointments of certifying factory surgeons are vacant: Ashford (Kent), Ballylison (Down), Cleator (Cumberland), Hipperholme (York., West Riding).

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Seven lines and under	—	—	0 6 0
Each additional line	—	—	0 0 9
Whole single column	—	—	4 0 0
Whole page	—	—	12 0 0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.

The Harveian Oration ON FORERUNNERS OF HARVEY IN ANTIQUITY.

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BY

RAYMOND CRAWFORD, M.A., M.D. OXON., F.R.C.P. LOND..

PHYSICIAN AND LECTURER ON CLINICAL MEDICINE, KING'S
COLLEGE HOSPITAL; CENSOR, ROYAL COLLEGE OF
PHYSICIANS.

WHEN, Sir, you entrusted to me the honourable duty of delivering this annual address, it seemed idle to suppose that I could add to the central theme, which has inspired this occasion now for more than 250 years, anything that had not been said by one or other of the long line of my predecessors in the post. But when I came to examine some of the outstanding accounts of the history of the discovery of the circulation I could not but feel that the fuller knowledge we now possess of the writings of the men of science of ancient days demanded a readjustment of traditional beliefs: we have claimed too much for the ardent anatomists of the Renaissance; we have conceded too little to the master minds of antiquity; in particular, I venture to think that the claims of Aristotle have not received their due meed of recognition.

It will be consonant to the directions of Harvey's testament that I should testify to-day how great a part of our present-day knowledge of the scientific works of Aristotle is due to a late Fellow of this College, and that I should commemorate him by name. I refer, of course, to the late Dr. William Ogle. His translation of the treatise, "On the Parts of Animals," with commentary and copious annotation, was first published in 1882, and rewritten with diligent revision in 1911, when the hand of death was hard upon him. I had the privilege of discussing with him many points of his work, and I desire therefore that he, being dead, may yet speak to you through the medium of my lips. In 1897 this first essay was followed by a second dealing in similar manner with the conjoint treatises on Youth and Old Age, Life and Death, and on Respiration. Every page of these volumes is instinct with refined scholarship linked to a wide knowledge of biology. If there be any here who meditate a like venture into the by-ways of ancient science, I cannot do better than adopt the words of the great man we commemorate to-day, and exhort them to imitate this benefactor, and contribute their endeavours for the advancement of this society according to the example of this deceased benefactor. These volumes will survive as memorials of an age of British medicine in which Science and Literature walked hand in hand, side by side with a few more, of which it is meet that on this occasion I should name those monumental volumes in which you, Mr. President, have enshrined the life-history of that great seat of medical learning which bears the name of Harvey on its roll of honour.

It has been alleged, in reproach of Harvey, that he withheld due recognition of the contributions of his immediate predecessors to the subject matter of his discovery. It is no part of my thesis to represent Harvey as immune to human frailty: the blind eye he turned to Aselli's demonstration of the lacteals and their function forbids this. But in the matter of the circulation of the blood it is permissible to say that his indebtedness to any but Aristotle is almost negligible. The starting point and the central theme of the whole of Harvey's exposition is his conception of the heart as a muscular pump forcibly propelling the blood to the furthest limits of the vascular system, and this conception is built directly on Aristotle's doctrine of the primacy of the heart. Harvey's own quantitative estimates of the output of the ventricle at each systole supplied the single other factor that was needed to compel the conclusion that the same blood was passing time after time through the heart in the course of a circular movement. Others had set out detached fragments of the truth, but it is only when these are regarded with twentieth century vision, wise after the event, that they become essential antecedents of the discovery.

Harvey is never tired of insisting on his great debt to Aristotle in every branch of his researches; he quotes him far oftener than any other writer, and next to him Galen, largely disregarding the great anatomists of the Renaissance.

There is an interesting parallelism between Aristotle and Harvey in the circumstances of their lives. Each was attached to the Court, and each enjoyed royal patronage of his work. Aristotle's father, Nicomachus, was Court physician to King Amyntas, father of Philip of Macedonia; it was probably from his father that Aristotle imbibed his taste for biology. Philip appointed him tutor to his son, Alexander the Great, and the friendship of tutor and pupil ended only at death; it was Alexander who supplied the money that enabled Aristotle to make important collections of zoological specimens, and also secured him the great variety of animals that he dissected. The Macedonian kings were no indiscriminating patrons of medical science, for both Philip and Alexander on occasion summarily put to death Court physicians who were convicted by the event of ineffectual therapeutics. Harvey likewise, as is generally known, was attached to the Court of Charles I, and acted as mentor to his sons. It was the same king that supplied Harvey from the royal herd with the does which played so useful a part in his embryological investigations. Charles's interest in Harvey's work was direct and personal; he showed keen interest in Harvey's demonstration of the *punctum saliens*, the first rudiment of the fetal heart; he was not satisfied till Harvey had repeated in his presence the experiments by which he proved the circulation of the blood, in a very different spirit from that of Louis Quatorze, who used them to afford a fresh sensation to the jaded minds of himself and his courtiers; and everyone knows the tale of King Charles inspecting and fingering the exposed heart of Harvey's patient, the son of the Lord Montgomery, and detecting its insensitiveness. For his enlightened patronage of Science, and much more so of Art, the Stuart monarch deserves the tribute of kindly reminiscence.

Aristotle, whose life extended from 384-321 B.C., was the first worker to present anything in the nature of a coherent account of the vascular system, and of the purpose it was designed to serve in the animal economy. This alone was a remarkable achievement, when we reflect that prior to him, with insignificant exceptions, the whole corpus of anatomy consisted of crude observations of some of the principal organs, gleaned from the hasty inspection of the slaughtered bodies of sacrificial animals. In assessing Aristotle's knowledge of anatomy, we must not forget that the treatises specially devoted to anatomy are lost; what a treasure trove for some future archaeologist! Aristotle himself tells us that they were illustrated by drawings, and if these were drawn, as seems probable, from actual dissections, and were not mere fanciful representations, they will have antedated by some 1,800 years any subsequent similar attempt. In the absence of these treatises we are dependent in the main on such anatomical details as can be derived from his treatises on "The History of Animals" and "The Parts of Animals."

What facilities were available to Aristotle for his researches? For human anatomy none, for Greek religious feeling was wholly repugnant to the desecration of the tabernacle in which the human soul found earthly tenement. All his dissections were carried out on the bodies of animals so varied in character that he may justly be designated the Father of Comparative Anatomy. In so far as he was an anatomist, Aristotle's feet were set on firm ground to the extent that the general plan of human and animal structure is interchangeable; in so far as he was a physiologist, his feet were still embedded in the shifting sands of speculation inherited from the early Greek physical philosophers. But even here his eyes were set towards the dawn, for he did at least test the abstract speculations of philosophers by the touchstone of anatomical structure. He saw that the endeavour to explain bodily function without a knowledge of bodily structure was an idle quest, and it was in this faith that he laid well and true the foundations of descriptive anatomy, which awaited elevation to the dignity of a science at the hands of Vesalius in his *Fabrica Humani Corporis*. So with Aristotle hypothesis began to give place to understanding. Had he but realized the necessity of testing by means of experiment the inferences drawn from observation, as Galen did, he might have been acclaimed the

Father of Physiology as well. Fidelity to the principles he professed saved him from the glaring and gratuitous fallacies, such as the presence of air in the arteries, the origin of the veins in the liver, and the existence of pores in the septum, with which his successors, Erasistratus and Galen, obstructed the elucidation of the circulatory system, and therewith the birth of modern physiology.

The problem that confronted Aristotle was a far wider one than that of which Harvey furnished the solution. The chapter of accidents that constitutes human existence was proof positive of some intimate relation between the life of a man and the blood that coursed in his vessels. When Cain shed Abel's blood upon the ground he established the axiom of primitive physiology that the blood is the life; it was manifest that warmth was inherent in the living human body, and that when warmth left the body life departed also; and that in some way or other life was dependent on the food we consume and the air we breathe. The task Aristotle set himself to accomplish was the blending of these elemental principles into a rational system of physiology, and one compatible with the anatomy of the vascular system as he knew it. Harvey was well aware that his great discovery touched only the fringe of this wider problem, for in his *De Motu Cordis* he made promise of further treatises on Nutrition and Respiration, neither of which was destined to see the light. Rightly, too, Harvey described his exposition as an anatomical exercise, and expressly stated that the question of the purpose of the circulation of the blood stood over for future consideration. The history of the discovery is like some great picture puzzle; Aristotle, with rare skill, figured out large but detached fragments of the picture, but left it incomplete; interested onlookers—Erasistratus, Galen, Stephanus, Columbus, Fabricius—picked up stray pieces, now one and now another, and laid them in their places; Harvey, by a splendid effort of genius and industry, mapped out the central theme of the puzzle, thereby supplying the key to the completion of the pattern; it was left to Aselli, who discovered the lacteals and so guided Pecquet to the discovery of the thoracic duct, and to the long line of physiologists, mainly British, who worked out in detail the physiology of respiration, to fill in the uncompleted picture.

Some outline sketch of the knowledge of the anatomy of the heart and blood vessels, derived by Aristotle from his dissections, is a necessary prelude to any attempt to appraise his value as a physiologist. But for the omission of the valves, Aristotle's description of the structure of the heart is reasonably correct. He describes the membrane around the heart, which we call the pericardium, and states that the mammalian heart has three chambers. There can be little doubt that he indicates the right and left ventricles and the left auricle, for such details as he gives harmonize with no other identification. This is the view expressed by Harvey in his *Praelectiones*, but in the *De Motu Cordis*, following Columbus and Cesalpinus, he puts forward the suggestion that Aristotle may have regarded the left ventricle as divided into two parts by the mitral valve. Right down to Harvey's time it was customary to speak of the ventricles only as "the heart"; the auricles were regarded merely as convenient ante-chambers. Aristotle, however, seems to have regarded the left auricle as part and parcel of the heart. On the other hand, he looked upon the right auricle as merely the meeting place of the two venae cavae, and termed the three together the "Great Vessel." His conception of the essential continuity of the three parts of the great vessel will be best understood by opening the thorax of an asphyxiated animal, when the right auricle and the two venae cavae will be seen to stand out replete and turgid with blood in contrast to the rest of the heart and vessels. Aristotle calls the left ventricle the middle chamber, and so, positionally, it is, lying between the right ventricle in front and the left auricle behind. He says that the great vessel is attached to the largest chamber—that is to say, to the right ventricle—and the aorta to the middle chamber or left ventricle. Again, he says that all these chambers are connected with passages leading in the direction of the lung, but that all these communications are indistinctly discernible by reason of their smallness, except one. This last is, of course, the pulmonary artery, and the two others the pulmonary veins and ductus arteriosus, though the latter is not functional normally for more than a few days after birth. Again, he says that the right cavity contains

more blood and less pure than the middle and left, and this would be so in the case of a strangled animal, a mode of killing that Aristotle recommends for animals that are to be dissected. Galen scoffs at Aristotle's assertion that the mammalian heart has three chambers; he himself always describes two ventricles, and assigns a very subordinate rôle to the two auricles. In the revival of anatomy, however, Aristotle's view triumphed over that of Galen, and we find anatomist after anatomist mistaking Aristotle's meaning, and insisting on the existence of a third ventricle, in verbal agreement with Aristotle. To effect this it was necessary to conceive the ventricular septum to be a porous spongy structure, comparable to a ventricle, formed for the elaboration of the blood in its supposed passage from the right to the left side of the heart. This was the third ventricle of Mondino, Manfredi, Leonardo da Vinci, and others, which only disappeared from textbooks of anatomy when Vesalius, following, as some will have it, the lead of Servetus, boldly declared that the septum was solid and its porosity a myth.

Aristotle felt that some explanation was necessary of the thickness of the walls of the heart, for he had no idea of the nature of muscular contraction and the energy produced in the process; he had no doubt that its purpose was to protect the innate heat which, we shall see, he conceived to reside in the heart.

Aristotle says that the chief blood vessels are two in number, because every animal is bilateral; each arises from the heart, and all other vessels are branches of these, and carry nutritive blood to every part of the body. These two chief vessels are the great vessel, already described, which is the source of all the veins, and the aorta, which is the source of all the arteries. Aristotle appears to be the first to restrict the name "aorta" to this vessel, which Diocles had called the "thick artery." Aristotle held that the blood, when endued with heat from the heart, was carried by both arteries and veins from the heart, not propelled, however, by any output of cardiac energy, to do its work in the distant parts of the body. In essence, the discovery of the circulation of the blood by Harvey consisted of a modification of this idea, whereby the blood left the heart by the arteries and returned to it by the veins.

Though Aristotle gives no specific names to either pulmonary artery or pulmonary vein, he describes them both; the former he regards as the great vessel continued back through the right ventricle, and the latter as the aorta continued back through the left ventricle. This conception is the necessary consequence of his assertion that the chief blood vessels are two, and that all others are branches of these. It is also a reason why he gives no names to so many of the vessels he describes, because he considers them merely branches of the two to which he has assigned names; we can only identify them, as a rule, by the organ to which he accredits them. One may accurately liken the Aristotelian heart to two Higginson's syringes, with their bulbs in intimate apposition, side by side. The long tube of the one is the great vessel and its short tube the pulmonary artery; the long tube of the other is the aorta and the short tube the pulmonary vein. Between the two collateral systems there exists no communication whatever.

In his *De Partibus Animalium*, Aristotle roughly sketches the superior vena cava as passing up towards the brain, and terminating in branches in its membranes. He regards it merely as an upward extension of the great vessel. But in the *Historia Animalium* he gives a much fuller, and reasonably correct, description of its innominate and jugular tributaries. Similarly he describes the aorta as terminating in its upward extension in branches supplying the membranes of the brain. Though the whole of the anatomy of the vascular system as given by Aristotle is full of interest, despite its inaccuracies, it is beside the present purpose to describe the branches he assigns to each of his two chief vessels. It is necessary, however, to give a thought to the breach of continuity which he leaves between the pulmonary arterioles and venules in the lung and the systemic arterioles and venules in the rest of the body, for until these gaps were bridged no demonstration of the circular movement of the blood was possible. Harvey, indeed, did not demonstrate the circulation, for he was in his grave when the movement of the blood through the capillaries was first made visible to human eyes. What he did was to establish by the strongest

experimental evidence the certainty of the movement of the blood in a circle.

Aristotle's description of the anatomical distribution of artery, vein, and bronchus in the lung not only bears witness to the meticulous care of his dissection, but implicitly it formulates the germ of the modern doctrine of respiration, in so far as the air is said to reach the blood through the unbroken walls of blood passages and air passages. "Canals," he says, "lead from the heart into the lung and branch off, just as the windpipe does, running all over the lung parallel with the passages from the windpipe. The canals from the heart are uppermost; there is no actual coalescence of the passages, but by their close contact they receive the air breathed and pass it on to the heart; and one of the passages conveys it to the right chamber of the heart, and the other to the left." The admission of air from the lung to each side of the heart by way of both pulmonary artery and pulmonary veins is a necessary consequence of the complete separation of the two sides of the Aristotelian vascular system. Aristotle has no use for this inspired air beyond the limits of the heart, and returns it to the lung by the self-same channels of entry as soon as it has done its work in the heart. Erasistratus and Galen, however, both retained some part of the air for further use in the body. To appreciate the pulmonary physiology of the ancients it is important to bear in mind that they thought and wrote of the lung as single, if bipartite; not as we do, as double.

As in the pulmonary so in the systemic system Aristotle suggests no communication, direct or indirect, between arteries and veins; he does not even postulate distal anastomoses between them, as his immediate successors do; yet he does vaguely foreshadow the existence of capillary vessels, which were not observed and described till two thousand years later by Malpighi. "As the blood vessels advance," he says, "they become gradually smaller and smaller, until at last their tubes are too fine to admit the blood." And again: "The smallest vessels are converted actually into flesh, though potentially they are no whit less vessels than before. This explains why, so long as the flesh of an animal is in its integrity, blood will flow from any part whatsoever that is cut, though no vessel, however small, be visible in it. Yet there can be no blood unless there be a blood vessel."

For reasons that seemed good to him, and which, viewed by the standard of the knowledge of his time, were by no means unreasonable, Aristotle located the vital principle in the heart. By it the heat, constantly generated in the heart from combustion of food carried to it in the blood, is so vitalized as to afford nutrition and functional activity to the body. Without heat all the functions of the body are in abeyance, and life is impossible. He traces the origin of the blood to the fluid portion of the food absorbed by the blood vessels from the intestine through invisible pores; the fluid passes in the form of an ichor or plasma to the heart. The route by which it passes is the mesenteric vessels, the arteries conveying it to the aorta and left side of the heart, and the veins to the right side of the heart by way of the portal vein and inferior vena cava.

Just as the absence of any communication, direct or indirect, between the two sides of the Aristotelian heart necessitated the admission of air to both sides by pulmonary artery and veins alike, so now food ichor is admitted to both sides of the heart also. The venous channels clearly are the mesenteric tributaries of the portal vein, for Aristotle describes them as spread over the surface of stomach and intestine, like the roots of a plant, a life-like picture of the portal tributaries that will commend itself to every anatomist. The hepatic vein he regards as a continuation of the portal vein, for he speaks of a short and wide branch of the great vessel, or vena cava, that runs through the liver. Under the heating influence of the heart, the ichor is converted into blood, which is the material from which the whole body is made. This same heat induces expansion of the blood in the heart and lifts up its muscular containing wall, and so excites its pulsation. This elaboration of heat within the heart is not only the cause of the heart beat, but is also the cause of the respiratory movements, for heat derived from the heart causes the lung, and with it the thorax, to expand, so that the air rushes in and reduces the heat, whereupon lung and thorax collapse and expire the air. Such is the mechanism of respiration, and its purpose is to temper the heat of the heart, which threatens ever to

become excessive; thus is equilibrium of body temperature automatically regulated. The food is the means of maintaining the heat of the heart and the body, and the air inspired is the means of keeping it within physiological limits. Diastole is the expansion of the heart caused by the combustion of food ichor within it, and systole is the subsidence resulting from condensation of the heated blood by the inspiration of cool air. Thus pulsation of the heart is a mere by-product of metabolic changes occurring within its cavities. Diastole and systole do but represent the alternating interplay of thermogenesis and thermolysis, and rhythm is the expression of the regularity of these phenomena. Pulsation is maintained continuously throughout life, because the influx of expansible food ichor into the heart and the ingress of cool air are also continuous.

To modern ears, wise with the wisdom of knowledge revealed, such physiology may seem archaic balderdash; for all that, Harvey, to the end of his days, deviated no more than a hair's breadth from the standpoint of Aristotle. Like him he conceived diastole to be an essential prelude of systole. At the entrance of the vena cava into the right auricle, just, in fact, where Keith and Flack located the sinus node, Harvey conceived a sudden expansion of the inflowing blood to take place, under the influence of its own innate heat, for late in life he transferred the seat of the innate heat from the heart to the blood itself. In his view this sudden expansion of the blood excited expansion of the right auricle in diastole, and diastole was the efficient stimulus of systole, which was no more and no less than a simple muscular contraction. To Aristotle, who knew nothing of the nature of muscular contraction, systole was, as we have seen, a passive subsidence due to condensation of hot blood in the heart by the cool air inspired; Harvey rejected the last vestige of passivity and established systole as the motor power activating the circulation. To Aristotle the heat of the blood in the heart, alternatively increased by consumption of food ichor and decreased by entry of cool inspired air, is the efficient cause of pulsation, to Harvey the innate heat of the blood just before it enters the heart. It is strange that Harvey, who was well aware that the excised heart may maintain its pulsation, and who demonstrated on the exposed heart of the snake the effect of compression of the vena cava in emptying the still pulsating heart, should have adhered to this idea of expansion of the blood, which his own experiments negatived. All men have blind spots in their field of mental vision, and the reasonable remedy would seem to be that research workers should hunt in pairs or in packs.

Following Aristotle, Harvey at first conceived that the purpose of the passage of blood through the lungs is to reduce its heat. Aristotle effected this reduction of heat within the heart; he knew that air was essential to the maintenance of a flame, and he conceived that it acted by cooling the flame, so that it did not burn itself out precipitately; similarly the inspired air hindered the innate heat of the heart from causing its own destruction. Galen accepted Aristotle's teaching thus far, but in addition to its cooling function held that some of the air inspired is retained in the blood, and has important functions to perform in the general economy of the body. Harvey, however, reverted to the simpler teaching of Aristotle, and thereby moved further away from the modern doctrine of respiration. Late in life Harvey rejected the cooling theory as well, and frankly confessed himself at a loss to explain the purpose of respiration. It remained for Borelli, Boyle, Hooke, Lower, Mayow, Black, Priestley, and Lavoisier by successive stages to attain this goal. I commend this list of names to those who have no pride in British achievements in scientific research.

It is matter for surprise that so keenly observant a mind as that of Aristotle should have overlooked the different rate of the pulse beat and respiration, which cuts at the root of his doctrine of the synchronous expansion of heart and lung. On that point his treatise on "Respiration" is silent; but we cannot presume that he tacitly conceived a greater degree or a fuller supply of heat to be necessary to cause expansion of the lung than to cause expansion of the heart, for he makes it clear that in his view subsidence of the heart at each systole depends on the inrush of cool air during inspiration.

To Aristotle, then, the heart is a bellows, not a pump, and diastole is the active phase, not systole. Right down

to Harvey, suction, not propulsion, was regarded as the essential activity of the heart. This necessarily precluded any satisfactory explanation of the arterial pulse, which Aristotle referred to the movements of the blood in the heart transmitted to the blood in the arteries, diastole of the heart synchronizing with diastole of artery. If we would understand his physiology we must purge from our minds any conception of the heart as a muscular organ propelling the blood; we must think of it rather as a laboratory, introduced into the vascular system, within which food and air play their respective parts in maintaining the vital heat in such a state of stable equilibrium as is most suitable to the requirements of the body.

Such, then, were the foundations in anatomy and physiology on which rested the Aristotelian doctrine of the primacy of the heart. Its dominating position, too, in the centre and forefront of the body seemed to mark it out as its acropolis, and his observations of the developing embryo assured him that it was the first organ to be formed, preceding even the appearance of the blood. In his earlier work Harvey followed obediently the lead of Aristotle, but in his later years transferred both the primacy and the seat of innate heat from the heart to the blood. This doctrine had found favour in Greece before the time of Aristotle, but he himself expressly repudiates it, for his observations seemed to show beyond question that the heart was the first part to live and the last to die. Indications are not wanting that even in his early years Harvey halted between the heart and the blood, and it was Aristotle's dictum that inclined him to declare for the heart; but his bosom's lord sat lightly in his throne, till his own researches in embryology and his own observations of the dying heart led to its ultimate dethronement in favour of the blood. Harvey fancied that he had perceived a residual flicker of movement in the blood after the substance of the heart was dead; had he referred this movement to its real cause he would never have strayed from the Aristotelian fold.

The primacy of the heart among the organs of the body was of first importance as the starting point for a rational explanation of the circulatory system, for it established the position of the heart as the source of the blood vessels. Before Aristotle the Hippocratic school had asserted their origin in the head, and Galen's first master, Pelops, sustained this belief. It was a sad falling away from the standpoint of Aristotle when Erasistratus and Galen referred the origin of the veins to the liver.

Aristotle had no notion of the movement of the blood in a circle, though he believed that it supplied nutriment to every part of the body. Following the lead of Plato, he looked on the vascular system as an irrigation supply, and compared it to "watercourses in gardens, so constructed as to distribute water from one single source or fount into numerous channels, which divide and subdivide, so as to convey it to all parts." He conceived the main flow of blood to be from heart to blood vessels, and so to all parts of the body, where much of it was used up; but he admits flow in the opposite direction also, for he says that the heart receives blood both from the great vessel and the aorta; what was used up at the far end of the blood vessels in the needs of the body was restored to the heart by the food ichor conveyed to it. The continuous supply of ichor, derived from the intestine, to the heart would seem to demand a continuous current in mesenteric veins and arteries towards the heart; on the other hand, the needs of nutrition postulated a current in the opposite direction from the heart towards the stomach and intestine. So keen a mind as Aristotle's must have envisaged this contradiction, and one can only imagine that he conceived something in the nature of a general diffusion to take place. Galen faced the difficulty squarely, and cited as a parallel occurrence the flow of bile in opposite directions in the cystic duct. Harvey, who still, however, in spite of Aselli's demonstration of the lacteals, believed in absorption of chyle by the portal radicles, triumphantly removed the difficulty by showing that the blood left the heart by one set of vessels and returned to it by the other.

At times Aristotle lends himself to the belief of an alternating flux and reflux in the blood vessels, in accordance with the teaching of Empedocles, who two centuries before him had laid it down that "it is the nature of blood to move backwards and forwards." Aristotle compares the blood flow to the current in the strait of Euripus,

which sets once a day in each direction; the ebb and flow of the tide is translated from the macrocosm to the human microcosm. He gives us no idea of what he conceived to be the motive force, but was satisfied with the fact that such a to and fro current did demonstrably occur in nature within his own experience. These more extensive movements of the blood must not be confounded with the local movements induced by diastole of the heart and its ensuing systole; they are smaller movements, as it were, within these larger movements.

To us who know that, under the impetus of the ventricular systole, blood flows from where the pressure is high to where the pressure is low, the conception may seem puerile; but in the absence of that knowledge and in the presence of spontaneous movements in the arteries, which seemed for all the world like the progress of a tidal wave, it was not unnatural to conclude that the movement was of the same nature as the ebb and flow of the tide. In our evaluation of the scientific ideas of antiquity we must beware of confusing ignorance—which is the common lot of mortals—with stupidity, which Nature, in regard for human progress, has wisely distributed on a basis of selection. It is as difficult to assume the mental attitude of two thousand years ago as it is easy to relapse into one that is twenty years behind the time. To men who had been accustomed to regard the tissues as lapping leisurely at the nutrient blood, the very idea of the rapid movement of the blood in a circle would have seemed as irrational as the antics of a puppy dog in hot pursuit of its own tail round a flower bed. Just as it was incomprehensible to Aristotle so it was unintelligible to Harvey, even when he had established its existence. So imbued was Harvey's mind with the thoughts of his predecessors in antiquity, that the very rapidity of the circulation convinced him that its purpose could not be the nourishment of the tissues.

Aristotle was aware that the blood differed on the two sides of the vascular system, but he had no notion of the cause of the difference; naturally, therefore, he concluded that there were two kinds of blood. He describes the blood on the right side as more abundant, less pure, and denser than on the left. No doubt he derived this belief from finding the venous side of the circulation charged with dark blood in the bodies of the strangled animals that he dissected. His belief in the complete separation of the two sides of the vascular system precluded any idea of the difference being due to the action of inspired air on the blood, for it compelled him to admit air to both sides of the heart by pulmonary artery and vein alike. The cause of the change was not known till after Harvey's time; indeed, the difference of the blood on the two sides of the circulation was used as an argument against Harvey's doctrine of a rapid circular movement, for it seemed incredible that the same blood should be constantly changing from one state to the other.

Passing from Aristotle to Erasistratus, we quit the clear crisp air of Hellas, that lent to Hellenic thought full measure of its own clarity, for the heavy exotic atmosphere of Lower Egypt, in which men seemed to see the truth as it were through a glass darkly.

In Erasistratus is focussed the contribution of the great Alexandrian school to the knowledge of the vascular system. His lifetime is vaguely assigned to the eighty-five years between 330 and 245 B.C. Born on the island of Ceos, it is uncertain where he received his medical education, but probably most of his anatomical work was carried out at Alexandria, for there alone existed facilities for the dissection of the human subject such as his knowledge attests; there he must have imbibed to the full the scientific teaching of Aristotle. Celsus and Tertullian have branded him as a dissector of living criminals, and Galen has fallen under the same imputation, though his dissections were almost, if not entirely, confined to animals. Even in Alexandria Greek religious sentiment retained its repugnance to human anatomy, so that the practice soon died out, even in the place of its first flourishing. If Erasistratus had ever dissected a criminal alive it is difficult to believe that he would have described the arteries as containing only air.

The only real contribution of Erasistratus to the anatomy of the vascular system is his description of the auriculo-ventricular valves of the heart and chordae tendineae; the semilunar valves had been already described in the "De Corde" of the Hippocratic Corpus. Erasistratus also

pointed out the mode of closure of the valves and its purpose; but so wedded was he to belief in flux and reflux of the blood stream that he is constantly compelled to ignore their competence. Unlike Aristotle, he believed the whole of the food to be absorbed from the intestine by the portal vein, which carried it to the liver for conversion into blood. He stood on the brink of a great discovery, for he described the lacteals in sucking kids, but believed them to be mesenteric arteries.

It is well-nigh impossible to gather together a complete account of the teaching of Erasistratus, for knowledge of his work is derived almost entirely from excerpts of Galen and other authors, so that lacunae are inevitable, but clearly he regarded the liver as the starting point of the blood stream. From the liver the blood pursued in the main the route of the *venae cavae* and their tributaries to the most distant parts of the body, but in its course a portion passed on into the right ventricle, and thence, by the harmonious co-operation of tricuspid and pulmonary valves, was guided to the lung. Flux and reflux in *venae cavae* and their branches, flux and reflux between right ventricle and lung—that was his conception of the distribution of the blood, a distribution, too, confined exclusively to the veins. Side by side with this sanguineous circulation in the right side of the heart and veins is a circulation of spiritualized air or *pneuma* in the left side of the heart and arteries. The mistake of Erasistratus in making the arteries carriers only of air—a mistake which he is said to have inherited from Praxagoras of Cos—was the outcome of a correct observation incorrectly interpreted. Just as Aristotle had been impressed by the fullness of the veins after death by asphyxia, so Erasistratus was impressed by the emptiness of the arteries, and he seemed to find confirmation of his belief in the close anatomical relationship of the bronchi and branches of the pulmonary vein, from which he inferred that they were in actual open communication. Erasistratus discarded the Aristotelian belief in the cooling function of respiration, and propagated one more in harmony with modern physiology, that the inspired air is, in part, retained and has important duties to perform in the most distant parts of the body. This would have been a notable advance, but for his absurd separation of the blood and the air in veins and arteries respectively. Most of the air, or *pneuma*, drawn in in inspiration through the trachea, passes from the extremities of the bronchi in the lungs by direct communications into the pulmonary veins, whence it reaches the left ventricle, and is distributed by the aorta and its branches, the arteries or air-carriers, to all parts of the body. The simple primitive *pneuma ζωτικόν*, or vital spirit) animates all vital processes throughout the body, but in the process of respiration it undergoes also in the left ventricle a peculiar refining, with formation of soul *pneuma πνεῦμα ψυχικόν*, or animal spirit), which is carried in the arteries to the brain, and there, by the agency of the emergent nerves, produces motion and sensation. To Erasistratus the purpose of respiration is the spiritualizing of the *pneuma* and its carriage into the arteries; the pulsation of the heart is due to expansion of the *pneuma* in presence of the innate heat of the heart, on the principle of an internal combustion engine. Like Aristotle, he had failed to detect the different rate of respiration and the pulse. The surplus air is returned from the lung and discharged by the mouth and nostrils. Erasistratus attributed different properties to blood and *pneuma*; blood is the prime constituent of the organs and sustains the simple vegetative processes of living bodies, but all the higher functions depend on the activity of *pneuma*.

So much for the vascular anatomy of Erasistratus, but Erasistratus the anatomist finds himself in conflict with Erasistratus the surgeon, whose experience has taught him that when an artery is severed blood flows from the wounded artery. To meet this discrepancy the anatomy of the body calls for revision, so the terminations of the arteries are made to anastomose with the terminations of the veins by little communications which under normal conditions are closed, but in the case of a wound of the artery become open. This he attributes to the escape of *pneuma* or air from the arteries, whereupon, in abhorrence of a vacuum, blood passes over from veins to arteries and streams out of the wound. His suggestion of anastomoses between veins and arteries is not prompted by observation or experiment, but by the necessity of bolstering up an indefensible theory. It is

matter for regret that the exotic term "*pneuma*" should have been adopted into English diction, for it represents primarily simply the inspired air. Viewed thus the physiology of Erasistratus is simplicity itself; the air we breathe passes directly from the bronchi by the pulmonary veins into the left ventricle; there it undergoes some subtle refinement before it is distributed by the arteries to all parts of the body, endowing them with function, just as the blood affords them life and the faculty of growth.

After Erasistratus, Galen. His anatomy was based almost exclusively on dissection of animals, living or dead. On rare occasions he had the good fortune of a hasty inspection of a human body, some dead highwayman, some victim of the arena, some decomposing body washed up on the river bank. In Alexandria the human skeleton was set up for demonstration, and disused burial grounds yielded up their bones to him, as they did to Vesalius. Like Harvey, Galen had on one occasion the opportunity of watching the movements of the heart in a living boy, who as the result of an accident had his heart exposed to view.

We shall understand Galen best if we think of him as a medical encyclopaedist bent on gathering up into one all-embracing system all the lore of all his scientific predecessors: the Hippocratic school, Aristotle, and Erasistratus meet and blend in him. He likened the portal vein and its tributaries to the roots of a tree, of which the inferior vena cava is the trunk and the systemic veins the branches. Just as the roots of a plant attract nourishment from the soil, so the roots of the portal vein attract food chyme from the intestine and stomach, and conduct it to the liver, whence it passes to the right side of the heart. But in the liver the chyme is transformed into blood, and endowed with natural spirit (*πνεῦμα φυσικόν*); this low-grade blood is only adequate for nutrition, and the veins are the channels by which it reaches its destination. The blood from the liver, as soon as it reaches the inferior vena cava, divides into an upward and a downward stream; the latter passes by the descending part of the cava and its branches to the lower part of the body; the former passes up to the right auricle and there divides into two, part continuing its upward course by the superior vena cava to the upper part of the body and head, and part passing into the right ventricle; here, under the influence of the innate heat of the heart, some purification is effected, and the fumes or sooty excreta pass through the pulmonary valves to the lung and are voided in expiration. From the right ventricle a stream passes by way of the pulmonary artery to the lung, giving nutrition to it, a very small amount finding its way from pulmonary arterioles to pulmonary venules by way of their mutual anastomoses. Yet another moiety filters by innumerable invisible pores through the muscular septum from the right ventricle to the left; these pores are seen with difficulty in the dead body, because the heart muscle, being then cold, is stiff and hard; still, reason assures us that they are there. In the left ventricle this blood is mixed with air drawn in from the lung by the active traction of ventricular diastole by way of the pulmonary vein, and undergoes concoction under the influence of the innate heat and engenders vital spirit (*πνεῦμα ζωτικόν*).

The heat is kept from becoming excessive by the cooling influence of the air drawn into the ventricle: this, indeed, is the main purpose of respiration, and when the air has effected this it is returned again to the lung. This higher grade blood charged with vital spirit undergoes an ebb and flow, in part by way of the pulmonary vein between the left ventricle and the lung, the imperfect closure of the mitral valve permitting this and also allowing the escape of waste fumes; and in part by way of the systemic arteries between the left ventricle and the most distant parts of the body, endowing them with function. Within the brain it engenders animal spirit (*πνεῦμα ψυχικόν* = breath of the soul); this subtle essence, distilled as it were from the blood, is carried outward from the brain by the nerves, initiates motion and sensation, and subserves the highest functions of the organism.

Such in outline is the ground plan of Galen's physiology of the vascular system; his belief in the existence of permeable foramina in the septum of the heart, borrowed seemingly from the post-Hippocratic school, placed one more obstacle in the way of the elucidation of the circulation. The belief was not a mere gratuitous figment in an age when dissection was almost exclusively confined

to the lower animals. The heart of the amphibious frog has but one ventricle, and the reptiles afford numerous instances of incomplete division, the complete septum being constantly found not till we reach the bird level. Again, patent foramen ovale is constant in the human fetus, and not rare throughout life, while minute defects, such as to permit the passage of a bristle, are common. Such conditions as these may well have lent a semblance of likelihood to a false anatomical preconception.

As against this capital anatomical error we must set to the credit of Galen his reiterated assertion of the existence of anastomoses between the terminal ramifications of arteries and veins, both systemic and pulmonary. The bridging of these gaps, speculatively at least, was a condition precedent to the discovery of the circulation. Erasistratus had stood sponsor for potential anastomoses, those of Galen are actual, and he claimed to have proved their existence experimentally, by showing that it was possible to drain all the blood out of the body by a wound in a single artery. He explains exactly how the interchange of arterial and venous blood takes place, diastole of the artery drawing blood out of the vein and systole letting it back.

As in the systemic system, so in the pulmonary, Galen asserts the existence of anastomoses, by which some small amount of the blood brought by the pulmonary artery to the lung finds its way directly into the pulmonary veins and so into the left ventricle. He was confirmed in his belief by the consideration that the pulmonary artery is far larger than would be necessary if its purpose were merely to give nourishment to the lung. The mechanism of transference he explains thus:

When the thorax contracts the pulmonary veins within the lung are driven in and compressed on every side, and force out very speedily the inspired air that is in them, and at the same time take up a certain amount of blood by these tiny communications. Now this could never happen were the blood able to flow back into the heart through the orifice of the pulmonary artery. But its return through this great opening being prevented, a certain portion of it distils into the pulmonary veins by the minute orifices mentioned.

Thus Galen, building on anatomical foundations laid by Aristotle, made one step onward towards the discovery of the pulmonary circulation, though he shows no sign whatever of understanding its fundamental importance. In effecting this pulmonary transit of a small quantity of blood, Galen makes it clear that the motive power is derived from thoracic compression of the pulmonary vessels, and not from the muscle of the right ventricle; indeed, he decides definitely that the heart wall is not muscular.

Galen is well-nigh as vague as Aristotle as to the source from which the blood derives its motion; sometimes he asserts the movement and seems to regard explanation as superfluous or impossible; at another time he seems to regard alternating diastole and systole as the efficient cause of flux and reflux, not only locally, but throughout the vascular system. Inconsistencies are frequent in Galen's physiology, because he does not hesitate to manipulate it so as to establish a thesis; but we shall not condemn him overmuch if we bear in mind how few years separated him from the time when the whole of physiology was armchair speculation.

If Galen had not decided that the heart was not muscular he might well be acclaimed the first exponent of the myogenic theory of its activity, for he locates the stimulus to activity in the heart itself; he attributes to it an inherent tendency to pulsate (*δύναμις σφύρμεκῆ*), which is equivalent to saying that the heart pulsates because it pulsates. It was impossible for him to refer the cause of the heart beat to the blood, as Aristotle had done, for he knew that rhythmic activity may persist for a while in the excised mammalian heart; he was driven, therefore, to make it inherent in the heart. It cannot be said that even now we are provided with a much more satisfying answer, though splendid additions have been made in recent years to our knowledge of the site of origin and the route of propagation of the impulse through the heart, mainly by the work of Gaskell, Kent, Keith, and Flack, who have worthily maintained the pre-eminence won by Harvey for this country in the domain of the physiology of the vascular system. In recognizing the primacy of the right auricle, as the first part to live and the last part to die, they were following in the footsteps of Galen, though for

the auricles generally Galen had scant respect, regarding them as introduced into the vascular system as a provision against the too violent strain of ventricular diastole on the veins that open into them. Galen also knew that contact with cold water tended to arrest pulsation.

Galen performed just the same experiment as Harvey in opening the pericardium and observing the movements of the heart, but failed entirely to draw the same conclusions as to the orderly sequence of movements in the various chambers of the heart; he did not even perceive that auricles, like ventricles, have both a systole and a diastole.

Galen proved by a vivisection experiment that Aristotle was right in saying that the arteries contained blood and not air. He placed two ligatures upon an artery and divided the vessel between them, when it was found to contain only blood; corroboration was afforded by plunging a cannula into the left ventricle, when blood flowed out instantaneously without any escape of air.

Galen tells a delightful story of such a demonstration of the presence of blood in the aorta, which shows incidentally that the medical student has remained true to type for some 1,800 years. Some ignorant anatomist repeatedly promised to demonstrate that the aorta contained no blood, but never got beyond promises, though Galen's students brought him animals and begged him to show them; the man, however, took refuge in demanding payment for the task. Thereupon the young men put down between them some 1,000 denarii, for him to pocket if he was successful, but this only produced a further crop of excuses. At last, however, their persistence prevailed, and he summoned up courage to take a scalpel and open the left side of the chest, where he fancied he would get the best view of the aorta, but he exposed his ignorance of anatomy by cutting down upon a bone. Then the young men, who had tabled the stakes, jeered at him, and undertook to carry out his demonstration for him. Opening the mediastinum, as they had seen Galen do, without wounding any of the vessels, they quickly passed two ligatures round the aorta, one near its origin from the heart and the other close to where it meets the spine; then they confidently promised that when the animal was dead, they would show that the part between the two ligatures contained no blood. But, lo and behold! when it was opened, there was blood in the vessel!

THE ADVANTAGES AND DISADVANTAGES OF GAUZE PACKING IN ABDOMINAL OPERATIONS.

BY

A. ERNEST MAYLARD, B.S., M.B.LOND., F.R.S. EDIN.,
F.R.F.P. AND S.GLAS.,

SURGEON TO THE VICTORIA INFIRMARY, GLASGOW.

In attempting to arrive at a conclusion regarding the conflicting opinions and practices of surgeons on any particular method of operative treatment no more satisfactory deciding factor can be found than that derived from prolonged practical experience coupled with careful observation. It is on such a basis that I venture to offer a few remarks upon a subject with regard to which we are as yet far from any unanimity of opinion or of practice.

The present attitude with regard to the use or non-use of gauze packing in abdominal operations may be briefly expressed by saying that there are surgeons who believe in the good effects of this agent in ensuring a more satisfactory result; and there are surgeons who equally hold that its use is fraught with ill effects. My effort will be to bring forward reliable statements of facts bearing on both sides of the subject, so that it may be possible for an impartial opinion to be formed. If the facts adduced sufficiently prove that the use of gauze packing is or can be harmful then its employment should unquestionably be abandoned. But we have ever to remember, in mitigation of such a statement, that surgical resources are not bound by rigid limitations; that where in one case a certain practice may be beneficial, in another the adoption of the same measure may be harmful. Careful and reasonable discrimination is needed to decide when a particular method of treatment should be employed, and when it should be avoided. If the element of risk can be shown

constantly to be present, then, even in the face of possible good, it becomes a question whether any particular line of treatment should be persisted in. In considering the facts connected with the two sides of the subject, it may, in the first place, be stated, probably without contradiction, that the question of the use or non-use of gauze packing only arises in operations upon the abdomen where sepsis in some form is found to be present. In by far the larger number of cases these operations are concerned with inflammatory affections of the vermiform appendix and the female pelvic organs. The frequency with which pus or necrotic tissue is present in inflammatory diseases of these viscera naturally leads to the desire to combat effectually the possible extension of one or other of these pathogenic processes.

THE ADVANTAGES OF GAUZE PACKING.

We may fairly assume that the effects we see which result from the use of antiseptic gauze packs in external wounds of the body similarly result when these same agents are used for intra-abdominal lesions. The gauze pack becomes freely saturated with the exudates poured out from the lining walls of the space which has lodged necrotic tissue or been the cavity from which pus has been evacuated; and the assumption is probably correct that the antiseptic agent within the gauze has a sufficiently sterilizing effect upon these exudates to prevent any further septic advance. Again, it is also probably correct to assume that this absorption, by admitting of direct contact of the gauze with the lining walls of the septic area, excites a normal reaction and reparative influence upon the surrounding parts; in other words, it induces the formation of healthy, healing granulation tissue. It would appear therefore that, so far as serving to check the advance of sepsis and to stimulate the formation of a healthy granulating wound, packing with antiseptic gauze is distinctly advantageous. Thus, one may not unreasonably infer that the beneficial effects obtained in the use of gauze packing for external wounds would accrue equally in the case of similar lesions occurring within the abdomen. And if there were no other considerations which entered into the subject, it might justly be concluded that packing with antiseptic gauze a septic intra abdominal wound was at least a reasonable, if not a generally advisable, line of treatment.

But whatever the analogy between septic processes taking place within and without the abdomen, there is absolutely none between the parts involved. The peritoneal cavity with its viscera introduces an entirely new aspect. There is nothing comparable between these parts and the external soft tissues of the trunk and extremities. Inflammation of these latter may have some impairing results, but they will be nothing to compare with what may accrue should the bowel or the peritoneum be involved in a septic process. It is the introduction of these important factors into the discussion that raises the question of the possible disadvantages connected with the use of gauze packing in the treatment of intra abdominal septic wounds.

DISADVANTAGES OF GAUZE PACKING.

It has already been indicated that the contact of gauze packing with the walls lining any septic space has a stimulating, if not an irritating, effect upon the granulations of these walls; this, in so far as it affects certain soft tissues of the body, may be a perfectly beneficial influence. But what is the effect upon such a sensitive structure as the peritoneum?

Let me describe a rather instructive experiment which was unintentionally made when operating upon a case of pyosalpinx. Before attempting to deal with the pelvic matted mass, some dry, simply sterilized gauze packing was introduced into the upper part of the wound or peritoneal cavity to protect the intestines, as well as to prevent their descent upon the septic pelvic area when this latter was freely exposed. It took about half an hour to complete the pelvic part of the operation. The gauze packing was then withdrawn, and in doing so it was found that it had already become intimately adherent to the visceral peritoneum covering a loop of small intestine. On peeling off the gauze an acutely injected surface was exposed, its rose colour and slightly roughened surface forming a very striking contrast to the smooth, glistening, grey serous tunic of the healthy neighbouring coils of bowel. The

difference was sufficiently marked to be noticed by my assistants and others whose attention I drew to a fact that seemed to me, when rightly judged, to possess no little clinical significance.

Let me instance another very instructive case:

Mrs. M., aged 33 years, was admitted to the Victoria Infirmary in May, 1906, suffering from gall stones. Operation was performed, and stones were removed from the gall bladder and one from the common bile duct.

She remained well for some years, but was again admitted to hospital in 1912—that is, six years after the first operation, for a recurrence of biliary colic. Operation at this time revealed the presence of a stone impacted in the ampulla of Vater. The stone was removed by first opening the second part of the duodenum, and then incising over the stone. The incision was stitched up; and, to secure against leakage from the bowel, a piece of iodoform gauze packing was placed upon the incision and led out of the parietal wound. By some unfortunate oversight in the subsequent dressing of the case, the gauze plug was allowed to slip unnoticed into the wound. The parietal wound healed well, and the patient made an uninterrupted recovery. About six weeks later the patient returned to the infirmary complaining of gastric symptoms which very evidently indicated obstruction. The abdomen was opened, and a mass of adhesions so dense and firm existed in the region of the pylorus—evidently the result of the two prior operations—that it was thought better not to attempt to separate them. Believing them also to be the possible cause of the obstruction, the operation of posterior gastro-jejunostomy was proceeded with. However, when the stomach was opened prior to the fixation of the jejunum, and the pyloric aperture examined, both it and the first part of the duodenum, instead of being narrowed, as was anticipated, by external adhesions, were markedly dilated, proving that the cause of the obstruction must be lower down. On pulling up the first part of the jejunum, preparatory to completing the anastomosis, it was found to be filled with some semi-solid material, somewhat sausage-like in shape and consistency. On opening the bowel, a piece of gauze presented. On withdrawing it, it was found that the upper end was matted together in the form of a knob, quite scentless, but the other end tapered off and extended some distance down the bowel. It had a distinct faecal odour. The operation of posterior gastro-jejunostomy was proceeded with, and the patient made an uninterrupted recovery.

There is but one explanation, I think, of the condition found—namely, that the gauze plug used at the second operation had ulcerated its way through the parietes of the second part of the duodenum, and been carried down by normal peristaltic action to the upper part of the jejunum, where, for some unaccountable reason, it had stuck, and proved the source of the obstruction. Another somewhat similar case is worthy of narration.

It was in 1910 that I operated in the Victoria Infirmary upon Mrs. T., aged 49 years, for well-marked pyloric obstruction. Gastro-jejunostomy was performed. As a protective measure, prior to making the anastomosis a plug of gauze with tape attached to one end was inserted into the abdominal cavity—a practice constantly carried out. A pair of pressure forceps is attached to the end of the tape to prevent the possibility of the plug slipping into the abdomen and being forgotten to be withdrawn. In this particular instance the forceps cannot have been attached, and the tape must have got pushed into the peritoneal cavity and been overlooked. She made a good recovery, and left the infirmary about a month after the operation, taking her food well and suffering from no discomforts.

I was asked by her doctor to see her about two years later for acute intestinal obstruction. He then told me that about three months after she left the infirmary she noticed a string, as she called it, protruding from the anus, which upon being pulled withdrew a long strip of gauze. For the acute obstruction she was at once removed to the infirmary and operated upon. Some adhesions were encountered, and one band which passed across a loop of bowel, considerably constricting it, was obviously the cause of the obstruction. A linear scar was noticed on the anterior surface of the sigmoid flexure, and this, as far as it was possible to discover, was the only evidence to suggest that the gauze may have made its entrance into the bowel at this spot.

It is not unreasonable to assume that the adhesions which were found, together with the constricting band, were the result of a chronic adhesive peritonitis set up by the presence of the gauze for some time free within the peritoneal cavity. Inasmuch as it was only three months after the operation upon the stomach that the patient withdrew the plug from the rectum, it was at least within this period that the gauze had ulcerated its way into the intestinal canal.

My object in introducing these two cases is not to illustrate the risks attendant upon the use of gauze for strictly operative purposes—risks which may be avoided, and which when followed by untoward results might justly be attributable to a certain amount of culpable

neglect—but to support the deduction which I intend to draw that the presence of gauze packing in contact with healthy bowel for any length of time may result in the visceral walls being perforated. I have, on not a few occasions, noticed that, on withdrawal of a gauze pack which had been left in the wound for a few days after the operation, a faecal discharge has, if not immediately, in a day or two, ensued. One could not be certain that the gauze was the cause; but the sequel has been too frequent not to make one somewhat suspicious of its being so. It was only after noticing the very striking and comparatively rapid effect of a piece of dry gauze in contact with the bowel for so short a time as half an hour—as illustrated in the first case narrated—that my suspicions seemed confirmed. It is quite possible that, had the gauze been previously wrung out of a warm saline or sodium citrate solution, this rapid adhesive effect would not have been produced. But with such results as those which accrued in the latter two cases it is hardly possible to conceive that any different course would have been pursued by the gauze had it been dry or moist. For, if used dry, it must soon have become soaked with the exudates, and so acquired much the same condition as that originally inserted moist. It is reasonable, however, to infer that a solution such as that made with sodium citrate, when saturating gauze tissue, will render it less irritating to the peritoneum—for the comparatively short period of an operation—than if the material had not been so treated and had been employed dry.

There may be said to be four other disadvantages arising out of the use of gauze packing, and these are in more or less direct proportion to the length of time the packing is retained. One is that if the packing be employed in septic cases without the adjunct of a drainage tube, it may act as a dam to the escape of any discharge. As soon as the gauze has taken up the exudates to the limit of its absorptive power, the overplus must either make its exit through the meshes of that part of the pack which is led out of the parietal wound, or it must accumulate in the infected region or be diffused further afield.

A second disadvantage is the possible and, indeed, probable irritative effect of the packing upon neighbouring coils of healthy bowel, leading to a low form of adhesive peritonitis. Coils of intestine may thus become matted together or become adherent to the parietal peritoneum, and the adhesion so resulting may in some way lead to obstruction.

A third disadvantage is that whenever an opening is maintained through the parietal wound for any time—and the longer the time the more likely is the accident to happen—a weakened cicatrix is almost the inevitable precursor of a ventral hernia.

And, lastly, the withdrawal of a gauze pack is a very painful process. The degree of painfulness is possibly dependent upon the amount of gauze in contact with, and probably to some extent adherent to, the peritoneum lining the abdominal parietes. It is a known fact that while the visceral peritoneum possesses little or no sensitiveness to mechanical irritation, any friction or undue pressure upon the parietal peritoneum causes pain. So great is the pain in some cases when a "pack" or "plug" is being withdrawn that the administration of an anaesthetic becomes necessary.

In thus indicating the advantages and disadvantages of the use of gauze packing in intraperitoneal work, I have sought to do so by simply stating facts, the result of my own personal experience in abdominal surgery; the disadvantages would seem to so greatly outweigh the advantages that but one conclusion appears warranted—that gauze packing should be avoided except under definite and clear limitations. These limitations may be thus expressed: the use of as small a piece of gauze as possible and for as short a time as possible, which equally connotes the avoidance of large packs retained for several days.

A RECENT enactment of the Government of the Argentine Republic forbids pregnant women to work for a month before the expected date of delivery, and requires mothers to rest for forty days after confinement. They are to receive their full wages during both periods. Every factory and workshop where they are employed must be provided with rooms furnished with cradles, and mothers must go there for fifteen minutes every two hours to nurse their babes.

REMOVAL OF TONSILS AND ADENOIDS.

BY
SIR CHARTERS J. SYMONDS, K.B.E., C.B.,
F.R.C.S.,
CONSULTING SURGEON, GUY'S HOSPITAL.

THE admirable paper by my friend and former house-surgeon, Mr. W. H. Bowen, in your issue of October 4th, on the whole question of operation for removal of tonsils and adenoids deserves to be carefully read. It seems to me the soundest presentation of the subject we have had for a long time. I ask permission to emphasize one point, and to differ on another.

I.
That complete removal of the tonsil can be effected by the ordinary Mackenzie guillotine I have demonstrated for many years. That I have not succeeded as often as I wished is probably, and I hope is, due to my ignorance of the method described by Mr. Bowen. The ring, as he points out, needs to be placed behind and below the tonsil. Standing on the right side with the head very slightly inclined back, the left tonsil is first removed. The handle of the guillotine is brought across to the right, the fingers of the left hand press the tonsil inwards, while the thumb presses the blade outwards. Thus a firm grasp is secured. The head is immediately turned to the right and the blood swabbed away. Then the process is repeated on the other tonsil, the operator remaining on the patient's right. The fingers of the left hand control the blade while the thumb presses the tonsil inwards from behind the angle of the jaw. Mr. Bowen uses the guillotine with blade reversed, as have others, but the special feature to my mind is the manner in which he manipulates the interpalatal portion of the tonsil into the ring of the instrument. If it falls to my lot to remove any more tonsils this method must be tried, though a few days ago both tonsils on removal by the method described showed rounded capsulated deep surfaces.

II.
Is complete extirpation necessary? What amount of relief has followed partial removal? and in what proportion has recurrent tonsillitis occurred? These are important questions, especially in view of the large number of children now submitted to operation under the education scheme.

Some years ago I collected the after-history from private cases over a period of ten years and found the results had been almost uniformly good. Recurrence was very exceptional, and I can recall only one case requiring a repetition of tonsillectomy. I doubt if there be 1 per cent. of recurrence in children. If so, the modern operation of complete removal by dissection, involving as it has done serious bleeding, followed at times by anaemia, and sometimes by death, requires much to justify its general adoption.

My long experience and my notes of cases convince me that the guillotine is the best instrument. Those who operate frequently will develop modifications of their own, which they may think suitable for general adoption. It must be remembered that safety is a matter of the first importance, that the operation is widely practised, and by many with limited opportunity of acquiring dexterity.

No doubt in most operations the deep portion of the tonsil remains. Though the amount of harm that results is very small indeed, I have for some years removed this remnant by a curette, and think with benefit. Hartmann's right-angled adenoid curette is the most convenient, but any sharp spoon will answer.

III.
The point on which I would differ from Mr. Bowen is the anaesthetic employed. In a well organized unit of experts, constantly doing team work, risks are reduced to a minimum, and the anaesthetic securing the most rapid effect and quickest recovery will be employed. But again, for wide employment and by persons of varying experience I cannot think that ethyl chloride is safe, nor does it give sufficient time for any but the dexterous operator who can complete removal of tonsils and adenoids in two minutes. Even then I much doubt if there be sufficient time to clear Rosenmüller's fossa when filled with soft adenoid tissue. For these reasons I have never

liked this agent. But this may be prejudice. Whatever anaesthetic be employed, safety must be the first consideration. Death should never occur in so simple a proceeding, and has always been due to the anaesthetic. Chloroform, either pure or in mixture, has been the cause. It is surely an excuse to talk of the status lymphaticus.

My object in this note is to emphasize the safety of ether for general use in removal of tonsils and adenoids. It became necessary in the out-patient department at Guy's Hospital as early as 1890, when these operations became numerous, to devise a rapid and safe method of producing anaesthesia, and one followed by quick recovery. Ether given by Clover's inhaler we found fulfilled all these conditions, and during thirty years I have—except when in private a special anaesthetist has insisted on some modification—employed no other method. To this, and this alone, I must attribute the absence of any fatality. There were some 300 operations each year at Guy's, and, adding cases in private, the number might safely be set down as between 4,000 and 5,000. Let me add that in private in the early days the anaesthetic was nearly always given by the medical man, who very rarely knew anything about ether. I never went to a case without ether and a Clover's inhaler, and generally put the patient under myself, leaving the doctor to carry on while completing my preparations.

Though I have been constantly operating during the war and supervising others, and therefore attending many operations, I question whether any anaesthetic can compete with ether for short operations, or Clover's inhaler as a means of administration where gas and oxygen are not available. The open method has, of course, replaced all others for long operations. There are some little tricks no doubt connected with the successful use of a Clover, and if you will give me space some day I will describe how a child or adult can be put under without a struggle, and without any feeling of suffocation, in four minutes.

Gas given before ether in throat operations is distinctly harmful; it produces much congestion and mucus, and prolongs the whole operation. Ether given by Clover's apparatus will, after four minutes, give an equal period of complete anaesthesia without abolishing the reflexes.

Let me in conclusion confirm the great importance of Mr. Bowen's test of safety when ethyl chloride is used, and I would also add chloroform—not to begin until there is a pharyngeal reflex. In my early operations on tongue cases I noticed that the breathing sometimes ceased when the tongue was drawn forward; I therefore waited until some resistance to the opening of the mouth returned. Then only is it safe to insert the gag, and the same applies to all mouth and throat operations.

CUTANEOUS ANTHRAX.

BY

ERNEST F. NEVE, M.D., F.R.C.S. EDIN.,

SURGEON TO THE KASHMIR MISSION HOSPITAL.

ANTHRAX is extremely common in Kashmir among cattle. Every few years an epidemic sweeps through the valley, carrying off thousands. It is discreditable to the administration that the prophylactic serum, which is procurable at the Imperial Bacteriological Laboratory, Muktesar, has not yet been brought into use.

Since 1900 seventy-five cases of "malignant pustule" have been treated in this hospital. The disease is becoming more frequent, for during the past three years twenty-five patients, or one-third of the whole, were admitted. All were males and between the ages of 14 and 57. I have never seen "malignant pustule" in a female. No doubt in some instances the disease was contracted while skinning sheep and cattle dead from anthrax. So far as I know, the hides of these animals are exported without any kind of warning or precaution. Flies do not, I think, play an important part in the transmission of cutaneous anthrax. It is quite as common in midwinter when there is hard frost as in the summer.

Of the cases 40 per cent. were affected in the upper extremity, 32 per cent. on the head, neck or face, 12 per cent. on the back, and the rest on the abdomen, chest, or lower extremity.

Cutaneous anthrax is a better name than "malignant pustule." The appearance is characteristic. The lesion is like a very large and acutely inflamed vaccination vesicle, with depressed dry dark brown centre and raised circumference with vesicular edge. The skin around is red, and there is inflammatory oedema. There may be satellite vesicles. These blisters contain serum, and the bacillus can easily be demonstrated. In some cases the lesion is of considerable size. I have seen one five inches across, and another with a diameter of four inches. The lesions may be multiple. One patient had six separate infected areas, another five. In a third the forearm and the head and neck were involved. A fourth case had five lesions on the abdomen. Another, a man who worked among sheep, and who had an abscess in the iliac region, got infection of the wound. The constitutional symptoms vary much. In cases brought late there may be profound toxæmia, with circulatory depression, high temperature, running pulse, albuminous urine, and other signs of visceral infection. One patient died the evening of admission. Four others died within forty-eight hours. In these late cases in which systemic infection has occurred, no treatment avails. In Kashmir the cases occur among villagers, farmers, shepherds, etc. I have not met with a single case of pulmonary infection.

The treatment we adopt is very thorough cauterization with a red-hot button cautery. Excision and incisions, recommended by some textbooks, I regard as almost equally dangerous, tending as they do to open up fresh planes of communication, and thereby promote systemic infection. The natural local reaction to the pathogenic irritant is very strong. There is most vigorous leucocytosis. As a rule the blood is not infected. The cautery, while destroying the virus, also increases the local reaction. Clinically, our records point to this as the most satisfactory method of local treatment. Slavov's serum has been recommended. But most of these cases, when they come under treatment, must have already produced their own antitoxins; those who have not and are almost or quite moribund are hopeless. Seven cases of our series of seventy-five died, giving a mortality of 9.3 per cent.

RUPTURE OF LARGE INTESTINE: OPERATION: DEATH.

By CAPTAIN E. HUNTLEY, R.A.M.C.,

SURGICAL SPECIALIST TO THE MILITARY HOSPITAL, FARGO, SALISBURY PLAIN.

I was under the impression that without ulceration, associated with recent or old disease or with the presence of new growth, rupture from straining at stool could not occur. In the following case, however, a man, straining badly, ruptured his bowel at a site where neither enteric nor dysenteric ulcers are commonly found.

Captain —, aged 34, was admitted to hospital on May 26th, 1919, suffering from intense abdominal pain. The history he gave was that he had always been very constipated. He had served nine years in India, but had never had typhoid or dysentery. He had attacks of malaria, the last five or six years ago, but up to the afternoon of the day of admission he had enjoyed excellent health, being, as he expressed it, "as strong as a lion." About 4 p.m. on the day of admission he went to the latrine, and while straining very hard, felt "something give way," and a sudden pain in the splenic region of his abdomen. He had felt sick, but up to the time of admission, about 6 p.m., had not vomited; he had passed flatus. He was in a somewhat collapsed condition, cold and clammy. Temperature 97° F., pulse 88. The abdomen was distended, but not markedly. There was general tenderness all over, but mostly under the left costal margin, and here there was more rigidity than elsewhere. Liver dullness was absent. Whilst examining him he vomited. There was nothing characteristic in the vomit. Examination by the rectum revealed nothing abnormal: no faeces could be felt. An attempt to give an enema caused him such intense pain that it was given up.

Captain J. R. Caldwell, R.A.M.C., very kindly saw the patient with me, and it was decided to operate at once. An abdominal incision was made in the middle line above the umbilicus, and later extended both upwards and downwards. As soon as the peritoneum was opened there was an escape of turbid fluid with flaky material. Large quantities of fluid were found in both flanks, with portions of floating vegetable matter. After diligent searching, nothing in the nature of a rupture was found, until the abdominal incision was extended six yards well below the umbilicus, when a rent in the large bowel about the junction of the sigmoid and rectum was visible. This ren-

was quite without any induration about its edges, and had all the appearance of being of recent origin; it was about an inch in diameter. It was closed by a purse-string suture. The abdominal cavity was then sponged as dry as possible, a large quantity of liquid and solid faeculent matter being mopped out of the pelvis and two drainage tubes inserted. The patient became very collapsed and pulseless towards the end of the operation. He was put back to bed and the usual methods adopted to try and overcome the shock. He passed a very restless night, with continual vomiting of darkish brown fluid. He died about 3 p.m. next day, never having got over the shock of the operation.

Post-mortem examination of the bowel was made by Captain Caldwell, in the presence of Colonel Sir A. W. Mayo-Robson. No ulceration or disease of any kind could be made out. The rent was on the free side of the bowel, and the suture had completely closed it, rendering it water-tight.

The portion of the bowel affected was sent, at Colonel Mayo-Robson's suggestion, to Professor S. G. Shattock, pathologist to the Royal College of Surgeons, for examination. The report received states that there is no evidence of either ulceration or new growth nor of any diverticulum. Thus no cause to explain the rupture can be assigned.

I desire to express my thanks to Lieut.-Colonel A. R. Henchley, D.S.O., R.A.M.C.(T.), for his permission to publish notes of this case.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ASPIRIN IDIOSYNCRASY.

THE following case of aspirin idiosyncrasy is of interest, after Dr. Karunaratne's case and the subsequent correspondence on the subject:

On August 22nd a man, aged 34, awoke with a severe attack of neuralgia, and at 9.15 a.m. took 10 grains of aspirin. An hour later he noticed that his eyelids and lips were beginning to swell. This was rapidly followed by difficulty in swallowing and in breathing through the nose. A rash then appeared all over the body. I saw him at 11.15 a.m., and he then had marked oedema of the eyelids, lips, and gums, and running at the nose and eyes. The arms, chest, and abdomen were covered with an urticarial rash. The pulse was 80 and the temperature normal. Two hours later the symptoms began to subside, and when seen at 5.30 p.m. the same day there was only slight oedema of the eyelids and upper lip; the pulse was 72 and the temperature normal. He could swallow without difficulty and breathe easily through the nose. He had a similar attack in November, 1918, after taking 5 grains of aspirin. On that occasion the symptoms started three and a half hours afterwards, and the attack lasted for twenty-four hours. At that time he was told that he had influenza. In April, 1918, he had an operation for mastoid disease, and since has taken aspirin only on the two occasions mentioned, and each time the same symptoms occurred. Before the mastoid operation he had taken aspirin several times without any untoward symptoms. Since the operation he has had a bad attack of neurasthenia, which lasted until three months ago.

He has been subject to nasal catarrh, but has not had nasal polypi, enlarged tonsils, or asthma.

Shanklin, I. W.

R. F. BOLT.

TRENCH FOOT LEADING TO GANGRENE.

SOWAR G. S., 12th Cavalry, was admitted to No. 1 Indian General Hospital, Karachi, on February 13th, 1919.

History.—The patient stated that he was exposed to damp and cold in the trenches in Mesopotamia for several days in the winter of 1918. He was admitted to No. 20 Casualty Clearing Station on December 8th, 1918, for swelling and oedema over both feet and the lower part of the legs, with severe pain, blisters, and marked discoloration of the skin over the affected parts. Later on the distal parts of the right foot shrivelled and turned black, ulceration and sloughing set in, and amputation was performed through the metatarso-phalangeal joints on January 8th, 1919. In the left foot an abscess formed below the internal malleolus which burst and continued discharging for some time. He had an irregular temperature throughout.

On admission a boggy swelling with oedema was present on both feet and the lower two-thirds of both legs

with slight greyish discoloration of the skin. He was unable to walk, and movements of both feet were very limited and painful. The operated stump of the right foot was discharging through several small sinuses. The probe could go about half an inch up, striking bare bone. There was no sinus in the left foot. The general health was very weak, and he was emaciated and anaemic. He was put on tonics, and a eusol bath was given to the right foot morning and evening. The wound has healed; the oedema is less, but the boggy swelling is about the same. The general health slightly improved. The x-ray report is as follows:

Right Foot.—All the metatarsal bones are necrosed; the shaft of each appears to form one large sequestrum, which is gradually becoming reduced in size and density and is surrounded by a growth of new bones.

Left Foot.—Irregularity of shaft of second and third metatarsal bones.

Right Leg.—Necrosis of lower end of fibula, the whole of the lower third of tibia appears to be a large sequestrum round which new bone is forming.

Left Leg.—Necrosis of lower end of fibula. The whole of lower third and part of mid-thirds of tibia appears to be one large sequestrum which is surrounded by growth of new bone.

The presence of a large number of septic sequestra presumably lying in a box of new bone formation is the unusual and interesting feature of the case. There are absolutely no signs of any abscess formation. I must thank Lieut.-Colonel R. W. Anthony, I.M.S., Officer Commanding No. 1 Indian General Hospital, and Major L. P. Stephens, I.M.S., Surgeon Specialist Karachi Brigade, for permission to send these notes for publication.

E. N. GOYAL, Captain I.M.S.(T.C.).

Karachi.

No. 1 Indian General Hospital.

Reports of Societies.

TRENCH FEVER.

AT a meeting of the Section of Epidemiology and State Medicine of the Royal Society of Medicine on October 24th, the President, Dr. E. W. GOODALL, in the chair, Major W. BYAM, R.A.M.C., read a paper on trench fever: its epidemiology and endemology. He defined trench fever as a blood infection communicable from man to man by means of the louse, characterized by recurrent pyrexia, headache, giddiness pain in the lumbar region and limbs often of considerable severity, conjunctival congestion, sweating, moderate leucocytosis at the height of the fever, and slight enlargement of the spleen.

The habits of the louse were described, and an account was given of some experiments tending to show that lice migrated more readily from the person of a febrile man to that of his neighbour than when the original host was normal. The experimental work of the Trench Fever Committee was summarized, and that of other observers, leading to the following amongst other conclusions:

1. Lice fed on trench-fever patients may be infective in from five to eight days from the first feed.
2. Such lice are certainly still infective up to the twenty-third day.
3. The excreta of such lice are infective.
4. The presence of *Rickettsia* bodies in the excreta of lice is highly correlated with the infectivity of such excreta.
5. As little as 0.1 mg. of infective excreta injected subcutaneously may produce the disease.
6. Lice can become infective on an afebrile patient.
7. The blood may still be infective so late as the 443rd day of the disease.
8. Infection probably does not occur by the mouth or by inhalation.

In the ensuing discussion, to which Dr. BUCHANAN, Dr. ARKWRIGHT, Mr. BACOT, Dr. BROWNLEE, Dr. CARMALT-JONES, Dr. CHALMERS, and Dr. BUTLER contributed, there was some difference of opinion as to the cogency of the experiments purporting to show that lice migrated more readily from a febrile patient. The probability of the disease becoming widespread in civilian life was debated, the general opinion being that this was unlikely. Attention was drawn to the value of hyperaesthetic skin areas in the differential diagnosis.

RECLASSIFICATION AND TREATMENT OF PENSIONERS.

A DISCUSSION on "The reclassification and treatment of pensioners" took place at the meeting of the Medical Society of London on October 27th.

The subject was opened by Colonel A. L. A. WEBB, C.B., O.M.G., who described the medical organization of the Ministry of Pensions. He said that in April last the medical department of the Ministry of National Service was amalgamated with the medical service of the Ministry of Pensions, and gave to the latter the peripheral medical organization which was essential. The first branch of the service dealt with reclassification or boarding, together with the supply of personnel for the various medical organizations which were set up in the country; the second dealt with treatment; the third with convalescent centres, where training as well as treatment was afforded (five or six of these centres were being organized in various parts of the country, the first at Blackpool); the fourth had to deal with accommodation and supplies, and the fifth was an intelligence branch, which was required to keep the service informed of the number of boards necessary and also to report upon developments affecting pensions overseas and at home. Approximately 16,000 men, not counting officers, came up for boarding every week. The service had now been re-boarding for a considerable time, and was organizing appeal medical boards which it was hoped would dispel individual grievances. Very large numbers of cases fell within the categories of orthopaedics, neurasthenia, and tropical diseases, and the medical service was placing on the staff of each regional commissioner officers who had had special experience in certain given disabilities or diseases, and whose duties would include the giving of advice on the formation of clinics in their region. It was hoped to have in each region or in every two regions—a region being analogous to a command—an orthopaedic centre, and radiating from each of these centres a considerable number of orthopaedic clinics under surgeons who would be within the administrative control of the commissioner for medical services of the region. On the same lines it was hoped to develop clinics for neurasthenia and other conditions. Powers would be given to the regional directors in the appointment and supervision of referees and of the staffs of hospitals. They hoped within the next four or five months to take over from the army a sufficient number of hospitals for their purpose.

Captain R. McNAIR WILSON dealt with one difficulty of reclassification—namely, that of cases which came to boards and hospitals with diagnoses that were symptomatic instead of fundamental. The most important of these cases were those called "D.A.H." Trench fever alone accounted for a large number of the so-called heart cases, and so did malaria and dysentery. The classification of these men as heart cases was erroneous and detrimental. The men should be reclassified according to their actual diseases, and treated and, if possible, cured. The Ministry of Pensions should refuse to accept such a diagnosis as "D.A.H."; and a diagnosis of bronchitis, myalgia, lumbago, and so forth should be regarded with grave doubt until the examiner had looked beyond the symptoms to the cause. This, if looked for, would be found much more frequently than might be expected.

Major W. BYAM said that at Hampstead he had been able to demonstrate, as a result of experimental investigation, that old and chronic cases of trench fever were still infective (in one case after nine months, and in another after fifteen months). Many of the men whose condition was described as neurasthenia, or as "D.A.H.," were not suffering from the after-effects of their infections; their symptoms were due to a continuance of the infection.

Mr. WARREN LOW, C.B., raised the question of whether the pension in surgical cases should be assessed on anatomical or on functional grounds, and also of whether the payment of a lump sum in certain cases was not preferable to the payment of a continuing pension. He thought the payment of a lump sum might lead to an earlier adaptation of a man to his surroundings than would a continuing pension, which suggested to him that he remained unfit. He also greatly deprecated the interference of pensions

agents or attorneys, whose activities in workmen's compensation cases had not always been desirable.

Dr. MONTAGUE SMITH, speaking as a referee, urged that referees should remain part-time officials, owing to the fact that ex-service men were inclined to regard the whole-time referee as a Government hack, with a bias against their claims.

Dr. CAREY COOMBS said that at Bristol the local profession had combined to form a representative committee to hammer out some sort of system for the treatment of ex-service men. They felt, as the previous speaker had said, that the ex-service man looked upon every referee as an official who was paid to get the better of him. It was found possible at Bristol by a simple organization to mobilize the whole profession for the care of the ex-soldier. The type of organization proposed there was that the man's own doctor should have at his back a suitable panel of consultants—that is to say, men who had had service experience themselves in their particular branch of medicine or surgery—and beyond these again should be hospital accommodation, while the whole plan would be held together by an administrative officer. The idea was being taken up in Bristol with enthusiasm.

Dr. DE HAVILLAND HALL raised the question of whether the pensions authorities could insist upon any form of surgical procedure they might think necessary for putting a man into a condition in which he could again earn his living. Mr. LAMING EVANS, replying on this point, said that his experience at his own orthopaedic centre was that, save in the most exceptional cases, if the men were offered an operation which enabled them to resume work they gratefully availed themselves of it. He added that quite 25 per cent. of the cases coming to his own centre were disabilities of a functional or spasmodic character with no true deformity, and fortunately these cases were capable of being dealt with quite easily, given the proper persons in charge of them.

Dr. W. H. WILLCOX asked what steps Colonel Webb was taking with regard to classification of different kinds of diseases from the point of view of treatment. He mentioned that in hospital practice he constantly saw men who came up complaining of quite an imaginary affliction, and yet it was out of the question to describe them as malingerers.

Colonel WEBB, replying first on the question of reclassification from the point of view of treatment, said that in London the boards were grouped into one big centre at Chelsea, and there the Ministry was opening clinics to assist the work of the boards. A clinic for tropical diseases—if he might so describe the set of conditions which included malaria, dysentery, and trench fever—was already in working order, with Sir Ronald Ross in charge. To this clinic patients were sent from the boards, which were working in the same building. If further classification or investigation was necessary, special beds were set aside for the purpose in hospital. The idea was that the men should be referred to the special tropical or other section for investigation, in the hope that if possible a definite diagnosis might be arrived at. The basis of assessment for pension hitherto had been the comparison of a disabled man with a healthy man of the same age. A question now urgently arising was as to the time when they should begin to consider that a man was entitled to a permanent pension. In view of this and other reclassification questions, particularly the extension of the schedule in the warrant so as to include other medical and surgical conditions than the present inadequate list and thereby to secure quicker and more uniform boarding, he had asked the Minister to request the Royal Colleges of Physicians and Surgeons to send two representatives to confer with the Ministry on these points. The first of these conferences would take place on Friday of the present week, when it was hoped that certain suggestions would materialize which would be laid before the Minister. The Ministry, added Colonel Webb, was well aware of the attitude of ex-soldiers towards whole-time referees, and it had no intention, so far as he knew, of employing such referees, or of altering the present arrangements. He was non-committal on the subject of the Bristol arrangement, and desired to see the plan in more detail; but he stated that the Ministry actually had an administrative officer or officers in Bristol, and machinery for employing consultants, both medical and surgical.

Reviews.

A PLEA FOR THE TONSILS.

PROFESSOR K. H. DIGBY'S *Immunity in Health*¹ is an essay on the function of the tonsils and other subepithelial (or gastro-intestinal) lymphatic glands in the bodily economy. He argues that the lymphatic tissue of the tonsils and appendix, for example, is of functional importance to the body, and gives good reasons for rejecting the short-sighted view that these organs are vestigial, functionless, and therefore worthy only of excision. He points out that lymphoid follicles or Peyer's patches—or both—occur from end to end of the alimentary tract, but he argues that the whole anatomical arrangement of the subepithelial lymphatic glands is such as to bring them into close connexion with the chief collections of bacteria lying outside of, but adjacent to, the tissues. "The circumpharyngeal ring meets the bacteria entering with the food (and with the inspired air in the case of mouth-breathers). The Peyer's patches, the appendix, and the solitary follicles are placed around the excellent incubating media in the ileum, caecum, and ascending colon, precisely those parts which are swarming with organisms. The stomach, on the other hand, protected from bacterial growth in its contents by the acid nature of its secretion, is almost free from lymphatic tissue, except towards the pylorus." Again, the subepithelial lymphatic glands in health, he says, are continuously ingesting bacteria in enormous numbers, and this ingestion must enhance the general powers of the organism against these bacteria. Further, he reminds us that these glands are largest and most active in young children at a period when individuals are acquiring immunity to the various common infections, while in old age all lymphatic structures tend to atrophy.

His argument, therefore, is that the tonsils must be looked upon as organs constantly sampling adjacent bacteria and immunizing the body against their invasion—both breeding and training the lymphocytes they produce for these purposes. Many ingenious arguments, based on comparative anatomy and the observation of the body in health and disease, are advanced in support of this view of the importance of the lymphatic apparatus; it has, indeed, much to recommend it. Professor Digby goes on to contend that the surgery of the subepithelial glands, more particularly of the tonsils and of adenoid vegetations, should be conducted upon lines more conservative than those at present in vogue. Mere enlargement producing no deleterious symptoms should not be considered adequate reason for operation. The indications for partial excision of the faucial tonsils should be chronic interference with swallowing or with speaking, and the removal should be complete if the tonsil contains a focus of chronic infection. Adenoids should be operated on only if they produce chronic mouth-breathing or deafness. The book is clearly written and well illustrated, and is well worthy of the attention of all practitioners, but especially specialists who deal, and deal perhaps too freely at times, with the structures mainly under consideration in its pages.

PSYCHOSES OF WAR.

In his book on the *Psychoses of War*² Dr. MARR has reviewed practically the whole subject of psychiatry, and has embodied a great number of excellent clinical observations on military cases. The book is extremely well illustrated, free use having been made of prints from cinematographic films; the method of using strips of five or six serial photographs expresses abnormalities of gait and movement with good effect. Had the author confined himself to clinical observations the result would have been a very readable contribution to descriptive psychiatry, supplemented by an excellent appendix on case-taking. Unfortunately it aims at being a methodological exposition of psychiatry based on psychoses observed during the war,

and viewed from this point of view it contains much that cannot be praised. Nearly a third of the book is concerned with functional neuroses. The method of classification adopted is open to criticism; we are told that neurasthenia may be divided into three classes—(1) simple, (2) hysterical, (3) organic. It is at least incumbent on anyone advancing a method of classification so much at variance with generally accepted notions of the relation of hysteria and neurasthenia to state his reasons clearly. We have been unable to find that Dr. Marr does this, and the omission is the more to be regretted because the book would seem to be addressed to the tiro in psychiatry. He ought to be told that he is being introduced to an unusual view of functional disease, and that if he adopt it in hospital and public work he may encounter much difficulty in fitting his diagnosis into the generally accepted scheme. An attempt is made to use a species of localization of faculties which, though presented in anatomical terminology, resembles not a little the old "faculty psychology" of Gall and Spurzheim. The author has been impressed by some of the work on cerebral development of Flechsig and other investigators, and he proceeds to apply this to the localization of psychical processes without, as it seems to us, an adequate appreciation of its at present fragmentary and chiefly anatomical significance. When we come across such a sentence as

The insular centre formed the idea that the old wry neck had returned, and wry neck thus developed automatically and without reference to the memory of personality,

we would almost suspect the seriousness of a writer who has shown himself capable of brilliant and lucid exposition of clinical observations. It is questionable whether in a textbook intended for not very advanced students of psychiatry it is wise to relate complicated analytical procedures which are still subjects of investigation as though they were generally accepted as trustworthy diagnostic methods. It is scarcely judicious to leave the student in any doubt whether such a method as that of Mott and Halliburton for the detection of choline in the cerebro-spinal fluid is one to be attempted for purposes of diagnosis.

Again, the author seems hardly to appreciate the limitation of laboratory methods when he proposes a test of the toxicity of the urine as a useful differential diagnostic method between epilepsy and hysteria. The book is marred by the introduction of debatable physiological views in a manner that may mislead the uncritical, and in some places by a blending of anatomical and psychical functions, as, for instance, in the sentence, "Hypnosis acts by suggestion, and implies a state of suggestibility in the higher neurones." We have said enough to show that in spite of its many excellences this book can only be safely used by those who have knowledge sufficient to enable them to form their own estimate of its physiological statements whilst appreciating the merits of the descriptive clinical matter it contains.

WILLIAM HOWARD LISTER.

WILLIAM HOWARD LISTER, while still a medical student at University College, London, served in the British Red Cross detachment with the Greek army during the Balkan war (1912); took the diplomas of the Conjoint Board in England in 1913; went a voyage and was wrecked early in 1914; was among the first twelve to receive a temporary commission R.A.M.C. in the first days of August, 1914; was at the Marne and the Aisne; was badly wounded in attempting to rescue a wounded officer on October 23rd, 1914; was in the first list of awards of the M.C. (June 23rd, 1915); won a bar to the Cross during the Somme fighting (1916), a second bar (awarded on the field) in the same year, and the D.S.O. a year later. He was killed on August 9th, 1918, near Asiago. He was not only a gallant officer, but a good organizer, and Mr. WALTER SETON has done well to print a biography of a man who crowded into his thirty-one years of life effort and experience that might have well filled the full span. Lieut.-General Sir Ivor Maxse, who commanded the 18th Division, with which Lister saw much of his service in France, in a foreword to Mr. Seton's book, says of him that "his eager temperament and immovable standard of duty made him indispensable to the troops whenever fighting was on . . . his power of organizing his own command in

¹ *Immunity in Health*. By Kenelm H. Digby, M.B., B.S., F.R.C.S., Ho Tung Professor of Clinical Surgery and Professor of Anatomy at the University of Hong Kong, etc. London: Henry Frowde, and Hodder and Stoughton. 1919. (Demy 8vo, pp. viii+130; 31 figures. 6s. 6d. net.)

² *Psychoses of War, including Neurasthenia and Shell Shock*. By H. C. Marr. London: Henry Frowde. 1919. (Med. 8vo, pp. xiii + 292; illustrated. 16s. net.)

battle, his courage and tenacity of purpose during an action, his example and influence with his subordinates are obvious . . . but the tale of his military achievements serves especially to illustrate the exacting duties and heroic courage required of medical officers on the modern battlefield."

Lister had shown qualities of leadership and of devotion to an ideal while still a student before the war. He was a loyal son of his college, was the leader of the protest against the perpetuation of a slander by the statue of the brown dog at Battersea, was one of the founders of University College Hall, at Ealing, and was keen to promote the corporate life of the college; but he also looked beyond the college to the university, was eager to make Londoners take a pride in the university, and was one of two witnesses for the Students' Representative Council before the Royal Commission on University Education in London. Like others who dreamed the same dream before him, his efforts did not meet with any obvious success, but if we can now see some movement in the desired direction it may justly be claimed that he did his part in helping it.

The book ought to be in the library of every students' union and medical school. It has been privately printed by the Medical Society, but copies (price 10s. 6d.) can, we are informed, be obtained from the Senior Clerk, University College, Gower Street, W.C.

NOTES ON BOOKS.

SOME little while ago we announced the forthcoming publication of *Tubercle*,² a monthly journal devoted to all aspects of tuberculosis. The first number, dated October, 1919, has now appeared, and will, no doubt, be welcomed by many workers in this important field of medicine. The opening article is contributed by Dr. W. Holmboe, Medical Superintendent of the Mesnali Sanatorium, Norway, who deals with Jacobaeus's method of endopleural operations. Dr. John Guy of Edinburgh writes on the necessity for a uniform standard of classification in pulmonary tuberculosis, and Sir St. Clair Thomson describes a case of "innocent" tuberculosis. In addition to abstracts and notices of books, the new journal aims at giving a critical survey of the literature of tuberculosis and of progress in administrative measures; thus the first number presents a summary of the chief changes which have affected tuberculosis in its public health aspects during the war. The editors may be congratulated on the workmanlike appearance of the new magazine.

The book on *Geriatrics*⁴ by Dr. THEWLIS is a short treatise on senile conditions, the diseases of advanced life, and the general care of the aged. It begins with a preface, and two introductions by authorities on the subject. The text is divided into thirty-one chapters, each dealing with some disorder or aspect of senility, and containing many serviceable hints for the practitioner of medicine. There is nothing exhaustive about the author's treatment of the topics under discussion, but many illustrative cases are quoted, and the book abounds in practical suggestions for alleviating the discomforts and disabilities to which old age is liable. Dr. Thewlis writes with sympathy, and his book may be commended to the attention of general practitioners of medicine.

The thirty-fifth edition of *Sell's World's Press*⁵ contains a vast amount of information, up to date and classified, that should be of service to journalists, advertisers, and hosts of other people who are interested in the activities of the fourth estate. Here are to be found details about all the periodical literature of the world, press photographers, and agents, papers such as "Baconiana," "The Topaz of Ethiopia," "Red Tape," "B.M.G.," and scores of others with intriguing titles. One feels that the reader who is not catered for by one or other of the two thousand odd British papers and periodicals listed in one section of the book must be hard to please.

² *Tubercle*, No. 1, October, 1919. Subscriptions (25s. per annum) may be sent to the Publishers, Oxford House, Great Titchfield Street, W. 1.
³ *Geriatrics*. By Malford W. Thewlis, M.D., Associate Editor, Medical Review of Reviews, New York City, London: Henry Kimpton, 1919. (Med. 8vo, pp. 250; 15 shillings, 15s. net.)
⁴ *Sell's World's Press*. The Handbook of the Fourth Estate. Founded by Henry Sell. Thirty-fifth edition, edited by E. T. Brown. London: Sells, Ltd. 1919. (Roy. 8vo, pp. 660. 10s. 6d. net.)

MEDICAL SERVICES IN INDIA.

PROPOSALS FOR "TRANSFER."

LIEUT.-COLONEL R. H. ELLIOT, I.M.S. (ret.), gave evidence before the Joint Select Committee on the Government of India Bill on October 13th.

At the opening of his evidence and during its course he made it plain that he was expressing his own view, speaking as a retired officer, and not as a representative of the British Medical Association. He had had no opportunity, he said, of consulting the Association, and could merely express his own views, which were founded on a very large number of letters written to him by officers in India, both in the Medical Service and out of it.

The CHAIRMAN asked the witness whether he had given attention to the recommendations of the Montagu-Chelmsford report of the bill, and of the Functions Committee, with regard to "transferred subjects"—namely, that certain departments of work should be transferred from the control of British ministers, under whom they were at present, to Indian ministers, and whether he was aware that it was proposed that some of the medical services in India should be so transferred.—The witness replied that he had given general attention to the matter.

The CHAIRMAN then said that the Committee would be glad if, speaking on behalf of the Indian Medical Service and knowing their views, the witness would state the effect on the work of that department and on its recruitment which the proposal, if carried out, would be likely to have.—Colonel ELLIOT said that he believed that the step would be extremely unpopular, would lead to a large number of retirements among senior officers, and would certainly make recruiting of European officers in this country increasingly difficult. After four years of uphill work a settlement, thanks to the continued efforts and kindness of the Secretary of State, had almost been reached, and it would be extremely unfortunate if a change which would certainly be unpopular should be made at this time.

In reply to further questions, he said that Europeans did not like serving under Indians, for they did not feel confident that they would receive the same support and that the same progress would be made under an Indian as under a British minister. All civil medical officers would be affected by it.

In reply to further questions by members of the Committee, the witness said that a large number of Indians were in the Indian Medical Service now. There was progress in the capacity, both administrative and scientific, of Indians, and there would be greater progress if time were allowed, but he did not think that their services at the present time were of the same value to India as the services of medical officers from Britain.

The task of the Indian Medical Service was to bring out the best that was in Indians, and it would be able to do so, but the country was not ripe for any large change. In his opinion the effect of transfer of public health and sanitation to the care of an Indian minister would not be for the good of India at the present time. The same energy for sanitation and sympathy would not be obtained.

In reply to another question, he said that the feeling of dissatisfaction among I.M.S. officers was not peculiar to any province; it was the same throughout India.

Mr. ACLAND—pointing out that as there were Indians in the service at present who would no doubt receive promotion in the course of time (probably soon), a stage would be reached when Europeans were serving under Indians—asked whether the objection was to serve under an Indian minister as distinguished from an Indian superior officer.—Colonel ELLIOT said that though European officers might not like serving under Indian officers, what they regarded as a serious matter was that the last appeal in any matter should be to an Indian and not to a British minister.

In reply to Lord ISLINGTON, the witness said that there had been a feeling of dissatisfaction as regards pay for some years, but that it had increased. In England and elsewhere the outlook for medical men had improved. Expenses had gone up in India as elsewhere; officers now often found it increasingly difficult to live on their pay, and they had not the same opportunity of increasing their resources from private practice. During the war many of them had been on military service.

The report of the Public Services Commission in 1915 was disappointing, but since then the Secretary of State had helped very materially, and he hoped the question of pay would be met.

Lord SINHA asked the witness whether the objection of European officers I.M.S. to work under the control of an Indian minister was purely racial.—The witness asked for a definition of "racial," and added that he did not think the matter was a question of race, but that medical officers felt that if they served under an Indian minister they would not receive the same sympathy and support they would get from a British minister. There were many Indians that Europeans would be glad to serve under, but he was afraid that many would be unwilling to serve under most Indians.

Lord SINHA said that the Committee had been informed by other witnesses that Indians would probably be too enthusiastic in the matter of sanitation, and would be carried by their zeal into initiating measures in excess of financial resources.—Colonel ELLIOT replied that his experience with Indian ministers in the Government did not at all lead him to take that view.

In reply to further questions, he agreed that the more Indians in the Indian Medical Service, the less popular would it become for purely European officers. He, however, declined to express an opinion as to whether the remedy would be to reserve the Indian Medical Service exclusively for Europeans. The matter had, he understood, been dealt with by the committee which sat under Sir Verney Lovett, and he would not presume to make recommendations on the matter.

Mr. MONTAGU said that at present sanitation and public health in India were in the portfolio of Education, while the Indian Medical Service and the welfare of its officers were in the Home department, so that if the Education member and the Home member were both Indians, the destiny of the I.M.S. under the present constitution would be in the hands of Indian members. That being so, he asked whether what was now proposed would make much difference.—Colonel ELLIOT replied that if it was found that all the work of the I.M.S. was to be placed under an Indian minister, he thought it would greatly detract from the popularity of the service and make recruiting extraordinarily difficult.

In reply to further questions, he said that the mass of Indian people took no interest in sanitation or—an instance put to him—in the prevention of malaria.

Asked whether hospitals in India and Mesopotamia had been controlled by Indian officers I.M.S. with great success, the witness said that he knew that some had done splendidly.

Asked by Lord MIDDLETON whether the difficulties of the problem with regard to health in India were equivalent or greater than in this country, the witness said that he did not think that any Government in India had begun to wake up to the work that ought to be done. As an illustration of this point, he stated that there were 600,000 totally blind in the villages without anybody to care for them. Many of them might have been rescued if travelling hospitals had been sent among them. The amount of blindness that might have been prevented or cured was enormous. No Indian Government had begun to realize its medical responsibilities. Some years ago, before the war, Professor Krusius of Berlin, after visiting his hospital, asked whether he would receive and train three or four young Germans at a time if sent by the German Government. At that very time he was asking the local governments, through the surgeon-general and with his support, to send their own medical officers from their own districts to be trained at the Madras Hospital, but it was not done.

Asked whether there was not a strong case for making the head of the Indian Medical Service a member of the Governor-General's Council, he replied that he had always held that opinion which was shared by the whole service.

He added, in reply to another question, that the whole matter of medical work in India should be looked at in a bigger, broader spirit than hitherto. Much more ought to be done, and a strong impetus from the centre—the Government of India—was needed.

Sir HENRY CRAIK inquired whether, from his experience in India, Colonel Elliot thought that the substitution of Indian officers to a very large extent would mean the substitution of inferior scientific medical knowledge.—The witness said that at the present time the substitution of Indians in large numbers for British medical officers would set back the clock and stop progress. Gradual substitution was quite another thing. But to withdraw at the present time the enthusiasm, the research, and the initiative of the British medical officers in medicine and sanitation would be against the interests of India.

In reply to Sir J. D. REES, he said that it was quite a mistake to suppose that the Indian Medical Service was not popular with the people of India; it was, on the contrary, very popular.

Sir J. D. REES: You said the British Medical Association would not recommend officers to go out in the Public Works Department?—The WITNESS: I beg your pardon. I would like to say once again that I cannot speak for the British Medical Association. I have no brief for them. I am attending by request, simply as a retired officer, to give my experience. What I did say was that officers in the Civil Service, in the P.W.D., in the Police, and other services, who had come home, had called upon me to say that if Europeans ceased to enter the service they would not recommend young men to go out in the services they had themselves served in.

Sir J. D. REES said that the witness seemed to fear lest the appointment of an Indian minister of the department would impair the future of sanitation with the masses of India. Had the witness reflected what it might cost to sanitate scientifically 260 millions? The Minister might be wise in not plunging too far.—The witness replied: I am tired of this attitude on finance. I have had a beggarly 10,000 rupees refused me when I asked for it to make a medical school efficient for training Indians to minister to the needs of their own countrymen at the time when the Government which refused it, on the ground of economy, were handing back lakhs of unexpended balance to the Government of India.

In reply to Mr. SPOOR, he said that while he thought the Government of India might have done much more, he was of opinion that had the matter been in the hands of Indian instead of British ministers not one-hundredth part of what had been done would have been done; a great deal had been done, but not nearly enough.

Lord SYDENHAM asked whether it was not the case that medical research had been entirely inspired and mostly directed by European officers.—The witness said that was the case, but he thought that the time was coming when Indians would take an increasing part. Hitherto sanitary measures had depended for their execution on the efforts of the Government, and these efforts had been resisted even by riots.

In reply to further questions, the witness said that while with some notable exceptions the work of Indian medical graduates had been disappointing on the whole, he looked forward with confidence to their doing very much more good work in the future. As a matter of experience, Indians travelled very long distances to obtain treatment by European doctors.

Lord SYDENHAM inquired whether some Indian medical graduates were ready to practise either the Western or the Ayurvedic system.—The witness replied that some were, but that he hoped their number was small.

The witness agreed that if the Indian Medical Service broke down and medical services and sanitation were transferred under the diarchical system there would be a danger of serious collapse in all health questions.

There were many elements in the disinclination of British officers to serve under Indians, but one of the strongest was the reluctance of scientific men to serve under Indians who knew nothing of science and might be opposed to Western medical methods.

If Indians were to be sufficiently trained to administer the medical services, and if questions of medical relief in India were to be properly dealt with, substitution should be extremely gradual, and he considered that a leavening of Europeans would always be desirable.

ROYAL MEDICAL BENEVOLENT FUND.

At the last meeting of the Committee, held on October 14th, £313 2s. was voted to twenty-three applicants. The following is a summary of some of the cases relieved:

Daughter, aged 62, of M.R.C.S.Eng. who died in 1887. Applicant earns £1 a week by working on the land, and a little extra by needlework. Receives £20 at Christmas. Pays 6s. a week rent. Her property has been sold to pay debts. Voted £18 in twelve instalments.

Widow, aged 75, of M.R.C.S.Eng. who died in 1882. Only income £30 pension from another charity. Has four children, and they pay the rent, 9s. a week. Applicant is too old to work, and suffers from ill health. Cannot manage owing to high cost of living. Voted £18 in twelve instalments.

Daughter, aged 63, of M.R.C.S.Eng. who died in 1880. Has no income, and applies for help owing to the death of her brother-in-law, to whom she acted as housekeeper. Now living with her niece. Voted £18 in twelve instalments.

Daughter, aged 85, of M.R.C.S.Eng. who died in 1855. Applicant cannot make ends meet owing to the high cost of living and through the death of her brothers, who used to help her. She pays £104 for board and lodging. Voted £20 in twelve instalments.

Subscriptions may be sent to the Acting Honorary Treasurer, 11, Chandos Street, London, W.1.

THE MEDICAL STUDENTS' REGISTER.

THE new *Medical and Dental Students' Register*,¹ issued by the General Medical Council, gives lists of the students registered during the year 1918, together with statistical tables. The fluctuations in the size and distribution of the medical student body during the past fifty-four years are shown in an analytical table, which gives a summary of the medical students registered during each year in each of the three divisions of the United Kingdom from the commencement of students' registration in 1865 to the end of 1918.

If these tables are shown in graphic form the most curious ups and downs may be observed. Thus the gross total for the United Kingdom was 582 in 1865; it leapt up to 948 the next year, and remained at about that level until 1869, when it rose to 1,164. Between 1871 and 1875 it stayed somewhere between 1,200 and 1,300. From 1877 to 1881 it rose steadily to 2,171. During the next nine years it varied between 1,783 and 2,027. In 1891 it shot up from 1,846 to 2,405, only to fall next year to 1,671, around which figure it hovered for the next eight years. The record entry in 1891 is generally ascribed to the announcement of the forthcoming compulsory five years' curriculum, whereupon there was a rush of young men anxious to register as students under the old regulations. From 1901 to 1910 the total kept very steadily around 1,400. In 1911 it fell to 1,232—the smallest since 1873. From this low ebb it moved steadily up to 1,600 in 1914. In the two following years it kept about 1,900, rising to 2,150 in 1917 and to

2,253 in 1918, the latter being the largest since the high-water mark was reached in 1891. But whereas in 1891 out of the total of 2,405 students 1,308 were registered in England, 729 in Scotland, and 368 in Ireland, analysis of last year's total shows that Scotland had 942, England but 840, and Ireland 471. The Scottish registrations last year exceeded by far all previous records. In the first year of students' registration only 61 registered in Scotland, but there were 321 the next year, and thereafter the Scottish figures varied less from year to year and from decade to decade than those for England or Ireland; indeed the steadiness of the Scottish curve is remarkable. During the last four years the figures for Ireland have surpassed even those of the palmy days of the early eighties.

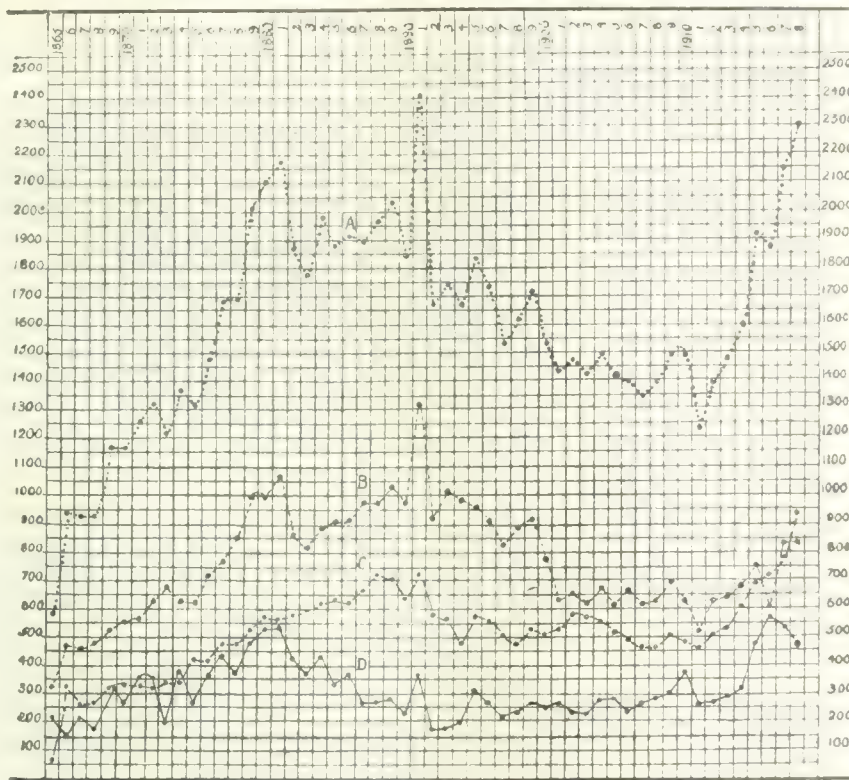
In all during the fifty-four years' registration rather more than 86,000 medical students were registered in the United Kingdom, the percentage for England and Wales being 47.81, for Scotland 32.59, and for Ireland 19.6. During the last quarter of the nineteenth century the gross yearly number of new registrations never fell below 1,500, but it did not again reach that figure until 1914, since when it has mounted steadily. The predominant position of the English medical schools, which up till then they had held, was lost at the opening of the present century. Notwithstanding the growth of English provincial universities Scotland has pressed harder and harder on the heels of England, and twice in the last three years her total has been a hundred greater than that of England.

The Polish Government is doing what it can to stem the western advance of typhus, but at the same time it is engaged in war along nearly the whole of its eastern frontier. While the Polish army is acting as the first barrier against the further invasion of the country by epidemic disease "it can hardly be just that the whole cost of protection should fall on the guardians and that the guarded should go free. The case seems to be one which calls for active assistance from governments as well as from voluntary organizations. . . . It should be frankly stated and generally understood that the resources of the Red Cross alone are insufficient to provide all the assistance required by eastern Europe in this great emergency, even if it were desirable for voluntary organizations to usurp duties which are more properly those of governments."

Investigations by the Commission.

The report consists of three parts: the first gives a general account of the Commissioners' visit and inquiries; the second is a copy of the interim report telegraphed to the head quarters of the League, at Geneva, on September 9th;

Numbers of Medical Students Registered in Each Year.



A = United Kingdom. B = England. C = Scotland. D = Ireland.

¹ Constable and Co., Ltd., London.

TYPHUS IN POLAND.

REPORT OF THE INTER-ALLIED COMMISSION.

WE have several times lately referred to the Inter-Allied Medical Commission appointed by the League of Red Cross Societies to make a survey of the prevalence of typhus and other epidemic diseases in Poland, and of the general sanitary condition of that country. The fourth number of the *Bulletin* of the League gives the full text of the report drawn up by the Commission. It is prefaced with a note by Sir David Henderson, Director-General of the League, in which the motives for dispatching a medical commission to Poland are briefly stated. Poland was selected for special examination because typhus had already swept that country, was still prevalent there, and likely to recur owing to fresh infection from the East. Save for the typhus epidemic, the distress and disease in neighbouring countries are, however, almost as severe as in Poland. Study of the Commission's report has convinced the authorities of the League that in order to cope adequately with the situation therein revealed more is needed than the combined, co-ordinated efforts of the voluntary societies composing the League.

and the third gives the chief findings of the Commissioners upon the matters referred to them. The president of the Commission was Dr. Hugh S. Cumming, assistant surgeon-general U.S. Public Health Service. The other members were Dr. G. S. Buchanan, senior medical officer British Ministry of Health; Professor A. Castellani, M.D., M.R.C.P., Italian Medical Service, and Dr. F. Visbecq, Médecin Principal de 1re Classe, French Army, Service de Santé. The Commission was appointed on August 6th last, and reached Warsaw on August 17th, where work began at once. Courteous aid was given by all officials of the Polish Government, and by non-official organizations and individuals everywhere. The first week was spent in visiting the municipal hospitals of Warsaw and a large refugee camp, and in studying the measures taken by the city authorities during the past two years to improve their methods of dealing with epidemic disease. The course pursued during the tour of investigation was as follows: The military and civil authorities of each district were notified beforehand of the time of arrival. After calling on the local authorities, an inspection was made of the hospitals, refugee camps, prisoners' camps, and of the housing conditions of the poor; and the prices and quantities of food available in the public markets were inquired into. A conference was held with the sanitary authorities, at which questions were asked according to a schedule. From time to time the Commission visited villages without previous notice. Warsaw was reached again on September 7th, after which some members of the Commission toured the region eastward as far as Brest-Litovsk.

The interim report stated that the typhus epidemic of this year had been very widespread and the number of cases and deaths enormous. Notwithstanding summer conditions the epidemic still continued, and was constantly being introduced from the east by refugees, prisoners of war, and the repatriated. This process would continue during the coming winter. Considering these facts, the military movements, and the general situation, the Commission anticipated very severe epidemics this winter unless the most energetic measures were taken. The active steps already undertaken by the Polish Government would not alone suffice. Invaluable service could, in the Commission's opinion, be rendered by the League of Red Cross Societies in various indicated directions.

Extent and Features of the Pandemic.

The main report opens with an account of the prevalence of typhus in Poland in recent years, and especially in 1918-19. The medical statistics, crude and imperfect as they were, gave indications of distinct value. Typhus, as is well known, is endemic in Poland, but before the war it manifested itself in general only by scattered cases. When, however, the invasion, destitution, and attendant causes brought serious social disturbances in 1914, typhus found in that country the most favourable conditions for its spread. In the past two years the scourge reached pandemic proportions. Almost the entire country was, and is, infected—the east, and especially the south, suffering most. From the beginning of this year to July 27th, the number of cases declared in "Congress Poland" was 124,620, with 9,657 deaths (7 per cent. case mortality). The official statistics for Galicia during the same period showed 21,208 cases, with 2,812 deaths (13.26 per cent.). In Galicia there has been a longer and better organization of public health services, and the statistical information is correspondingly more trustworthy. Among the military population during the same period there were between eleven and twelve thousand cases, divided about equally between troops at the base and troops at the different fronts.

War conditions are the evident causes of the transmission from local endemic prevalence to a state of pandemicity. "Once again typhus is revealed as the disease of physiological poverty. These causes have been sufficient to arouse latent foci. Moreover, it must be remembered that if typhus is a disease of poverty, it is also one which accompanies great migrations of peoples." Hidden in the rags of refugees from Russia the virus found Poland ripe for conquest. The most serious factor in the situation was that, notwithstanding the time of year, typhus continued, and even here and there increased, in many centres all over the country and among the troops

also. Hence the fear of recurrence of a large epidemic this winter in consequence of the bad conditions of living and increased opportunities of infection to be expected in the cold season.

The characteristics of the present epidemic in Poland are briefly set out. Most cases showed the typical features described in all textbooks, and seen by the Commissioners in previous epidemics. Complications were rare in Poland, in contrast to the Serbian epidemic of 1914-15. The diagnosis is generally made on clinical grounds, but in places with bacteriological laboratories the Felix-Weil reaction is much used for confirming the clinical diagnosis. The prognosis in the present Polish epidemic seems more favourable than in epidemics observed elsewhere. The treatment is symptomatic as far as this can be carried out with a lack of nurses, and a great scarcity of the simplest drugs, food, and medical comforts. During their tour the Commissioners observed a very large number of cases of relapsing fever. This coexistence of epidemics of the two diseases has been noticed for many years. Both infections are carried by the same insect, the louse, and all the measures taken to stamp out typhus should be successful in combating relapsing fever.

The conditions favouring the spread of typhus are enumerated as follows: (1) Gross overcrowding of persons in houses; (2) malnutrition and general poverty; (3) prevalence of body lice and head lice; (4) opportunities of infection; (5) fresh introduction of infection by refugees, etc. All these conditions have been greatly intensified or created by the many fluctuations of the tide of war throughout Poland. Lousiness, for instance, now seems to be practically universal, and personal cleanliness is at its lowest ebb.

Preventive Measures.

A large section of the report deals with the importance of checking typhus in Poland for the protection of Western Europe, and considers the question of a "sanitary cordon" along the eastern frontier of Poland. Apart from the humanitarian desire to aid the Polish people—weighed down with famine, overcrowding, and epidemic disease, yet still repelling the enemy at their gates—motives of self-protection require assistance to be given to Poland. The circumstances in parts of Western Europe are such that great loss of life and interference with the return to normal conditions might easily result if there were superadded a widespread epidemic of typhus fever. "It is a matter of international moment, therefore, that proper measures be instituted to prevent a flood of infection from Russia from continuing to overrun the country, and at the same time to free Poland itself from typhus infection as well as from those conditions which are conducive to the spread of other preventable diseases." With regard to the proposed "sanitary cordon," the Commissioners think it neither wise nor desirable to advocate this at the present time, if the term is used to signify an attempt, by strict military and police methods, to maintain a comprehensive medical control over the entry of every person through the frontier; but they strongly advocate the establishment of suitable stations on the main routes from the East where refugees could be individually examined, disinfected, and (where necessary) sent to hospital or kept under observation as contacts, meanwhile being well fed and cared for. A further useful check might be afforded by the issue of "sanitary passports" to refugees who have passed the medical tests and have been cleansed and disinfected. In this sense a limited "sanitary cordon"—regarded rather as a coarse filter than as a barrier—might be most useful not only as regards typhus but also other epidemic diseases.

The Commissioners next report briefly on the deplorable sanitary state of Polish towns and villages, and the risk of epidemic diseases especially associated with such conditions—for example, cholera, typhoid, dysentery. Poland, they say, needs many years of sanitary effort and good administration before real and permanent progress can be secured. Generally speaking, all the factors exist for the propagation of epidemic diseases carried by contaminated water, food, or flies. There is a possibility that small-pox also may become seriously epidemic in the winter and spring, while in some provinces malaria is quite common. Most of the population are probably immune to enteric group infections in consequence of attacks in childhood,

but they would have no such immunity towards cholera if this were introduced. Apart from direct sanitary measures, the extent to which Poland is likely to suffer from epidemic disease must largely depend on the aid given by the allied nations to the Polish Government in supplementing the food supply this winter. Again, throughout the country there is a serious shortage of doctors; for some twenty-eight million persons there are only about 3,800 doctors, of whom 1,400 are required by the army. There is also great need of trained nurses.

In these and other kindred directions the League of Red Cross Societies should prove invaluable. The principal and most immediate needs fall under four main heads—organization, supply of material, supply of doctors and nurses, and development of the Polish Red Cross Society. The Commissioners consider that the activities of the League should be directed by a representative on the spot in close communication with the Government departments and voluntary agencies concerned. They suggest that the League might obtain from different countries the services of medical officers recently demobilized and willing to undertake infectious disease work in Poland; the experience needed is that of medical treatment and organization in military or civil hospitals. Special knowledge of infectious diseases would of course be an advantage, as also a knowledge of colloquial French or German. Other things being equal, preference should be given to younger men or those who have previously had typhus. The medical officers employed should be guaranteed reasonably good conditions of living and opportunities for really effective work.

EFFECTS OF THE WAR ON PROFESSIONAL REMUNERATION.

THE transition of the country from war to peace is proving to involve greater difficulties than the most pessimistically-minded observer would have anticipated two or three years ago. The economic situation is briefly this: The fall in the purchasing power of money has been met, and sometimes more than met, in certain fairly well defined sections of society by more or less automatic increases in incomes measured in terms of money, and has not been met, or only to a small and obviously insufficient extent, in others; the former are striving to maintain or even to increase their higher incomes, while the latter have still to make good their claims in spite of the *vis inertiae* and the popular demand for public and private retrenchment in expenditure. Perhaps the most conspicuous example of the latter class is the medical profession.

A reference to what has occurred in other fields may be useful. The case that is most prominently referred to in the public press is that of the wage earner, whose increased remuneration expressed in terms of percentage on money income is most striking, but it has to be remembered that in many such cases an altogether abnormal proportion of income is absorbed by expenditure on the necessities of existence—for example, a street scavenger whose wages may have risen from 25s. per week to 55s. per week has received an increase in money of 120 per cent., but he and his family may still be on the margin of bare subsistence. Where the income is larger a smaller proportion is expended on food, clothing, and shelter, and—seeing that the country as a whole cannot be as affluent after the war expenditure of the past four years—in such cases there is a margin of “real” income that the individual can reasonably be expected to give up, unless he can make it good by increased industry or skill. It is presumably on some such principle as this that the last award in the case of civil servants was grounded; the award in question may be summarized as providing for payment of an annual “war bonus” of £50, plus 20 per cent. of the salary, so long as the total bonus does not exceed £300.

In the two foregoing cases the amount of the bonus was fixed by specific negotiation, but in many cases the amount is more or less adventitious. In the familiar case of the retail trader the adjustment of money income to the new conditions has in fact been arrived at somewhat as follows: Most traders have a certain rough idea as to the percentage of gross profits necessary to show a reasonable net profit after paying expenses, and increase the prices paid by

them by rather more than that percentage and endeavour to increase their profits by increasing their turnover. The rise in prices has brought about an automatic increase in turnover measured in money values and thereby increased their profits. For instance, suppose a grocer used to earn a 10 per cent. gross profit on a turnover of £20,000, and after paying £1,500 in expenses to have £500 left as net profit in pre-war days; then in present conditions a sale of the same volume of commodities could show a turnover of, say, £40,000, a gross profit of £4,000, and a net profit of something more than £1,000, for though some expenses, for example, wages, may have doubled, others—for example, rent, rates, carriage—will not, and his expenses will in general be below £3,000. Somewhat similar considerations apply to wholesale traders and manufacturers, though there the more rapid fluctuations in price have generally provided greater facilities for making enhanced profits at the expense of the consumer. A moment's thought will suffice to show that the medical practitioner is in a somewhat difficult position: as in the case of the wage-earner and the civil servant the problem of the proper amount to be demanded has to be faced as a specific problem, but like the tradesman whose bonus is automatic he must demand it not from a single employer with whom he can discuss the matter in all its bearings, but from members of the public with whom he is in contact. It is proposed in this article to make some attempt to examine the problem, and to suggest some solution.

The real difficulty lies in dealing with the rise in the general cost of living, but before approaching that question one point must first be settled, and that is, what adjustment in the pre-war scale of charges is necessary to cover the increased cost of working the practice? This is an essential preliminary to the main inquiry, because it is the diminished purchasing power of the income that is under discussion, and because an increase in working costs does not require a corresponding percentage increase in charges—for instance, if costs have doubled, it does not necessarily follow that charges should be doubled also; the effect might be to treble the profits.

In connexion with the application made to the National Insurance Joint Committee for an increased payment on account of increased expenses, a limited number of statements of income and classified expenditure were supplied by practitioners in various parts of the country, which throw some light on this question. Unfortunately only a few statements were forthcoming, and they are restricted to rural and urban-rural practices, it being found impracticable to obtain such statements for urban practices. Apart from this, there is no reason to suppose that the cases in question are not fair examples of the whole. As regards the absence of urban particulars the higher expenditure on travelling in rural areas may perhaps be fairly set off against the higher rents, rates, and general costs of work in urban areas where a higher scale of social expenditure is demanded, but this still leaves unaccounted for the expenditure incurred in dispensing in rural areas, and renders more difficult any attempt to estimate urban expenses as a whole.

The particulars given in these statements have been tabulated and are as follows:

	Year 1915 or 1916.	Year 1917.
Expenditure:		
1. Drugs, instruments, professional books and newspapers and general surgery expenses	3,549	4,657
2. Travelling expenses	4,526	8,480
3. One third of rent, rates, lighting, and firing		1,048
4. Salary, etc., of locum, assistant and dispenser	849	1,531
5. Telephone	178	242
Total expenses	10,296	16,198
Gross receipts	42,784	47,135
Net earnings	32,488	30,937

A few comments on the above figures are necessary.

1. Inasmuch as dispensing practitioners must hold some stocks of drugs, the 1917 expenditure does not fairly represent the full rise in price, because drugs supplied in that year would to some extent have been paid for in the previous year. This may be regarded as sufficient offset

for the prospect of some fall in prices, and the proportional increase shown by the above figures may therefore be presumed to represent a fair permanent or quasi-permanent rise in costs.

2. In connexion with travelling expenses it has to be borne in mind that the exigencies of the war necessitated the continued use of very many cars which in normal times would have been replaced by new ones. If car replacements had occurred with normal frequency, the increase shown by the figures would undoubtedly have been greater.

3. These figures are certainly too low in both years. A scrutiny of the individual particulars shows that where a practitioner owned his house he frequently omitted to enter any charge for rent among his expenses, or for any outlay, such as repairs, which his ownership of the premises entailed. It is clear that from the professional standpoint such a charge must be made—that is, the individual in effect pays *qua* practitioner a rent to himself *qua* landlord. These rent charges, of course, do not show increases as between the two years in question, but it is clear that the capital value of such properties has already risen, and that rents must rise before long—or such houses will never be built again—and sooner or later the practitioner will have to incur higher expenses under that head.

An examination of the particulars also suggests that insufficient charges were made for the wages and board of domestic servants wholly or partly employed in connexion with the practice. In connexion with the increase in gross receipts, it must be pointed out that the increase is apparently fictitious; it was obviously impossible to obtain schedules of particulars from practitioners on active service, and there is good reason, therefore, for assuming that the increase shown is to a large extent merely a temporary transference of gross income from the practices of absentee practitioners.

These comments are pertinent and should not be overlooked, but while they modify they do not destroy the general result of the figures, which establishes a presumption that in a rural or semirural area the professional expenses amounted to 25 per cent. of the fees in the pre-war years, and that in 1917 the expenses had increased by $57\frac{1}{2}$ per cent. of the former amount, and represented 34 per cent. of the year's gross income; and, further, in the light of the above comments it may safely be assumed that in fact the general average for such practices would exceed these figures. The absence of a reliable sample of urban cases is particularly regrettable. An analysis of the increased costs of rural as compared with urban-rural practices shows that the expense of travelling has risen more sharply in the latter, which may be due to the higher cost per car mile of short distances as compared with long ones, more frequent stoppages leading to a less economical consumption of motor spirit, but the real difficulty is to estimate the effect of the absence of dispensary charges.

In connexion with the conversion of the Civil Service scale of war bonuses on net incomes into the equivalent bonus on the insurance payments, the Ministry of Health (deliberately and after consideration and argument) acted on the assumption that 25 per cent. of the present remuneration went in expenses, excluding from such expenses the cost of drugs or of travelling outside a radius of two miles. On the basis of that exclusion there can be no doubt but that urban practices would show a higher ratio of costs, for not only would rents, rates, and the general practice charges be higher, but the social exigencies of urban work might be found to increase the motor and establishment costs. Obviously, therefore, the consideration of the question on the basis of a 25 per cent. expenditure for the country as a whole is fair to the client if not to the practitioner.

Before suggesting a general conclusion on this matter it must be noticed that the expenses taken are for the year 1917, and assuming that they were spread more or less equally over the whole year that implies that they represent average payments as at the end of June or the beginning of July. At that time the rise in prices had not reached its maximum—for instance, the percentage increase in the "working class budget" as given in the *Labour Gazette*, was $77\frac{1}{2}$ in June, 1917, as compared with 115 in August, 1919, and therefore it follows that the $57\frac{1}{2}$ increase is an insufficient index to the rise in costs measured up to the present time. The "working class

budget" factors are not strictly germane, but may usefully indicate some appropriate modification, and if $57\frac{1}{2}$ per cent. was the increase in expenses at June, 1917, then the present increase may be computed at approximately $57\frac{1}{2} \times \frac{115}{77\frac{1}{2}}$ per cent.—that is, 85 per cent.

We may therefore reach this conclusion: that of 100s. in the pre-war days, 25s. represented expenses, and that the corresponding outlay to-day would be 25s. + 85 per cent. of 25s.—that is, 25s. + 21s. 3d. = 46s. 3s.; in other words, to put the practitioner back into the same position as regards expenses, he should charge an additional amount equal to $21\frac{1}{2}$ per cent. of his pre-war fee.

The question of the increase to be made to cover the increased cost of living is a matter of much more difficulty, for not only is the collection of reliable and adequate data almost impossible, but assuming its possession, there still remains the fact that there is no generally accepted standard by which the appropriate degree of compensation for high prices can be measured. The country to-day is, as a whole, greatly impoverished as compared with its pre-war financial condition—this must be sufficiently clear to all thinking men, in spite of the way in which newly-acquired wealth is flaunted in the face of the world—and no adjustment of prices can enable everybody to enjoy the same comforts and luxuries as formerly. It seems inevitable that some classes must suffer most keenly—for example, the owners of property, annuitants, pensioners, and others having more or less fixed incomes—but the total burden cannot be borne by them alone, and, in general, it must, we suggest, be admitted that individuals will have to realize that the pre-war standard of "real" income is unattainable. And this is not relieved but rather accentuated by the recurrence on a much larger scale of a phenomenon observed after the Napoleonic wars, the rise to prominence of a new section of the wealthy classes, a war plutocracy.

Mention has already been made of the fact that the Board of Trade figures for the percentage rise in the price of articles consumed by the working classes is 115. We may safely assume that in general the corresponding rise for the professional classes would be 100 or more; in other words, that at present—and probably in the more or less immediate future—the pre-war purchasing power of money has been halved. It may perhaps be objected that as many of the working classes, and some sections at least of the traders of the country, have succeeded in doubling their money incomes, there is no reason why the professional classes should not do so too, but there are other factors to be considered. In the first place, the doubling of "wages" was largely essential to the maintenance of a reasonable standard of mere subsistence; and as regards the trade side of the question, it must not be forgotten that the semi-automatic nature of the adjustment in that case will also come into operation—though, doubtless, with much less celerity—when prices fall; and some fall is to be anticipated when an end comes to the rush of orders to make good war losses, depreciations, and postponed work. In other words, though the trader gains more during a period of prosperity, he loses more during a period of depression. Nevertheless, a competent observer cannot fail to be struck with the disparity of the financial rewards for training and ability in professions as compared with those in trades—a disparity which existed before the war, and to some extent may be inseparable from the social conditions of such a community as ours, but which has certainly been unreasonably accentuated by recent events.

On the other hand we cannot—with all deference to the authors of the award—regard the Civil Service rate of bonus as at all adequate. In order to test its adequacy, we may take the case of a man with an income of £1,000 a year, with no income other than his professional earnings, and with a wife and three children to support, two of the children being at school. In this fairly typical case we must discover what is the actual increase of income which the bonus gives him, and what is the actual necessary additional expenditure in respect of which the bonus is given. The bonus received under the award is £260, but from this has to be deducted (a) the income tax on this bonus at the rate

* Even in such cases the rise in the rate of interest obtainable on new savings and realizations and the present opportunities for selling property at enhanced prices mitigate considerably the hardships of "fixed" rents and rates of mortgage and debenture interests.

paid before the bonus was granted; (b) the extra 9d. in the pound on £1,260 by reason of the total income having been brought into the high-rated category; (c) the loss of the allowance on one child from the same cause. These deductions leave the increase of actual income due to the bonus at about £168, in comparison with what it would have been if the bonus had not been given. The absolutely necessary additional expenditure is (a) food, fuel, light, and cleaning materials, at 15s. a head per week, £195; (b) clothing at, say, £20 a head for self and wife and £10 for each child, £70; total £265. So that the net additional income produced by the bonus in such a case covers barely three-fifths of the additional expenditure on necessities and allows nothing for luxuries or even comforts. Further, there is no provision for the education of children to an extent which will enable them to earn an income which will maintain them in the same social or industrial scale as their parents. If the average practitioner is to be forced to economize on this item, not only will injustice be done to individuals, but in the long run the highest interests of the community as a whole must suffer.

Assuming that a national system of taxation commands the general support of the general body of taxpayers it may be true in the main that no section is justified ethically in passing on to another a portion of the burden which is intended for its own shoulders, but like most principles of general application it is not free from important exceptions. Thus while the medical profession is not entitled to claim that medical fees should be raised to an extent sufficient to counterbalance the heavy taxation resulting from war expenditure, it is entitled to some adjustment if that taxation reduces the surplus income available for accumulation to such a point as will no longer enable the average practitioner to educate his family suitably and at the same time provide adequately for his dependants and for old age. An interesting sidelight on this phase of the question is afforded by the evidence given by Mr. R. V. N. Hopkins before the Royal Commission on Income Tax in his official capacity as Secretary to the Board of Inland Revenue. Speaking of the "medium incomes," that is, those between £500 and £2,000 a year, he said, "the complaint which most frequently reaches the Board of Inland Revenue—and it is difficult to feel that the complaint is not well founded—is that the income tax at present rates falls with great severity on professional and other earned incomes within the range between £500 and (say) £2,000 a year. . . . It is suggested for the judgement of the Royal Commission that should it be found that some small part of the burden upon these incomes can be fairly transferred to a higher point in the scale, that course would be both a reasonable one and acceptable to public sentiment." What precisely will be the "judgement of the Royal Commission" will, of course, remain unknown for some months, but it is at least encouraging to learn that the present financial sufferings of the professional class—which falls almost entirely within the specified range—have received official recognition. But the pressure for large "social" expenditure, the advisability of which we do not wish to discuss, and the costly winding up of the war, may very possibly necessitate a higher scale of taxation, and the average medical practitioner will probably have to rest content for some years with the negative blessing of freedom from further increase in his income tax charge. Whether that is an optimistic or pessimistic view of the probabilities time alone can show, but at any rate it is clear that a professional man is very hard hit by existing taxation, and that it has been borne only by economies so drastic that their continuance would seriously prejudice his future efficiency, for occasional holidays and relaxations cannot be indefinitely sacrificed without physical staleness and loss of mental vigour and elasticity.

The above arguments may perhaps be sufficiently developed for the purpose of showing that the principle of the Government scheme of war bonus would be quite unsuitable as a working basis for a revision of medical fees and stipends. The fact is that the great majority of Civil Service salaries do not exceed £500 per annum, and salaries above £1,000 per annum are quite exceptional, and consequently the "loading" of the 20 per cent. addition by the fixed sum of £60 renders it reasonable enough in most cases. If the case of the more highly paid permanent civil servant has our sympathy, that is no

reason why we should share his misfortunes, the more so as he has a pension to look forward to, on which he may anticipate some bonus if prices generally remain at their present level. On the other hand, the trader who has secured a 100 per cent. rise in his profits has been too fortunate, and is unlikely to retain his gains permanently. Common sense suggests some compromise between these two typical cases, and although the whole matter is full of difficulty there can be little doubt but that a rise of 50 per cent. in net pre-war fees would be thoroughly justified.

Taking the pre-war expenses at 25 per cent. the percentage on gross income equivalent to 50 per cent. on the net income would be 37½ per cent., so that if the amount of professional expenditure has increased by 85 per cent. of the pre-war amount the adjustment would work out as follows:

	Gross Fee.		Expenses.		Net Fee.	
	s.	d.	s.	d.	s.	d.
Pre-war basis ...	100	0	25	0	75	0
Revised basis ...	158	9	46	3	112	6

A percentage of 58½ would no doubt be difficult to work, and in view of the fact that the 25 per cent. for expenses is insufficient for urban practices, and does not cover the whole of the rural expenses in many cases, no objection could well be raised to substituting 60 per cent. for the 58½ per cent.

There remain one or two general considerations to be briefly mentioned. In the commercial world the presence of a lively competition in most trades is a fairly certain guarantee against unreasonable prices, though it must be admitted that the machinery often works slowly and of late years has become clogged by Government control, by import restrictions, and by an unusual sense of trade solidarity engendered by a sense of common trade difficulties and dangers, and a general desire to retain customary trade rates of profit in new conditions. In the case of medical fees that guarantee is invalidated by the dictates of professional discipline, and for that reason a greater burden of responsibility rests on the profession to refrain from such an increase as would deter clients from seeking medical assistance at the proper time, or in the mass impose an unreasonable charge on other sections of the community. Whether such an increase could be made, and if made how long it could last, may perhaps be open to argument; it is at least fairly obvious, at a time when prices generally have been doubled, that an increase of 50 per cent., to include additional expenses, would not have such effects.

It is suggested that the increase should apply to all fees, insurance capitation payments—in the case of which, however, there are some additional considerations which must modify the calculations—and salaries to which a reasonable proportion of the general expenses of the practice is applicable. As has already been explained the question of the proportion of the total receipt which is paid away in expenses really cancels out of the matter to a large extent, if not entirely.

Lastly, the increase is necessitated by the fall in the purchasing power of money, and any substantial and quasi-permanent return to old price levels would call for a reconsideration of the whole question. Medical practitioners have been among the greatest sufferers from the rise in the cost of living, and they would be among the first to welcome a fall in prices, and to admit that it would be undesirable to maintain a revised level of medical remuneration when the *fons et origo* had disappeared.

A NUMBER of clinics in which young women are to be trained in the care of children have been established in Greece by the American Red Cross. The course extends over six weeks, and the pupils are taught to recognize the most common types of disease. Their work will be to give instruction to mothers among the poor.

THE medical profession of Colombia propose to erect a monument to the doctors who took part in the campaign for the independence of Bogotá, won at the battle of Boyacá, the centenary of which will shortly be celebrated. The memorial is to be placed in the principal quadrangle of the medical school of Bogotá.

British Medical Journal.

SATURDAY, NOVEMBER 1ST, 1919.

THE PREVENTION OF INFLUENZA.

THE success of the public health service in excluding exotic diseases, such as plague and cholera, from this country has been so remarkable that its complete failure to prevent the widespread epidemic of influenza last year is a reminder that there are classes of epidemic diseases which our existing methods, whether central or local, are impotent to control, and a salutary warning of the urgent need for extensive and intensive research into the natural history of these other diseases and the character and life-history of their infecting agents. Influenza is a good example, for we very much want some practical and efficient method of checking this readily communicated infection of the upper respiratory passages. Nor is comfort to be derived from the reflection that poliomyelitis—which appears to spread in a manner similar to influenza—has manifested itself within recent years in America in epidemic form. It would seem likely also that the active development now going on in methods of rapid and free communication may in future increase opportunities for the spread of influenza and other diseases, of whose true nature we know little or nothing, though some of them, perhaps the majority, are conveyed in a like manner.

The brilliant success of prophylactic inoculation for the prevention of enteric fever may be held to give ground for the hope that eventually a similar method may become available for checking the spread of influenza. But as the exact nature of the causal micro-organism is not yet established, the necessary scientific basis for this procedure is lacking. The prophylactic value of the vaccine of mixed bacteria associated with influenza has still to be defined with adequate controls and with convincing results. The possibility also must be borne in mind that when a satisfactory method of prophylactic inoculation against influenza has been elaborated, the immunity resulting therefrom may be found of far shorter duration than is the case with the preventive inoculation against enteric fever.

In these circumstances it is satisfactory to know that a subject of such importance as the prevention of influenza is being investigated from another point of view, even although the results at present can have only limited application. During the recent prevalence of cerebro-spinal fever among troops an attempt was made in later outbreaks to deal with the mass infection by causing not only contacts but the whole of the camp population to pass daily through inhaling rooms where the air was kept charged with droplets of a solution of zinc sulphate by means of a steam atomizer. We understand that although this treatment failed to reduce the bacteria lodged in the nasopharyngeal mucous membrane beyond a certain point, and failed to clear up chronic carriers, it appeared nevertheless, when used during an outbreak, to have a good influence in checking the incidence of the disease. It is possible, therefore, that if some equally harmless but more effective method could be elaborated for rendering the mucous membrane of the upper respiratory passages unfavourable to the growth of an infec-

tive virus, some progress might be made in providing against the spread of the disease in schools, colleges, workshops, and large business establishments. It would, indeed, not be too much to hope that some convenient modification might be devised and placed at the disposal of those more careful members of the public who were disposed to make use of it.

Special interest therefore attaches to the researches which Dr. Alexander Gregor reported in our last issue, at p. 523. The starting point of his investigations was the observation that certain industrial employees who worked in an atmosphere charged with a small amount either of nitrous oxide or of sulphur dioxide gas exhibited a relative immunity to influenza, when their fellow employees who worked in atmospheres free of these gases were heavily attacked. Dr. Gregor set himself the task of finding out the reason for this escape of the workers in the fumes, and he shows by some carefully executed experiments that air when charged with either of these gases in a concentration easily tolerated is distinctly bactericidal, and he has further satisfied himself that such air when inhaled has the effect of rendering the secretion of the upper respiratory passages acid. Now an acid medium is known to be very unfavourable to the growth of the majority of pathogenic bacteria, and it seems possible that Dr. Gregor's work, if confirmed and elaborated, may be of considerable practical value. The acidity of the gastric secretion is generally regarded as one of Nature's methods of defence against bacterial invasion. We are glad to learn that the Medical Research Committee has already provided Dr. Gregor with expert scientific assistance, and that so capable an investigator as Dr. Benjamin Moore has also taken the matter in hand. We would commend Dr. Gregor's work to the attention of the Minister of Health, who, we do not doubt, is fully alive to the urgent need of a satisfactory method of preventing the spread of influenza.

PURGATION BEFORE OPERATION.

THE giving of purgatives before operation is a custom so well established as to be almost a hallowed tradition sacrilegious to question or to doubt. As J. D. Beresford has judiciously observed, most of us "take everything for granted because we happen to be used to it, that's all." It is not quite clear whether purgation before operation was a routine procedure with our fathers of old, and the question arises how far the introduction of anaesthesia and the extension of abdominal surgery are responsible for it. However, the belief that a man is a better man after a purge than he was before it is so widespread that the pre-operative cathartic probably dates back to very early times. The belief of the ancients in purgatives is, so to say, moving in the extreme. Thus Galen says that "every purgative by some specific property attracts and, as it were, sucks to it the humor to which it has a natural alliance in like manner as the magnet attracts iron." Haly Abbas held that the purgative "goes to the part where its cognate humor is lodged, from which both are expelled and returned to the bowels together." Whilst for Burton, in his *Anatomy of Melancholy*, the thing is simple: "clysters and suppositories," says he, "draw the humor from the brain and heart to the more ignoble parts." We have no option, then, but to believe that a clear bowel and a clear head go hand in hand. The experience of mankind at large confirms this, but few have realized that the relief obtained by a bowel action is so complete and so immediate that the symptoms must have depended on a local reflex, and cannot have been due to the elimination of toxins.

Dr. Alvarez¹ of San Francisco has been bold enough to traverse the generally accepted view that purgation is desirable before operation. In brief, his answer to the question "Is this purgation justifiable?" is an unqualified "No!"

The reasons adduced for pre-operative purgation may be summarized under a few heads. It is held to prevent post-anaesthetic vomiting, to ensure an empty intestinal tract, to obviate "gas pains," and to eliminate auto-intoxication. After weighing these claims in the balance Alvarez finds them wanting; and it must be admitted that he makes out a good case, for not only do cathartics often leave undone that which they ought to do, but they are apt to do things which they ought not. It is rash to assume that a patient who has been heavily purged is thereby in better condition to face the ordeal of a severe operation. A man who is about to undergo a great physical strain is not recommended to take a purge. The Oxford and Cambridge crews are not purged through the night preceding the boat race. But our unfortunate patient comes on to the table after a restless and disagreeable night, his tissues often depleted of water, feeling, as it were, "thin" through and through. Now, is this state of body compensated by commensurate advantages? Does a purge prevent, in the first place, post-operative vomiting? The answer to this must surely be No; for emergency cases very often do better than thoroughly prepared quiet ones, and certainly in France very little trouble from this cause was seen. The anaesthetist will very properly demand that his patient's stomach be empty, but that is secured by withholding food and not by giving a purge. The greatest fallacy with regard to purgatives seems to be that they empty the intestine. This is very far from being the case, and on this point Alvarez has some excellent evidence to offer.² The purged bowel is usually full of gas and fluid, the mucous membrane is injected, and the mesenteric circulation is disturbed. Further, free fluid may be present in the coelom; this has been noted in man, and though the exudate is sterile, it is none the less abnormal. After purgation Alvarez finds that some parts of the bowel are very irritable and inclined to contract into cord-like structures, others are paralysed and fail to respond to powerful stimuli. It seems very probable that "gas pains," which purgatives are supposed to prevent, are frequently induced by them, being due to the distension of palsied, inactive segments by the gas and fluid forced into them and held there by the more irritable and powerful loops above and below. Magnesium sulphate seems to be a particularly obnoxious drug from the surgeon's point of view, for not only does it distend the gut with fluid, but it prevents the absorption of water—a disastrous effect. Excised loops of purged bowel contract very feebly in aerated Ringer's solution, in marked contrast with the normal. Alvarez concludes that purgatives—and he has tested over fifty drugs—leave the gut in no fit state to resist and recover from operative manipulation.

The mechanism of post-operative gas pains has already been alluded to, but interference with the mesenteric circulation and the intestinal gas exchange must be added to what has already been said of their causation. Gas does not ordinarily collect if the circulation is not interfered with. But we see daily in intestinal strangulations that the loop is filled with gas and fluid from obstruction of the veins by the

strangling band, whilst above a plain occlusion, such as an annular carcinoma, there may be much fluid but rarely much gas. As Alvarez says, surgeons "have desired above all things a clean and empty bowel, whereas they should pray for a good blood supply and a normal gas exchange."³ An empty colon will often be demanded by the surgeon, but this can usually be obtained by enemata, and may not need even that. The fourth point urged in favour of purgation—namely, the prevention of auto-intoxication—leads us into troubled waters. Alvarez has shown that many of the symptoms of auto-intoxication are due to mechanical distension and irritation of the rectum by faecal masses. Certainly the symptoms disappear so promptly after an evacuation of the bowels that they cannot be due to absorbed toxins. The enema alone will relieve them.

To sum up: an empty stomach can be ensured by withholding food, and an empty colon by giving enemata. The small intestine cannot be emptied by purgatives, and is often profoundly disturbed by them. Pre-operative purgation is, therefore, better omitted.

Alvarez has, at least, stated a case, and has adduced reason and experiment to support it. Many surgeons who have given up this "preparation" of the patient will be glad of Alvarez's positive experimental testimony. Those who cling to the past and purgation must produce counter-evidence in its favour. The onus of rebuttal has been thrown upon them, and must take the form not of hazy generalizations but of definite, careful, and critical observations.

POST-GRADUATE EDUCATION IN LONDON.

We are glad to be able to announce that at a meeting on October 24th the amalgamation of the Fellowship of Medicine and the Post-Graduate Medical Association was finally authorized. The existing officers of the Fellowship undertook to retain office until the new executive committee is able to report on the whole organization. The officers are: President, Sir William Osler; Chairman of the Executive Committee, Sir Humphry Rolleston; Treasurer, Sir Arbuthnot Lane; Honorary Secretaries, Mr. Philip Franklin, Sir J. Y. W. MacAlister, and Mr. Herbert J. Paterson. One of the most important matters which will come up for consideration is the question of the future home of the amalgamated associations. At present the business will, by kind permission of the Royal Society of Medicine, be conducted for the acting committee at No. 1, Wimpole Street, W.1, where communications may be addressed to the Secretary of the Fellowship, Miss Willis. This arrangement can, of course, only be temporary, and we hope that the larger scheme for providing a home of its own for the amalgamated associations may shortly materialize. Such a central home should comprise not only reading and lecture rooms, but laboratories and command of a sufficient number of hospital wards. The new hospital and institute of the London Tropical School might indeed be taken as a model. As Sir Havelock Charles, the Dean of the School, said in his speech reported last week, combination of laboratory and ward work is essential. If a post-graduate college were established in London on a sound basis we anticipate that it would be eligible to receive a Government educational grant towards maintenance, but it would be essential in the first place that the college should be established. For this a large capital sum will be necessary. The present position affords a great opportunity for some rich man who desires to benefit his kind, for official and medical opinion are thoroughly agreed that medical practitioners should have an opportunity of reviewing their

¹ W. C. Alvarez: Is the Purgation of Patients before Operation Justifiable? *Surg., Gyn., and Obst.*, June, 1918, 651.

² W. C. Alvarez, and F. B. Taylor: Changes in the Rhythm, Irritability, and Tone in the Purged Intestine. *Journ. Pharm. and Therap.*, October, 1917, p. 365.

³ W. C. Alvarez: Cause and Prevention of Post-operative Gas Pains. *Calif. State Journ. Med.*, July, 1918.

knowledge from time to time and making themselves acquainted with the development of medicine in all its departments, including laboratory work and special clinics. We earnestly hope that a benefactor willing to identify himself with the scheme may shortly be found.

PATHOMETRY OF INFLUENZA.

WE have been favoured with a copy of the minutes of a meeting, on September 19th, of the Subcommittee on Pathometry, appointed by the Influenza Committee of the American Medical Association. This subcommittee, which includes several mathematical statisticians of international reputation, discussed, *inter alia*, the possibility of representing the epidemic curve of influenza by an analytical function, and concluded that no such function, simple in nature and therefore easily applicable, could be found at present. Attention was directed to the fact that many different functions based upon widely different hypotheses gave results indistinguishable one from another. This point was emphasized by Dr. Major Greenwood in his opening paper to the April clinical meeting of the British Medical Association, and is likely to be accepted by most statisticians. The subcommittee thought that the method of multiple correlation would be useful in evaluating some of the factors of epidemicity and scheduled several variables it would be well to study. It was held that the following matters should be borne in mind: (a) Explosiveness; (b) time distribution; (c) aggregate of epidemic damage regardless of explosiveness or time distribution; (d) infectivity of the organism at various stages of the epidemic wave; (e) virulence of the organism at various stages of the epidemic wave. The importance of these matters is considerable, but it may be very difficult to express variations in a form suitable for quantitative study. It is satisfactory to observe that the value of these studies is as fully recognized in America as it is coming to be in this country.

HEALTH VISITORS.

IN the later part of the last century social reformers began to realize that something more than the provision of a pure water supply, efficient drainage, and even the strict administration of sanitary statutes, was required if the sickness rate and death rate of the country were to be lowered. The gospel of individual responsibility began to be preached and laudable efforts were made to instruct the wives of working men in household management and in the care of young children. At first this was carried out by means of mothers' meetings and district visitors. Later came the district nurse, and presently a few sanitary authorities appointed women health visitors. In 1908 sanitary authorities in London were enabled through the London County Council (General Powers) Act of that year to appoint as health visitors women whose duties were to include the giving of advice on the proper nurture, care and management of young children, and the promotion of cleanliness as the basis of health, and to discharge any other cognate duties that might be assigned to them. In 1909 the Local Government Board made regulations prescribing the qualifications which these new officials should possess—a medical degree, a nurse's training, the certificate of the Central Midwives Board, the previous discharge of similar duties under a local authority, or some training in nursing together with a certificate of efficiency after examination by a society approved by the Board. In connexion with this last qualification an examination for women health visitors was established by the Royal Sanitary Institute, by which body nearly 1,500 certificates of proficiency have been granted. The Exchequer grants instituted in 1914 and the enforcement of compulsory notification of births in the following year no doubt stimulated local authorities to appoint health visitors, and considerable experience has

been gained with regard to the precise duties they should undertake, and perhaps more important still, what duties they should not. For example, though they may with advantage possess the certificate of the Central Midwives Board, and should have a knowledge of sick nursing, they ought not to act either as midwives or nurses. Similarly a knowledge of sanitation, or even the possession of a sanitary inspector's certificate, is desirable, but the executive duties of a sanitary inspector should not be carried out by a health visitor but by the proper officer. In these circumstances the Ministry of Health has decided that the health visitor of the future shall go through a course of training on certain prescribed lines, and the Board of Education has issued regulations relating to the course. The full course will last two years, and the theoretical instruction is to include elementary physiology, methods of artisan cookery and household management, hygiene, infectious and communicable diseases, maternity, infant and child welfare, elementary economics and social problems. The practical training is to be designed "to illustrate the theoretical instruction and to give the students a first-hand personal knowledge of the various aspects of their future work." It is suggested by the Board that one-half of the student's time should be taken up with practical work. A shortened course of twelve months will be allowed for a hospital nurse with three years' training, a health visitor with three years' service, or a graduate of a university. A student must be at least 18 years of age before entering on the course, and it appears to be the desire of the Board that girls should begin their training at that age, though many competent critics will disagree with this. It is rarely, if ever, that a health visitor is appointed under the age of 25 years; if a girl is qualified at 20, during the intervening five years before she obtains an appointment she will in all probability not only lose enthusiasm but will forget what she has learnt, and—so fast do we advance nowadays—she will be five years behind the times in her methods. This aspect of the case has apparently not been forgotten by the Board of Education, for in a pre-fatory memorandum to the regulations for training it is admitted that a student who on the completion of her course is only 20 years of age will not in general be sufficiently experienced or mature to take posts of responsibility. It is suggested by the Board that such students may take a further course of training, such as that for the certificate of the Central Midwives Board, or may take posts of limited responsibility in infant welfare centres or elsewhere. Time only will prove the correctness of the Board's anticipation. The regulations are open to criticism in minor details, and, no doubt, opportunity will be taken to amend them in accordance with experience. The objective of the Ministry of Health, assisted by the Board of Education, is admirable, but in the endeavour to attain it too much stress must not be laid upon scientific training or routine methods. It must be remembered that the course of training is for *women* health visitors, whose greatest qualification should be the possession of womanly sympathy and consideration.

FISH ENEMIES OF THE MOSQUITO.

HILDEBRAND (Public Health Reports, United States Public Health Service, May 23rd, 1919), from numerous experiments and observations made at Augusta, Georgia, for the United States Commissioner of Fisheries, at the request of the Public Health Service, draws the following conclusions: The top minnow (*Gambusia affinis*) is especially suitable for antimosquito work because (a) it seeks its food at the surface; (b) it is very prolific; (c) it gives birth to well-developed young, and therefore requires no special environment for depositing and hatching the eggs; (d) it lives and thrives under a large variety of conditions, and frequents areas especially suitable for the support of mosquito larvae; (e) it usually lives and multiplies in ponds

stocked with predaceous fishes, provided it has very shallow water for refuge. Plants which have slightly submerged leaves and stems, or which form floating masses, are the chief sources of protection for mosquito larvae against the top minnow. Such plants should be removed from the water, or so treated as to make them uninhabitable for the immature mosquito. Grasses and rushes, and other plants having straight stocks and no slightly submerged leaves, furnish no protection, and the smart-weed (*Polygonum*) would appear to be even repellent to mosquito larvae. Algae often form mats which float on the surface, and in which mosquito larve can develop unless they are sprayed with oil; in this case the alga pods act like sponges, retaining the oil and making them uninhabitable for the mosquito. The top minnow eliminates the wriggler from ponds fairly free from protective vegetation and debris. The number of fish required depends largely on local conditions. One adult female was observed to eat 165 large larvae in less than twelve hours, and Seale, working with this fish in the Philippine Islands, reports that one pair of half-grown *Gambusia* ate 5,041 mosquito larvae, by actual count, from December 9th, 1915, to February 25th, 1916. As regards other species of fish, Hildebrand considers the "star-headed minnow," *Fundulus nottii*, and the roach minnow of considerable value; the goldfish, although useful in aquaria, is probably of little effect in large bodies of water when other food is obtainable. His observations indicate that several species of sunfishes are of doubtful assistance in antimosquito work, since one large pond supplied with bream, warmouth, and the blue spotted sunfish supported large numbers of mosquito larvae of both types, and top minnows had to be introduced in order to secure mosquito control.

HIPPOCRATES ON HEAD INJURIES.

HIPPOCRATES had in the highest degree the wonderful capacity of the Greek mind of separating essentials from accidentals. Matthew Arnold in speaking of Thucydides describes this as a "tendency to observe facts with a critical spirit, to search for their law, not to wander among them at random." Newton said of himself *Hypotheses non fingo*, and the Father of Medicine looked at the facts of disease with eyes unclouded by superstitious fancies or mists of theory. Much of his teaching is as valid now as it was when delivered to his disciples in the island of Cos in the fifth century before Christ. In the handling of fractures and dislocations he has been placed by modern authorities on a level with Dupuytren, and Littré praised his work on the joints. Max Neuburger¹ says that Hippocrates discussed the diagnosis and treatment of dislocations and fractures, and particularly of injuries of the head, in a masterly manner. The Hippocratic aphorism—that no injury of the head is trivial enough to be neglected or too grave to be accounted desperate—received many illustrations in the recent war. Dr. L. Pron of Algiers has lately given² a useful summary of the teaching of Hippocrates on injuries of the head. He distinguished five varieties of fracture: (1) Fissure of bone with contusion of soft parts, the line of fracture in some cases being so narrow as to be scarcely visible; (2) simple contusion; (3) depression of the skull as well as fracture, when the membranes are unhurt the depression is less dangerous; (4) a penetrating lesion of varying depth may accompany the fracture; (5) fracture by contrecoup. The surgeon was told to find out by exploration with the finger whether or not the bone was denuded; if this method failed, he was to use a probe to determine whether there was penetration, depression, or other lesion. When no definite information could be obtained the wound was to be dressed with the "black medicament," which was soluble; a piece of linen soaked in oil was applied and then a poultice of barley

paste. On the following day the dressing was to be removed, the wound cleaned, and the bone scraped with the raspatory. The uninjured parts would be found white, but the fracture and contusion would be stained by the medicament. The raspatory was then applied deeply, and if the blackness did not disappear, the case was one of complete fracture. When no lesion was found and the skull was left to itself fever supervened, and with its establishment a little fluid escaped, the wound became discoloured and viscous, and had the appearance of salted meat. The bone from that time began to mortify, suppurating phlyctenulae formed on the tongue, and the patient died in delirium. It was noted that generally one-sided convulsions occurred, and that if the wound was on the left side the right side of the body was affected, and vice versa. Hippocrates directed that as soon as fever came on the bone should be trephined down to the membranes or scraped, and the patient treated thereafter according to symptoms. For fracture by contrecoup nothing could be done, as neither its existence nor its situation could be recognized. In penetrating lesions the parts were to be scraped, and if the lesion was found to be complicated by fracture the surgeon was to trephine, taking care not to injure the membrane; the trephine was to be applied where the bone appeared thickest, and was to be looked at often to see where it was, and an attempt made to lever up the bony fragment so as to detach it. Hippocrates warned the surgeon against reckless interference with the temporal region lest convulsions and palsy should occur on the opposite side of the body. An incision to ascertain the condition of the bone was to be free, the flesh was to be detached where it was united to the pericranium, and a tent placed in the wound, over which should be applied a poultice composed of fine barley flour pounded in vinegar and cooked to make it sticky. When, although an erysipelatous swelling appeared on the face and eyes the wound continued to look healthy, the prognosis was said to be hopeful; purgatives should be given, care being taken not to weaken the patient. Although Hippocrates was ignorant of antisepsis, his teaching on the treatment of wounds must, as Littré³ says, be studied with deep attention; for his writings are founded on a wide experience, minute and profound observation, and an enlightened and infinitely cautious judgement.

AN AMERICAN CRITIC OF NATIONAL INSURANCE.

AN "occasional lecture" was delivered at a meeting of the Royal Society of Medicine on October 23rd by Mr. Frederick L. Hoffman, LL.D., of New Jersey, on the subject of national health insurance. The chairman, Sir Humphry Rolleston, in introducing Dr. Hoffman, said that he was the statistician of one of the large insurance companies of America, and vice-president of the American Statistical Association; he had been for two months in this country studying the methods and results of our national insurance system in various representative areas. Dr. Hoffman's address was a thorough-going denunciation of the whole principle and machinery of national insurance. Apparently he had been unable to discover a single redeeming feature, save the excellence of the type of civil servant engaged in insurance administration. He said that the Act was a misconceived piece of legislation. It did not promote health or even intelligently co-ordinate health administration; it was in no sense preventive; it was simply a method of social amelioration. Dr. Hoffman made a particular attack on that famous definition which is at the basis of medical benefit: "such treatment as is of a kind which can, consistently with the best interests of the patient, be properly undertaken by a general practitioner of ordinary professional competence and skill." He held that the effect of this was to standardize mediocre practice. He had seen scores of insurance

¹ *History of Medicine*, translated by Ernest Playfair. London, 1910, p. 156.

² *Paris méd.*, August 2nd.

³ Quoted by Allbutt: *The Historical Relations of Medicine and Surgery*, London, 1905, p. 9.

patients dealt with in a manner which he could only describe as "lightning diagnosis." The time given to each patient in some instances had averaged two and a half minutes. The vast majority of illnesses which came within medical benefit, as was shown by an examination of representative lists, were minor maladies of about one week's duration. Under proper economic conditions the patients should in such cases pay for any medical assistance they required, and any State scheme should be reserved for dealing with the really serious cases, with which the existing scheme did not deal at all adequately. He gave some data which he had obtained in Manchester showing that 85 per cent. of the attendances there were at the surgery and only 15 per cent. were domiciliary visits; also that out of a million attendances only 133 were for surgical operations. He also criticized the general methods of prescribing, and stated that some thirty drugs would cover 80 per cent. of the prescriptions. Sanatorium benefit, save in a few areas, was wholly insufficient; while maternity benefit, the most popular feature of the Act, had, properly speaking, no business there at all, but should be administered through the maternity and child welfare centres. Dr. Hoffman believed that the Insurance Acts would be supplanted very soon by a State medical service. He had spoken to a hundred well-known people engaged in administration, and with the exception of those who belonged to the medical profession, the general judgement was in favour of a State medical service of universal scope, not discriminating even in favour of the necessitous poor. Such a State service he believed to be imminent. Sickness benefit would then be administered by the Ministry of Labour, and sanatorium benefit would be the province of a public health department. Altogether, he saw no justification for the Insurance Acts, and he suggested that the setting up of national insurance in this country was due to a deep-laid plot on the part of Germany, who, having got a similar incubus on her own shoulders, saw to it, by an insidious propaganda, that her rival was similarly handicapped!

THE FIRST BRITISH MEDICAL ASSOCIATION LECTURE.

THE first British Medical Association lecture under the scheme adopted by the Council on the recommendation of the Science Committee was given by Dr. Thomas Lewis, F.R.S., on October 24th at Sheffield. His subject was "Cardinal principles in cardiological practice." The lecture was a good example of the application of scientific investigations by a master of his subject to problems of everyday practice. It was listened to with great attention by a large audience, and will be published in full in an early issue. Dr. A. E. Barnes, Chairman of the Division, presided, and Dr. A. J. Hall, in proposing a vote of thanks to Dr. Lewis, congratulated the Association on having inaugurated the scheme of lectures, and went on to pay a warm tribute to the work of Dr. Lewis, who, he said, was not only a master of research but a most lucid teacher. Dr. A. M. Pilcher (D.C.M.S. Sheffield Area, Ministry of Pensions), in seconding, referred to the investigations and writings of Dr. Lewis on the subject of soldier's heart, and spoke of the valuable help which these had been in the work of the Military and Pensions Boards. Sir Thomas Horder has accepted an invitation to give a British Medical Association lecture to the Southern Branch at Southampton on November 13th. The lecture will deal with the preventive treatment of influenza.

THE HOUSING QUESTION.

In his report for 1918 the medical officer of health for the City of Birmingham, Dr. John Robertson, calls attention to some sinister facts respecting the housing conditions of the great Midland city. In 1913 there were 43,366 back-to-back houses in Birmingham, housing nearly 200,000 persons—a population equal to that of the city of

Cardiff. In six wards, all in the central area, from 51 to 76 per cent. of the houses were of this kind. During the period 1914-18 four of these wards had a general death rate of more than 19 per 1,000; five an infant mortality greater than 134 per 1,000 births; three a measles death rate above 0.56; five a death rate from pneumonia and bronchitis above 3.63; five a phthisis death rate above 1.63; and five a mortality rate of over 29 per 1,000 births for deaths at ages under 2 from diarrhoea and enteritis. As a control we may take King's Norton, with less than 8 per cent. of back-to-back houses. The death rate here from all causes is less than 10.9, the infant mortality less than 78, the measles mortality less than 0.12, the bronchitis and pneumonia rate below 1.62, the phthisis rate below 0.89, the diarrhoea and enteritis figure below 9. Dr. Robertson is aware that some of the inhabitants may be shiftless and criminal, unfit to thrive in any environment; he is also aware of the fact that "it is impossible to imagine a rising generation of young people being able to improve in health or self-respect, even if the best of educational facilities are provided, when everything they come in contact with is sullied by dirtiness and squalor." In his opinion the only remedy is the replacement of these slums by decent houses in a pleasant environment. Publications such as this are of great value. Even in these days of specialist education there may be left one or two readers of Matthew Arnold who will remember how he quoted the dithyramb of one of our political strong men, Mr. Roebuck, on the amazing prosperity of England. Roebuck asked his audience "whether, the world over or in past history, there is anything like it?" Arnold demurely quoted the report of a child murder in Nottingham—the perpetrator, a girl named Wragg, being in custody—and pensively repeated Roebuck's question, adding, "*Wragg is in custody.*" We, too, may add as a refrain to the speeches of our strong men in praise of our national exertions and prophesying a new heaven and earth, this sentence: *In the city of Birmingham 200,000 persons live in back-to-back houses.*

CAMBRIDGE is easily able to provide ample accommodation for all the activities of the Annual Meeting, which will be held there at the end of next June. The address by the President, Sir Clifford Allbutt, will be given in the Senate House on the evening of Tuesday, June 29th. The annual Representative Meeting, which will begin on Friday, June 25th, will be held in the Examination Hall of the University Buildings, Downing Street. The Council meetings will be held in a smaller room in the same buildings. The sections also will meet in these buildings, and the exhibition will be held in the Corn Exchange. The reception room will be established in the Guildhall, and there will be reading and writing rooms in the Guildhall and Union Club.

Medical Notes in Parliament.

PARLIAMENTARY interest has been centred chiefly in the preparations for the debate on national finance, though the defeat of the Government on the clause of the Aliens Bill dealing with pilots afforded a tragicomic interlude.

Milk.—In reply to Colonel Burn, Dr. Addison said that local authorities were given power, subject to any necessary restriction imposed by the Food Controller in times of shortage, to supply milk for expectant and nursing mothers and children under five at cost price or less, according to the circumstances of the case, and he had recently impressed on local authorities the importance of exercising their powers in this respect fully. Arrangements could be made through the food control committees for priority of supply in the case of sick persons and young children, if necessary, but he was informed that the supply of milk was considered fully adequate.

Hospitals.—In reply to Sir A. Warren, Dr. Addison said that he was aware of the financial difficulties of many of the voluntary hospitals and recognized that they affected the proper provision of the various forms of medical services in hospitals and in centres or clinics, and otherwise, but he was not yet in a position to make a statement.

MEDICAL CONSULTATIVE COUNCIL.

WE have received the following official announcement from the Ministry of Health:

The first meeting has been held of the Consultative Council appointed by the Minister of Health to advise on questions relating to medical and allied services. Sir Bertrand Dawson is the Chairman and Colonel C. J. Boud of Leicester the Vice-Chairman of the Council. There was a full attendance of members, and Dr. Addison opened the proceedings as President of the Council.

After welcoming the members of the Council, Dr. Addison said that he was sure that the experiment which he was making in bringing a body of this kind into close touch with the work and plans of the new Ministry would be justified by results. Their main duty would be to advise him on questions of policy in the formative stage. They would thus be brought into the counsels of the Minister before decisions were taken, and if their advice was to have full weight the confidential character of their relations with the Minister must be respected. At the same time he had to remember that the Council must be put in a position to keep him in touch with the medical profession throughout the country, and to help him to carry the profession with him in the policy which he adopted. Therefore, he did not propose that the whole of their work should be conducted in secret. He had agreed with Sir Bertrand Dawson that periodical statements should be issued to the press of the nature of the problems referred to the Council, and of the progress made with their deliberations, and he hoped that this arrangement would encourage discussion and criticism. He asked the Council at once to consider a reference which would enable them to tell him what in their view should be the ideal system of medical and allied services towards which the Ministry should work. Obviously this was a vast subject, and he would leave them completely free to consider its various aspects in order of urgency, and to report to him at different stages of their work if they thought fit. He was looking to them for substantial help in shaping policy, and their chairman would have direct access to him for the purpose of conveying advice and suggestions. They might rely upon his cordial co-operation and that of his departmental advisers, both medical and lay, in carrying out their task, and under Sir Bertrand Dawson's chairmanship he felt confident of their success.

Sir Bertrand Dawson, after thanking Dr. Addison for his cordial reception of the Council, said that in bodies of this kind he saw a new instrument of government full of possibilities. The growth of knowledge and the necessity for securing public confidence in proposals which closely affected large sections of the population had made the development of some such organ of communication inevitable. This did not mean that departmental advice was not good, but that it needed supplementing from new sources. The Consultative Council were an experiment devised to meet this need. The problems referred to them would tax their powers to the full, and in feeling their way to the best methods of working they would welcome and rely upon that co-operation which they were promised by Dr. Addison and his advisers. In his opinion the activities of the Ministry of Health were bound to extend, and to affect all branches of medicine more and more closely. If the results were to be satisfactory a good understanding and close co-operation with the medical profession must be maintained throughout. He hoped that the profession would find in the Council a new link with the Minister. They would not displace any existing organization in the counsels of the Ministry, but would endeavour to represent the views of all sections of the profession. He was deeply conscious of the honour conferred upon him by the Minister's invitation to act as Chairman of so distinguished a body. The responsibility was a heavy one; but with the help of his colleagues and the support of Dr. Addison and his advisers he did not doubt that they could take an effective share in the shaping of the new policy which the Minister of Health had been appointed to carry out.

Dr. Addison then asked Sir Bertrand Dawson to take the chair, and after making arrangements as to future procedure the Council held a preliminary discussion of the principles to be observed in the future developments of medical and allied services upon which the Minister had asked them to advise.

THE Massachusetts Department of Health celebrated the fiftieth anniversary of its establishment on September 13th. Among the speakers were Professor W. H. Welch and Sir Arthur Newsholme.

England and Wales.

CARDIFF MEDICAL SOCIETY.

THE first meeting of the winter session of the Cardiff Medical Society was held in the society's rooms on October 14th. Mr. A. W. Sheen delivered the presidential address. After thanking the members for electing him, and particularly for their expressed desire that he should retain the post after he had moved to London, he gave details of the society's war service, and reminded the members that theirs—the oldest medical society in Wales—was this session entering upon its jubilee, having held its first meeting on February 14th, 1870. Of its seventeen original members none now remained alive. The society was up to date in its earliest activities, for at its first meeting was shown a case of bullet wound of the elbow which recovered after operation with complete movement of the joint, while at its second the question of sending delegates to a meeting of the "Reform Union" in London was discussed.

Mr. Sheen then spoke of the Welsh Hospital in India. This hospital, No. 34 (the Welsh) General Hospital, was mobilized at Aldershot in April, 1916, the medical and nursing staff being found by Wales, the nucleus being furnished from the Welsh Hospital, Netley, and after being destined for France was sent to the East, and eventually established in Deolali in the Western Ghats, 130 miles from Bombay, and enlarged to 3,000 beds for British troops, being the first British general hospital in India. The hospital, and its organization until it was complete in all departments, were described and illustrated by photographs. Mr. Sheen then spoke of his work as consulting surgeon in India subsequent to his relinquishing the command of the Welsh Hospital, and after a brief reference to his surgical experiences gave short descriptions of the salient features of various tropical diseases he had seen.

These included *Plague*, in which the necessity for a better education of the people was particularly emphasized. *Cholera*: The urgency of the treatment and the life-saving methods of Sir Leonard Rogers with intravenous hypertonic saline, and oral permanganate of potash. *Malaria*: The great value of drainage and the efficacy of prophylactic quinine. *Leishmaniasis*: Kala-azar, known by remittent temperature, enlarged liver and spleen and leucopenia; and oriental sore, which when excised is microscopically like epithelioma; both forms of leishmaniasis are curable by intravenous antimony; the sore is also curable by a vaccine as shown by Dr. Row. The occurrence of a flagellate in plant juice resembling the flagellate form of the Leishman-Donovan body was described and illustrated. *Kangri cancer*: The Kashmiri keep themselves warm during their very cold winter by hugging to the abdomen under the clothes an earthenware basket covered receptacle containing hot wood-ash known as a kangri. Cutaneous cancer of abdomen and sometimes of the thighs (from squatting) results. Mr. Sheen described cases from observations afforded and details kindly given by Dr. Ernest Neve. *Oriental bubo*: Enlargement and breaking down of the inguinal glands; seen in British patients; no avenue of infection found; removed tissues reported sterile. *Guinea-worm infection*: The means of treatment and the dangerous cellulitis resulting from the breaking of the worm in the tissues were particularly alluded to.

The remainder of the address included references to dysentery—carriers amongst the general population; typhoid—question of the value of gall bladder drainage in carriers; leprosy—the orange-like skin and the remarkable enlargement of the nipples; scurvy—the diagnosis of scurvy haematomata; heartstroke—the nature of the disease; bharziosis—curable by intravenous antimony; and the mention of various other tropical maladies seen by the speaker.

Dr. D. R. Paterson and Dr. Ewen Maclean proposed and seconded a vote of thanks, and referred, as did Mr. Sheen in reply, to the increased sphere of work opening to the society with the resumption of its full work, interrupted by the war.

LIVERPOOL MEDICAL INSTITUTION.

The inaugural meeting of the eighty-first session of the Liverpool Medical Institution took place on October 23rd, when the president, Mr. W. Thelwall Thomas, delivered an address on "The evolution of the surgeon and his training." There was a large attendance of members, and among the visitors was the vice-chancellor of the university, Dr. J. G. Adams. Mr. Thomas treated the subject historically, beginning with the earliest records and ending with the standard of equipment that should be required to-day. He drew attention to the fact that many of the appliances and instruments used even in the earliest

days had not undergone much alteration. The principles of the art were there, even though the science of surgery was in its infancy. The progress of surgery received a great impetus from the discovery of the microscope and its application to the elucidation of disease. Surgery benefited immeasurably from the germ doctrine of disease, and with the introduction of anaesthesia became able to treat disease successfully in a manner undreamt of by our forefathers. Operation did not now present the same terrifying aspect to the general public as it did even thirty years ago. He recalled the fact that, when a house-surgeon, the only time he saw the abdomen opened was when ovariotomy was performed. In his concluding remarks Mr. Thomas expressed the opinion that the future surgeon should spend more time on handicraft. He should have performed operations on the living subject under skilled supervision before presenting himself for the final examination in surgery. More time should be devoted to practical classes and less to systematic lectures, which, owing to the excellent surgical manuals, were no longer necessary. The address was received with much applause, and a vote of thanks, proposed by Professor Rushton Parker and seconded by Dr. E. W. Hope, was carried unanimously. Afterwards the president entertained the members to supper, and an excellent programme of music was provided. Dr. Livsey was accompanist, and Mr. Walton Hatton, 'cellist, charmed the audience with his brilliant playing.

ANNUAL MEDICAL SERVICE IN LIVERPOOL.

This service took place at St. Luke's Church on Sunday afternoon, October 26th. There was a good congregation, but only few medical men were present in academic dress. The Bishop of Warrington (Dr. Martin Linton Smith, D.S.O.) preached the sermon, taking for his text St. John, xvii, 3. In a thoughtful exposition the preacher set forth the limitations of human knowledge. The material view failed to account for the phenomena of life, which could not be solved in terms of mechanical or biochemical knowledge. He emphasized the spiritual claims on man's life. The Bishop of Liverpool read the lesson and bestowed the blessing. The offertory, for the Royal Medical Benevolent Fund, amounted to £55 16s. 1d. The honorary treasurer, Dr. J. Ernest Nevins, 32, Princes Avenue, mindful of the fact that many medical men were unavoidably prevented from being present, will be pleased to receive their contributions to the fund.

Scotland.

EDINBURGH MEDICAL SCHOOL.

Two of the occupants of new chairs in the Medical Faculty of the University of Edinburgh gave inaugural addresses during last week. Professor Barger, the new professor of chemistry in relation to medicine, dealt with the connexion of chemistry and medicine in the past, and gave instances of the great advantage both pathology and clinical medicine had derived from the introduction of suitable methods of analysis. The functions of a university were twofold—to impart knowledge and to extend it, and it seemed to him that in Edinburgh teaching had sometimes been developed at the expense of research. Professors had often been too much occupied in lecturing and administrative work to do justice to themselves as original investigators. Professor Meakins, the first occupant of the Christison chair of therapeutics, devoted his inaugural address to a discussion on the influence of Edinburgh on McGill University and American medicine. He recalled that James McGill had been born in Glasgow 175 years ago and received his early training and education in Scotland. He went to Canada as a young man, and when he died in Montreal, in 1813, set apart his estate on the slopes of Mount Royal, together with a sum of £10,000, for the foundation of an English-speaking university, one of the colleges of which was to be called McGill. The Montreal Medical Institution—an active teaching body, representing the first attempt at medical education in Canada, officered by

men coming from the Edinburgh school—became the medical faculty of the university. They had brought with them the Edinburgh methods of medical teaching, and from its very origin down to the present time the McGill medical school has continued on the foundations then so truly laid. Persistence and faith carried them through a protracted struggle, during which they were joined by other Edinburgh graduates. In fact, in the last one hundred years there had been few exceptions to break the steady line of Edinburgh and McGill men occupying chairs at McGill medical school.

At the meeting of the Edinburgh University Court on October 20th it was reported that the University would shortly obtain possession of the new site near Blackford Hill, and it was decided to proceed at once with the erection of the first part of a new chemical laboratory. It was estimated that the cost of the portion now to be begun would be £60,000; the total cost of the new chemistry school, when complete, will be about £250,000.

DINNER AND PRESENTATION TO DR. G. C. ANDERSON.

On October 22nd his fellow practitioners in Fife gave Dr. Anderson a dinner and presentation of silver plate, on the occasion of his departure for London to take up the duties of Deputy Medical Secretary of the British Medical Association. Thirty-three sat down to dinner, one of the largest gatherings ever held. In proposing Dr. Anderson's health and making the presentation to him, Dr. Douglas said that a meeting of his fellow practitioners was inevitable. So friendly were the relations between Dr. Anderson and his colleagues in the county, and such were his surgical attainments and the interest he took in the profession in the area, that his removal to his new sphere of duties was a loss to the district. As members of the Fife Branch of the British Medical Association, of which Dr. Anderson was the honorary secretary for ten years, it was a source of sorrow when they saw his appointment as Deputy Medical Secretary to the Association; but at the same time it made Fife feel prouder of itself than ever. He could only compare Dr. Anderson's appointment to the promotion of a junior officer to be D.A.Q.M.G. at G.H.Q. The troubled times they were passing through and which were ahead were reflected in the profession, and this was the time when of all times a man was needed in the position Dr. Anderson had been chosen to fill. The Englishman was a sportsman, and did not mind that Scotsmen should be appointed to heads of departments in England. If they had been asked for their selection, with one accord those who knew Dr. Anderson would have said, "Try Anderson, Denbeath; he's the man for you." His appointment had placed Dr. Anderson in the position of second in command of the permanent officials of the British Medical Association.

In reply Dr. Anderson said he had always worked on the most friendly terms with his fellow members, although his views were often in direct opposition to those of many. He corroborated the fact previously mentioned of the influence which Fife had always exerted in the Association, notably with regard to the defence fund in 1912; and he stated that he meant to uphold the views he had always given voice to as secretary of the Fife Branch.

An extremely pleasant evening was spent, a fitting close to a decade of much hard work for the benefit of the Association in Fife.

GENERAL MEDICAL COUNCIL ELECTION.

Dr. Dewar closed his campaign in this election last week by addressing meetings at St. Boswells and Stirling. Dr. Dewar based his claims for election on the following grounds:

1. That the 1886 Act was passed for the purpose of enabling the general profession to elect one of themselves as their direct representative.
2. That Scotland had not been represented by a general practitioner since 1906, and the 1886 Act had thus been a dead letter in that country for thirteen years.
3. That he is a general practitioner in active practice, and has been strenuously engaged for the last seventeen years or more in furthering the interests of the profession.
4. That it is now time for the general profession to assert itself and take its share in the control of the general education of those proposing to enter the medical curriculum, and in the medical education of students qualifying for registration as medical practitioners, by returning one of themselves to the Council.

Dr. Ebenezer Duncan addressed a meeting of the profession in Edinburgh on October 21st, when Emeritus Professor Caird was in the chair. Dr. Duncan criticized the constitution of the new Board of Health, and added that it would in the course of a short time take up the question of increasing hospital accommodation, which was very inadequate; but it was for the medical profession to guide the Board with regard to the kind of hospitals which should be established. The appointment of a registrar of public assistance would put a stop to hospital abuse. He thought it would be a calamity to the public and to the profession to have compulsory medical service. Dr. Duncan also held a meeting in Glasgow on October 23rd, with Dr. Freeland Fergus in the chair, when a motion favouring his candidature was unanimously adopted.

Dr. Norman Walker held a meeting at Kilmarnock on October 23rd, in which he dealt especially with educational matters, and observed that the most important thing from the point of view of practitioners in Scotland was the raising of the standard of preliminary examination agreed upon by the Scottish universities.

GLASGOW HOUSING EXHIBITION.

An elaborate housing and health exhibition, displayed in the Kelvin Hall, Glasgow, has attracted a very large number of visitors, who have had the opportunity of seeing model cottages and of comparing them with the insanitary conditions of Glasgow slums. Dr. A. K. Chalmers, M.O.H., has published in the *Glasgow Herald* an essay on the medical aspects of the exhibition. He points out that efforts to deal with the housing problem have been on foot for several generations, and in Glasgow date back to the outbreak of cholera in 1848. In the earlier stages the difficulty was to prevent the erection of new slums when the demolition of the old was carried out. He showed by statistics that the death rate in families living in one apartment was much higher than in those living in three or four, so that the size of the houses must be included along with the external environment as one of the conditions influencing the health of its occupants. In conclusion, he pointed out that the changed circumstances of the day had expanded the meaning of the phrase "housing reform" to one which implied an actual shortage of houses. During the last fifteen years or so the supply of new houses had fallen off. It began, he says, to wither before the war, for reasons which require the closest attention of the economist, and almost absolutely ceased during its continuance. Further, the present need for houses rests, on the one hand, on the legacy of insanitary areas, and, on the other, on the almost complete absence of the annual output of houses. The Glasgow Corporation has approved the draft scheme of the special committee on housing and general town improvement.

COLLIERY SURGEONS' COMMITTEE.

A conference was held in Glasgow on October 16th, under the chairmanship of Mr. John Robertson, M.P., between the Colliery and Public Works Surgeons' Committee and the Executive Committee of the National Union of Scottish Mine Workers. The object of the conference was to consider the remuneration of medical men in colliery and industrial districts in Scotland. Dr. Goff of Bothwell, chairman of the Surgeons' Committee, made a statement defining the position taken up by the surgeons, and supporting the request made to the Mine Workers' Union last April for an increase in the scale of fees. The Surgeons' Committee, it was stated, were in a position to speak for the members of the medical profession concerned throughout Scotland, and were prepared to arrange an agreement at once. The miners' executive, however, stated that they could not conclude an agreement without first submitting the matter to the district unions. It was agreed that this should be done at once.

EDINBURGH MATERNITY HOSPITAL.

Drs. William Fordyce and J. Lamond Lackie have been appointed physicians to the Edinburgh Royal Maternity and Simpson Memorial Hospital to fill vacancies caused by the retirement, on completion of the usual period of service, of Drs. F. W. N. Haultain and J. W. Ballantyne. Dr. Ballantyne, as already reported, remains in the service of the hospital in charge of the ante-natal work with which his name has so long been associated.

Correspondence.

CREMATION AND MEDICAL FEES.

SIR.—Cremation as a method of disposal of the dead has strong recommendations in its favour from the point of view of preventive medicine, and, as stated by Mr. H. T. Herring in his letter to you in your issue of October 25th, 1919, cremation is becoming more general in this country. The question of medical fees for a cremation certificate should give rise to no difficulty. It is obvious that the fair and proper fee would be that of an ordinary professional visit, as stated by Mr. Herring.

The Cremation Act, 1902, necessitated the giving of two medical certificates, each of which certifies that death has actually occurred, and that there is no external evidence to show that death was other than natural. The system of death certification under the Cremation Act is much more satisfactory than the present system of death certification for ordinary burials.

Attention has been called on several occasions to the defects of the present system of death certification in this country for ordinary burials; for example, in 1910 the Departmental Committee appointed to inquire into the law relating to coroners recommended that a certificate of death should not be accepted from a medical man unless it states that he has by personal inspection of the body satisfied himself as to the fact of death. At present he may certify merely on the information given by relatives. The committee also recommended that in every case when a medical certificate is not given the death should be reported to the coroner in order that a proper inquiry should be made.

Under present conditions the law makes no safeguard against premature burial or the concealment of crime. The cremation certificates give adequate safeguard in both these respects, and on this account will be commended by the medical profession.—I am, etc.,

London, W., Oct. 29th.

W. H. WILLCOX.

SIR.—Mr. Herring asks for an expression of opinion on medical fees for signing cremation certificates. He does not seem to distinguish between the medical men signing Parts B and C. In the one case it is more or less the signing of a death certificate by a doctor attending a case, and as such might call for a fee such as Mr. Herring suggests. In the other case the medical man signing occupies an official position under the Cremation Act and acts in a semi-judicial capacity, and it can only be done by the M.O.H. or divisional surgeon, who has first to interview the doctor signing Part B, and then has to visit the house of the deceased, often at an inconvenient time, examine the body of the deceased, and hold a sort of inquiry into the death, interviewing one or more relatives separately and also those in attendance during the illness, and then has to make his report. For this I have, as divisional surgeon always charged one guinea fee, but am doubtful if this is adequate at the present time.—I am, etc.,

A. DUMVILLE ROE, M.B. Cantab., M.R.C.S.

Putney, Oct. 26th.

CHILD WELFARE AND OPERATIONS FOR TONSILS AND ADENOIDS.

SIR.—The recent interesting discussion on the subject of "a death under an anaesthetic," in the columns of the *JOURNAL*, emphasizes not only that anaesthesia during tonsil and adenoid operations is not devoid of risk, but also that the operation itself, even in the most competent hands, is not devoid of danger and complications, immediate and remote.

The public, and I fancy also a good many practitioners, have come to regard the operation as one of a trivial nature; this may be explained by the frequency of its performance and the high standard of technical skill displayed as the result of constant practice.

But is the operation of such a trivial nature? The children requiring it are often of poor physical development and in delicate health. Haemorrhage at the time of the operation may be severe, even in tonsillotomy, while in the case of enucleation, if the tonsil is adherent, it may prove a difficult and dangerous procedure.

Of the later complications reactionary and secondary haemorrhage are occasionally met with, and ear complications, such as acute purulent otitis media and acute mastoiditis, are by no means uncommon in hospital practice. In the course of seventeen years as surgeon to the Queen's Hospital for Children, I can recall quite a number of cases of acute mastoiditis arising after operations for tonsils and adenoids, on which I have been called to operate, and on several occasions I have had little patients admitted into my wards suffering from profound anaemia following haemorrhage.

This leads me to the point of my letter, whether the present arrangement of operating on large numbers of children in the out-patient departments of hospitals and sending them to their homes soon after they have recovered from the anaesthetic is really the best method of dealing with them. Let me put the matter in another way: Would any surgeon have his own child operated on in the manner described and sent home, or would any surgeon do the operation for a private patient under similar circumstances unless compelled? I have no doubt as to the answer, and yet these children are sent to their homes without inquiries as to what kind of a home it is; many of them are overcrowded, dirty, and quite unfit from a hygienic point of view for the convalescence of a case with a large raw surface in the throat. To my mind the wonder is that ear complications are not much more frequent. The exigencies of hospital practice are responsible for the method, as it is only possible to remain in hospital those cases in which some complication has arisen during the operation.

What is the remedy? I would suggest that with the establishment of infant welfare centres, school clinics, and treatment centres, some provision should be made for their convalescence in suitable surroundings. If some such arrangement could be made the children would have the advantage of good nursing and appropriate feeding, and the hospitals would be to some extent relieved of their congestion.—I am, etc.,

DOUGLAS DREW,

Consulting Surgeon to the Queen's Hospital
for Children, Hackney.

London, W.1, Oct. 13th.

SCHOOL MYOPIA.

SIR,—Myopia surely has more than one cause. Almost certainly some cases are congenital. How else can myopia —7 sph. with —3 cyl. at 6 years, or —10 sph. with —1 cyl. at 9 years of age be explained? Almost certainly also some cases of myopia result from eye-strain, unocular myopia developing from emmetropia or hypermetropia, the other eye being in compound hypermetropic astigmatism. It is rational to believe, though clinical proof be absent, and should be absent, that hypermetropic astigmatism uncorrected may become mixed astigmatism.

Though actual proof, by the nature of the case, be absent, by analogy tension, eye-strain, may justifiably be considered the part cause of myopia, as varices result in veins abnormally weak in resistance from normal intra-vascular pressure.—I am, etc.,

W. CAMPBELL M'DONNELL, M.R.C.S.

London, N., Oct. 20th.

THE CAPITATION RATE.

SIR,—During the next week or two Panel Committees will be engaged on the most important work they have ever had to do on behalf of the material interests of the profession—that of (1) ascertaining the views of the individual working practitioner throughout the country as to his proper remuneration, and (2) of instructing their representatives at the November Conference as to the capitation fee they should demand of the Government for the work of the next three years.

Obviously this demand must be a considered one, arrived at scientifically and capable of being logically maintained in the face of opposition.

In document M. 22 the Chairman of the Insurance Acts Committee sets out the problem and the best ways of solving it clearly and lucidly, as he invariably does, but we may admire the method without accepting the data or agreeing with the conclusion; and I cannot help thinking that if either the Conditions of Service Subcommittee or the full Committee had had time to consider the document at leisure, or even to read it as a whole, before adopting

it, they might well have decided, after checking and amplifying both the data and the arguments, to have left the Panel Committees and the Conference free and uncommitted to arrive at their own conclusions as to the figure to be named. I trust even now that the lead of the Insurance Acts Committee will be ignored, and each practitioner will think out the problem for himself and arrive independently at his own result.

The following notes may be of assistance:

1. "Basic Fee" of 7s. 6d. or Average of 7s. 3d.—This was arrived at in 1912 before it was known what amount of attendance would be required. We now know that the average is approximately three consultations and one visit per year. For payment by attendance the Commissioners fixed the fees at 2s. a consultation and 2s. 6d. a visit. At this rate the basic fee should be 8s. 6d. On this the calculation in paragraph 19 of M. 22 works out at 16s. 2d.

2. The Factor of +60 per Cent. for Changing Old Value of Money into Present Value (paragraph 11).—This may be right or wrong, but should not be accepted without examination. Let the problem be referred to an accountant—say Sir Woodburn Kirby, the independent Chairman of the Distribution Committee—and his award agreed to beforehand.

3. The Working Year of Eight Hours a Day for 300 Days.—That is, six full days a week with thirteen days' holiday, including Christmas, Easter, Whitsun, and Bank holidays. The working year of the higher ranks of the civil servant is, I think, seven hours a day, a half holiday on Saturdays, and forty-two days' full-pay leave. (They work overtime for nothing; this is a wrong.) When we go on leave we have to pay eight guineas a week and his board to our locum. The length of the working year is important, as it obviously affects the calculation of the fraction three-eighths.

4. The £1,800 a Year Gross Income Present Day Value for a Successful Middle-aged Man.—This is a pure guess, though possibly not a bad shot. Why not base the gross income on the pay, present day scale, of a medical officer of the army or navy? At age 45 a medical man in the navy would have, say, twenty years' service, and be a surgeon commander of six to seven years' seniority as such. His pay would be £967 5s. a year, with free board, lodging, and service, valued by the Admiralty (in allowances) at £210—total £1,177 5s. The present value of the pension (£515) to which he is entitled, at 5 per cent., is £4,757, which will give him and his heirs an income of £237 16s.—total £1,415 a year. And I believe there is in addition the value of a small pension to his widow, which I will not attempt to estimate, but which must not be forgotten. His income being *net*, we must add one-third for the expenses of a non-dispensing practitioner (paragraph 24), which raises it to £1,886 gross, or if in the case of a dispensing practitioner add a half, which brings it to £2,122. If we take the mean and adopt £2,000 a year gross instead of £1,800, the capitation fee works out at 15s.

I have not worked out the equivalent for an officer of the army, and there are points in the above calculation—for example, value of pension—which I have hastily assumed, but it is enough, I think, to show that the £1,800 a year wants further examination.

In conclusion, I submit that in this matter of remuneration, as in all negotiations as to pay, the right course to adopt would be to come to an agreement with the Government as to the principles on which the sum is to be assessed, and then refer the actual calculations to an expert committee with an independent chairman.—I am, etc.,

Weyhill, Oct. 28th.

J. P. WILLIAMS-FREEMAN.

SIR,—I wish through the columns of the JOURNAL to lay before the profession a very definite plan of campaign with the object of securing an adequate "capitation rate" for our services under the National Insurance Acts, based upon the figures contained in my letter in your issue of October 25th.

To recapitulate the figures:

1. A capitation rate of 16s. to be paid to each panel practitioner for each patient on his list as from January 1st, 1920, as long as the cost of living is more than 100 per cent. higher than it was in 1914.

2. A capitation rate of 14s. 10d. while the cost of living is more than 75 per cent. higher than it was in 1914 but not more than 100 per cent. higher.

3. A capitation rate of 13s. 8d. while the cost of living is over 50 per cent. higher than it was in 1914.

4. A minimum capitation rate of 12s. 6d. when the cost of living comes down to a figure 50 per cent. higher than it was in 1914.

The range of services should be those outlined in M. 25 as subsequently modified at the Annual Representative Meeting and Panel Conference, with perhaps a few alterations which could in all probability be easily adjusted. Personally I am in favour of the insurance work being made complete and thoroughly efficient, but no scheme,

however perfect in other respects, can be efficient so long as there is a sense of inadequate payment left in the minds of the practitioners working it. If the country wants a good service it must be prepared to pay for it.

How shall we proceed to get it? I suggest as follows:

(1) Let each panel practitioner, whether a member of the Association or not, write to the secretary of the Division of the British Medical Association in whose area he resides a letter on the following lines:

I hereby express my complete agreement with the capitation rates for insurance patients outlined by Dr. Crawshaw in the issues of the BRITISH MEDICAL JOURNAL for October 25th and November 1st, 1919, and hereby undertake to support any steps which may be deemed necessary by a majority of panel practitioners to make these rates effective.

Date.

(Signed).....

The matter is one of considerable urgency and importance, and I appeal to every practitioner concerned to send this letter *within the next week*. I am positive we shall get no better terms, and it rests with us to say that these shall be our minimum. In this way by November 8th the secretaries of the Divisions should know how many will support the scheme in their respective Divisions.

(2) In the week following November 8th each secretary of a Division should make a return to the Medical Secretary of the Association of the number agreeing and the percentage that number bears to the total number in his Division.

(3) In the following week each secretary of a Division should call a general meeting of his area to confirm the proceedings so far, and pass a resolution pledging the Division as a whole and each practitioner individually to stand out for the scheme. Copies of those resolutions should be sent to the Medical Secretary of the Association.

(4) The Medical Secretary should see that the figures are published in the next succeeding issue of the JOURNAL and lay them before the Council, who should then take the necessary steps, if the returns justify it, to lay the matter before the Government. This could perhaps be done best by the Insurance Acts Committee, but I would leave the selection of the method to the Council.

(5) If the Government accept the terms the matter is at an end. But we must be prepared for their non-acceptance, and then the matter must be referred to the Divisions, when I would suggest the vote should be some form of ballot. The results of the Divisional voting should come before a Special Representative Meeting of the Association, which should remain in session until a final agreement is arrived at, and appoint a special committee from among its members to act as an intermediary with the Government. It might be necessary to "strike" before the terms are accepted, and I should be prepared to go to this extreme.

In this scheme I have deliberately passed the Panel Committees by, as I am convinced they are too unwieldy, and not representative of the profession. The proper unit to work through is the unit of our own organization, not a Government-made committee.

As regards a "strike," it is an extreme step which I should regret to see necessary, but it would simply be an absolute refusal to work under the insurance system, not a refusal to attend the sick. They should be given to understand that after December 31st next they would have to pay privately for their attendance.

This scheme is definite, and so far as I know the only one before the profession, and to every member thereof it seems to me it should be acceptable. I appeal strongly to every practitioner to take the necessary initial step, and get a move on.—I am, etc.,

Ashton-under-Lyne, Oct. 27th.

SAMUEL CRAWSHAW.

1920 REGULATIONS AND REMUNERATION.

SIR,—As the Insurance Acts Committee approve generally the draft regulations we may take it for granted that before long we shall be working under those regulations. I should like to express an opinion or two before it is too late.

Every leader of medical thought who has either written or spoken on the present crisis in our profession has emphasized the necessity of liberty and freedom in the carrying on of our work. Yet I notice that one of our most cherished liberties is soon to go. I mean our right to choose or refuse patients.

It shall be the duty of a practitioner who refuses to accept on his list a person who applies for treatment as an insured person (a) to give the applicant such treatment, if any, as may be required by him, pending his acceptance by or assignment to a practitioner, and (b) to inform him of the name and address of any neighbouring practitioner or practitioners to whom application for acceptance might be made, and to hand him a form, to

be supplied by the committee, for the purpose of enabling him if necessary to secure assignment to a practitioner.

This is not all.

It shall be the duty of any practitioner who may be summoned and may be available to give the insured person any necessary treatment.

I trust the Conference will have the sense to oppose this. We are here consenting to do the work which up to now has been done by the clerk to the committee.

If a practitioner is responsible for all acts and omissions of his deputy or assistant, why should he be compelled to inform the Insurance Committee of any arrangement he has made for securing treatment for his patients when he is not available and must be absent from his practice for more than one week, without first informing the Insurance Committee of the fact and of the person or persons who will be responsible for his insurance practice during his absence? We have here an agreement without a consideration, which in common law would be void. We are told plainly that our responsible person is not responsible. This sort of contradiction is not uncommon in official regulations.

There should be no artificial limitation of patients on the lists of doctors. It is a thoroughly discredited fallacy that if a man did less work there was more work for others to do. The only natural and rational way to accomplish this is to entice into the service able men who "possess professional skill or psychological characteristics" that attract patients to them.

A word about emergency work. A man who does good solid conscientious work cannot go in for emergency work. If he keeps to his prescribed hours at his own home and visits his patients at reasonably fixed hours emergency work becomes impossible. To give to insured persons the care, thought, and time which the Act demands one cannot in the midst of work run off because another insurance patient has a fit. Emergency work is incompatible with contract work, and no rules and regulations can make it otherwise. Emergency work should be done in public institutions with a good ambulance service and an adequate staff.

Granted that the whole of a practitioner's time is (or should be) at the disposal of his patients, and the conditions of the insurance contract really constitute a prior claim for such persons on the whole of his time; that a doctor has to be on the alert from "Sunday midnight to Sunday midnight"—why, then, should his working hours for payment purposes be calculated at eight hours a day?

I do sincerely hope that the Conference will insist on Sir Bertrand Dawson's four postulates*:

- (a) Team work and organized equipment.
- (b) Means for the general practitioner to help himself.
- (c) Reform in remuneration such as justice demands.
- (d) Liberty of action.

—I am, etc.,

Exeter, Oct. 27th.

J. PEREIRA GRAY.

INSURANCE NEGOTIATIONS WITH GOVERNMENT.

SIR,—That negotiators without a weapon are on that account at a disadvantage when dealing with politicians who are striving to drive as good a bargain as possible is evident; it is equally evident that our weapon cannot be a strike, involving a suspension of medical attendance, as it would hit the Government only through the suffering of the sick. We possess, however, a weapon which, if called into action, would hit the Government in a tender place—finance—and in such a way that neither the sick nor the public need suffer.

Let all panel practitioners formally repudiate any words in their agreements which bind them to sign "intermediate" and "final" certificates, and agree that they will unanimously cease to sign these unless their just demands are honestly met. Such action would not be a strike in the "down tools" sense, and would inflict no hardship upon the sick, who would be duly certified for sick pay by the "first" certificate, and would continue uninterruptedly to receive medical attendance; moreover, it is for financial, not medical, purposes that we are expected thus to protect the Government against imposition.

* Cavendish Lecture, July 4th, 1918.

The movement should, I think, be organized by panel practitioners as distinct from the British Medical Association, but they should work with the Association in the matter, so that the profession as a whole would not be involved in a conflict, and yet the hands of those on whom the responsibility of negotiation falls would be provided with a weapon which could be called into use if found necessary.—I am, etc.,

Eastbourne, Oct. 23rd.

ARTHUR P. SHERWOOD.

A BITTER CRY FROM IRELAND.

SIR,—Before it is too late, will you allow me, through the medium of your columns, to address a few words to my fellow practitioners in Ireland? Having only a more or less direct personal interest in the matter, I may perhaps make my suggestions without being suspect of having an axe to grind.

The medical profession in Ireland is now at the parting of the ways. A false step will lead to disaster, but it has still, not through any merit or foresight on its part, an opportunity such as will never recur if it acts collectively and with promptitude.

The Government, having successfully established the fact that medical attendance on chronic invalids—that is, discharged disabled sailors and soldiers—plus the supplying of medicines, dressings, ordinary splints, etc., plus a considerable amount of clerical work, is only worthy of pay at varying rates of from 12s. 6d. to 15s. a year, is now preparing to lay a snare, not, alas! “in vain in the sight of the bird,” but stealthily and with many and specious promises and arguments, before a profession which prefers to emulate the ostrich to seeing after its own interests.

This snare is euphemistically termed “extension of medical benefits,” or “a State medical service,” or “reform of the Poor Law,” or any other claptrap which past experience has taught will entrap the unwary.

A maximum of 15s. per annum for medical attendance, etc., on chronic invalids having been established, the Government will naturally argue that a much smaller sum is adequate remuneration for attendance on the healthy, and if we as a profession do not bestir ourselves, we shall find we are offered and—do not let us make any mistake in the matter—practically compelled to accept an annual sum for unceasing work equal to a part of what many of the so-called working men receive for a day of from seven to ten hours' work.

I put it to the general practitioner, Is he satisfied to be the only worker whose status is not improved and whose emoluments are not increased? I put it to the specialist and consultant, Are they content to be perpetually exploited by the well-to-do artisans, farmers, shopkeepers, etc., who frequent hospitals for free medical attendance, while denying themselves no amusement or gratification they can by any means reach to?

I shall perhaps be told that my feeble criticism is merely destructive, that all will be well if we only remain inactive and await with patience the maturing of a plan designed by a beneficent and sympathetic Government. Let us remember the words of Edward Fitzgerald: “To-day which has outlasted so many to-morrows.”

No doubt I shall be asked for a scheme not open to criticism. The remedy lies with ourselves, and I believe I can suggest one which, while maintaining our independence as a profession, will improve our status, increase our emoluments, and provide the public with a just and efficient service.

Briefly, my scheme consists in our providing a medical service managed by ourselves in which no lay person shall have any voice except as our paid servant. I see no insuperable difficulties in preparing and working a plan of this sort, the benefits of which would of course be open only to those unable to pay ordinary fees.

We have lately had established a new General Committee to represent the entire profession in Ireland. What is to prevent this being the Central Governing Body? We have already in existence local medical committees all over the country. What better functions can they have than carrying out of the scheme in their own locality? Probably I shall be told I am a visionary. Perhaps I am, but it is the vision of the abyss into which the medical profession in Ireland is in danger of falling that prompts me to put my pen to paper.

No doubt many arguments will be advanced against a scheme which provides for liberty of action in the profession, and which makes it possible for us to say on what conditions and for what remuneration we will give our labour. I shall be told that the profession is not organized or united. Granted, but what greater incentive to unity can there be than mutual monetary benefit? Under such a scheme as I suggest tens of thousands of pounds would be annually divided among members of our profession—general practitioners, consultants, specialists—not one penny of which now reaches our pockets.

Again, I shall be told that we have not the intellectual capacity or business acumen for managing anything. I freely admit that we come under Swift's category of those not fitted to be a “clerk to an apple stall,” but we can pay laymen to do our non-professional work for us. Then, again, it will be urged “Let us wait and see what the Government scheme is before we do anything.” Yes, by all means, let us try to insure our house when nothing but ashes remain!

Seriously, Sir, what does any man who considers the matter dispassionately imagine will happen once the Government launch a scheme for the enslavement of the medical profession under the specious title of State Service? Will there not be murmurings, meetings, threats of a general strike, and so forth; and in the end will not the profession accept whatever garbage in the way of remuneration they are offered? Meetings and murmurings are futile. The public is sick of strikes. At best a strike is but a negative policy, and can only be brought to a successful issue by a thoroughly organized and united body of men.

Is there any reason why the medical profession should not adopt a positive and constructive policy which will not only assure its own liberty and economic position, but will at the same time provide those members of the public who cannot afford to pay ordinary fees with an efficient voluntary medical service?—I am, etc.,

Waterford, Oct. 10th.

J. W. H. JELLETT.

INFLUENZA.

SIR,—Let me remind your readers that there is a very remarkable feature—far more significant than that of *S. viridans*—in the symbiosis of Pfeiffer's bacillus and *Staphylococcus pyogenes*. The prolific growth of influenza bacilli around colonies of staphylococci, and also in areas where dead staphylococci have been streaked upon the plate culture, shows that the soluble products of staphylococci favour the growth of the influenza bacilli. Surely this is likely to be a more fertile source of knowledge than the experiments with *S. viridans*.—I am, etc.,

London, W., Oct. 25th.

W. CAMAD WILKINSON.

** The suggestion was intended to be of general application; *S. viridans* was taken only as an example.

“THE CULT OF INDIVIDUALISM.”

SIR,—Before replying generally on the correspondence under this heading which you have been good enough to allow in your JOURNAL, it would be useful to refer to replies by officers of the Federation of Medical and Allied Societies and the Medico-Political Union, whose activities outside the British Medical Association are greatly to be deplored.

With regard to the Medico-Political Union. In your issues for September 27th and again for October 11th a certain question was submitted to Dr. Macdonald (York), the protagonist for that body—namely, how he would propose, by using trade union methods or principles, to compel certain practitioners in a town, who are considered by the British Medical Association to be recalcitrant, to resign their appointments if the Medico-Political Union determined that this should be done. Up to the present no reply is forthcoming. No one need be surprised. There is no power available either for that body or any other. This silence has always been the result when an advocate of this Union is eventually tied down to show cause for the faith which is within him whilst avoiding rhetoric and prophecy. It can be taken, therefore, that the individualism shown—with the consequent schism—by this body is proved, however much one may admire and sympathize with the honestly-believed-in endeavours of its active members.

With regard to the British Federation of Medical and Allied Societies the position is more serious. The individualism and schism there shown is based on inaccurate and misleading published statements, and when the officers are asked to give concisely what object they propose to advocate which the British Medical Association neither can nor has the power to carry into effect, they own that their "particular piece of work" is not one which the British Medical Association cannot carry into effect, nor do they seek any power to accomplish it. That being so, why form an incorporated association under Board of Trade registration before finding out whether the British Medical Association was doing that work? Had such an inquiry been made it would have been found that the British Medical Association began that "particular piece of work" in 1914, and was only delayed in its fulfilment by the war. At the public meeting of the profession in London in the spring, when asked to hand over its political interests to the Parliamentary Committee those present refused to do so, hence the necessity for the change of name and machinery. But it is "the old gang." Rumour states, moreover, that it has been engineered into life by a political party. The inaccurate and misleading statements published are that certain "medical bodies have joined this Federation," when, as a fact, certain quoted societies did join the Parliamentary Committee but have never joined the Federation, whilst others were represented at the July conference to hear and report what was said, but they have never as yet notified their allegiance. If the Federation conducts its future propaganda on such questionable lines, it will not only become a danger to the profession but also a discredit to it.

This is not the time—when health services are under consideration, not only for the nations of our empire, but also for the so-called "new world"—for the British medical profession anywhere to proceed to split itself into rival groupings. It is therefore the more to be deplored that not only societies which are collaborating now with the British Medical Association (for example, Association of Medical Officers of Health, Irish Medical Association, Royal Society of Medicine, Medical Women's Federation, Poor Law Medical Officers' Association, Central Committee for State Registration of Nurses, British Dental Association, etc.), but also honoured members of our profession (for example, Sir Malcolm Morris, Sir Ronald Ross, Mr. E. B. Turner, etc.), should allow themselves to be advertised as assisting a body whose birth is questionable, and whose activities, if successful, must tend to hamper the British Medical Association, and thus to defeat that union of the profession so necessary now to assist in the formation of a really satisfactory international medical service for the nations of the world brought together for the first time under the League of Nations. Is it too late to appeal to them to reconsider their position?

This cult of individualism in our profession—not only in the individual or group—may prove to be a national disaster. Surely the call is for each and all to be willing to place on one side, even what may be their individual strongest convictions, if by so doing they can assist to some extent toward the medical profession getting into line, rising to its opportunities, and so going forward in the second war—against disease—as one united whole.—I am, etc.,

Hove, Oct. 27th.

E. ROWLAND FOTHERGILL, M.B.

THE BRITISH FEDERATION OF MEDICAL AND ALLIED SOCIETIES.

SIR,—In his letter published in your issue of October 25th Sir Henry Morris has indeed dealt faithfully with his successors in the hierarchy of the British Federation of Medical and Allied Societies. He tells them that in answer to my original letter they gave "a somewhat distorted explanatory reply to the first charge, and no reply whatever to the second." The phrase, I confess, does seem to me to sum up the situation so far as the official defence of the Federation is concerned, and after such a judgement from such a source I, at least, may be content with the verdict. The officials themselves appear to accept the chastisement with becoming meekness, and I am sure that in any event their sense of politeness will restrain them from applying such terms as "carping" or "jealous" to their formidable mentor. Yet, if they desire to retort,

they might remind Sir Henry Morris that he has closely followed their pattern in one respect, for he, too, avoids offering any defence of the activities cultivated by his committee outside the authoritative terms of reference; here obviously his formula, "no reply whatever," has a further field of opportunity. It is possible for a committee to sin by commission as well as by omission.

On the main facts of the controversy Sir Henry Morris confirms my statements. He agrees that the Steinway Hall committee pledged itself, on October 1st, 1918, to report to "a subsequent general meeting of the profession," and that its later action was a "deliberate departure" from this pledge. In his opinion, certain "unfavourable experiences" of general meetings of the profession justified this course, whereas my inclination is to the more primitive view that a promise once given and accepted is binding and must be fulfilled. Because they judged the atmosphere "unfavourable," the Steinway Hall committee departed from this elementary obligation. Yet, until I am assured to the contrary, I shall refuse to believe that any one of these gentlemen in the conduct of his private affairs would deign to avail himself of so dubious a retreat.

Sir Henry Morris agrees also that the chairman of the Steinway Hall committee undertook that his committee should not intervene in Scottish electoral affairs, and his limitation, "at any rate at the outset," whatever its other values, has no relevance to a discussion which is concerned with the earlier proceedings of the committee. Now, it is admitted that the committee placed on a list of approved candidates the name of a gentleman who was soliciting the suffrages of the electors in a Scottish constituency—namely, the constituency formed by the union, for parliamentary purposes, of the four Scottish universities. But, says Sir Henry Morris, in defending the committee against a charge of breach of engagement, "neither canvassing nor platform oratory was rendered by the committee in any university or other constituency in either Scotland or Ireland." If the committee is to be judged by this test its chance of acquittal is a slender one. I know nothing of canvassing, but it is certain that, in so far as abstinence from platform oratory goes, the position cannot be counted for virtue to the Steinway Hall committee, for this committee actually wrote to at least one candidate for the Scottish Universities constituency to offer the help of speakers in support of his candidature. The non-appearance of the oratory was thus due, not to the committee's respect for its chairman's pledge but solely to the modesty—or perhaps to the alarm—of the candidate.

Now, for myself, I say once and for all that an organization which (1) publishes in an approved list the name of a gentleman standing as a candidate for a Scottish constituency, and (2) offers this gentleman the co-operation of speakers in the prosecution of his candidature, does actually intervene in Scottish electoral affairs; and, further, that if this organization has previously pledged itself to abstain from action of this order, it has by such intervention been guilty of a breach of faith. If others, while admitting the facts, contest these conclusions, I can only assume that they, on the one hand, and myself on the other, apply different standards in our respective estimations of values.

On one point Sir Henry Morris is palpably in error. He writes: "The other candidate . . . to whom Dr. Hawthorne refers in his very reproachful and denunciatory criticism of the Committee was also a resident in London." My letter contains no such reference.—I am, etc.,

London, W., Oct. 27th.

C. O. HAWTHORNE.

* * * We cannot continue this correspondence.

THE Food Education Society (late National Food Reform Association) will hold a conference in Manchester next year, on the lines of the Guildhall School Conferences of 1912 and 1913. Steps are also being taken to constitute local committees in Birmingham and other places, so as to arouse interest in and secure adequate representation at the conference and to arrange for local campaigns.

MAJOR-GENERAL WILLIAM C. GORGAS, late Surgeon-General of the United States Army, who has been investigating sanitary conditions in Central and South America, has offered to assume the technical direction of the sanitation of Guayaquil, Ecuador, provided the necessary funds are supplied by the municipality or the Republic.

The Services.

ARMY OF OCCUPATION BONUS FOR MEDICAL WOMEN.

ON August 12th, 1919, an Army Council Instruction, No. 491 of 1919, was issued approving the issue of the Army of Occupation bonus to lady doctors attached to the R.A.M.C. serving on general service contracts (including those attached to Q.M.A.A.C.), and those at Endell Street Military Hospital on full time duties) with effect from February 1st, 1919. Permission was given for the issue to be made automatically by the Command Paymaster, or by Messrs. Holt and Co., Army Agents; and steps were ordered to be taken to see that amounts due were issued to those already demobilized. A subsequent Army Council Instruction dated October 21st, No. 603, lays down the rates of the bonus for medical women as follows:

	Weekly.
	s. d.
1. Lady doctors who have served on general service contracts for less than one year	28 0
2. Lady doctors who have served on general service contracts for periods in excess of one year	31 6
3. The Controllers of Medical Services Q.M.A.A.C. overseas and at home	35 0
4. Lady doctors serving as full time medical officers at Endell Street Military Hospital should be paid the bonus of the rank for which they are drawing pay.	

HONOURS.

THE following distinctions have been conferred for services rendered in connexion with the defence of Kut-al-Amarah:

C.M.G.

Lieut.-Colonel John Hennessy, C.B., R.A.M.C.

D.S.O.

Major Charles Harrison Barber, I.M.S., Captain (acting Major) Arthur Skelding Cane, O.B.E., R.A.M.C., Captain Edward Geoffrey S. Cane, R.A.M.C.

Military Cross.

Captain John Startin, R.A.M.C.

The following officers should be added to the list of mentions in dispatches published in the *London Gazette* of October 19th, 1916 (BRITISH MEDICAL JOURNAL, 1916, vol. ii, p. 601): Major E. A. Walker, I.M.S., Captain P. B. Bharucha, I.M.S., Captain (acting Major) A. T. J. McCreery, M.C., R.A.M.C., Captain L. Murphy, R.A.M.C.

ORDER OF THE BRITISH EMPIRE.

The following appointments to the Order of the British Empire are announced:

To be Officer (Military Division).

Surgeon Lieutenant Commander Lidbrooke Frank Cope, R.N., for valuable services with the Danube Naval Brigade.

To be Member (Military Division).

Surgeon Sublieutenant David James Tosh Oswald, R.N.V.R., for valuable services during the war.

FOREIGN DECORATIONS.

The following decorations and medals have been awarded by the Allied Powers for distinguished services rendered during the course of the campaign:

Conferred by the President of the French Republic.

Légion d'Honneur.—Officer: Major-General Edward George Browne, C.B., C.M.G., late R.A.M.C. Chevalier: Captain and Brevet Major Thomas J. Carey Evans, M.C., I.M.S.

Conferred by the King of Italy.

Bronze Medal for Military Valour.—Temporary Captain George Thomson Mowat, R.A.M.C.

Conferred by the King of the Belgians.

Croix de Guerre.—Surgeon Lieutenant Walter G. Bigger, D.S.C., R.N.

Conferred by the King of the Hellenes.

Order of the Redeemer.—Officer: Major Alexander Edward Kidd, O.B.E., R.A.M.C. (T.F.). Chevalier: Captains Archibald Oliver, R.A.M.C. (T.F.), and William Arthur Valentine, R.A.M.C. (T.F.).

Conferred by the President of the Portuguese Republic.

Military Order of Avis.—Commander: Colonel Murray MacLaren, C.M.G., C.A.M.C.; temporary Colonel Charles Ferdinand Martin, C.A.M.C.; temporary Major and brevet Lieut.-Colonel Frederick S. Brereton, C.B.E., R.A.M.C.

Conferred by the King of Serbia.

Order of St. Sava (5th Class).—Captain J. K. Mossman, M.C., C.A.M.C.

MILITARY CROSS.

The following are the statements of services for which the decorations announced in the *London Gazette* of March 8th, 1919, were conferred (continued from p. 482):

Temporary Captain St. George Marriott Leslie Homan, R.A.M.C., attached 1/8th Battalion Notts and Derby Regiment (T.F.).

On September 23th, 1918, during the attack on Bellenglise, he worked in an indefatigable manner, tending wounded in open trenches under heavy shell fire showing disregard for personal danger, and moving his aid post from time to time to be on the spot. Again, at the attack on Kamecourt and Montbrehain, on October 23rd, he worked incessantly for twenty-four hours, tending to casualties from every battalion in the division, and, although badly gassed, he refused to relinquish his excellent work.

Temporary Captain George Jackson, R.A.M.C., attached 15th Battalion Notts and Derby Regiment.

During operations on October 14th, 1918, east of Terhand, he displayed great courage and devotion to duty in attending the wounded under close artillery and machine-gun fire. Throughout the whole day he was with the foremost wave of the battalion, and several times traversed the front line and dressed the wounded. Later, in Sweveghem, he again performed invaluable service in attending the wounded, and thereby saved many lives.

Captain Frederick McNab Johnson, C.A.M.C., attached No. 2 Field Ambulance.

For conspicuous gallantry and devotion to duty. During the attack by the division on September 27th, 28th, and 29th, 1918, in front of the Canal du Nord, he was unremitting in his attention to wounded. Especially on September 29th he worked continuously under fire, locating and dressing wounded who were lying out and superintending carrying parties.

Captain Arthur Poole Lawrence, 6th Field Ambulance, A.A.M.C.

He displayed great gallantry and able leadership on October 3rd, 4th, and 5th, 1918, during the fighting in the Hindenburg Line north of St. Quentin, particularly during the assault on Montbrehain, as bearer captain. He maintained touch with regimental aid posts in spite of heavy shell fire, and his genius for selecting routes and loading posts resulted in a very rapid evacuation of wounded.

Temporary Captain Henry Ruthven Lawrence, 1st Field Ambulance, S.A.M.C.

For conspicuous gallantry and devotion during operations before Beaurevoir and Le Cateau, between October 7th and 15th, 1918, whilst in charge of the collection and evacuation of wounded. On the 7th his organization and energy were admirable, and from early morning on October 8th to the evening of the 9th he worked without rest, and the successful and expeditious evacuation of the wounded was due in a large measure to his tireless energy, resource, and disregard of danger.

Captain Gladstone Wilfred Longhead, 4th Field Ambulance, C.A.M.C.

In charge of stretcher-bearers during the operations north and east of Cambrai, October 9th to 12th, 1918, he displayed great energy and fearless devotion to duty. Particularly on October 10th to 11th, he worked continuously for forty-eight hours without rest. He time after time led his bearers to forward positions under severe shell fire and was responsible for the rapid evacuation of the wounded from the field.

Temporary Captain Robert Chichester McMillan, R.A.M.C., attached 38th Battalion Machine Gun Corps.

For conspicuous gallantry and devotion to duty. On November 8th, 1918, at advanced dressing station, Pot de Vin, he dressed and evacuated a large number of wounded continuously for twenty hours. For four hours of this period the enemy heavily shelled the advanced dressing station, one shell entering the building where he was attending the wounded, blowing out one of the walls.

Captain Allan Young McNair, C.A.M.C., attached 10th Infantry Battalion Alberta Regiment.

For conspicuous gallantry and devotion to duty east of Haynecourt on September 27th to 28th, 1918. He worked unceasingly for forty-eight hours in very exposed positions and under heavy fire. At one time he went forward and brought back a wounded officer who was lying out in front. His energy and fine behaviour throughout saved many lives.

Temporary Captain Malcolm Manson, R.A.M.C., attached 10th Battalion Royal West Surrey Regiment.

For conspicuous gallantry and devotion to duty near Menin on October 14th, 1918. He went forward in the fog under heavy shell and rifle fire and established an aid post, and continued dressing wounded under heavy shell fire at 1,000 yards' range quite regardless of his own personal safety. He showed marked coolness and courage throughout the whole operations.

Lieutenant Will George Frederick Owen-Morris, R.A.M.C. (S.R.), attached 1st Battalion Leinster Regiment.

For conspicuous gallantry and devotion to duty on October 14th, 1918, near Ledershem. Seeing a man fall wounded, he turned back, and for over half an hour remained working in a shell and bullet swept zone without any cover, at ending to this man and others before himself moving to a pill-box a short distance away.

Captain (acting Major) Harry Priest Rudolf, R.A.M.C.

At Fife Knoll, near Kh. Abu Feiah, Egypt, on September 18th-19th, 1918, he remained out all night, under a heavy bombardment, attending the numerous wounded. Again, on September 20th, he was indefatigable in his efforts, under shell and rifle fire, to collect the wounded. His gallant personal example cheered and encouraged not only the stretcher-bearers, but all ranks with whom he came in contact.

Temporary Captain (acting Major) Robert Bryson Rutherford, 91st Field Ambulance, R.A.M.C., attached 6th Division.

For conspicuous gallantry and devotion to duty during the night October 8th-9th, 1918. On hearing that a congestion of stretcher cases had occurred at the regimental aid post of the left brigade east of Montbrehain, he at once organized a party of bearers and dressers and proceeded in ambulance cars as far as the roads would allow. He then got in touch with the regimental medical officers, and under heavy shell fire organized the collection, dressing, and removal of the wounded to a place of safety.

Lieutenant Sohan Lal Bhatia, I.M.S., attached Infantry, I.A.

Near Sabieh, Egypt, on September 19th, 1918, for conspicuous gallantry under intense fire. The enemy put down a heavy barrage where he had established his aid post. In the midst of this he carried out his work with an absolute disregard of his personal safety. The skilful way the wounded were dressed by him, in spite of the adverse conditions, afterwards elicited the admiration of the medical officers in the dressing stations.

Lieutenant (temporary Captain and acting Major) Gerald Evan Spicer, 107th Field Ambulance, R.A.M.C.

He was in charge of a detachment of bearers during the operations around Mooscelle from October 14th to 17th, 1918. He worked unremittently throughout, establishing posts for the collection of wounded and going up to the regimental aid posts, and on occasions forward of these posts, frequently under heavy shell and machine-gun fire. Owing to his gallantry and tireless devotion to duty the wounded were rapidly and successfully evacuated.

Temporary Captain Frederick Reginald Sturridge, R.A.M.C., attached 2nd Royal Scots Fusiliers.

From the commencement of the advance east of Ypres to Vichte he displayed great courage and devotion to duty. On the night of October 13th-14th, 1918, at Slipschappelle where the enemy put down a heavy barrage and caught two companies in the open, causing a large number of casualties, he immediately rushed his stretcher-bearers forward and established his aid post where the casualties had occurred, in spite of the fact that it was in the open, and that the enemy was still shelling heavily. Throughout he behaved admirably.

Temporary Captain (acting Major) Christopher Sullivan, 75th Field Ambulance, R.A.M.C.

He was in charge of the advanced dressing station during the action at Bearevoir on October 5th, 1918, when over 300 cases were passed through his post. He was very short-handed, but by his personal courage and devotion to duty he animated all ranks and successfully evacuated the wounded under very heavy shell fire.

Temporary Captain Edward Cowper Tamplin, R.A.M.C., attached 9th Battalion Scottish Rifles.

During continuous operations east of Ypres, from September 28th to October 26th, 1918, he has carried out his duties with conspicuous success as battalion medical officer. He has never failed to get all wounded expeditiously evacuated, frequently under heavy fire. His fearless devotion to duty has been an inspiring example to all who have worked with him.

Captain James Thompson, R.A.M.C., attached 2nd Battalion Bedfordshire Regiment.

During the operations near Preux-au-Bois, on November 4th, 1918, he showed great coolness and devotion to duty in attending to wounded under heavy machine-gun and shell fire. Entirely disregarding his own personal safety, he moved about among the wounded, attending to men of all units, and by his untiring energy he was instrumental in saving many lives. He has always set a very fine example to stretcher-bearers and others working under him.

Temporary Captain William Tudhope, 17th Field Ambulance, R.A.M.C.

For conspicuous gallantry and devotion to duty near St. Quentin on September 15th-19th, 1918. He was in charge of a section of bearers and brought them up under very heavy shell and machine-gun fire. He got in touch with the battalion and cleared their wounded soon after zero hour. He continued throughout the whole day and following night to supervise the evacuation of the wounded until this was accomplished.

Temporary Captain (acting Major) Alexander Wilmot Ulloth, 132nd Field Ambulance, R.A.M.C.

He showed great gallantry and untiring devotion to duty whilst in command of bearers during the operations from September 29th to October 1st, 1918, near Bellicourt. At a very critical period and when casualties were heavy, he successfully organized relay posts and led a party of bearers during the night of September 29th-30th to a position in the line whence he was able to carry out an immediate evacuation of the wounded.

Temporary Captain Robert William Lessel Wallace, R.A.M.C., attached 9th Battalion East Surrey Regiment.

For great gallantry as regimental medical officer. On the night of October 30th-31st, 1918, when the enemy counter-attacked at Nieuwenhove a relief he remained out during the night in what had then become "No Man's Land" tending the wounded after most of his staff had become casualties. Again, on October 15th, when his aid post received several direct hits, he carried on his work where best he could in close proximity to the enemy. Thanks to his fine devotion to duty throughout, a large proportion of wounded were brought in.

Captain Rene Edward Amos Weston, C.A.M.C., attached 2nd Canadian Field Ambulance.

For conspicuous gallantry and devotion to duty. On the morning of September 27th, 1918, near Bourlon Wood, he came into a heavy barrage in order to dress the wounded. This is only one of several examples of the manner in which he performed his duty. His absolute disregard of personal safety is admirable.

Captain (acting Major) Michael White, No. 1 Field Ambulance, R.A.M.C.

For conspicuous gallantry and devotion to duty when in command of brigade stretcher-bearers on October 17th-18th, 1918, near La Valle Molituro. Undeterred by enemy fire he kept in close touch with the battalions, frequently visited their aid posts, and maintained the steady and rapid evacuation of all casualties. His coolness and resource inspired his men, and his skilful leading undoubtedly saved many lives.

Captain Henry Parks Whitworth, R.A.M.C.(S.R.), attached 6th Battalion King's Own Scottish Borderers.

For marked gallantry and devotion to duty near Cuerno on October 16th-17th, 1918. In spite of heavy shell fire he showed utter disregard of his personal safety in tending the wounded. Twice his aid post was hit by a shell, but he carried on and performed most valuable work in dressing the wounded until he was seriously wounded.

Captain Edward Albert Woodward, 8th Field Ambulance, A.A.M.C., attached 29th Battalion Australian Infantry.

At Bellheurt during September 29th-30th, 1918, with his regimental aid post, in an open trench under heavy shell and machine-gun fire, he carried on day and night dressing and attending the wounded. He showed a total disregard of danger and untiring devotion to duty under the most trying conditions, working without rest for forty-eight hours.

The following are the correct names and designations of the officers mentioned, and not as printed in the *London Gazette* of the dates indicated: August 22nd—Surgeon Lieutenant Commander (acting Surgeon Commander) Arthur Douglas Cowburn, R.N.V.R.; Surgeon Lieutenant William Wilson Rorke, R.N.; Surgeon Lieutenant Alexander Elder Sanderson, R.N.; September 16th—Surgeon Commander Percy H. Boyden, R.N.

Universities and Colleges.

UNIVERSITY OF OXFORD.

THEODORE WILLIAMS scholarships in human anatomy and in physiology have been awarded to J. H. Fletcher and T. C. T. K. Cross respectively.

UNIVERSITY OF LONDON.

PHYSIOLOGICAL LABORATORY.

DR. A. D. WALLER, F.R.S., professor of physiology in the University, began his course of advanced lectures on physiology on October 29th. The lectures, which are being given in the Physiological Laboratory of the University, South Kensington, and not as previously advertised, deal (a) with the energy balance of the human body, (b) electrical signs of emotive phenomena. The lectures are delivered on Wednesdays at 5 p.m.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

Honorary Fellowship.

THE important work performed by the medical forces of the navy and army in the recent war, and its share in bringing about the victorious result, is not always fully realized. To carry on a great war not only a wise commander-in-chief, an able general staff, and a brave army is needed; but an efficient medical staff well organized is also essential if the troops are to be kept in health and condition to respond to the demands made upon them by their generals. Never in the history of war have the medical branches of the forces of the empire attained to such a high standard of efficiency as they have during the war of 1914-18. This is due not only to magnificent organization by the heads of those departments, but also to the courage, ability, resource and devotion to duty of the whole personnel, and no praise is too high for their work. Recognizing these facts the Royal College of Surgeons of Edinburgh, on October 15th, unanimously resolved, on the motion of the President, Dr. R. McKenzie Johnston, that the following names, representative of all the branches of the Medical Services, be added to the Roll of its Honorary Fellows, for distinguished services in the great war.

Sir William Norman, K.C.B., R.N., late Director-General Naval Medical Department.

Sir Robert Hill, K.O.M.G., C.B., O.V.O., Director-General Naval Medical Department.

Lieutenant-General Sir T. H. John Goodwin, K.C.B., C.M.G., D.S.O., K.H.S., Director-General Army Medical Department.

The Honourable Major-General William Rice Edwards, C.B., C.M.G., K.H.P., M.D., Director-General Indian Medical Service.

Major-General G. L. Foster, C.B., Director-General Medical Services Overseas Military Forces of Canada.

Major-General Sir N. R. Howse, V.O., K.C.B., Director Australian Army Medical Service.

Colonel W. H. Parkes, O.M.G., C.B.E., Director New Zealand Medical Corps.

Colonel P. G. Stock, C.B., Director South African Medical Corps.

Rear Admiral W. C. Braisted, U.S.N., Administrative Head of the Medical Service of the United States Navy.

Surgeon-General M. W. Ireland, United States Army Medical Corps, Médecin Inspecteur-Général, Professor of the Val-de-Grâce Military Hospital.

Lieutenant-General Leopold Mellis, K.C.B., Inspecteur-Général du Service de Santé de l'Armée Belge.

Maximiliano Generale Commendatore Lorenzo Buonomo, of the Ispettorato di Sanità Militare, Roma.

Surg-on Director-General Professor Tadako Honda, Director-General Naval Medical Service (Japan).

In referring in suitable terms to the personal career of each, the President pointed out that the honorary Fellowship was very rarely awarded. Prior to the 400th year from the foundation of the College only about thirty-four honorary Fellows had been created, while in the last fourteen years one addition had been made in the person of Lord Rosebery on the occasion of his opening the new hall and museum extension. He hoped those now admitted as honorary Fellows would accept the award as an honour, just as the College felt honoured by the addition of their names to the roll.

It had been arranged that the installation should be made at a public meeting, to be followed by a banquet to the honorary Fellows. Much to the regret of the college and many others, the railway strike caused so many difficulties in the arrangements that the public functions had to be dispensed with.

CONJOINT BOARD IN SCOTLAND.

The following candidates have been approved at the examinations indicated:

FINAL EXAMINATION.—J. B. W. Telford, H. Jennings, M. Sidawi, T. F. Minford, T. R. Sinclair, I. R. Macphail, J. A. A. Duncan, G. C. Field, J. T. Dier, J. R. Larson, L. Rifkind, Mandayam Anandampillay Parthasarathy Iyengar, W. G. Wilson, G. Beveridge, N. J. Patterson, G. L. Stanley, A. H. B. Hudson, D. A. Diaz.
D.P.H.—C. R. Merrillees, C. M. G. Elliott, P. M. Tolmie, Martha L. Hamilton, R. J. M. Horne, R. N. McKinstry, T. B. Gilchrist, J. J. Galbraith, J. E. Allan, R. C. Robertson, W. A. Lethem, Annie M. Madin.

Obituary.

ARTHUR NEVE, F.R.C.S. EDIN.,
Surgeon, Kashmir Mission Hospital.

We regret to record that Mr. Arthur Neve died at Srinagar, Kashmir, on September 5th. He was born at Brighton in 1858, and was educated at Brighton Grammar School and in Edinburgh. He took the diplomas of L.R.C.P. and S. Edinburgh in 1880, and that of F.R.C.S. Edinburgh in 1884. After serving as house-surgeon to the Livingstone Memorial Dispensary of the Edinburgh Medical Missionary Society he was appointed to the Kashmir Mission Hospital of the Church Missionary Society, and went out to India in 1882 to be assistant to the late Dr. Edmund Downes, whom he succeeded in charge of the Srinagar Medical Mission towards the end of that year. For thirty-seven years Mr. Arthur Neve was head of the hospital, working in association with his brother, Dr. Ernest Neve.

Arthur Neve won a great reputation in India as a bold, skilful, and successful surgeon. In 1901 he was awarded the Kaisar-i-Hind gold medal; in 1909 he was vice-president of the International Medical Congress, Bombay, and from 1910-12 president of the Indian Medical Missionary Association.

When off duty, in his few holidays, his favourite relaxation was mountaineering in the Himalayas, and in 1911 he received the Back award of the Royal Geographical Society. He was the author of a *Guidebook to Kashmir and the Northern Himalayas*, which has reached its tenth edition, of *Picturesque Kashmir*, and of *Thirty Years in Kashmir*, 1913. Soon after the beginning of the war he volunteered for service, and on April 8th, 1915, received a temporary commission as major in the R.A.M.C. He served as surgical specialist successively in the Kitchener Indian hospital at Brighton, in the Dartford war hospital, and finally in France, and was mentioned for good service by the Secretary of State. After the armistice he returned to his work in Srinagar, where, in addition to his regular hospital work, he was superintendent of the State Leper Asylum. The Maharaja of Kashmir ordered a public funeral, the guard being furnished by the Kashmir Imperial Service Infantry and by the 3rd Punjab. The mourners included all classes, races, and many different religions, who united to pay a tribute of true respect to a well-beloved and disinterested friend who had done so much for Kashmir and its people.

SURGEON-GENERAL CHARLES JAMES, R.N.

It is certain that throughout all ranks in the navy many and sincere will be the regrets caused by the death of Surgeon-General Charles James, R.N., which recently took place after operation in a nursing home in London. He joined the Naval Medical Service in 1877 and served with distinction in all its ranks. He retired a few years ago on completion of the full period of service as surgeon-general of the Western Naval Command, including the R.N. Hospital, Plymouth.

Charles James from start to finish was devoted to his profession, of which he had profound and ripe knowledge ever at the service of humanity, and, above all, of the British sailor, who was to him "the salt of the earth and the salt of the sea." His Cornish ancestry and boyhood's days had bitten into him, body and soul, a love of the sea and all that therein is, which persisted from the cradle to the grave. He was a most lovable and warm-hearted man. A gentleman to his finger tips, he lived up to high ideals. He was absolutely unselfish, "upright-down-straight" in all his dealings, and ever ready to help a lame

dog over the thorny places of life's rough way. He loved his fellow beings and was one of those glad souls whose mission it is to bring sunshine wherever they go and so make others happy.

He leaves behind a widow and daughter, and a blank in a home of remarkable happiness which can never be filled, but the memories of which to those who knew will "ever smell sweet and blossom in the dust." While many to-day sorrow for his loss, it is certain no one has an unkind word to say of him.

JOHN THOMAS TIBBLES, M.R.C.S., L.S.A.,
Melton Mowbray.

We regret to announce the death, on September 18th, of Dr. John T. Tibbles of Melton Mowbray, at the age of 64 years. He was born at Leicester and educated at Charing Cross Hospital Medical School. He settled in Melton Mowbray early in the eighties and entered fully into the social, philanthropic, and political life of the town. He was very popular as a medical man, and his practice had a wide range. He was parochial medical officer for the district of Asfordby, and public vaccinator for Melton Mowbray and Asfordby parishes. He was connected as a surgeon with Holwell iron smelting works from the time of their construction. He entered fully into the practitioner's side of medical politics and worked strenuously to bring the health insurance scheme within the range of practical politics. His zeal was rewarded by his election as chairman of the Leicestershire Panel Committee. He was a member of the Leicester Medical Society and of the British Medical Association; he had been chairman of the Leicester Division and vice-president of the Midland Branch. He was a fluent speaker and keen debater, and this ability raised him in the esteem of his fellow practitioners and townsmen who elected him Town Warden. In addition to his professional and other engagements, he was a Fellow of the Royal Meteorological Society, and for twenty years made observations on the climatic conditions of Melton Mowbray, which were recorded by the society and utilized in various reports. He was a victim of overwork during the war, but his zeal was such that he knew no rest until sickness laid him aside; he bore a long illness of eighteen months with exemplary patience and fortitude. He leaves a widow and eight children; one son served as captain in the R.A.M.C. during the war, and two daughters are nurses.

SURGEON-GENERAL DAVID SINCLAIR, C.S.I., Madras Medical Service (retired), died in Edinburgh on October 11th. He was the second son of the late William Sinclair of Peterculter, was born on January 26th, 1847, and educated at Aberdeen Grammar School and at the university in that city, where he graduated M.B. and C.M. in 1869. He entered the I.M.S. as assistant surgeon in that year. He became surgeon-general on October 11th, 1899, and retired on November 15th, 1904. Previous to his promotion to be head of the Madras Medical Service in 1899 all his service had been spent in Burma, where he held the post for many years of inspector-general of prisons, and finally that of inspector-general of civil hospitals. He received the C.S.I. on December 31st, 1898.

LIEUT.-COLONEL THOMAS JACKSON, Bombay Medical Service, died on leave at Melbourne, on October 16th, of heart failure, aged 54. He was born on January 18th, 1865, educated at Queen's College, Cork, and graduated as M.B., B.Ch., and B.A.O. in the Royal University of Ireland in 1890. He entered the I.M.S. on July 27th, 1892. After six years' military duty, he took civil employment as superintendent of Haiderabad Central Gaol, in Sind, in March, 1898, was appointed resident surgeon of St. George's Hospital, Bombay, and professor in the Grant Medical College, Bombay, in April, 1901, and, after acting as medical officer of Kathiawar Political Agency from June, 1906, to March, 1910, became surgeon superintendent and physician of St. George's Hospital. He served in the Sudan in 1896 in the Dongola expedition, receiving the British and Egyptian medals; and in the North-West Frontier of India campaign of 1897-98, gaining the Frontier medal with two clasps.

Medical News.

THE tablets in memory of Lord Lister, executed for University College by Professor Harvard Thomas, will be unveiled on Tuesday, November 11th, by Sir George Makins, President of the Royal College of Surgeons, and Sir J. J. Thomson, President of the Royal Society. The Duke of Bedford, President of the Lister Memorial Committee, will take the chair at 5 p.m.

THE Bradshaw Lecture before the Royal College of Physicians will be given on Thursday, November 6th, by Dr. A. P. Beddard, who has chosen the subject of chronic arthritis. The FitzPatrick Lectures will be given by Dr. Edgar G. Browne on November 11th and 13th. The subject is the origin and development of Arabian medicine.

MEMBERS who desire to receive regularly the half-yearly Indexes of the JOURNAL, SUPPLEMENT, and EPITOME are invited to send a request to that effect to the Financial Secretary and Business Manager, 429, Strand, London, W.C.2.

THE postponed annual dinner of past and present students of Charing Cross Hospital will take place at Gatti's Restaurant, on Wednesday, November 19th, at 7.30.

THE annual dinner of the staff and past and present students of the Royal Dental Hospital of London will be held on November 22nd at the Connaught Rooms. This is the first dinner since the war began. Particulars can be obtained from the Dean, Mr. W. H. Dolamore. It is hoped that Mrs. Lloyd George will unveil the roll of honour and distribute the prizes on Wednesday next, November 5th, at 5 p.m.

THE Medico-Legal Society held a successful dinner on Wednesday evening, October 29th, at the Holborn Restaurant, London, with the President, Mr. R. Henslowe Wellington, in the chair. The speakers included Mr. Samuel Osborn, F.R.C.S. (Master of the Society of Apothecaries), Sir William Collins, Master Watkin-Williams, Mr. J. A. Foote, K.C. (Chairman of the Bar Council), Dr. F. G. Crookshank, and the President.

A MEETING in support of the candidature of Professor Bolam, Dr. Macdonald, Mr. Turner, and Sir Jenner Verrall for election to the General Medical Council has been arranged by the Council of the Metropolitan Counties Branch of the British Medical Association. It will be held in St. James's Vestry Hall, Piccadilly, on Thursday next, November 6th, from 4 to 6 p.m.

DR. JOHN HEDLEY CROCKER has resigned the post of medical officer of health for Richmond, Surrey, which he has held for the last nineteen years.

A COURSE of lectures on housing problems and town planning in relation to public health is being given at the Royal Institute of Public Health, 37, Russell Square, W.C. The first lecture was delivered by Professor E. W. Hope, M.O.H. Liverpool, on October 29th. Subsequent lectures will be given on succeeding Wednesdays at 4 p.m.

MR. BONAR LAW was, on October 25th, elected Lord Rector of Glasgow University by 1,073 votes, against 726 given to Professor Gilbert Murray and 80 to the Socialist candidate, the Hon. Bertrand Russell.

SIR HENRY ALEXANDER MIERS, D.Sc., F.R.S., Vice-Chancellor of the University of Manchester, has been appointed a member of the Advisory Council to the Committee of the Privy Council for Scientific and Industrial Research.

DR. WILLIAM HENRY WHITEHOUSE, barrister-at-law, M.O.H. for Deptford, has been appointed coroner for the south-eastern district of London.

THE Ministry of Health has asked county councils to allow county medical officers to investigate any matter touching housing and report directly to the Housing Commissioner. The London Council, while agreeing that the Ministry should have the benefit of the medical advice at the Council's disposal, decided that any request for information should be made to the Council, and that any report by the medical officer should be made to the appropriate committee.

THE s.s. *Nagoya* arrived at the Port of London on October 25th with eight cases of plague on board. The vessel is being disinfected.

A RECENT Army Council Instruction provides that an officer who requires an artificial limb may either obtain it under Article 647 of the Pay Warrant, or be provided with it at one of the special fitting hospitals—namely, the Queen Mary's Hospital, Roehampton; the 5th London

T.F. Hospital (St. Thomas's Hospital, S.E.); Prince of Wales's Hospital, Cardiff; the Edenhall Limbless Hospital Musselburgh (out-patients only); or the Ulster Volunteer Force Hospital, Belfast.

LAST January, at a conference called by the Presidents of the Royal Society and of the British Academy, and attended by representatives of many other bodies, it was resolved to establish a monthly popular journal of the progress of knowledge. A trust for its maintenance has been formed; and Mr. A. S. Russell, D.Sc., Reader-elect in Chemistry, Christ Church, Oxford, has been appointed editor. The first number of the new journal, which will be called *Discovery*, will be published by Mr. John Murray on January 15th, 1920, at the price of 6d. An editorial advisory council has been formed and a list of suitable writers on topics for 1920 selected.

THE London Jewish Hospital at Stepney Green, opened on October 26th by Lord Rothschild, has been founded almost entirely by small sums given by the Jews in the West End largely in the form of contributions of one penny a week, beginning in 1907. The site was acquired in 1909 and the building started in 1914. Work was suspended during the war, but was resumed last July, and it is now proposed to complete the front part of the hospital, which will have sixty beds, at an estimated cost of £50,000. Mr. Kiley, M.P. for Whitechapel, said that though it would be known as the Jewish Hospital qualification for admission would be neither race nor class, but need.

THE usual monthly meeting of the Executive Committee of the Medical Sickness Society was held on October 17th, when Mr. E. Bartlett, vice-chairman, presided in the absence of Dr. F. J. Allan. The secretary's report referred to the greater necessity of cover during incapacity of any kind owing to the high charges for locums. It was stated that, whereas £3 3s. to £4 4s. a week was the usual fee ten years ago, such sums as £8 8s. and £10 10s. a week were now quite common; the society's rates of premium were the same now as in 1884. The results of the new table for sickness and accident for women practitioners has been satisfactory and proposals were still being received. The sickness claims continued to be under the expectation, but there had been a slight increase in the number of influenza cases during the last few weeks. A new form of proposal and medical examination was approved. Prospectus and all particulars to be obtained from Mr. Bertram Sutton, F.C.I.I., Secretary, 300, High Holborn, W.C.1.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitology*, Westrand, London; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate*, Westrand, London; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Melisecca*, Westrand, London; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

INCOME TAX.

"A. B. C." inquires whether it is correct that his son should be assessed to income tax on a salary paid to him, as assistant, by "A. B. C." while "A. B. C." himself is not allowed to deduct that salary for the purpose of his own assessment.

"* "A. B. C." is assessable on his average earnings over the past three years, when he was apparently not paying the salary in question; and he cannot deduct from that average any special expense of the current year, even though it may take the form of a salary assessable on some other person. But at the end of the current year he may be entitled to an adjustment of the present assessment, because if he can then show that his *total actual* income is less by more than 10 per

cent. than the total income on which he has been assessed or charged, he will be entitled to repayment of tax on the difference, or to an allowance against any tax that may then be outstanding.

LOCAL ANAESTHESIA FOR PILES.

A. H. G. asks for directions for local anaesthesia for the removal of piles.

* * A 5 per cent. solution of novocain or 1 per cent. eucaine with adrenalin 1 in 10,000 should be injected in the papillary layer of the skin at the junction of skin and mucous membrane. This is best done through a curved hypodermic needle inserted posteriorly and carried round anteriorly successively on each side, and the solution injected as the needle is withdrawn. Through a straight needle the solution should be injected into the submucous tissue of those piles which are to be removed. A more lasting anaesthesia is obtained by urea and quinine hydrochloride, but with this there is a risk of sloughing.

PAIN IN ARTHRITIS OF SPINE.

DR. T. GERALD GARRY (Cairo) writes: I would advise "Spes" (BRITISH MEDICAL JOURNAL, September 20th, p. 404) to send his patient, if he can afford it, to Bad Pöstyén, now Pístany, as it is incorporated in the new Czecho-Slovak Republic. Information concerning the natural mud baths can be had in London from Messrs. Gould and Portmans.

LETTERS, NOTES, ETC.

INFLUENZA.

THE Ministry of Health has issued the following statement, dated October 25th, with regard to influenza:

"During the last few weeks there has been in the ninety-six great towns of England and Wales a slight but gradual increase in the number of deaths attributed to influenza and a coincident rise in the number of notifications of acute primary and acute influenzal pneumonia. The increase appears to have been associated with prevailing meteorological conditions, and does not apparently signify more than the usual variation in catarrhal and lung diseases generally which may be expected at this season of the year. Whilst the possibility of a fresh outbreak of influenza cannot be excluded, the data available do not at present afford any indication of an immediate recrudescence of the disease in epidemic form."

It may be added that the deaths from influenza reported by the Registrar-General in the ninety-six great towns numbered 14 in the week ending September 20th, 20 in the following week, 32 in the next, 39 in the next, 57 in the next, and 71 in the week ending October 25th. In London the deaths from this cause numbered 20 in the week ending October 25th, as against 4, 11, 16, and 18 in the preceding four weeks.

CHOLESTERIN IN A PERICARDIAL EFFUSION.

DR. J. S. ALEXANDER (University College Hospital, London) writes: A specimen of the cholesterol pericardial effusion the details of which were published in the JOURNAL of October 11th, 1919, p. 463, was sent to M. Adrien Grigaut of Paris, and he has found the cholesterol content per litre to be 0.61 gram, and draws attention to the fact that the spangled appearance is due rather to conditions of solubility than to actual concentration of cholesterol.

SCHOOLBOYS' WEIGHT.

DR. J. F. L. WHITTINGDALE, School Medical Officer, Sherborne, writes: An examination of the following figures of the weights of boys at Sherborne School, where it is the custom to weigh all at the beginning and end of each term, tends to show that the majority gain weight during the term, but that this is dependent on the season of the year. Taking the last three terms, the figures are as follows:

October term, 1918: 81.3 per cent. gained, 9.1 per cent. stationary, 9.6 per cent. lost.
 Lent term, 1919: 72.3 per cent. gained, 13.2 per cent. stationary, 10.5 per cent. lost.
 Summer term, 1919: 53.9 per cent. gained, 9.7 per cent. stationary, 36.3 per cent. lost.
 The amount of loss was only one or two pounds. It is usual for spare boys to gain and the stout ones to lose, as the result of hard exercise.

SUGAR AND BUTTER.

DR. GORDON WARD (Sevenoaks) sends the following extract from a letter received from the Director of Rationing and Distribution of the Ministry of Food. He considers it a concise and easily remembered rule.

"In the case of applicants for sugar, grants are restricted to applicants who are certified to be for some reason or other unable to take solid food.

"In the case of butter, grants are restricted to applicants who cannot take margarine or who urgently require animal fats and are not able to take these in any other forms than butter."

WATER FOR WASHING CARS.

THE Automobile Association informs us that a number of cases have been reported to it in which unauthorized charges have been made for water used for washing cars; where it has had an opportunity of taking the matter up with the authorities the item has been deleted from the water rate notices. The opinion of the Automobile Association is that, in the absence of any special powers giving authority for such charges, the supply of water to private individuals for washing motor cars comes within the supply for domestic purposes, and in these circumstances no extra charge can legally be made.

INFANT WELFARE.

At a meeting of the National Baby Week Council on October 21st the following resolutions were adopted:

That it is the duty of all interested in infant welfare to use every effort to secure that the borough and district councils carry out as speedily as possible adequate housing schemes.

That, in view of the continuous and conclusive evidence that the measures of liquor control in this country since 1915 have directly saved the lives of very many infants and have been of indirect service in various ways to motherhood and infancy, it is imperative in the interests of the race that some effective control should be permanently maintained.

THE PUFF DIRECT.

THE best authority tells us that puffing is of various sorts. We have seen many examples of "the puff direct," but never one more exuberant than is contained in a cutting, recently sent to us, from a weekly paper published in a part of these islands which we will not specify because we prefer to think that the article was inspired by a friend unacquainted with medical traditions. For the same reason in the extracts that follow we suppress the names of people and places.

The article before us is headed "New Health Officer," and is illustrated with a portrait. It frankly professes to tell the life story of Dr. A. The county favoured by his birth "is well known for its proverbial upbringing of its own doctors." Hence a feeling of local pride suggests that "in appointing Dr. A. to the important post of district medical officer and public vaccinator for B., the board of guardians did honour to themselves by electing one who is a typical [native] to his fingers' tips." Details of Dr. A.'s parentage and upbringing follow, his student career being neatly divided into the periods of elementary, secondary, and professional education. After being told about his diplomas and the resident appointments he held, we are informed that he joined the R.A.M.C. and served in France for twelve months, 1917-18, but was gassed and returned to England. "In April, 1918, he came to B., entering into partnership with the veteran surgeon, Dr. E., where he still resides, faithfully attending to the ailments of town and countryside residents." Some local appointments are then mentioned, and it is stated that "his wide experience will be a valuable asset in treating medical, surgical, and obstetric cases." Then follows the statement that, "The most unassuming of men, Dr. A. enters upon the important duties of his offices with the best wishes of his wide circle of friends, and coming out of a family traditional for its love of music and religion, he will not devote what spare moments he has to anything but the culture and development of his native country." The article concludes with a few particulars about its subject's brothers.

The exceeding ingenuousness of all this disarms our criticism, but we would hope that the "New Health Officer" will be more successful in checking disease than he has shown himself in moderating the raptures of his friends.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 38, 42, 43, 44, and 45 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 39, 40, and 41.

THE following vacant appointments of certifying factory surgeons are announced: Darwen (Lancs), Gatehouse (Kirkcudbright), Grassington (Yorks, West Riding), Kinsale (Cork), Oban (Argyll).

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.

A FEW SURGICAL LESSONS OF THE WAR.

AN ADDRESS DELIVERED TO THE AMERICAN COLLEGE OF SURGEONS

BY MAJOR-GENERAL SIR ROBERT JONES, K.B.E., C.B.,
F.R.C.S. (ENG.), M.Ch.,
INSPECTOR OF MILITARY ORTHOPAEDICS, A.M.S.

I APPRECIATE more deeply than I can express the great honour you have done me by inviting me to address you as a delegate from Britain. The admiration I have for the surgery of America, and for the countless personal friends who practise it, would alone make this voyage memorable to me; but, in addition to this, I can never forget the debt under which we are placed for help given to us at a very critical period at home.

The loan of twenty-five keen and experienced young surgeons placed at our disposal for the duration of the war, equipped and paid for by the American Government, has placed an obligation upon us very difficult to repay, and which I can only express in terms of affectionate gratitude. How that band of twenty-five rapidly swelled to close upon a hundred is known to many of you; but we on the other side, who lived amongst them, inspired by their energy, their sense of responsibility, their loyalty and devotion to duty, can alone speak of the sweet memories they have left behind. They filled a gap which seriously threatened to sterilize our reconstructive efforts, and they filled it with distinction and success.

When your nation entered upon the war most of our more tragic problems were being overcome. Sepsis and gas gangrene had largely lost their terrors. Shock was being adequately dealt with; wounded men at advanced units were promptly and effectively handled; continuity of treatment from regimental aid post to the base was being secured, and standardization of methods appreciated and practised. Team work was in full swing, while the segregation of special cases under expert men had already made advance.

But in the early days of the war, when the wounded passed into our country in countless numbers, our hospitals soon became full to overflowing. The same conditions were experienced in France. There was nothing for it but to evacuate the less serious cases to make room for others, with the result that our towns and even villages began to feel the burden of the cripple. If the men were not discharged they were found segregated in command dépôts, and these dépôts from their nature were not equipped with the personnel which could effectively deal with them.

A visit through these large camps very early proved to us that it was necessary to have certain hospitals governed by less stringent rules, where every accommodation should be provided for the type of case which required a sufficiently protracted stay to prevent deformity and to restore function. At Sir Alfred Keogh's request an experiment was first made in Liverpool, where 250 beds were placed at our disposal. Later, in Liverpool this number grew to 1,500, and fresh centres were started in Great Britain and Ireland, until the number reached over 25,000. Difficult as it was to find beds, it was even more difficult to find surgeons to superintend them, for all medical men under 45 were commandeered for foreign service, and it was the young men who were badly needed—men of sound surgical training, with minds sufficiently open and flexible to grasp and solve new problems.

Visits to general hospitals and command dépôts clearly proved that without segregation and continuity of treatment we were in danger of scrapping thousands of cases who possessed the potentialities of recovery; and these were not merely the serious cases, but also those suffering from lesser injuries upon the recovery of which we depended in order to replenish our fighting forces.

The cases we met with in these tours of inspection were malunited and ununited fractures—especially femurs. Stiff and ankylosed joints; flail joints; the after-effects of injuries to peripheral nerves and deformities due to the contraction of scars. Many of these conditions were recoverable, and most of them might have been prevented.

These men, when admitted into our centres, had usually

been to several hospitals. They were generally discontented, and by no means willing to undergo any further manipulative or operative attack. They did not necessarily come from our small auxiliary hospitals, but often from those institutions where, in normal times, we would find the most skilful and eminent surgeons.

Our first effort consisted in endeavouring to improve the mental outlook of the men and in making every effort to humanize the hospital. Persuasion and explanation took the place of command and penalty, and our various centres with their annexes became hives of industrious and contented men. In a very short time they were prepared to submit to anything we wished.

The segregation into large centres of so widely differing groups of cases involved great responsibility—more especially the nerve cases. Frequently I had been told by neurologists who operated in various hospitals that they were quite unable to follow their cases, there was no possibility of retaining them in the war hospitals, where convoys continually arrived, for much longer than it required to heal the wound. They were evacuated and found again in various small country hospitals, or even in command dépôts, sometimes under conditions anything but desirable. They had to be admitted to our centres, and it was therefore necessary to secure the service of eminent neurologists to help in the treatment. As most of the nerve injuries were accompanied by other lesions they were very admirably placed for general supervision.

It may be of interest to mention briefly certain lessons we have learnt in the treatment of these peripheral nerve injuries. The complications were such that we were often obliged to wait until they were overcome before any operation could be undertaken. Suppurating wounds, involving bones, muscles and tendons, and stiffness of joints, all delayed an attack upon the nerve. Muscles had to be freed and developed, and osteomyelitis drastically extirpated in order to render the muscles receptive to impulse. The sooner these complications were overcome or improved the better the chance for the nerve, not because delay in operating upon the nerve lessened the chance of regeneration, but because a chronic myositis very seriously impaired the power of the muscle to react when recovery of the nerve path was re-established.

Experience taught us that it was better to explore earlier and more frequently than we did at the beginning of the war.

It is found that if a nerve is simply concussed or compressed, and has undergone Wallerian degeneration, it will early show signs of recovery. In cases which do not spontaneously recover in a month or two, it is usually a mistake to await regeneration of the nerve, and an exploratory operation should be undertaken. Inspection of the exposed nerve at the time of operation and its faradic excitability should be regarded as a part of diagnosis. It is essential in such cases that the surgeon should be experienced in nerve surgery, and be prepared to close the wound without interfering with the nerve if it has an intact sheath, and gives a faradic response when tested with a weak current. It is probable that no interval between wound and operation is too long to preclude possible recovery after suture. The state of the muscles, tendons, and joints is the important factor.

It has been found in practice that end-to-end suture can be attained in the great majority of cases by posturing the joints and by transposing nerves. An inch and a half can be gained by transposing the musculo-spiral to the inner side of the humerus, and several inches by transposing the ulnar to the front of the elbow. In the two instances where the nerve could not be brought together we found this could be accomplished by a two-stage operation. Silk was tied around the bulbs, and they were brought together as nearly as possible, extra length being secured by posturing the limb. The wound was then closed and gradual traction applied to the nerve through the limb for some weeks. At the second operation it was found that the ends could usually be brought together. It is needless to emphasize the importance of approaching the nerve through normal tissue above and below the lesion were it not that even yet surgeons may be found making the exploration through scar tissue. Nothing is to be gained from surrounding the suture line with vein or Cargile membrane or fat introduced from without. If the nerve has to be protected from scar tissue, a living muscular flap is indicated, but, whenever possible, the scar

tissue should be freely excised. The Medical Research Committee, whose report is not yet published, has carefully investigated a large number of cases operated upon. In the case of nerve grafting they have not met with one case of complete recovery and but very few partial recoveries. Most cases have ended in failure. Bridging by catgut, vein, alcoholized nerve, and other foreign material has consistently failed. The turning down of flaps of nerve, and nerve crossing or anastomosis—that is, implanting the distal end of the divided nerve into a healthy one—invariably fails. The conclusion come to is that end-to-end suture by a one, or, if necessary, a two stage operation, is the method to be adopted in every case.

In cases of irreparable damage to the musculo-spiral or posterior interosseous, tendon transplantation properly performed has proved an unqualified success. It must be associated with a good technique, and be followed by careful re-education. The operation I suggested in pre-war days with certain modifications I still recommend, but I advocate a more frequent use of the pronator radii teres. The flexor carpi radialis and the flexor carpi ulnaris can be transplanted into the paralysed extensors of the thumb and fingers, and the pronator radii teres may be affixed to the radial extensors. In transplanting tendons it is important to pay careful attention to the correct tension, and the hand and fingers should be kept well dorsiflexed when the attachments are being made, and the transplanted tendon must run a straight course from its origin to its new insertion. Attention to these points will make the difference between success and failure. If the operation is a real success, the fingers and thumb can be easily fully extended. Tendon transplantation with the object of merely dorsiflexing the wrist should be discouraged, and tendon fixation with the object of permanently fixing the wrist in dorsiflexion should be reserved for those cases where transplantation has been a failure and where the extensor muscles and tendons have been destroyed.

Paralysis of the anterior crural is very rare, probably because the femoral vessels are usually destroyed by the missile. We have here a choice of hamstrings to attach to the patella. Strangely enough I have only met with one case, and in this instance the recovery was sufficiently good to permit of climbing stairs with increasing power.

Tilanus of Holland some twenty years ago suggested an operation for flail feet in poliomyelitis which he termed tenodesis. He used paralysed tendons as ligaments in order to sling the foot at right angles. Gallie and others have worked on similar lines. This operation, with modifications, is helpful in drop-foot due to sciatic injury where suture is impossible. The peroneus longus is cut about three inches above the external malleolus, and the tendon is withdrawn through an incision above the base of the fifth metatarsal. The loose tendon is then passed through the annular ligament and through a tunnel bored through the tibia. The tibialis anticus is also cut and passed through the same tunnel. The tibialis is passed from within outwards, the peroneus from without inwards. The foot is dorsiflexed to a shade beyond the right angle, and the tendon ligaments are drawn tight and attached to each other. The peroneus brevis is cut and attached to the fibula. The result of the operation is very satisfactory—much more so than in the case of children, where problems of growth have to be considered.

The prognosis as regards functional utility after nerve suture depends very largely upon which particular nerve has been injured. Thus the musculo-spiral usually makes a good recovery, whilst the ulnar, as regards the intrinsic muscles of the hand, does badly. Another factor of importance in prognosis is the occupation of the patient. A man with an ulnar nerve lesion will usually recover both sensation and muscular control quite well enough for most trades, but he will not recover control of the finer movements of the hand—such as are needed for piano playing.

After the musculo-spiral, in order of good recoveries, we must place the sciatic. The results of suture here are surprisingly good. A large number of our cases were examined two or three years after suture. Some of these men could jump, climb ladders, and run, and many have returned to their pre-war employment.

The brachial plexus often makes a good recovery, especially the upper part. Plexus lesions should be

watched for a long time, six to nine months or more, and not operated on for exploratory purposes as are the nerves themselves, because they frequently make excellent progress, and a generalized paresis may later be limited to one cord, or nerve.

Median injuries do fairly well, the thumb intrinsics even recovering in some cases, whilst it is usual for the wrist flexors and considerable sensation to recover. Sensation, however, is usually lost, or very slowly or rarely recovered from, over the terminal phalanx of the index fingers.

The ulnar recoveries are good as regards wrist and finger flexors, and even its sensory disturbance clears up well. As has been stated, good recovery of the interossei is very rare. They may and do recover their faradic excitability more often than voluntary power.

Combined lesions of the median and ulnar, particularly if complicated by ligation of the artery, do very badly. There is usually the stiff, rigid, board-like hand with joint changes to still further hinder the chance of good function. This is, indeed, the important obstacle.

The after-treatment of cases of peripheral nerve injury has not undergone much change. The relaxation of muscles is essential, and it is also necessary that the relaxed position of the nerve should not be too early dispensed with, otherwise the recently regenerated axis cylinders will be ruptured. Interrupted galvanic stimulation, massage, heat and re-education are indispensable desiderata.

Dr. Lloyd Roberts, who is in charge of the neurological department at the Liverpool Special Military Surgical Centre, has demonstrated a phenomenon which he describes as "oppositive electrical reaction." He points out that in certain conditions electrical stimulation of a muscle induces, instead of contraction of the muscle itself, contraction of the muscle or muscles whose action is exactly the reverse of that of the stimulated muscle. For example, stimulation of the extensor longus pollicis will induce contraction of the flexor longus pollicis. This result has, of course, been frequently seen, but was supposed to be due to the overflow of a strong current. Roberts points out that it can readily be proved that this is not the case from the fact that the contracting muscle is not adjacent to the stimulated muscle, and that the intervening muscles do not contract. Similarly, stimulation of the extensor indicis will induce contraction of the index tendon of the flexor sublimis. Such is the delicacy of the reaction that the other flexor tendons are not at all stimulated. This reaction is never obtained when the nerve supplying the stimulated muscle is normal, or severed, or slightly compressed, but only in conditions of severe compression.

When compression is progressively increasing it is often the last electrical sign to persist, and, conversely, when a sutured nerve is recovering, it is often the first reaction to be obtained. In the case of the posterior interosseous it probably always indicates compression of the musculo-spiral by callus.

A series of very interesting trick movements have to be carefully watched for when we test the amount of recovery following suture, or when we are making a diagnosis. Unless the surgeon is familiar with their occurrence he is very liable to be misled.

In complete paralysis of certain muscles and muscle groups the unaffected muscles acting in combination can replace the movements lost by paralysis in a very remarkable manner. For instance:

1. The opponens pollicis can be perfectly imitated by the ulnar adductors of the thumb in combination with the extensor ossis.
2. The extensor ossis may act as a good wrist flexor in cases of complete paralysis of all median and ulnar muscles.
3. The fingers may be closed in complete median and ulnar paralysis by extending the wrist when the inelastic paralysed flexor tendons acting as ligaments permit the fingers to mechanically flex.
4. The elbow may be flexed by the pronator radii teres in combined lesions of musculo-cutaneous and musculo-spiral nerves.
5. Flexion of the fingers may extend the wrist in lesions of the musculo-spiral, simulating the movement of the wrist extensors.

Although electrical stimulation will generally teach us to discriminate between the true and spurious movements, the observer must be on the alert or he will be quite easily deceived.

Sir Anthony Bowlby, to whose organization we owe so much for work in connexion with the subject, has already addressed us on *Fractures of the Femur* as he met with them in France. In the early days of the war these injuries supplied our centres with a large proportion of deformities. In 1917 I described gunshot injuries of the femur as "the tragedy of the war," not only by reason of the fatality by which they were attended, but also because of the deformity and shortening so often associated with them. This was due to the absence of effective team work at home and abroad, a want of standardization of splints, and of continuity of treatment from front to base, and of the segregation of these injuries in special hospitals under expert men. I have it on the authority of Sir Henry Gray, who collected statistics over one of the army areas in 1916, that the mortality from these fractures amounted to almost 80 per cent., a large proportion of deaths occurring on their way to, or at, the casualty clearing stations. In the year 1918 Sir Anthony Bowlby tells us that "the mortality in field ambulances and in casualty clearing stations was reduced to 20 per cent."

To what are we to ascribe this dramatic change? First and foremost to the recognition, too long delayed, of the value of the Thomas splint, and to its distribution to the regimental aid posts. We cannot give too much credit to Sir Henry Gray for the work he did in this connexion. In pre-war days a certain kind of homage was paid to the Thomas splint, but that was all. Its use was strictly limited, and in spite of its simplicity very few surgeons knew how to apply it, and in many of our teaching hospitals it was only known by name. In Liverpool we have long taught that fracture of the femur, simple or compound, treated by a Thomas splint, should, at the worst, not yield more than half an inch of shortening, and that if a surgeon desired it he could easily produce an appreciable lengthening. It has taken a great war to drive this truth deep home. The calliper splint, which has been in use for over forty years, was scarcely known. The standardization of the Thomas splint, the education of men in its use, its application on the field of battle, secured for the fracture immobilization and simplified transport, it minimized shock, and it prevented the perforation of vessels by securing the alignment of the broken ends. Its use had to be understood from the field to the base hospital, for continuity of treatment was imperative. At the base hospital it might be necessary in more leisurely fashion to apply modifications in response to special requirements. A subjugation of sepsis and gas gangrene also played an important part in these improved statistics, with all those accessories for the prevention and lessening of shock, such as the heated ambulance and the hot chambers. In addition to this the mobile expert teams which were rushed from place to place allowed of more skilled and frequent operative treatment. Then came the equipping of special femur hospitals, where some of the best and most inspiring war work was done. In this connexion I feel I must refer to the work of Major Sinclair, who displayed remarkable ingenuity, and whose cases, even in the early days of the war, arrived in England with barely any shortening and in excellent alignment. To him and to Colonel Pearson and Colonel Watkin Williams we are much indebted for excellent pioneer work. Pearson, who later took charge of one of our large femur hospitals, using the modified Thomas splint to permit of knee flexion, obtained traction by the introduction of callipers which gripped but did not penetrate the femur, and used suspension of the Thomas ring and elevation of the femur. In addition, he designed a special bed which rendered dressing easy and painless.

In 300 cases of compound fracture treated in England in one of the special military surgical centres where this method of extension was employed, the average shortening was half an inch. There can be no doubt that the use of the safety ice-tong calliper in the hands of experienced surgeons has been of very great service. The arrangement should always be affixed to it to prevent it from entering the bone. This is especially important if evacuation takes place during treatment. Many cases arrived in England where the knee and ankle-joint had been infected by ice-tong callipers which were introduced into cancellous

tissue and worked their way downwards. It must be remembered, however, that fracture of the femur can be effectively treated by the Thomas splint with ordinary extensions. The pressure of the ring can be modified by tying the end of the splint to the end of the bed, which is elevated. Of 97 cases which were at the Liverpool Special Military Surgical Centre at one time, the average shortening was less than five-eighths of an inch, and the skilled nursing secured for the patient freedom from pressure sores and a comfortable convalescence. The extension callipers, combined with a free knee-joint, undoubtedly minimize a frequently obstinate stiffness, but they should never be used for transport purposes.

The Thomas, with plaster or glue extension, is the ideal transport splint, and fractures of the femur, such as we meet with in civil life, can be most adequately dealt with by this apparatus. The stiffness of the knee which follows retention is of a very tractable kind, and is usually quite overcome after two weeks' massage and exercise. As a transport splint in civil life it is ideal. I remember on several occasions when I assisted H. O. Thomas in the case of workmen brought to him with fractured thigh. A splint was applied in a few minutes without an anaesthetic and the patient sent home in a four-wheeled cab, sometimes a considerable distance.

The lessons that we civilian surgeons should learn from all this are clear. If such results are obtained by simple means in such compound fractures as have occurred in war, why should we have recourse to more complicated methods? Why should the student be taught that fractures of the femur can only be adequately dealt with by one of the various forms of internal splinting? Why should we spend so much ingenuity and time in devising operative novelties when it is so much easier and useful to learn the simple way? In the hands of the expert and cleanly surgeon catastrophes may generally be avoided, but what of the rest? In every village and hamlet the humblest of us may be called to treat a broken thigh, and the humblest of us should know before he leaves his studies how this can be done with safety and success.

Many years ago I pointed out that the textbook deceived us as to the time it takes for bone to consolidate sufficiently to bear body weight. This delay in firming is still more pronounced in war wounds. After several months of apparent union angulation may occur unless the bone is protected. The use of the calliper splint is the best protection. This splint is a Thomas splint running into the heel of the boot, and it should be used in the later stages of treatment of all fractured femurs. The removal of the splint should be gradual, and the experiment should be made under careful observation.

Time will only allow me to touch upon a few of the many interesting surgical problems that we have worked amongst. We have found loss of substance the most common cause of non-union. This is more especially the case in the humerus and the femur. When there is another bone to maintain the length, non-union is less common.

Esquiectomy, though at times inevitable, accounts for many of these gaps which do not fill up. It is quite impossible at the time of injury to say that a loose piece of bone has no blood supply. In the later stages of treatment we have been often impressed by the osteogenetic power of apparently loose pieces of bone which have lived in suppurative areas. This has led us to advise the maintenance of the length of limb rather than to approximate the bone ends, more especially in the case of the femur. Gaps which only exhibit a faint shadow here and there may ultimately be filled up with bone, and it is well to give the case its chance. Ununited fractures of the femur with loss of bone should be kept in calliper splints and allowed to walk with rubber tubes above and below the fracture. This, apart from maintaining the patient's health, increases local congestion and osteogenesis. Many ununited fractures of the humerus have been caused by prolonged and too powerful extension, and sometimes by the injudicious use of the Thomas arm splint. The Thomas arm splint is essentially a transport splint, and its prolonged use may give rise not only to non-union but also to ankylosed elbow, wrist and fingers. Compound fracture of the humerus is best treated with the arm abducted. Ununited fracture of the humerus is most surely united by the step cut operation, and the steps should be long. Shortening of the arm is of minor importance.

Bone grafting proved of no value in filling gaps in the shaft of the femur or the humerus. Real adequate development rarely if ever was secured even if the graft lived. Several grafts which have been used to make up the deficiency in flail joints have fractured, and in the few that have survived for over a year there is but little promise of adequate stability. The best results from bone grafting are in association with the radius and ulna, and I think that the method described by Hoy Groves is best whereby the ends of the bone are freshened, their medullary cavity drilled, and a piece of tibia like a cricket ball is removed and the two sharpened ends are passed into the medulla. This technique is suited to non-union in association with a gap. If bone grafting is decided upon it should be done in two stages—the first being the removal of scar tissue. This allows of better blood supply and lessens the liability of sepsis. In malunited fractures we never operate in the presence of a sinus nor for some months after it has closed. We hasten the healing by free excision of sinus, scar, and bone. If the alignment of the bone is good and the shortening does not exceed one and a half inches we do not operate. If the alignment is good but there is marked rotation of the limb, we perform an osteotomy some distance from the fracture. In malunion we rarely evacuate the ends of the bone through the wound, but prefer to follow the attached surfaces with a chisel and trust to extension without internal splinting. Rough manipulation stirs up all hostile factors. We should be merely gently efficient. Although we know fractures will unite in the presence of sepsis, the sooner we eradicate sepsis the firmer and better will union become. In recent and in ancient fractures all joints should be kept mobile, and the muscles should be regularly stimulated by electrotherapy.

The restoration of function in joints is too vast a subject to dwell upon. Suffice it to say that forcible movements are rarely indicated. Certain symptoms following manipulation and passive movements indicating injurious strain may be formulated:

If pain occurs after manipulation and is of short duration, movements may be continued.

If pain persists for lengthy periods after manipulation, rest is indicated.

If the increased range of movement is maintained after manipulation, further movements can be safely prescribed.

If in spite of movements, even in the absence of great pain, the range is continually diminishing, rest is indicated.

The duration of pain when tissues are relaxed, rather than its intensity, should be our clinical guide.

In overcoming adhesions and in subsequent manipulations the joint should be put through its various movements only once. The oft-repeated pump-handle movements applied at each sitting are never useful, and often start inflammatory symptoms. Voluntary movements can safely be allowed and should be encouraged. They are not followed by obstructive reaction.

A more systematic and thorough education is required in the treatment of fractures. This can only be effected either by setting apart wards for fractures under the care of men who devote real interest to the subject, or by retaining certain institutions solely for the treatment of these cases. Education is sure to be imperfect if the treatment of fractures is to remain in the hands of surgeons who take no interest. We should regard every fracture as the potential cause of disability. In England, and I should imagine to a certain extent here, the demand for beds is so pressing in our civil hospitals that a junior officer will gain no favour if fractures are admitted in numbers or are retained for long. This, after all, is only a repetition of the story of early evacuation in time of war. It has no justification in time of peace. If general hospitals are not prepared to segregate cases of fracture, properly superintend them, and to treat them until evacuation is safe, they are far better without them, from the point of view of the surgeon and the student, and of the unfortunate victim.

Your nation taught us a valuable lesson when a committee was appointed to standardize splints, and all the surgeons were taught to master their construction and use. This again should be of value to us in civil life. If the

simplest and best splints were standardized by a committee of experts, and their application thoroughly taught to every student it would clarify a complex problem. The student should be taught not to be out and out adherents to an operative, a fixation, or a mobilizing school. He should be taught to cultivate a sense of proportion, and above all, he should be taught how to make a diagnosis without first consulting an x-ray picture.

War has taught us the importance of insisting that before a man becomes a specialist he should have a sound working knowledge of general surgery. Nothing is so fatal to progress in any special branch than when, from defect of education, a surgeon is obliged to take a microscopic rather than a telescopic view of a problem. When a firm surgical foundation is acquired he can deflect his energies with great advantage to special fields. One of the inevitable misfortunes of the war has been that able young surgeons with but little pre-war experience have graduated as excellent operators. They should, on their return, supplement their knowledge of the use of the knife by a careful study of conservative methods such as they will find in our reconstructive hospitals. The scalpel is not the surgeon's greatest asset—it may be his greatest curse. He requires a steady head even more than a steady hand.

War has brought to the front the young surgeon. He has left an indelible impression upon the evolution of surgery during a grave national crisis. We must give him more liberty, and make more use of him than we have been accustomed to in the past. His flexible mind has great potentialities. This can only be developed by giving him a fuller responsibility. It is a tragedy to see men between thirty and forty gathering the crumbs that fall from the table of Dives. The experience of age is after all only the product of opportunity. Let the young glean all that is worth gleaning from their seniors, but let us on our part offer the hand of friendship to all who strive to improve upon our methods, and value their loyalty all the more if they maintain a critical spirit.

War has done us one supreme service. It has cemented the two nations we love into a sacred bond of brotherhood. May it last in ever-increasing strength throughout the ages.

SOME REMARKS ON MEDICAL EDUCATION.

BY

SIR GEORGE MAKINS, G.C.M.G.,

PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

Of the many questions needing an early solution at this time of change and reconstruction that of medical education is far from the least important. We may do well, then, to consider what changes are possible in dealing with the preliminary and intermediate subjects, and further, whether the teaching of the final subjects as at present carried on is adapted to the production both of the ordinary practitioner and of those whose duty it is to further the advance of the science of medicine and to serve as pioneers and teachers of others.

The spirit of this address is in no sense to raise any question as to the necessity of employing a scientific method in the teaching of medicine, but its object is to lay stress upon the fact that the "doctor" in the ordinary sense of the term is of necessity a practitioner of "*the art of medicine*." He is in a position to further the advance of the science by intelligent observation and logical reasoning, but the nature of his duties and the calls upon his time render it unnecessary to deal with him as a student of pure science, and hence the character of his education should correspond with the nature of the duties he will be called upon to perform.

The development of our present system has been a gradual process, of which one of the most important features—that of fitting a man for the actual practice of his profession—has been removed from the preliminary to the post-graduate stage. Under the ancient system of apprenticeship a boy acquired a knowledge of the essential qualities for successful practice, both from the

* An address delivered to the Medical Society of Manchester, October 29th, 1919.

humanitarian and the economic points of view, before he was compelled to definitely make a choice of his life's work. Some experience of his aptitude for the calling of a doctor was gained not only by himself, but also by others well qualified to judge of his character, disposition, and mental capacity. These advantages—of capital importance to the production of the medical craftsman—have had to be sacrificed to meet the requirements of the ever-increasing share taken by science in the advance of medicine.

The casual knowledge acquired during the period of apprenticeship, supplemented by a course of "walking the hospitals," became gradually supplanted by the "medical school" and a more strictly defined curriculum, to which from time to time constant additions have been made, with again a curious fluctuation in the importance assigned to the earlier and later subjects included.

Fifty years ago anatomy and chemistry provided the chief sources of scientific instruction, supplemented by limited courses of physiology, botany, and perhaps comparative anatomy. The science of physiology was at that time in its infancy, and the essential facts regarding the functions of the various organs and structures of the body required but a small exercise of the mental powers of the student. The same remark may be applied to pathology as a constituent part of the curriculum.

With the growth of the latter two sciences an ever-increasing amount of time was required for the acquisition of the modicum of knowledge to be acquired by the student, until they, together with the other early subjects, began to engross the greater part of the entire medical curriculum. Meanwhile advance in the whole field of medicine, and especially the development of the so-called "specialities," rendered the time available for the acquisition of actual professional knowledge hopelessly inadequate, and as a consequence the curriculum had to be lengthened, and the share to be devoted to the study of the preliminary and intermediate subjects strictly limited. This expedient has since been rendered inoperative by the constant addition of subjects of prime importance, such as the branches of pathology and pharmacology.

This is the position in which we find ourselves to-day—the student burdened with a task wellnigh impossible, worried by the frequency and multiform character of examinations, and yet perhaps less broadly acquainted with the general principles of medicine than he was after passing through a much simpler course.

It may be well here to pause for a moment to consider what place medicine holds amongst the sciences, and how far it is necessary that the practising medical man should be held to be a follower of medical science rather than a practitioner of the art. A suitable preface to this consideration may be found in a dictum of Professor Huxley, laid down in an address to the medical profession, "On the Connexion of the Biological Sciences with Medicine" (*Proceedings of the Seventh International Medical Congress, 1881, vol. i, p. 91*):

It is so difficult to think of medicine otherwise than as something which is necessarily connected with curative treatment that we are apt to forget that there must be, and is, such a thing as a pure science of medicine—a pathology—which has no more necessary subservience to practical ends than has zoology or botany.

This is an undeniable statement, and I think it behoves all concerned in the education of the medical practitioner to bear it in mind in the decision how far that education should be directed towards the development of the science of medicine, and how far towards the production of the efficient practitioner of the art.

The science and the art of medicine are alike founded on the exact observation of the conditions of health and disease; both owe much of their development to the use of the experimental method, by which observations are confirmed, additional facts are obtained, and new fields of inquiry are opened up. In either the science or the art advance depends upon logical reasoning and upon conclusions drawn from the facts observed. The methods employed differ little from each other in character, but while the worker in pure science seeks for the extension of knowledge as to the causation and the process of disease, the practitioner of the art mainly strives to perfect his knowledge of such phenomena of disease and the means and methods of combating it as have already become familiar. Hence the objects of the art of medicine are

more limited in scope and confined to a comparatively narrow field, while those of the science are illimitable and pursued independently of any utilitarian aim. Nevertheless, the science of medicine owes its birth to the observations of the practitioners of the art, and even under the altered conditions which obtain to-day its followers can only work satisfactorily for the advance of knowledge by maintaining an intimate collaboration with the practitioner of the art.

A survey of these considerations should exert a definite influence upon the determination of the nature of the course of education best suited to the development of the doctor upon whose efficiency the happiness and health of the nation so largely depends. It is clear that for the great bulk of the profession a path must be found by which advances in science are utilized for the perfection of the art of medicine, but it cannot be possible to elevate every medical man to the position of an apostle of pure science.

All men are not endowed with a truly scientific spirit; the power of evolving great principles is reserved to the few, and even the correct appreciation and application of those which have been laid down is not a faculty universally enjoyed. Again, the power of reasoning, the possession of initiative and invention, and the facility of developing technical skill, are qualities very unevenly distributed amongst the class of man who adopts medicine as his profession. The reasons which lead to his choice are by no means always governed by the degree of aptitude he possesses for the calling he decides to follow. To some the science of medicine appeals; some adopt medicine from the lofty motive of desiring to benefit mankind; some boys are born to succeed to a family practice; some become students of medicine because the choice coincides with that of a friend; in some business capacity is *nil*; in others it is the mainspring of the future career and dominates all other feelings or aspirations. Lastly, in not a few instances the initial choice has never been made the subject of serious thought or consideration.

The student of pure science in the past chose a career which for many was equivalent to a vow of poverty and chastity, from single-minded love of the subject and an abnegation of all thought of personal gain or advancement. Matters have perhaps changed somewhat of late in this direction, but a large proportion of the newer recruits are to departments of technical science of a purely utilitarian nature, the practice of which is in no sense to be distinguished from that of an art.

Medicine therefore is not a calling which can be held to stand alone as to the difficulty in determining what relative share science and art must take in the moulding of its followers, and it is evident that, except in the initial stage, one and the same course of study can hardly be calculated to produce the desired end—that on the one hand of producing a student of science, or on the other a practical medical man. Hence it appears evident that in the education of the doctor medicine itself must be allowed to take a more prominent part as an exercise of scientific thought and method, and the attempt to develop a scientific turn of mind by administering smatterings of the ancillary sciences should be abandoned.

Modern tendency has been in the direction of relegating the study of the preliminary scientific subjects, chemistry, physics, and elementary biology, to the secondary schools, and to define the extent of the work to be done by a syllabus which limits the scope of knowledge which will be required at the examination. Can it be maintained that such a method of teaching is that most suitable for the inculcation of broad lines of scientific principle, or does it not rather tend to the initiation of a habit of accumulating a number of details learned more or less by rote for the purpose of passing an examination?

A further objectionable feature in the existing curriculum lies in the hurried acquisition of a minimum of knowledge in short successive stages, at the end of each of which the medical student starts afresh with new teachers and, to him, a new subject, which he is apt to regard as quite unconnected with the subjects he has left behind him. Even in a university, the limited scope of the knowledge demanded from the student of medicine, and the short period of time allowed for its acquisition, places him at a disadvantage when classed with others who are making a serious study of subjects such as chemistry, physics, and biology; hence courses directly adapted to meet his modest needs are commonly arranged for his convenience.

Yet no one can deny the necessity of his acquaintance with the principles and many of the facts of chemistry, physics, and biology, as a part of his training as a medical man.

Two difficulties therefore have to be met: one the short period of time which can be allotted to the subjects, the other the want of co-ordination and continuity in the instruction given, consequent on the present method. In both particulars a retrograde step appears to have been made in the sharp separation of the so-called preliminary and intermediate subjects, and in making the former rather antecedent to than ancillary to the latter.

A difficulty of exactly the same character has become more and more evident in the case of the intermediate and final subjects, and here an attempt is being made to co-ordinate and render them continuous by appointing teachers of applied anatomy and physiology to demonstrate practically the intimate connexion of these sciences with medicine and surgery in the wards.

It may appear presumption on the part of one who has spent his life as a practising surgeon to venture to suggest an alteration in the method of teaching the purely scientific subjects; but it must be accorded that the teaching of these subjects is but a means to the end of producing an individual whose life will be spent in the same manner, with or without the addition of allotting a good half of the time to the service of a hospital and school. I would first point out that those entrusted with the direction of the education of the medical man are not justified in relegating the teaching of the preliminary subjects to the secondary schools, and washing their hands of any further responsibility. This procedure corresponds in character with the feeling of the student that the acquisition of knowledge in these subjects is but a means to the end of placing an examination behind him. There is every reason to encourage the teaching of science in secondary schools, but it is necessary at the same time to ensure that the proper relation of the subjects dealt with to those which are to follow is never lost sight of.

I would suggest that a remedy from some of these evils might be found by regrouping the subjects, and returning in some degree to the simpler course laid out for the student in earlier days. With these objects in view the following changes are recommended:

Elementary biology as a separate course to be excluded from the curriculum, and the congeries of subjects dealt with in the existing syllabus relegated to their respective positions at the commencement of the courses of anatomy, physiology, and pathology.

The first year of study to be devoted to anatomy, chemistry, and physics.

The second year to be mainly devoted to physiology, together with classes in anatomy so arranged that the subjects dealt with run concurrently with those to which they relate in the course of physiology.

The third year to be devoted to the study of pathology and pharmacology, including such elements of the course of materia medica as may be retained. During the summer session of this year elementary instruction in clinical methods.

The fourth and fifth years to be entirely devoted to professional subjects as at present.

Examination.

An examination in anatomy and physiology at the end of the second year.

No examination in chemistry and physics to be held by the licensing bodies, but the whole responsibility for sufficient instruction in these subjects to be thrown upon the respective teachers in the schools, who would satisfy themselves by means of class examinations.

An examination in pathology and pharmacology at the end of the third year.

The final examination in professional subjects to be held, as at present, after the termination of the fifth year.

The first criticism of this scheme which may be made is that it tends still further to curtail the time to be devoted to the practical study of anatomy. As an old teacher of anatomy this point has been thoroughly debated in my own mind, and the objection dismissed, for the following reasons:

The dissecting room has of necessity long ceased to be the centre of life in a medical school which it used to be, and this depends upon the following reasons: (1) The need for economy in time, (2) the scarcity of anatomical material for dissection. Neither of these difficulties are likely to become less—in fact, there is unfortunately reason to apprehend that the latter is likely to become increasingly urgent. Hence the tendency is for the practical teaching

of anatomy to pass still more from the dissecting bench to the classroom, with, it is true, a risk in decline in delicacy in manipulation and in intimate knowledge of the finer details of structure, but with a distinct economy of time.

Against these disadvantages the following points must be considered. Allowing intimate knowledge of the anatomy of the human body to be the most important item in the earlier study of medicine, the plan proposed gives to the anatomical teacher the manifest advantage of virgin soil into which to instil instruction, while the class teaching in direct connexion with the course of physiology in the second year ensures a proper sense of the relation of the structure of the body to its functions to be grasped. Again, the use of sections of the body and of x-ray photographs allows the student to gain a true sense of the relations of the various structures in the architecture of the body more readily than used to be the case.

A more weighty argument lies in the urgent necessity which exists of carrying on the knowledge gained in the anatomical department and utilizing it in relation to the study of the later subjects. Its relation to the course of physiology has already been dealt with, and it is no less important that as an applied subject it should take its proper place in the courses of pathology and in all the different sections of medicine and surgery. If this be properly kept in mind and arranged for, the study of anatomy will only cease with the termination of the medical course.

I think that the relegation of the commencement of the study of physiology to the second year is justified by the assumption that it is better for the student to become first acquainted with the structure and mechanism of the human machine, and that the purely mechanical side of function is a more suitable introduction to the study of physiology than the more intimate problems dependent upon an appreciation of vital action. It would be presumption on my part to make any further suggestion regarding the teaching of physiology beyond making the broad statement that it should be so designed as not only to progress together with the study of anatomy, but also in sympathy with that of the chemical laboratory, the pathological laboratory to which it is an introduction, and later that a special course should carry the application of physiological knowledge to the wards.

In considering the question as to how far the student in the past has benefited by the physiological course, it should be pointed out that the responsibility lies equally between the teachers of the intermediate and advanced subjects, and that while the physiologist should strive to make his course strictly appropriate to the needs of the student of medicine, the clinician himself should point out and dwell upon the light that physiology sheds upon the many problems of disease that are dealt with in the wards.

The direct passage of the student from the study of anatomy and physiology to that of morbid anatomy and physiology is becoming more and more generally recognized as the rational sequence of progress in acquiring an elementary knowledge of the science of medicine, and the same may be said for the combination of pathology and pharmacology as the logical introduction to the clinical study of disease. The sequence is not only rational but also an easier one for the student, freshly primed as he is with the facts of anatomy and the methods by which the normal vital functions of the body have been investigated and determined.

The allocation of the whole of the third year to these subjects, moreover, is not so prodigal of time as may appear on first consideration, since the student becomes acquainted with a large part of the general principles of medicine, and during the summer session commences to acquire familiarity with clinical methods while the lessons of the physiological laboratory are fresh in his mind. To obtain the full advantage of this rearrangement of the preliminary and intermediate courses some readjustment would be necessary in the various departments, particularly in the case of the assistant teachers or demonstrators.

The first element for success would lie in a close co-ordination between the heads of the several departments concerned, the teachers forming a small board to meet frequently to discuss matters connected with the course of instruction, and also the progress of the individual pupils.

The second would lie in establishing a closer bond of intercommunication between the demonstrators. This

could best be effected by arranging that as many as possible of the demonstrators should work in more than one department. Thus anatomy and physiology, particularly with regard to histology, physiology and pathology, physiology and pharmacology, chemistry with chemical physiology and chemical pathology, while demonstrators of anatomy and physiology might take part in the courses of practical surgery, and those concerned with instruction in clinical methods. There can be no doubt that in a medical school the class of man willing and able to undertake such combined duties would be easily found, and for those who take up the duties of a demonstrator only as an educational phase of their career the appointments would be particularly valuable.

I do not propose to dwell upon the work of the two clinical years, because the existing system appears to me the only remaining portion of the old curriculum calculated to evolve the type of man fitted to undertake the duties either of the consultant or the general practitioner. These two years of hospital life now furnish the sole opportunity to the student of acquiring confidence to face the responsibilities which lie before him, and to learn by precept and example what should be the attitude of the doctor towards his patient. It is during this period that the student gets to know his teacher and the teacher his pupil. It is now that the student gets an insight into professional manners, acquires the proper humanitarian feeling towards his patient, and gains his first intimate knowledge of human nature. Science alone, apart from a knowledge of human nature, and the capacity to read men and sympathize with their weaknesses and difficulties, can do little towards the evolution of the successful practitioner.

I would only enter a plea for the utmost simplification in methods of diagnosis and the need for exactitude of observation being constantly kept before the student. It should be impressed upon him that an x-ray examination is to be regarded as affording corroborative evidence and not as a means of making a diagnosis, that surgeons long before the days of bacteriology were able to draw a distinction between staphylococcal and streptococcal infections; in fact, that the natural senses properly cultivated suffice for the very great majority of the work that he will be called upon to perform. The habitual resort to special methods, and the belief that complicated apparatus is necessary in the investigation of the ordinary problems of disease, is likely to do as much towards the destruction of the art of the practitioner as the methods of science can do to help it.

Up to this point we have been concerned with the undergraduate and the attempt to inculcate in him a broad acquaintance with the principles of medicine and of the practice of the art, and it is claimed that in a scheme such as has been outlined proper compromise has been effected to ensure a sufficiently scientific basis upon which his future life's work can be built up. From this stage a great majority of the men pass from the schools, some after fulfilling the duties of the various junior posts in the hospitals, to the actual practice of their profession, and a new sphere is opened up to them in which they will need to rely on the experience and example of their senior fellow practitioners to complete their education as a doctor. A minor proportion will desire to remain and increase their store of knowledge and experience, to become workers at the science of medicine, or eventually to take part in the education of others.

Can it be said at the present time that the best opportunities exist for this latter class, or that arrangements allow such a course of study as has been suggested to be amplified to meet their needs? It is true that a man in his own school and amongst his own teachers is in a position to follow out some line of investigation he may wish to embark in, and again certain special hospitals not directly connected with a medical school may offer him opportunities for following their practice, or even to undertake a research—for example, in neurology, ophthalmology, laryngology, or urology. He also has the opportunity of meeting financial difficulties by undertaking the duties of a junior teaching post in his own school. Nevertheless such men have in the main to work out their own salvation, and conditions are far from favourable for easy or continuous study.

For the graduate from the provinces, from the dominions, or from abroad, except for the possibility of establishing an arrangement with an individual teacher, matters are far

more difficult, and should he desire to follow up more than one subject he will probably require to visit a number of institutions, neither of which he can regard as his home.

I do not think that graduates from abroad are to be regarded merely from the point of view of men who may carry the prestige of the British School of Medicine into other lands, but rather as members likely to contribute an important share towards the success of the school to which they may become attached. The same advantages obtain to the entry of students from any source in the British empire, each introduces a different experience of men and of methods, the diffusion of which may exert a vivifying and stimulating influence on existing lines of thought and on the direction of action. Under existing circumstances these men are in a position to do little beyond "walk the hospitals," or to undertake research in a laboratory as individuals and not as members of a school for which they may develop a lasting pride and affection. Their presence in the past in a primary school of medicine has been an actual source of embarrassment, for, if in any numbers, they necessarily either engross a large part of the attention of the teachers to the detriment of the undergraduates, or they fail to attain the object for which they have come.

A still larger class of graduate student needs to be alluded to: the practitioner who wishes to refresh, modernize, and augment his store of knowledge and fill in the gaps in his powers which experience has made him realize; or those who wish to perfect themselves in the practice of one or more of the so-called specialities. Certain provision exists for men of this class, but even in dealing with them it has come to be realized that special arrangements are necessary. In London successful attempts have been made by the West London and the Seamen's Hospitals, both of which institutions are entirely devoted to this object. They have performed particularly valuable work for members of the services and for many practitioners, but their resources are not sufficiently large to meet the future needs. The attempt made to provide for post-graduate instruction by the polyclinic, even supported by the energy and enthusiasm of Sir Jonathan Hutchinson, a pioneer in this field, failed from the fact that the essential element for success, an attached hospital, was lacking.

At the present moment, therefore, powerful incentives to the establishment of an efficient system of graduate instruction exist. A strongly awakened desire to further the advance of medicine in this country, the wish to attract the student who has been accustomed in the past to seek post-graduate teaching in the schools of the Continent, and the need to meet the growing tendency of the practitioner to fit himself to practise one or more of the so-called specialities with efficiency. In the light of the assumption that this latter class may augment enormously in numbers if the system of out-patient clinics be developed by the Ministry of Health, the wants of these men may become urgent.

Recent movements (in London) have been in the direction of trying to organize and co-ordinate the teaching of the large medical schools and the special hospitals, and by a common effort to supply the opportunities desired. It must, however, be allowed that this is by no means the first occasion upon which the establishment of such a scheme has been attempted, and that previous attempts have been attended by very modified success or by absolute failure. The reasons of this want of success in the past are probably not far to seek, the main elements being the absence of a strongly organized centre and the fact that schools adapted to the purpose of primary instruction in medicine are ill suited to the needs of the graduate student.

The combined demands of hospital practice and duties in a medical school are as much as any consulting physician or surgeon is in a position to meet. To add a separate series of lectures and classes is to throw an additional task upon an already overburdened man.

The courses of work suitable for the instruction of undergraduates are practically useless for the man who has already obtained his degree or diploma. The most successful teachers of undergraduates, probably by reason of the dogmatic nature of the instruction given and the necessary limitation of its scope, are by no means necessarily those who can interest and enthuse the graduate, as anyone who has passed his life in a medical school is well

able to appreciate. Many teachers who are able to enforce broad general principles founded upon practical experience, may lack the necessary knowledge of literature and acquaintance with the results of the most recent methods of scientific research needed by the graduate. Yet, literary erudition and extensive acquaintance with the most recent methods and results of research, while not essential for a teacher whose task it is to produce an efficient practising "doctor," are necessary qualifications for the leadership of the graduate who aspires to follow the higher paths of medicine.

In the foregoing remarks it is not intended to suggest that the highest qualifications are not advantageous in imparting the most elementary instruction. If we consider the example of the greatest teachers of the past, such as Huxley or Michael Foster, we find them expending a great part of their energy in imparting the fundamental principles to the junior students, and entrusting to their younger colleagues the detail that the pupil himself is apt to regard as the more difficult part of the subject.

The atmosphere of a primary medical school, where the main object is to impart elementary and practical instruction, is unsuitable to the acquirement of intimate acquaintance with detail, and in a considerable degree to the freedom of thought, the sceptical attitude towards received and adopted views, and the single-minded desire to advance medical science by research which should animate the graduate who seeks to follow the higher paths of medicine. In the primary medical school the performance of the whole of the practical work in connexion with the patients in the hospital is engrossed by the undergraduate students and the house officers. In the laboratories, again, the main energies of the departments are more or less monopolized by the class teaching, and the graduate engaged in a research, except for his direct association with his chief, must work as an individual, and the valuable stimulus of a close relationship with his fellows is missing. How gladly, for instance, would many a graduate undertake the duties of the ordinary junior posts in the hospital, with the abundant opportunities afforded of observation, from which he is debarred by the simple fact that no room exists for his services? In fact under existing conditions, except as the occupant of one of the junior teaching posts, the graduate student forms the fifth wheel of the coach in a primary medical school.

If these premisses be correct, it is clear that in making provision for the many sides of graduate study which exist, adaptation of the present system will scarcely suffice; for the needs of the student of advanced medical science, and those of the practitioner of medicine, are of different degree and nature, and even for the latter the position of the graduate and undergraduate is quite distinct.

Graduate instruction requires to be utilized for more exacting purposes than that of merely improving the capabilities of the practitioner—it must also include facilities for workers at the science of medicine engaged in experimentation and investigation, and afford opportunities for those preparing to occupy professorial chairs. It cannot be restricted to affording help to the practitioner and giving foreign visitors a glimpse of the views held and the methods in use in this country. We cannot be contented alone with a series of courses such as have been held in the past in Vienna, in which the greatest amount of information is given in the shortest possible period of time—a system in many respects comparable to the cramming for a scholarship or other examination in the early part of a student's career. The question requires to be solved by establishing a system which not only co-ordinates the extensive fields of observation and sources of instruction which already exist, but also by the founding of secondary schools of medicine, one of which might form a centre for the whole country.

The former of these objects is already the subject of serious consideration and organization, and I propose to make little further allusion to it than to express the opinion that the entire direction of this work should be under the control of the secondary medical school to be now outlined.

The first essential for a graduate school is the possession of a large and well-appointed hospital entirely devoted to the purpose, with sufficiently well-equipped and extensive laboratories directly attached. No distinction should be

made between these two departments of the school; for the hospital is the first-line laboratory of the student of medicine—it provides him with his field of observation, here he discovers the points which require investigation, it is the ever-welling fountain that engrosses his thoughts, and its inspiration tends to keep him on the direct track and prevents him from wandering into the by-paths of abstract lines of investigation.

The greatest of the services of the great war has been to demonstrate the advantages which accrue from the presence of the worker in pure science in the field of practical medicine—an observation definitely substantiated by the experience gained in all attempts to establish laboratories for pathological research, except in direct connexion with a working hospital.

Speaking in the presence of a number of members of a large and important university in the provinces, where medical education is already centralized, I am aware that some of the further remarks I am about to make may not be strictly suitable; but while the arrangements which may have to be made may not be of a similar nature in consequence of the better organization and equipment of the departments for the teaching of the preliminary and intermediate subjects, yet the principle suggested, that graduate instruction needs special provision to be made for it quite independent of undergraduate instruction, is equally applicable. It is also, I believe, certain that the need for post-graduate instruction throughout the country is likely to become a much more general and urgent matter, should the system of out-patient medical clinics be set up in the near future by the Ministry of Health.

London, with its many medical schools under only nominal university control, and the numerous hospitals, laboratories, and museums already in existence, offers a more complex question. I believe, however, it is in some respects a more easy one of solution, in consequence of the greater number of graduates likely to avail themselves of any advantages offered and the more numerous teachers who could be called upon.

The staff of the school should be of the professorial type, but I think it would be neither practical nor advantageous for it to be composed entirely by permanent whole-time professors. In the laboratories this would probably be necessary, but in the case of the clinical work any difficulty might be surmounted by adopting the system followed by the Assistance Publique of Paris in appointing physicians and surgeons to the individual hospitals for a limited period. Under such a system officers from the various schools in London might be seconded, say, for a period of five years to serve as professors in the secondary school. The method would possess the advantages of regularly infusing new blood into the graduate school, of giving a valuable experience to the teachers of undergraduates, and in establishing a common bond of sympathy in mode of thought amongst the several schools. It might do much to raise the general standard of education, while at the same time it would not disturb the time-honoured and successful method of clinical teaching now in vogue.

Not a few of us must, I think, have been interested in the views put forward by Sir James Mackenzie concerning the difficulties which attend the teacher whose life is passed in consulting practice in his limited opportunity of observing the beginnings of disease or of tracing the continuous progress of the disease in the individual when it has once become established. Mackenzie argues that the general practitioner is the only man suitably placed to elucidate the problems of the commencement of disease and their progress towards their eventual termination. Hence he asks that the general practitioner should take a more active and prominent part in the education of the student. I do not think that this proposition affects the question of primary medical education. In the short period at the disposal of the undergraduate it is enough for him to master the fundamental facts regarding the normal structure and functions of the body, the effects upon them of disease, and the characters of disease when developed. The first steps in his education must necessarily consist of the investigation and appreciation of the strongly marked types, and the extension of his knowledge by following the gradually weakening links which stretch backward to the normal must be the study of the man

who has at least reached the status of a graduate. In the secondary school, then, the accomplished general practitioner might find a proper place.

The hospital would furnish a certain number of graduates with opportunities for observation and research, and also afford facilities for practical work and technical development of the highest class. The graduates would take the place of the junior officers in a hospital attached to a primary medical school, acting as assistants to the professors. These advantages, however, could be enjoyed by only a limited number, and the occupants would need to be selected with care and due consideration of the aims they had in view.

The further field of action is identical in intention with the efforts that are at present being made for the co-ordination of existing sources of instruction, and making them available for the practitioner who desires to go through a limited course for purely utilitarian purposes. It is obvious that if the scheme of a central secondary school should find favour, that the associations who have the work of co-ordination in hand are the proper agency through which the entire scheme could be completed.

This being the case, the school would be the centre to which all graduates of either class would gravitate, and from it the men would be allocated in whatever special

direction and to whatever special teacher they might desire. Thus the whole wealth of material possessed by the hospitals, infirmaries, laboratories, and museums of the metropolis would acquire a bond of union, and a vast amount of opportunity now so cursorily utilized might be opened up to any graduate student. The graduate provided with such a central institution would no longer be a wanderer tilling a solitary furrow, for his school would not only provide a vast field of action, but would also bring him into contact with workers from every school and land—an association which could hardly fail to widen his horizon and extend his experience, not only of methods, but of men.

The advantages to be gained, moreover, would not be confined to the student alone; the teacher also would benefit in no small degree from contact with the different class of pupil, to whom his duty would consist in stimulating the acquisition of knowledge of the highest grade and arousing the faculty of research. Again, the existence of a school of medicine with this scope and these ends in view could not fail to react inspiringly upon the primary medical schools around it. It would tend still further to the elimination of dogma and empiricism from the practice of medicine, and to heighten the standard of education throughout.

A GIANT MUCOCELE OF THE APPENDIX.

BY

W. GIFFORD NASH, F.R.C.S.

THE following case is reported because examples of such great distension of the appendix appear to be very rare. Kelly, in his work on the vermiform appendix, fol. 288, gives an illustration of this condition. He mentions a case related by Sonnenberg in which the appendix was 14 cm. in length and 21 cm. in circumference. In my case at the time of removal the length was 17.7 cm. and circumference 19 cm. Virchow described a case in which the appendix was as large as a man's fist. In the case related below there is no evidence as to the duration of the change in the appendix, as the patient appears to have had no symptoms until a few days before admission. Kelly says that the walls of the cystic appendix are attenuated and transparent, but in this case they were extremely thickened.

The patient, a male aged 64, was admitted to the Bedford County Hospital on June 27th, 1918. Two days before admission he was seized with abdominal pain, followed by vomiting. The pain began in the umbilical region, but later settled in the right inferior quadrant of the abdomen; it was relieved by morphine. The bowels were constipated and an aperient was given without result.

On admission to hospital the general condition was good, the pulse was 92, and temperature 98.6° F. On palpation there was rigidity of the muscles and tenderness over the caecum. A swelling could be felt in the caecal region, but hyperaesthesia and rigidity made it difficult to palpate.

Operation (June 27th).—An incision was made over the caecum, and a large elongated firm lump was then felt lying behind the caecum and ascending colon, which suggested an enlarged kidney. This was delivered and found to be attached to the apex of the caecum. It was removed, leaving an opening into the caecum half an inch in diameter. A purse-string suture was applied, and the stump invaginated.

After the operation vomiting continued for several days, which caused a good deal of exhaustion and difficulty in feeding. The man left the hospital quite well on August 1st.

The tumour which was removed was 7 in. long, 7½ in. in circumference, and weighed 8½ oz. It was sent to Mr. S. G. Shattock, F.R.S., at the Museum of the Royal

College of Surgeons, who very kindly supplied the following report:

A vermiform appendix enormously enlarged from the accumulation of mucus within it, after its occlusion. The distended structure, which is somewhat pyriform like the gall bladder, measures 14 cm. (5½ in.) in length and 6.5 cm. (2½ in.) in greatest transverse diameter. Its surface is of a dull white colour and quite smooth except for the presence of a few shallow sub-circular pits like those seen in the peritoneal thickening over the spleen or liver or on ovarian cysts. The wall of the sac, which is of extreme density, is 0.7 cm. in thickness.

Microscopic sections show that it is constructed of parallel lamellae of dense fibrous tissue furnished with a moderate number of flat connective tissue corpuscles, uniformly distributed and regularly disposed between the fibres. The cells increase in number towards the inner aspect, where there are, in addition, lines and larger groups of lymphocytes in the clefts. The innermost zone of all, however, is devoid of cell nuclei and in a state of necrosis, the cells, as shown by the use of scharlach, being represented only by elongated groups of fat droplets.

There is no trace of epithelial lining, the necrotic fibrous tissue being immediately succeeded by an adherent layer of mucus in which there are embedded calcareous molecules and larger spherules, the chief of which have a laminar structure. On the narrow, proximal and less thickened end there may be recognized a small patch of the mucous membrane of the caecum which was opened in the removal of the appendix.

AN out-patient department for the treatment of nervous diseases is being instituted in connexion with the Bethlem Royal Hospital, London, S.E. Persons of the educated classes, in a presumably curable condition, are alone eligible for admission as in-patients and are received either free in necessitous cases or at

a fixed inclusive rate of three guineas a week. With a view to the early treatment of eligible cases voluntary or uncertified cases are admitted. It is hoped that the new department will prove to be of great help to those requiring early advice before their condition has become so urgent as to require the medico-legal label of insanity. The department is established in another building, quite apart from the main institution and will be known as the Hospital for Nervous Diseases. The address is 52, Lambeth Road, S.E. Consultation between members of the hospital staff and the medical practitioner in attendance upon the case will be encouraged.



Two-thirds natural size.

POLYCYTHAEMIA VERA (RUBRA) COMPLICATED
WITH HYPERTHYROIDISM.

BY

EDGAR J. TYRRELL, M.B., B.S. DUBLIN,

LONDON, E.C.

THE note on polycythaemia hypertonica¹ in the Epitome of Current Medical Literature of October 25th, p. 14, induces me to think the following case may be of interest:

A man, aged 45, came to consult me regarding his high blood pressure. He had been under treatment for this condition for over two years, but his symptoms had increased in severity, and he was now subject to recurrent attacks of vertigo, which rather alarmed him. The history was one of gradually increasing cyanosis during the last eight years, some shortness of breath, and increasing muscular weakness. About April, 1918, some bombs which fell near his house during an air raid greatly upset him. Within twenty-four hours this was followed by swelling of the neck and thyroid gland, which became as large as two duck's eggs. The swelling gradually receded until it became the size of a hen's egg and had remained in that condition. From this time he became nervous and exhibited signs of hyperthyroidism. During the last month he had had several attacks of giddiness with some confusion of mind, lasting a few seconds. There was no history of specific disease.

His face showed a well-marked degree of cyanosis. The superficial temporal arteries were tortuous and thickened. The radial pulse felt hard and gave the impression of high tension. The artery was thickened. The blood pressure, taken on three separate occasions, was always about 120 mm. Hg. The heart was not enlarged. The urine contained a trace of albumin, but microscopic examination showed no casts or anything abnormal. The spleen was enlarged and reached to 3 in. below the costal margin. The right lobe of the thyroid gland was prominent, the swelling being as large as a hen's egg. There was slight exophthalmos.

A complete blood examination was made, with the following result:

Red blood corpuscles...	...	9,600,000 per c.mm.
White blood corpuscles...	...	25,000 "
Haemoglobin...	...	125 per cent.
Colour index...	...	0.8

A differential blood count revealed:

Polynuclear neutrophils...	...	80.8 per cent.
Small lymphocytes...	...	10.4 "
Large lymphocytes...	...	5.6 "
Eosinophils...	...	0.4 "
Mast cells...	...	2.3 "
Myelocytes...	...	0.0 "

There was therefore both polycythaemia and leucocytosis.

In the literature on polycythaemia, I could find no case mentioned in which the thyroid gland was involved. This must be an unusual complication. There are apparently two varieties of polycythaemia, each with its own well-marked characteristics:

(a) *Polycythaemia Hypertonica*, which has been described by Geisböck² and also by Stähelin,³ in which there occurs a high blood pressure, hypertrophied heart, an increased number of red blood corpuscles up to six to eight million or more per c.mm., a pulse which is generally regular, but prone to extra-systoles. No increase in size of the spleen. Arterio-sclerosis and nephritis.

(b) *Polycythaemia Vera*, as described by Vaquez and Osler,⁴ and *Polycythaemia Rubra*, mentioned by Clifford Allbutt.⁵ These appear to be the same condition, in which the red blood corpuscles may reach to ten million or more per c.mm. The arteries are thickened and tortuous, but with normal blood pressure and no hypertrophy of heart. The spleen is enlarged. The urine contains a trace of albumin.

Osler says that the three cardinal features are: a change in the appearance of the patient, enlargement of the spleen, hyperglobulism; there is a moderate leucocytosis without any characteristic differential change; the red corpuscles may reach to even thirteen million. As a rule they are normal in appearance and shape.

The blood is always very viscous; this was quite marked in the case here recorded, and some effort was required to draw the blood up into the pipette. This gives one the impression that clotting may readily occur in the capillaries if the pulse becomes slowed and the blood pressure low. A heart which is not hypertrophied must feel the strain of driving such an increased mass through thickened and narrowed vessels. It may be that the attacks of "vertigo and confusion" complained of had some connexion with this increased viscosity. It has been stated⁶ that in epilepsy the coagulation time is much shortened. It is only reasonable, therefore, to assume that the

"attacks" are something in the nature of petit mal; the description seems to fit in with the latter.

In the treatment of viscosity iodine has been suggested. My patient says he has been treated with potassium iodide for over two years, with apparently no effect on the viscosity. It must be remembered also that there has been considerable hyperactivity of the thyroid gland during the last eighteen months. If iodine be one of the chief active ingredients of thyroid secretion when the thyroid gland is overacting, this man's blood must have become saturated with iodine—and still there is excessive viscosity.

McCarrison says⁷ blood changes of a fairly definite character occur in endemic goitre. The number of erythrocytes is diminished as well as the haemoglobin index. The coagulability of the blood is increased; the total number of leucocytes is reduced. The blood changes of exophthalmic goitre resemble those of endemic goitre.

It is reasonable to think, perhaps, that the administration of thyroid gland substance may be of benefit in these cases. In the case quoted above there are symptoms of hyperactivity of the gland and the thyroid is considerably enlarged; but it is not a fact that in hyperactivity the internal secretion is perverted in character? It is excessive in quantity but deficient in quality. It would be interesting to know whether thyroid has ever been used in the treatment of polycythaemia, and, if so, what was the result.

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FATAL ANAPHYLAXIS FOLLOWING PROPHYLACTIC
INJECTION OF DIPHTHERIA
ANTITOXIN SUBCUTANEOUSLY.

BY

A. D. McCALLUM, M.B., CH.B. EDIN.,

PRESTON.

THE death here recorded was apparently an instance of severe anaphylaxis. Sir William Osler mentions the rarity of the condition and alludes to the symptoms of fatal cases, namely, extreme distress, dyspnoea, cyanosis, respiratory failure, and collapse. He warns against inoculation of persons who have been previously inoculated with antitoxin, persons subject to asthma, and persons susceptible to the proximity and smell of horses. There is no evidence of this boy having been previously inoculated with antitoxin, and on my arrival at the house he was playing on a coal cart drawn by a horse. The bronchial colds mentioned later may have partaken of the character of asthma. Sir William Hale-White mentions two fatal cases occurring rapidly after the injection of diphtheria antitoxin.

On September 25th, 1919, I gave an apparently healthy boy, aged 8 years, a subcutaneous injection of diphtheria antitoxin; he collapsed and died within five minutes. The injection was made at his home, and was given as a prophylactic, his mother having been removed on the previous evening to Preston Isolation Hospital, suffering from faucial diphtheria. The serum used was supplied by the Municipal Health Department of Preston, and was marked on the cover as potent until January 1st, 1921. The dose given was 2,000 units. The injection was made subcutaneously through the skin, previously painted with tincture of iodine, to the inner side of the angle of the right scapula, and the syringe used was an all-glass Burroughs, Wellcome and Co.'s serum syringe, which had been previously boiled for five minutes. Following the injection of the boy, his three younger sisters were injected with the same dose and in a similar manner without, at the time of writing (September 28th), any bad result. Within two minutes of the boy's inoculation he complained that "it had gone to his stomach," and he immediately ran out of the kitchen of the house, where the injection was made, to the w.c. in the yard. A minute later I heard him call out "Daddy! Daddy!" and his father immediately ran out to him and as quickly returned and informed me that his boy was very ill and was apparently choking. I followed the father into the yard and met him carrying the boy in his arms from the w.c. The boy's face was deeply cyanosed, and he was apparently collapsed. I carried him quickly into the kitchen, placed him on the sofa, with his head hanging over the edge, and after pulling out his tongue and swabbing from the pharynx a considerable collection of mucus, commenced artificial respiration. At this time the heart beats and

respirations had ceased, and the pupils were widely dilated. Other medical aid was summoned and artificial respiration continued for three-quarters of an hour without avail.

A *post-mortem* examination was conducted by Dr. Pilkington the following day, and, except for a mass of caseous tuberculous glands in the mesentery, all the organs were healthy. There was no evidence in the pharynx, glottis, or larynx that the boy had recently suffered from diphtheria. The left ventricle of the heart was contracted and empty; the right ventricle was flaccid and contained dark fluid blood.

The boy's parents are healthy, and from his previous history it appears that, except for susceptibility to bronchial colds during the winter, he enjoyed good health.

I may, perhaps, add that at the *post-mortem* examination the stomach was found to contain about half a pint of undigested food. The injection was made at 10 a.m. and the last meal (breakfast), consisting of bacon, bread-and-butter, and tea, was taken at 8.30 a.m.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

CALCIUM CHLORIDE AS A HAEMOSTATIC.

RECENTLY a man, aged 25, consulted me for enlargement of the right tonsil. The organ was the size of an ordinary walnut, and removal was advised. He elected to have this done at once, and also decided against a local or general anaesthetic. The tonsil was easily removed by a spade guillotine; bleeding was slight, and the man walked away a few minutes afterwards. An hour later I was hastily summoned, and found him somewhat blanched, throwing up blood clot every few seconds, and with a pail before him which must have contained a pint of blood at least. Attempts to localize the bleeding spot by examination only caused more violent retching and gagging with more bleeding, and for the same reason spraying with a styptic also failed. The bleeding was venous, and an attempt to arrest by digital pressure failed for the same reason as the other measures. At last I injected into his gluteal muscle a hypodermic syringe of a 1 in 4 solution of calcium chloride, following this with a similar injection into the other gluteus. The amount of the salt injected was 8 to 10 grains. The effect was striking; the bleeding ceased in a minute and a half and did not recur. He passed the night in a half-sitting posture on the couch, and no subsequent recurrence took place.

A week afterwards he came up with a slight but persistent return of the venous oozing, which was at once arrested by injecting 4 grains of calcium chloride into the gluteus as before; it did not recur.

It is to Dr. Grove of St. Ives, Cambridgeshire, that I am indebted for the knowledge of this measure; indeed, many local practitioners will remember the valuable paper he read some years ago, at a meeting of the Cambridge Medical Society, on the uses of calcium chloride in practice.

Histon, Cambs.

L. GWILLIM DAVIES, M.D. Cantab.

ACUTE SUFFOCATIVE CATARRH.

THE case recorded by Dr. C. O. Jones (October 11th, p. 466) recalls two cases which I saw within a couple of years in a working-class practice in Scotland. The first was in a woman of 30 years, who was seven months pregnant. The history was that, after washing down the outside stair leading to her house about 9 p.m., she was attacked with sudden breathlessness and was with difficulty able to ascend the stair. A neighbour assisted her into bed and sent for me. When I arrived she was half reclining on her right side and gasping for breath as if she had a very severe attack of asthma. A quantity of pink froth was coming from her mouth; I calculated that from beginning to end she brought up about a pint. The whole chest was full of rales; the pulse was rapid and feeble. She died within an hour of the onset of the attack. Her family doctor informed me that, with the exception of an attack of pleurisy some years before, she had always enjoyed good health.

The second case was in a man aged 28. The attack came on while he was asleep. There was the same dyspnoea as in the first case, and a large quantity of froth was brought up, but it had not a pink colour. There was a history of chronic chest trouble which I took to be

tuberculous, but the rales all over the chest prevented my being able to locate it. I sent the man into hospital at once, but he died within a few hours of the onset of the attack.

Birmingham.

ROBERT ANDERSON, M.D.

Reports of Societies.

TUBERCULOSIS AND LIFE ASSURANCE.

At a meeting of the Assurance Medical Society held on November 5th, with the President, Dr. F. PARKES WEBER, in the chair, Dr. OTTO MAY read a paper on some aspects of the tuberculosis problem in life assurance, namely, (i) the significance of a tuberculous family history; (ii) the question of "contact-infection"; (iii) the assurance of individuals with a personal history of tuberculosis. Under the first head he dealt with the universal experience that tuberculosis "runs in families." The frequency with which three, four, or even more members of a family died of this infection was far greater than could be accounted for by any fortuitous incidence of the disease. But the explanation was still a matter of debate.

Even if an inherited "predisposition," or "lack of resistance," were accepted, it must not be assumed that each individual of a tuberculous family was specially susceptible to this disease. For this reason we must guard against the assumption that a tuberculous family history necessarily rendered the proposer an impaired life, acceptable only at special rates. The question was one for decision by the actuary rather than the medical man. Some light was thrown on this problem by an investigation by Rusher and Kenchington, with the assistance of the late Dr. E. M. Light.¹

They investigated the mortality in a group of some 80,000 proposers with a family history of tuberculosis, the total experience comprising 622,462 policy-years, with an average observation period for each proposer of nearly eight years. The data were grouped in various ways, according to age at entry, sex, nature of insurance (whole life and endowment), and details of family history—whether the tuberculous deaths were in lineals (father and mother), collaterals (brothers and sisters), or lineals and collaterals.

The results, expressed in ratios of actual to expected deaths, varied considerably in different groups, but the chief findings might be roughly summarized as follows:

1. The mortality experienced in the early years of assurance was heavy, especially for young ages at entry. In other words, the effect of a definite tuberculous family history shows itself mainly in the younger ages at entry and the early years of assurance.
2. After the first five years of assurance the excess mortality is less marked, especially in the case of endowment assurances, in which it comes well within normal limits. The latter fact suggests the importance of "selection" by the assured—of the "bad life" more or less consciously choosing a whole-life assurance rather than an endowment.
3. As regards the relative importance of lineals and collaterals in this respect, the authors "have no hesitation in expressing the opinion that at least as much attention—if not more—must be given to a history of tuberculosis among brothers and sisters as amongst parents."
4. The degree of tuberculous family history is of much less importance than the age at entry, and may, in fact, be said to have no practical value for assurance purposes over age 35 at entry.

In 1914 appeared an elaborate medico-actuarial investigation, embodying the combined experience of the leading American companies with regard to various classes of special risks. The findings with regard to tuberculous family history were particularly interesting, as in most of the groups, in addition to the age at entry, the weight, and in some cases the height, were taken into account.

The logical conclusion from these data was that, in estimating the importance of a positive family history of tuberculosis, two additional factors must always be taken into account: (1) age at entry, (2) weight and build.

In proposers under 35 the risk should be treated as increased unless all other circumstances were unimpeachable—weight (not below good average), occupation, height, and family history (freedom from any suspicion of tuberculous disease). If any one of these factors was unfavourable in a proposer under 35, a considerable debt should be placed on the policy; if two factors, for example, weight and occupation, were unfavourable, the

¹ Journal of the Institute of Actuaries, 1915.

debt should be very heavy or the case declined altogether. In the case of older proposers the question of weight was not so important, but Dr. May suggested that no proposer under 50 with a tuberculous family history should be accepted at tabular rates if the weight was appreciably under the average for the height and age.

Since actuarial investigations showed that the extra risk was essentially an early one—in the first few policy years—an addition to the premium did not afford adequate protection to the company. The "diminishing deduction," on the other hand, formed a far better method of dealing with these cases, and, in fact, with all extra risk associated with tuberculosis, whether family history, exposure to contact infection, or a past history of the disease.

Under the head of contact infection, Dr. May discussed the importance, if any, that should be attached to the circumstance of a proposer living or having recently lived in association with others suffering from "open" tuberculosis. This raised the problem as to the usual mode of tuberculous infection, recently discussed by Dr. Batty Shaw.² According to this view, true contact infections in adult life were so exceptional as to be almost negligible, and hence, from the assurance point of view, not much importance need be attached to a proposer's living in a tuberculous environment. In seeking evidence for or against this theory it was important to exclude cases of blood relationship, the interpretation of which would be complicated by the question of hereditary predisposition. Striking evidence in its favour was the result of the *Second Study of the Statistics of Pulmonary Tuberculosis: Marital Infection*, by E. G. Pope, edited by Karl Pearson, 1908. If "contact infection" were a frequent phenomenon, one could hardly postulate a more favourable condition for its occurrence than a healthy husband living with a phthisical wife, or vice versa. Yet Pope found that the probability of infection between husband and wife was considerably less than between parent and child or brother and sister, a result suggesting that hereditary "lack of resistance" played a considerably greater rôle than direct infection. On the other hand, Ward,³ from a consideration of 156 married couples, of whom one of each had been notified as phthisical, arrived at the conclusion that marital infection was extremely common. Dr. May then inquired in what circumstances "mass infection," or exposure to a concentrated dose of tubercle bacilli, was likely to occur. The size of the dose necessary to overcome the resistance of the body differed, of course, in different individuals, and in the same individual from time to time. But equally or more important was the nature of his environment when exposed to the risk. Contact in good hygienic surroundings with adequate ventilation was obviously far less likely to be harmful than in a close, ill-ventilated place.

As to the treatment of "contact cases" in connexion with life assurance proposals, the points to be considered were:

- (a) Family history.
- (b) Personal history (especially with regard to tuberculous infection).
- (c) Personal condition of proposer, including age.
- (d) Hygienic conditions under which contact occurred.

If all favourable, ignore contact. If (a) unfavourable, but everything else satisfactory, ignore contact or put a small debt on the policy. The family history would be treated on its merits.

If (b), (c), or (d) unfavourable, defer the proposal or put a heavy debt on the policy, perhaps with an offer of reconsideration at a later date.

If proposal unfavourable in two or more of these respects, it should be deferred or declined.

Dealing with the assurance of individuals with a personal history of tuberculosis, Dr. May said that the principal types of tuberculous history met with in proposers for life assurance were:

- (a) Tuberculous adenitis.
- (b) Tuberculosis of bones and joints.
- (c) Genito-urinary tuberculosis.
- (d) Pleurisy—dry and with effusion.
- (e) Pulmonary tuberculosis.

The bearing of (a) and (b) on assurance was discussed by the society in 1901.

Mr. Eccles then expressed the belief that in many cases chronic enlargements of cervical glands in childhood were not tuberculous, and that, even if they were, provided they had

been recovered from, with or without operation, the prospects of life were not appreciably affected if no other unfavourable circumstances existed—for example, a bad family history or poor physique. Though the subsequent discussion manifested some differences of opinion, its general trend was towards accepting the view that a past glandular tuberculosis did not materially add to the risk of subsequent phthisis, while the possibility of its acting as a protective agent against subsequent infection was not overlooked.

A good many proposals showed a past history of genito-urinary tuberculosis, usually one of nephrectomy or excision of a testicle for tuberculous disease. A working rule was to defer such cases till at least five years after operation; if then there was no sign of recurrence and other factors were favourable, to recommend acceptance with a debt (lien) varying in amount with the age of proposer, etc.

Assuming that the large majority of all cases of non-purulent pleurisy were tuberculous in nature, a positive history in a proposer was obviously of great importance, as pointed out by Dr. Hector Mackenzie in a paper to the society in 1897. A working rule was to put a debt on every case of pleurisy (not complicating frank pneumonia or other specific diseases) occurring within five years of proposal. If the attack occurred more than five years ago, accept at ordinary rates provided no other unfavourable factor was disclosed.

With regard to (e), if, as the Midhurst and other experiences indicate, it were accepted that the mortality rate in cases of apparently "arrested" phthisis approached the normal after six or seven years, then it was reasonable to assume that cases of this nature selected by careful medical examination might be accepted as reasonably good risks, say, five years after treatment had resulted in arrest.

The problem in all cases with a history of tuberculous infection was to protect the company or society from a risk which was heavy in the first few years and then showed a rapid decrease to approximately the normal. For this class of extra risk the contingent debt, decreasing with each year the policy remained in force, afforded an almost ideal mode of treatment, and could be so graded as to render practicable the acceptance of any proposal in which there was a reasonable chance of survival during the early years of assurance.

Reviews.

"THE PRINCIPLES OF GYNAECOLOGY."

IN its third edition, Dr. BLAIR BELL'S well-known book, *The Principles of Gynaecology*,¹ has been thoroughly revised and in some portions rewritten. Much fresh material has been added to the text, and many new illustrations added or substituted. The result is, as might be expected, a book of great interest to all gynaecologists, one full of information not to be found in most other textbooks on the same subject, and one that bears throughout the impress of the author's individual views.

The unusual character of the book becomes at once apparent to the reader, for the first fifteen pages are devoted to a brief review of the evolution of the female genital organs, and the next twenty to their development. Then follows the more usual description of the anatomy of the female pelvic organs, illustrated with many good plates and photomicrographs.

The section on physiology contains references to the physiology of conception and generation, lactation, and uterine contractions, all of which are unusual in such a book, but obviously necessary in relation to the teaching of the principles of gynaecology. In the later parts of the book certain disorders of conception are also included, such as abortion and uterine moles. The author's plea that a consideration of these is essential to a proper understanding of the pathology and differential diagnosis of many more purely gynaecological conditions is unassailable, and if the book is to be self-contained their inclusion is necessary. At the same time the logical conclusion of this plea would mean the inclusion of much more that is usually relegated to textbooks of midwifery, and it is difficult to know just where to draw the line.

Dr. Blair Bell says that objections to the pathological arrangement and classification of gynaecological conditions are unworthy of consideration in the present day. We quite agree. Gynaecological pathology is still in a state of flux in regard to some subjects, and the only hope of progress is to teach the observers of the future to think

² BRITISH MEDICAL JOURNAL, July 26th, 1919.

³ Lancet, October 4th, 1919.

¹ *The Principles of Gynaecology. A Manual for Students and Practitioners.* By W. Blair Bell, B.S., M.D. Lond., etc. Third edition. London: Baillière, Tindall, and Cox. 1919. (Roy. 8vo, pp. xvi + 660; 390 figures, 6 coloured plates. 38s. net.)

along true scientific lines. For this same reason it is a little disappointing that in regard to some conditions the author deals so briefly with the pathology. Some little confusion may be caused by the use of novel terms, such as "endometriomyoma" for the condition to which the term "adenomyoma" has become wedded in the most authoritative literature of the subject.

The author has exercised great restraint in dealing with the subjects of the relations of the calcium metabolism to the sexual functions and of the influence of the internal secretory glands. Indeed some disappointment will be felt that he has not said more on subjects to which he has devoted so much work and thought, and with which his name is so closely associated.

The book is fully and beautifully illustrated, although the photomicrographs vary considerably in value and in accuracy of reproduction. We extend very hearty congratulations to both the author and the publishers of this volume, which will help to maintain the high standard of recent gynaecological literature in this country. It is a book which thoughtful and open-minded students of gynaecology cannot afford to overlook.

THE HYPOPHYSIS.

In his large and handsomely printed volume on the physiological action of extracts of the hypophysis² Dr. HOUSSAY, who is professor of physiology at the University of Buenos Aires, has published a part of his work upon this important gland, reserving for the future an account of the therapeutic employment of these extracts and also some of his own original work on the subject carried out by other methods of investigation. The book contains twenty chapters, in which the structure of the gland itself and the action of its extractives upon the various organs, processes, and tissues of the body are set out at full length, and the relation of the hypophysis with the suprarenal glands is fully dealt with also. A very full bibliography is added, containing nearly four thousand references, for over forty of which Professor Houssay, with or without the assistance of his pupils, is responsible.

The volume is freely illustrated with charts and tracings of all sorts, admirably reproduced; the text is full of information, and well arranged, but it is rather wordy, and the reader is grateful for the summaries of results and conclusions with which the author too rarely indulges him. To a large extent the book is, of course, a summary of the work of other investigators, amplified by accounts of the author's own experimental observations. It is full of detail, and should be accessible to all physiologists and medical men interested in the pituitary body and its extracts.

HYGIENE AND DISEASE IN PALESTINE.

In a little book entitled *Hygiene and Disease in Palestine*,³ reprinted from the *Quarterly Statement of the Palestine Exploration Fund*, Dr. MASTERMAN gives an account, based on first-hand knowledge, of the hygienic conditions and diseases of modern Palestine and Syria. Originally written as a popular sketch of the diseases mentioned in the Bible, Field-Marshal Allenby's conquest of Palestine has led to its expansion into an essay on the steps that should be taken for the reform of the sanitary conditions of the Holy Land. The late Professor Alexander Macalister in a short preface pays an emphatic tribute to Dr. Masterman's competence to speak on the matter. Within the compass of thirty-two pages the author gives a clear description of the racial characteristics, habits, and food of the various classes of people, the climate and water supply, the common diseases of Palestine and Syria, the ideas of the natives as to disease, and the conditions of life and health in early times.

The inhabitants of Palestine may be grouped in three classes: the bedawin, who dwell in tents and lead a pastoral life; the fellahin, who till the soil; and the town dwellers, whose occupations are various. According to Dr. Masterman, the popular belief that the bedawin are exceptionally

healthy owing to their mode of life does not hold good in regard to the nomads of Palestine. Their clothing of goat skin gives little protection against the weather; the atmosphere of their tents in winter is foul and unwholesome, while they are preyed upon by disease-bearing insects. Malaria and consumption are rife, and epidemics of zymotic disease are not uncommon; the people are fatalists, and in most illnesses the sufferer is uncared for. Though they show a very feeble resistance to acute disease, especially pneumonia, wounds heal with wonderful rapidity. The fellahin, too, live in unhealthy surroundings. Their dwellings swarm with lice, which are looked upon as a protection against disease; the prayer is often heard, "May God not remove them (the lice) from me." The people suffer much from dyspepsia and are particularly liable to intestinal parasites.

The town folk are better lodged than the fellahin. The Oriental Christian knows how to live in reasonable comfort. Milk by long-standing instinct is always boiled. But the sanitary arrangements are very primitive, and the fresh sewage is distributed over the gardens in which the vegetables for the city are grown. The desert tribes are almost free from venereal diseases, but the case is different among the mongrel bedawin in the towns, whose morals are very low. These affections are rare among the Jews and not very often met with in native Christians, but they are fairly common among well-to-do Moslems.

Of the climate Dr. Masterman says that, for those who do not mind a fairly high temperature in summer, the clear pure air and cloudless sunshine make Palestine, taken as a whole, very enjoyable. Compared with Egypt the highlands of Palestine afford a better summer climate for Europeans, though falling far short of some parts of the Lebanon. In considering Palestine as a home for Europeans the prevalence of malaria, tuberculosis and other infectious diseases must be reckoned with. Professor Alexander Macalister, however, says that, given the enforcement of modern sanitary regulations, the Holy Land might become one of the healthiest countries in the Eastern Mediterranean.

An appendix on the water supply of Jerusalem serves to give an idea of the difficulties of this problem which has vexed the minds of administrators since the foundation of the city. Readers of Anatole France's *Procureur de Judée* will remember the account Pilate gives of the tribulations which his well-meant attempt to furnish the Holy City with a supply of wholesome water brought upon his head from the fanatical Jews. In our own time several offers have been made by English philanthropists to restore the old aqueducts, but their endeavours have been defeated by the obstructiveness and corruption of the Turks. When the British army entered Jerusalem the provision of an adequate water supply was at once taken in hand, and what the Turks had failed to do during the many centuries of their rule, the British engineers accomplished in six months.

The section on diseases in the Old and New Testaments is valuable for the accuracy of the information and the readable style in which it is conveyed. Dr. Masterman's informative essay may be heartily commended to all who are interested in the past and future of the cradle of Christianity.

ITALIAN ARCHIVES OF SURGERY.

We welcome the appearance of the first number of a new surgical periodical, the *Archivio Italiano di Chirurgia*,⁴ under the editorship of Professor DONATI of Modena. Each volume is to be not less than 600 pages in length, and to be made up of six numbers.

The issue at present before us is of convenient size, well printed, and well illustrated. It contains four articles. The first of these is by the editor, and deals with latent and atypical tetanus in cases of gunshot wound, a condition calling for treatment with antitetanus serum. Professor Donati gives a brief summary of his conclusions at the end of his article, a practice for which all his readers—and particularly those who are not Italians—will be grateful to him, and one that should be made obligatory for all contributors to periodicals such as this. The second article, by Dr. Biancheri, is on local hypertensive post-seral tetanus of slow evolution, with a report of a case; here the condition was cured by a late second

² *La Acción Fisiológica de los Extractos Hipofisarios*. By Dr. Bernardo A. Houssay. Buenos Aires: A. Flaibau. 1918. (Demy 4to. pp. 283 + 75; 167 figures.)

³ *Hygiene and Disease in Palestine*. By E. W. G. Masterman, M.D., F.R.C.S., D.P.H., Medical Superintendent, Camberwell Infirmary, Palestine Exploration Fund, 2, Hyde Street, Manchester Square, W.1. Price 2s. 9d., post free.

⁴ Bologna: L. Cappelli. Annual subscription, Postal Union, 60 fr.

operation, with removal of a foreign body and some infected tissue. Next follows an article by Dr. Fasiani describing his production of antisera for various anaërobic bacteria met with in cases of gas gangrene; experimentally several of these sera proved valuable, but they do not seem to have been employed in the treatment of gas gangrene in human beings.

The last and longest contribution is by Dr. Gherardo Forni, and contains an account of the experimental study of the effects following removal of one kidney when the remaining kidney is infected with tuberculosis. The animals employed were guinea-pigs and rabbits. Dr. Forni confirms by his experiments the conclusion reached on clinical grounds in the case of human beings—namely, that early tuberculosis in one kidney does not contraindicate the removal of the other if it is gravely diseased. He finds that such removal actually promotes the arrest of the tuberculous process in the kidney that remains, and is followed also by its hypertrophy.

We congratulate Professor Donati on the first number of his new periodical, and wish him all success in his editorship.

NOTES ON BOOKS.

THE new and revised edition of Dr. BREND's small *Handbook of Medical Jurisprudence and Toxicology*⁵ gives an excellent outline of these subjects, for the use of students and practitioners. It can be carried in the pocket with ease, yet literary form has not been sacrificed to brevity. The print, though small, is good, and the typographical arrangement aids the eye. As with the previous edition, we have looked here and there for certain specified points, and have found that the information given is quite sufficient for a clear understanding of the principles of the matter. Thus we consider that Dr. Brend has again succeeded in his expressed aim, which is to present in a succinct form the essential facts relating to medical jurisprudence without overburdening the text with illustrative cases. In the present edition the chapters on insanity and other abnormal mental states have been rewritten. The work as a whole is strong on the practical side, and the student who has found it useful in preparing for examination will certainly wish to keep it beside him as a guide, both to the many medico-legal perplexities that beset practice, and to the diagnosis and treatment of cases of poisoning.

Dr. HOISHOLT's authorized translation of Dr. WIMMER's textbook, entitled *Psychiatric - Neurologic Examination Methods*,⁶ gives an excellent and practical account of the way to set about the examination of mental patients of all sorts and ages. It has three chapters: the first shows how the history of the case should be investigated; the second, how the psychic state should be examined; the third and longest chapter deals with the physical examination of the patient. Little is said as to the pathology of the conditions under consideration or their clinical features, and the author is to be congratulated upon his decision to omit such extraneous matter. He has produced a complete and practical handbook that should be of great service to alienists, school doctors, and medical men who have to deal with cases of mental disorder. To medical students also the volume may be recommended, for it contains a well-written account of a subject about which their knowledge is apt to be fragmentary. The American translator has done his work well.

Mr. ANDRÉ L. SIMON has written a gossiping book about *Wine and Spirits*,⁷ which in a subtitle he calls "the connoisseur's textbook." He gives as much space to the wines of the Cape, California, and Australia as to those of Portugal, Spain, and France, and about each he has something informing to say. He sketches the mysteries of the different sorts of brandy, passes in review other kinds of spirit, and has chapters on beer and cider. A later chapter

on the care of wine contains much sound advice, but the last has a title which may lead to misapprehension, for it is headed "Drink: a Physiological Necessity"; by drink is meant, among other things, water, which is certainly a physiological necessity. But alcohol is not, although Mr. Simon would seem almost to wish us to believe it is. To say that "ethylic alcohol is a food with a specific action upon the nervous system" is true, but may give a false impression. The value of alcohol as a food is negligible; it would be much truer and, in the long run, much more politic from the wine-lover's point of view to say that the vast majority of mankind have hitherto drunk and are still drinking alcoholic beverages because they like them.

Mr. J. A. CROWTHER's *Manual of Physics*⁸ sets out to give a brief, clear, and orderly account of the fundamental facts and principles of physical science for the benefit of students, particularly first year medical students, with no previous knowledge of the subject. Emphasis is laid throughout on the main principles, particularly those of mechanics; details, descriptions of apparatus, and of the way in which experiments should be carried out have been carefully omitted; so, too, details in the numerous diagrams scattered throughout the volume have been cut down to the *ne minus ultra* with a skill comparable to that exercised in another sphere of representation by Phil May, in order that the reader may be able to see at once what is essential in the apparatus or principle under consideration. Examples, some of them with the working out appended, and examination questions are given to illustrate the problems met with in the various departments of physical science. The book is admirably clear throughout, and appears to cover all the ground of the average elementary physics schedule; it should be of great service to students, and we wish it the success it deserves.

GUTTMANN's *Medizinische Terminologie*⁹ is a dictionary of the chief scientific terms, names, eponymic diseases, and the like, that will be encountered by the reader of German medical literature. It does not give equivalents in other languages, except sometimes the Latin term. It is a German medical dictionary for the use of persons acquainted with that language. A good feature is that the author habitually gives some brief biographical note of the person whose name is applied to a disease, structure, or phenomenon.

*The Way of Healing*¹⁰ is a booklet of quotations in prose and verse from all sorts of authors, selected with a view to comforting those who know suffering and are connected in some way with the art of healing. The authoress has made an excellent choice, and the volume may be recommended to those in search of a bedside booklet of the sort, where religion, sentiment, and the cheerful outlook are mainly cultivated.

⁵ *A Manual of Physics*. By J. A. Crowther, Sc.D. London: Henry Frowde, and Hodder and Stoughton. 1919. (Cr. 8vo, pp. xx + 537; 295 figures. 16s. net.)

⁶ *Medizinische Terminologie*. By Walter Guttmann. Berlin and Vienna: Urban und Schwarzenberg. 1919. (Roy. 8vo, pp. 1307; 309 figures. M. 35.)

¹⁰ *Way of Healing*. A Little Book for those who Know Suffering. By Estelle Blyth. Cambridge: W. Heffer and Sons, Ltd. 1919. (3½ x 6½, pp. 136. 2s. 6d. net.)

MEDICAL OFFICERS OF INDUSTRIAL SCHOOLS.

In July, 1918, the Home Secretary appointed a committee to inquire into the conditions of service of officers of reformatory and industrial schools, and to make recommendations as to the number, qualifications, and salaries of the officers required in the several classes of schools. The only medical member was Dr. A. H. Norris, M.C., Chief Inspector of Reformatory and Industrial Schools, who was appointed chairman. The only medical witness was Dr. T. Gordon Kelly, who in his evidence took every opportunity to further the claims of medical officers of reformatory and industrial schools. While all he asked has not been acceded to, he received a sympathetic hearing from the committee, in particular from the chairman, Dr. Norris.

As it is probable that many of the medical officers of these institutions (who have hitherto been very ill paid) may not see the report, we have been asked to give a short account of the clauses dealing with their remuneration and conditions of service. The committee expresses the

⁵ *A Handbook of Medical Jurisprudence and Toxicology*. For the Use of Students and Practitioners. By W. A. Brend, M.A. Camb., M.D., B.Sc. Lond., of the Inner Temple, Barrister-at-Law. Third edition, revised. London: C. Griffin and Co., Ltd. 1919. (Fcap. 8vo, pp. 330; one plate. 10s. 6d.)

⁶ *Psychiatric - Neurologic Examination Methods*. By August Wimmer, Director St. Hans Hospital, Roskilde, near Copenhagen, Denmark. Authorized translation by Andrew W. Hoisholt, M.D., Medical Superintendent, Napa State Hospital, London: Henry Kimpton. 1919. (Demy 8vo, p. 177; 9 figures. 10s. 6d. net.)

⁷ *Wine and Spirits: The Connoisseur's Text-book*. By André L. Simon. London: Duckworth and Co. (Demy 8vo, pp. xvii + 272. 7s. 6d.)

opinion that there should be a medical officer for every school.

His duties should include a thorough medical examination of every child as soon as possible after admission and shortly before leaving the school, a quarterly inspection of each child, periodic visits at least weekly, general inspections of the institution from a hygienic point of view, advice as to dietary and general hygiene, the treatment of sick children and resident members of the staff, and the keeping of the medical records. A woman doctor is preferable in girls' schools, if resident within a convenient distance.

With regard to dental care, the committee considers that a qualified dentist should be attached to every school, whose work should include two inspections yearly of each child's teeth, extractions, fillings, advice and instruction on the care of the teeth, and the keeping of a dental register.

With regard to nurses it is pointed out that the schools are residential institutions, and that many of the children are suffering from the effects of early neglect. Hence it is necessary to give special attention to questions of health.

On the staff of every school there should be a woman of sufficient training and experience in nursing to recognize early signs of disease, to give prompt and skilled attention to minor ailments, to render first aid in case of emergency, and to understand and intelligently carry out the directions of the medical officer. Dr. Gordon Kelly, the experienced medical officer of Desford Industrial School, in giving evidence said: "Some training for the nurse is, in my opinion, absolutely essential. Two years' training in a hospital would meet the case. There is no reason why she should not also undertake the work of assistant matron. She would obviously be far more efficient than an untrained woman in every way, and would also very largely relieve the responsibilities and anxieties of the matron and superintendent."

The committee makes the following recommendation as to the emoluments of medical officers of industrial and reformatory schools:

We consider that the medical officer should be responsible not only for caring for the health of the boys but also for the hygienic conditions of their environment. Taking this consideration into account, we recommend that the salary of a school medical officer should not be less than 10s. per head of the number of children in the school; this to be exclusive of the cost of medicine.

THE WELFARE OF THE BLIND.

THE Departmental Committee on the Welfare of the Blind, which reported in July, 1917, recommended the establishment in the Local Government Board of a special department whose function should be the general care and supervision of the blind and the appointment of an Advisory Committee of persons associated with the care of the blind. Such a committee was accordingly appointed in December, 1917, and its first report (for the period ended March 31st, 1919) has been published by the Ministry of Health.¹ The existing voluntary agencies for the welfare of the blind have been registered where their objects and activities met the standard set for such agencies. Three conditions had to be complied with: (1) Properly constituted committee of management, (2) properly audited accounts, (3) trade union rates of pay. The list will be revised annually, and the public are invited to limit their subscriptions to agencies on this list.

The deficiency of the census of 1911 in the enumeration of the blind has been met by an inquiry through public bodies. A register formed on the replies thereto shows a total of 25,840 blind persons in England and Wales. It is thought that when omissions are made up the total will be 30,000. A fourth of the blind live in the northern counties, Lancashire giving a high proportion. Next come London and the home counties. Inquiry was made into the work of the blind, and it was found that the unemployable group (11,895) is the largest, being 46 per cent. of the total enumerated. This class represents the real crux of the problem of dealing with the blind.

Of blind persons in occupations the largest proportion are engaged in basket and cane work; there are relatively few in outdoor occupations. It was found that a large number of blind children are not attending school, and of these 40.6 per cent. were returned as mentally defective.

A table of the age of onset of blindness shows that 21.4 per cent. were blinded within the first year of life, the majority of them within the first few months. After the first year the incidence is, roughly, 10 per cent. for each decade up to 70 years. The inquiry did not elicit useful

information as to the causes of blindness, so far as disease was concerned, owing to the absence of medical opinion. But accidents were found to account for 12.3 per cent. of the total. It is believed that a considerable proportion of these cases of blindness would be prevented if better protection by goggles and the like were provided in certain industries. An analysis of 6,000 returns of eye accidents, received by the Home Office, showed that 51 per cent. were due to chips of metal or grit striking the eye.

Trade union wages do not allow the slow-working blind to gain a living; a scheme for the augmentation of wages has been framed which it is believed will provide an incentive to work and offer no inducement to malingering. During the war there has been ample work for the blind and measures are to be taken to secure a sufficient diversion of work to keep them employed in normal times. It is reported that an attempt to co-ordinate the London workshops has failed, and that the whole position remains unsatisfactory. Perhaps the grants for workshops adumbrated in the recent regulations of the Ministry of Health will foster the desired co-operation.

The Committee urge the extension of education beyond the age of 16 years, and hope that compulsion would be put on authorities under the Education Act of 1902.

THE OLYMPIA MOTOR SHOW.

FEATURES FOR THE MEDICAL MAN.

By H. MASSAG BUIST.

THE first post-war Motor Car Show opens at Olympia, London, under the patronage of the King, on Friday, and there was a press view on Thursday. It reveals that in the interval of war the industry, as well as the profession, has had to recast its ideas concerning what can be marketed and bought in the way of a motor vehicle for any sum of money that represented a car classification of sorts six years ago. As the members of the medical profession have not enjoyed 100 per cent., or more, increase of income in common with organized manual labour, the medical man will think of the cars of 1920 that are likely to serve him in much the same way as he did of those of 1913-14, more or less in price groups. The moment he begins so to classify them he realizes what has happened as a result of the war. For instance, for somewhere about £200 he could have got such two-seater light cars as the Singer, the Standard, and so on, while he could have a middle-size car like the Rover for £350; but to-day that is at least the sum he has to pay for the so-called light cars of the types indicated, while a four-seater Rover now costs £750. This is because, from the manufacturers' point of view, money buys less than half the labour and material it used to do, and, of course, all burdens in the way of taxation and rates are up correspondingly. But all this is of little help to the average medical man.

He observes, of course, that credit is due to the average car manufacturer, first, because relatively few have increased the prices of their vehicles in measure at all corresponding to the enhanced price of labour and materials; and, secondly, because though to outward appearance much the same, the average post-war model of any make of repute before the war is really a vastly better vehicle. For instance, the Rover engine, which has now water-cooled valve caps, gives 25 per cent. more power, and is equipped with the highest grade of mechanical engine-starter; the Lucas set, the electric lighting scheme also is by this firm, and makes a strong appeal to the medical man because there are no more or less exposed wires to get injured when the car is cleaned. These details pass through tubes; the perfection of the arrangements for keeping the dust, dirt, and rain out of the lamps, while, nevertheless, rendering it possible in a moment to replace a broken bulb, are praiseworthy in the extreme. Again, the higher speed of the engine renders it possible to lower the gearing for the direct drive, while its extra power enables the second indirect speed gear to be raised, so that the gap between the direct and indirect drive for hill climbing has been largely eliminated. The back axle has also been notably redesigned to deal with the problem of thrust, and the vehicle is supplied with a very complete but simply equipped instrument board.

¹ H. M. Stationery Office. To be purchased through any bookseller, price 2s.

So it is with the four-cylinder Sunbeam and the Vauxhall. Both machines are war-tested and war-developed; indeed, they have now become rather cars for tourists than for the general practitioner, who does not have occasion to make long individual runs. Those who have will find in these speedier, commodious types vehicles that hold the road well, and climb the hills in time-saving fashion.

SOLUTIONS OF THE PRICE PROBLEM.

Nevertheless, there is no blinking the fact that, though medical men need cars of such sizes and power, the number of them who can afford £750 and upwards is vastly fewer than the number who could pay £350, or less. Indeed, instead of paying more money for their cars, many medical men find they have less to spend. This point has not been lost sight of by the Rover Company, which has done a bold thing in buying an entirely separate factory for the purpose of running it on the one-model programme concerned with an original type of light car which has been tested for a year, and which aims at giving the most suitable service possible for those whose means are strictly limited. If one announces that this vehicle has a nominal 8 h.p. air-cooled, 2-cylinder engine, the chances are ten to one that lips are pursed and noses turned up, remarks being made to the effect that air-cooled and 2-cylinder engines are out-dated for car service. But if the inquirer will possess himself in patience and go into the matter a little more closely he will find that, at least, it will pay him to ponder the situation.

In an age when a motor bicycle of the first quality is retailed with side-car at £180 any manufacturer who offers a sound proposition in the way of a light car for £230 complete must at least command attention. When he goes further, as does Rover, by reducing the weight of light cars as we knew them before the war by 50 per cent., nobody interested in vehicles of this class can afford to ignore this proposition. Very few light cars made before the war scaled as little as 12 cwt. Completely ready for the road, the Rover weighs 8 cwt. and the engine develops 14 horsepower, so that we have here a very high ratio of power to vehicle weight—nearly 2 h.p. to 1 cwt.—therefore something that is really a light car compared with any pre war achievement. Such a proposition must be bought, like American cars, precisely as it is standardized, with electric lighting and so forth, deviation being quite impossible. The high ratio of power to weight is a matter of particular importance to the medical man, not merely in hilly districts, but also in towns, because, whether we consider omnibus, train services, or doctors' cars, the key of the whole time-saving idea is acceleration. It is almost unnecessary to point out, too, that the light weight of the small Rover car reduces the tyre and petrol bills, as is very necessary since both commodities cost twice as much as they did before the war.

VICKERS'S NEW MOTOR POLICY.

Again, among four-cylinder water-cooled cars we have to note the effects of the process of evolution. For instance, before the war Vickers used to make a series of Wolseley cars, and a Stellite small car designed by the Wolseley Company on extremely original lines, which are apparently now being very carefully studied and, in some points, copied by the motoring industry; but the whole of Vickers's passenger-car business is now consolidated in the Wolseley enterprise, so that the erstwhile Stellite becomes the 10 h.p. post-war Wolseley; it still follows the distinctive constructional features, which, however, have been developed not merely by furnishing an engine starter and a pressed steel frame, because there are now three speeds forward controlled on the gate principle, and the engine has overhead valves and cam shaft, together with special aluminium alloy pistons. It gives 20 h.p. to a vehicle weighing about 12½ cwt. completely ready for the road and capable of a turn of speed up to forty miles an hour, the whole being equipped with either a two or a three seater body scheme. It is a class of car directly appealing to the medical man, in that it gives performance with economy. The main design is so strikingly original that, though it was introduced before the war, it is still as distinctly modern a car as any in the show. Of course, the medical man who wants a larger machine can have the middle-sized Wolseley of 15 nominal h.p., also with an overhead valve four-cylinder engine, the dimensions of which are 80 mm. by 120 mm., against 65 by 95 mm. in the case of

the nominal 10 h.p. model, the same distinctive scheme of cantilever springs being employed in both cases for both front and rear suspension. These two models, with the largest, nominal 20 h.p. six-cylinder machine of the same engine dimensions as the nominal 15 h.p. four-cylinder type, constitute the Vickers's post-war car programme, which aims at an output of 20,000 vehicles a year. Here we have big production from the European point of view in combination with a three model programme such as Fiat in Italy and Daimler in this country favour. Of course, it is the experience Wolseley has had in building aircraft engines that has led to the standardization of overhead valve types of high output, but relatively not high crank-shaft revolutions for car service. Here we have one of those makers of sufficient experience to know how to meet the quite different demands of aerial and of road service.

THE CAR MARKET IN GENERAL.

It is not the purpose of these notes to give detailed specifications of cars calculated to be of service to the medical profession. The only practical way to proceed in face of the limited space at disposal and the wealth of material for consideration is to draw up a table of such vehicles, which is here printed. A glance at it is calculated to give the reader a good idea of what is being done in regard to the respective classes of motor vehicles now on the market.

The "Baby" Peugeot of pre-war days is superseded by another version (not, however, shown at Olympia), which is a notable attempt to produce a practical motor vehicle at a low price. I refer to the 6.2 h.p., block-engined, water-cooled, four-cylinder model with three forward speeds and propeller-shaft drive, which really derives in scheme from the belt-driven "Bedelia," which pioneered the whole light-car movement in Europe, because, like it, the post-war "Baby" Peugeot has the seats arranged tandem fashion, so that the wheel-track is a yard wide only, whereas the wheel-base is two and a half yards long, giving the opportunity to the constructor to achieve good riding in combination with light weight and reduction of production costs. This car has a single transverse spring in the front and quarter elliptic springs at the back. The smallest Peugeot shown, however, is the 11 h.p. model.

NO OCCASION TO GO WITHOUT CARS.

Moreover, as illustrating the fact that the great increase of production costs does not necessarily mean that a vast proportion of the members of the medical profession must go without motor cars, attention may be drawn specially to the post-war version of Vickers's Stellite light car—now renamed the "Wolseley Ten"—with its three forward speeds, and to the entry of Fiat, the largest motor manufacturing enterprise in Italy, into the light car business with a 10½ h.p. four-cylinder water-cooled model on more or less conventional car lines. All these strongly contrasted European-built vehicles will be manufactured on what is generally called the mass-production principle, though it is observable that the manufacturer of none of them uses the word, despite the fact that I have named the four biggest manufacturers in the three countries concerned. The fact is, each of them has such a high reputation that he has no need for catch phrases, and each has such a thorough knowledge of his business that he is aware that the most anyone can do in Europe is quite a trifling proposition compared with the scale of post-war motor manufacturing in America.

SOME REMARKABLE MIDDLE PRICE CARS.

When we move upward in the price scale to the vehicles costing between £300 and £400, it is found that there is a very big range, which, on investigation, prove to be largely established makes of light cars developed, as to power and equipment, some of them to an appreciable extent, as notably the post-war Standard car, which comes at the higher end of this price range. At the higher end, too, we have in the new Willys-Overland car, with entirely original 3-point cantilever rear springing, a contribution from America which will be represented in this country as a one-model programme, the outstanding feature of which is to provide the suspension qualities of a machine of long wheelbase to a chassis of quite ordinary compass.

The original 5-cylinder air-cooled Enfield Allday with girder frame, which I described at some length in

CARS OF INTEREST TO MEDICAL MEN AT THE MOTOR SHOW.
Prices from £195 to £625 Complete. Two to Six Cylinder Types.

Start No.	Car	No. and Size of Cylinders.	Price of Car	Accommodation.	Outstanding Features.
105	A. E. C.	2 cyl. 12 mm. bore	4125	2 seater	Air-cooled engine; price approximate; fabric disc clutch; bevel drive; four speeds
68	A. C.	4 cyl. 60 x 100 mm. stroke	4975	Coupe	Disc clutch; worm drive; three speeds; C.A.V. starter.
69	A. C.	6 cyl. 56 x 100 mm.	5360	Car complete	First six cylinder light car; price approximate; three speeds; worm drive; C.A.V. starter.
109	Albat	4 cyl. 68 x 103 mm.	5360	4 seater	Four speeds; bevel drive; C.A.V. starter.
96	Anglo-Saxon	4 cyl. 70 x 117 mm.	5430	4 seater	Mass production "new British car; Lucas starter; upper pistons detachable; 11 inch.
48	Anglo-Saxon	4 cyl. 80 x 120 mm.	5500	4 seater	C.A.V. engine starter; plate clutch; bevel drive; full elliptic rear spring.
54	Anglo-Johnson	4 cyl. 80 x 127 mm.	5450	Chassis	"Victory model"; overhead valves; 4700 complete vehicle seating 4 or 5 only.
17	Avon	4 cyl. 70 x 120 mm.	5450	4 seater	9000 yearly output; C.A.V. starter; couple 4500; engine gives 40 h.p.
18	Beardmore	4 cyl. 90 x 112 mm.	5540	2 seater	ex Perry; "one model programme" car; with helical back axle gear; Smith starter.
42	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	New British car by shipbuilding firm; 2 high power models also exhibited; C.A.V. starter.
107	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; steering column stayed to fly wheel casing.
59	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	C.A.V. starter; helical back axle gear; 4 overhead valves per cylinder.
103	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	S.E.V. starter; 35 per cent. imp. duty to be added to provisional price.
79	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	C.A.V. starter; single plate clutch.
66	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; disc clutch; worm drive.
116	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
8	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
95	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
94	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
21	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
92	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
61	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
93	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
31	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
77	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
67	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
7	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
108	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
38	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
21	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
55	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
88	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
121	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
9	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
116	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
114	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
25	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
75	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
10	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
40	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
80	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
7	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
46	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
62	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
112	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
113	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.
35	Boyle	4 cyl. 90 x 119 mm.	5450	4 seater	Rollax starter; multiple disc clutch; helical back axle gear.

these columns earlier in the year, materialized at this stand, is perhaps the most original vehicle staged.

In the price class between £400 and £500 we have new British propositions in the Angus-Sanderson and in the Bean (*ex* Perry) and the Ruston Hornsby cars, of which details are given in the table; also the post-war Austin one-model programme, the chassis lines of which are somewhat reminiscent of American practice and the refinement of which is notable. The nominal 20 h.p. Austin four-cylinder engine gives 45 h.p. on the brake; the hand-controlled brakes operate on the back wheels, and the gear change is on the driver's left hand. This is a car available with four-seater coupé body for £595, and it must be regarded among the class of larger cars for medical men. Therefore, judged even by pre-war standards of costs, it is a remarkably cheap vehicle in face of the equipment. The scheme aims at an output of thirty-five machines a day, and is, therefore, like the Wolseley, a very important contribution by the British industry to the price problem. In this category, too, the French "mass-production" proposition, the new Citroën car, with herring-bone back axle gear, is, happily, to be seen at the Show.

SOME HIGH-POWERED CARS.

Because a certain number of medical men have occasion for large, luxurious, and fast cars development in this field may be reviewed briefly. Rolls Royce and Sunbeam standardize their six-cylinder machines with side-valve engines; Daimlers, Minerva, Panhard, and Piccard-Pictet, with sleeve-valve engines; Peugeot (six-cylinder model), with a novel cuff-valve engine; Hispano Suiza, Farman, and Gnome et Rhône, as well as Armstrong-Siddeley, Lanchester, Napier, and Straker-Squire, with overhead valve engines. (The smallest six-cylinder vehicle, of course, is the overhead valve A.C. light car.) Notable changes in the Rolls-Royce scheme are an electrical engine starter that works through the gearbox, an entirely new form of cantilever rear spring composed of very few instead of many leaves, and a lighter "livelier" engine. The Napier is a monobloc six-cylinder engine which gives 50 per cent. more power than the pre-war one—80 to 90 h.p.—yet the chassis, which is vastly stronger and more completely equipped, weighs at least 2½ cwt. lighter and provides such a rigid platform for mounting the coachwork that hundred-weights can be saved in the construction of the body. This car has been designed purely for luxury performance entirely regardless of cost, whereby the chassis price is £1,750 against £1,575 for the Rolls-Royce and £1,500 for the Lanchester chassis. The Napier programme aims at an output of about 500 vehicles this season.

By contrast the absorption of the Siddeley-Deasy Company by Armstrong-Whitworth has resulted in that old-established house leaving the Coventry concern to do all its passenger-car production on a one-model programme schemed on a basis of 5,000 vehicles a year, in consequence of which the completely equipped 60 h.p. Armstrong-Siddeley chassis, with mechanical engine-starter and so forth, retails at £720 without coachwork. In the face of the prices at which most chassis are being marketed there should be a big field for the new Armstrong-Siddeley car, for it appears to be practically without a rival in price in the powerful six-cylinder class.

In reviewing powerful and luxurious vehicles, too, we may not lose sight of the Talbot-Darracq eight-cylinder model of very neat design which, like the Cadillac, has side by side valves, and Delco apparatus for starting the engine, for ignition and for car lighting. In the twelve cylinder Lancia Italy sends an altogether remarkable design. This block engine is only 9 in. wide and 2 ft. 4 in. long, being, therefore, in effect a vertical twelve-cylinder, though actually it is not so.

THE PROBLEM OF DELIVERIES.

It is natural that a feeling of irritation should be abroad concerning the failure of promises to give deliveries. In this connexion there is at least a prospect that medical men will really be able to secure delivery of cars within a matter of months; but no idea is more ill founded than the quite remarkably widespread notion that the British motor industry as a whole is singular in having failed to perform according to programme. Neither the French, the Italian, nor the Belgian industries have done any better than our own this year; yet those industries have had nothing like the labour and kindred troubles to hinder

their output. Moreover, though our situation was to be greatly relieved by importations of American cars, we must not let grow a spirit of prejudice or complaint against either the British or Continental manufacturers as being a set of incompetents by comparison with the Americans, whose deliveries to us have practically ceased for the time being by reason of the labour troubles in the U.S.A.

Investigation shows that, though the American motor industry has been slightly disturbed by the war, it has also been helped to an unprecedented extent by it. Yet it is no less behind with deliveries than our own, as may be judged from the fact that, whereas 100,000 cars placed on the British market would adequately satisfy demand in this country, last August America was one million and a half cars behind her home demand, and it is anticipated that the situation will have become worse to the extent of at least half a million more cars by the end of the year. What we must have in mind when according blame or praise to various countries is that America's intention to aid us in the present crisis is a mere policy of trade and enterprise, and is totally unrelated to a problem of her having produced, or failed to produce, cars. Relative to her facilities, certainly she has made no better showing this year than either the British or Continental industries; therefore, it is not fair, nor patriotic, to spread a spirit of complaint against those industries merely because, to establish an export business, the American industry is pleased to let us have cars now at the expense of Americans who want delivery of them in the United States.

A NOT UNSATISFACTORY SITUATION.

Perhaps if our Government and public had the same average of enlightenment that obtains in the New World we should have been even more starved for cars than we have been, because we should have exported all this year's production. In the mean season, American cars were expected to be brought over by the thousand, but the strike trouble has intervened and held up projects; nevertheless, many new makes will be put on the market, though very few such are figured at the Show owing to the lack of accommodation. There is, however, the four-cylinder Chereollet, introduced by the firm of F. S. Bennett, and the Chandler, by Messrs. H. G. Burford.

When the prices of the cars on the market this year are considered, it is found on examination that the British industry offers value second to none in the world. For example, what American or Continental made car of comparable power, accommodation, and performance to the British 20 h.p. Austin is offered at £495? Even if we take cars of entirely novel schemes that have been evolved during or since the war, can the nominal 10 h.p. five-cylinder, air-cooled, radial-engined, girder-framed Enfield-Allday, completely ready for the road for £350, be surpassed by anything hailing from abroad?

On the other hand, we must not live in a fool's paradise and imagine that the British industry has got the foreign ones well in hand. The American industry is not yet offering cars as cheaply as it could and will be able to do in spite of the Exchange situation and the current high shipping rates. The fact is there is no need for it to lower the prices below what are being asked at the moment, because it can dispose of all the cars it can send over to retail at those prices. Therefore there is no occasion to reduce profits at the moment, and make trading conditions harder hereafter by causing a tariff to be set up permanently and, possibly, to a higher extent than that in force to-day.

While in the main there is reason to expect that cars will really be coming out of our own and foreign works in increasingly rapid numbers from now onwards, nevertheless we may not ignore the fact that the full effects of the coal strikes and of the moulders' strikes on motor-vehicle manufacturing have not been felt by the native industry yet, and that if the Government allows any further troubles of this sort to develop the situation will become critical. It is not merely that our own car production will be adversely affected; those who are apt to speak disparagingly concerning what our native industry has not done this year are not even aware that it has supplied vast numbers of crank shafts and other engine and chassis parts to the Continental industry. Many a foreign-built car staged at the recent Salon in Paris could not have been produced except for the enterprise of the British industry this year.

British Medical Journal.

SATURDAY, NOVEMBER 8TH, 1919.

WOUNDED NERVES AND FRACTURED FEMURS.

THE medical profession during a great war treats wounds to the best of its ability according to the standard of knowledge of the time. In the course of the war improvements are at first improvised, then specialized, and finally standardized. Not very far back, only a few centuries in the history of war surgery, limbs were amputated without anaesthetics and dressed with boiling oil. No comparison can be made between the treatment then and now. The improvement of methods of transport, the prevention of shock, careful anaesthesia, blood transfusion, and other modern methods have completely revolutionized the treatment of the wounded.

Upon the men who have guided the treatment during any war a great responsibility is laid, for their teaching will determine the treatment which will be carried out in future wars. They lay down a standard of treatment in matters which relatively seldom arise in civil surgery owing to the comparative infrequency of accidents producing lesions so severe as may be caused by gunshot wounds. Sir Robert Jones in an address to the American College of Surgeons, published in this issue, deals with some surgical lessons of the war, and there is nobody better fitted to lay down the principles of military orthopaedic surgery in the future, for he has been the moving spirit in their adoption during the war now happily coming to an end. Some of the principles he enumerates are worthy of special attention. One of these is his statement that when a nerve is concussed but the sheath intact and a response to faradism can be obtained, the nerve should be left untouched. He points out that when operation is necessary, increased length may be obtained for end-to-end suture by alteration of posture. Again he insists that explorations should be made through normal tissues above and below the nerve and not through scar tissue. Bridging the nerve and turning down flaps of nerves he condemns as useless. Of tendon transplantation and re-education of muscles, methods of which he has had long experience, he says that during the war they proved an unqualified success in the case of wounds of the musculo-spiral and posterior interosseous nerves. One of the most interesting passages of the address is that in which he discusses the prognosis for different nerves. The musculo-spiral, he says, makes a good recovery, but the intrinsic muscles of the hand after ulnar paralysis do badly, and there is loss of the finer movements of the hand. The sciatic makes a surprisingly good recovery, as also the upper part of the brachial plexus.

The war has given exceptional opportunities for the study of compound fractures. In 1917 Sir Robert Jones described gunshot injuries of the femur as "the tragedy of the war." Sir Henry Gray in 1916 stated that the mortality from these fractures accounted for 80 per cent. of the deaths occurring in wounded men on their way to the casualty clearing stations, or in those units. In 1918 Sir Anthony Bowlby said that

the mortality in field ambulances and in casualty clearing stations had been reduced to 20 per cent. This dramatic change was brought about by discarding the Liston splint in favour of the Thomas, and by improved treatment of shock. Towards the end of the war the average shortening in 300 cases was only half an inch. This great improvement was mainly due to the use of the ice-tong calliper splint. In 97 cases which were treated at the Liverpool Military Surgical Centre the shortening was less than five-eighths of an inch. These results were brought about by the co-operation of many surgeons and the combination of their ideas. From a beginning of 250 beds at Liverpool the number increased to 25,000, spread over Great Britain and Ireland. Men specialized in fractured femurs, and the results of their combined ingenuity was that the best form of calliper splint, the best way to use it, and the best kind of bed were devised. It was found that the length of the limb rather than the gap between the bones was the matter that required special attention, and it was established that the calliper walking splint should be used for after-treatment. Bone grafting proved to be of no value. Experience of malunited fractures showed that no operation should be performed for several months after the sinus had healed.

A very interesting account of the subject is given in the recent book of Pearson and Drummond¹; they tell the story of the gradual advance of knowledge in this branch of surgery, how the old ideas were dropped and new ideas taken up and perfected, how the long Liston was replaced by the Thomas splint, the calliper splint improved, the "anti-aircraft" position developed, and the walking calliper splint devised and perfected. A minimum of shortening was one result, and the prevention of stiff joints another. What thousands of deformities could have been avoided had we known at the commencement of the war what we know to-day! Pearson and Drummond lay stress on the importance of the primary operation, on the value of accurate x-ray pictures taken at once, and on the valuable guidance that can be obtained by ascertaining the type of missile. The modern teaching is that all wounds, with the possible exception of bullet wounds, should be excised in order to prevent gas gangrene. Esquillectomy leaves such large gaps that it is better to wait and do sequestrectomy later if necessary. Secondary haemorrhage can be prevented by a good initial operation with adequate drainage, taking care that neither displaced fragments nor drainage tubes are left in contact with the main vessels. Following the suggestion of Sir Henry Gray, the use of the Thomas splint and the collection of the cases into special femur wards produced great good. More than this, the orderlies were so well trained that in the field ambulances they were able to put on a Thomas splint with Tapson's sole clip and extension in four minutes. Good splinting is of the utmost importance for transport.

The advance made and the results obtained in cases of fractured femur provide one of the most interesting chapters in the history of war surgery. It is to be hoped that the knowledge will not be allowed to lapse, but that in the next war treatment will commence where it left off in this war. It is to be hoped also that the lessons taught by war experience in this matter in particular will have a permanent influence on civil practice.

¹ *Fractured Femurs: Their Treatment by Calliper Extension*, by Maurice G. Pearson, O.B.E., M.B., B.Sc., F.R.C.S., and J. Drummond, M.D., M.R.C.P., Edin. London: H. Frowde, and Hodder and Stoughton, 1919. (Roy. 8vo, pp. xii + 52; 50 figures. 10s. 6d. net.)

LAËNNEC'S INFLUENCE ON MEDICINE.

THE centenary of the publication of Laënnec's *Traité d'auscultation Médiate* has recently been celebrated in his native Brittany. At the foot of the statue at Quimper, erected in 1868 to his memory by the French medical profession, speeches were delivered by a number of distinguished persons. Laënnec is chiefly remembered to-day as the inventor of the stethoscope, and if he had done no more than introduce an instrument of precision into the practice of medicine his name would be deserving of honour. But his fame has other and surer foundations. It may be claimed for him that he was, if not the first, one of the first of the clinical pathologists. He was the successor or contemporary of a distinguished band of men who in France and England devoted much time and thought to morbid anatomy; but like Hunter, though with perhaps a stronger bias towards clinical observation, Laënnec perceived that the material of morbid anatomy, however rich and however rapid its accumulation, could never become a science. Long before the invention of the stethoscope he said that if pathological anatomy "was to become directly and immediately applicable to practical medicine it must be combined with the observations of the symptoms or alterations of function which coincide with each kind of alteration in the organs." This doctrine seems to-day so obvious that we find it not easy to understand that it should ever have been necessary to fight for it, but Dr. Raymond Crawford in the Harveian Oration has recently reminded us with how much difficulty even the most acute and original minds free themselves from the domination of authority and the empire of traditional belief.

On the one hand, Laënnec's study of morbid anatomy had been wide and thorough; on the other, he was well acquainted with symptoms to be observed at the bedside, particularly in diseases of the chest, to which he had given special attention; he was in search of a means to bring the two into relation. He saw at once the possibilities of auscultation, and with unflinching intellectual honesty allowed neither the dogmas of the schools nor his own preconceptions to turn him from the road along which the new method was leading him. The astonishing insight, almost amounting to intuition, with which he worked out the relation of the sounds to the lesions, left little for his successors to add to the almost perfect method embodied in his treatise. The mass of detail the book contained was vivified by enthusiasm; the bent of his mind would have made him at home in the scientific world of to-day. He sought for facts first and theories afterwards, thus reversing the procedure popular among his immediate predecessors. When he received his first teaching appointment as Professor of Medicine in the Collège de France he publicly rejoiced in finding there an atmosphere and a tradition of freedom which gave scope for his uncompromising criticism of the "systems" resting not on observation but on theory, which then still dominated the teaching of medicine.

Laënnec insisted that medicine must be founded on observation, and it is not without significance that he was practically the last physician to occupy the chair; his successors, Magendie, Claude Bernard, and Brown Séquard, resorted to the experimental method, and were physiologists rather than physicians. But this did not mean that the professorship was deflected from its true purpose. Professor Gley, who represented the college at the ceremony at Quimper, made an apt quotation from Claude Bernard's lectures on experimental pathology: "There are not," said

Bernard, "two kinds of laws of life, the one ruling the pathological state and the other governing the physiological. No; the two orders of phenomena blend, and there are regions where pathology cannot be distinguished from physiology. In short, there is only one physiology, which is the analysis of the phenomena of life under all the forms in which they may be manifested." It is well to recall these words of a great master, though the lesson they contain is, perhaps, less needed to-day than it was a decade ago.

GENERAL MEDICAL COUNCIL ELECTION.

VOTING papers in connexion with the election of direct representatives of the medical profession upon the General Medical Council are being posted to-day, Friday, November 7th, to all practitioners registered with addresses in England and Wales, Scotland, or Ireland. In consequence of the war, however, it is probable that many medical men and women have left the addresses at which they dwell in 1914, and have not notified the Registrar of their present whereabouts. Any medical practitioner whose registered address is within the United Kingdom, and who has not received a voting paper, should communicate at once with the Registrar of the Branch Council at which he originally registered, whether he wishes to take part in the election or not. This is important, in order to avoid the risk of removal of his name from the *Medical Register*, under Section 14 of the Medical Act, 1858. The address of the Registrar of the General Council and the English Branch Council is 44, Hallam Street, Portland Place, London, W.1; that of the Registrar of the Scottish Branch Council is 20, Queen's Street, Edinburgh; and of the Registrar of the Irish Branch Council, 35, Dawson Street, Dublin.

CIVIL EMPLOYMENT OF RETIRED OFFICERS.

THE Retired Officers (Civil Employment) Act, 1919, is one which will interest many members of the medical profession. By the Superannuation Act, 1887, the Treasury was empowered to make rules as to the conditions on which any civil employment of profit under certain public departments might be accepted or held by a person in receipt of the pay, half-pay or retired pay of officers in the naval or land forces, and rules were accordingly made by the Treasury under that Act. These rules, after defining the words "civil employment of profit under a public department" as meaning any employment the profits of which were derived from the consolidated funds, money voted by Parliament, land or hereditary revenue of the Crown, the Mercantile Marine Fund, or any other funds to be subsequently specified which were administered by a Government department, went on to provide that no such person should accept or hold such employment without the consent of the Admiralty or War Department. They further provided that where the annual amount of non-effective pay together with the profits of the employment exceeded the sum of £400 a year, such profits should be subject to an abatement of an amount not less than 10 per cent. as determined by the Treasury in consultation with the department concerned. A very large number of retired officers have been employed by the State during the past five years in one capacity and another, and the Act of 1887, to which we refer, has undoubtedly worked a great injustice in such cases. Under the Retired Officers (Civil Employment) Act, 1919, the Treasury "may by order revoke or modify the rules made under the Superannuation Act, 1887, in so far as those rules provide for a deduction being made from the civil emoluments of any person who has received or is receiving retired pay or pension in respect of past services as an officer in His Majesty's forces," and, further, "the provisions of any order made" by the Treasury under the Act "shall take effect as from such date or dates,

whether before or after the passing of this Act, as may be specified in the order." The Treasury has not yet published any order under the new Act, but there is apparently reason to hope that the order, when it is made, will be retrospective, and that some part, at any rate, of the money "docked" from the profits of the civil employment of these retired officers under the Act of 1887 may be refunded.

MOTOR AMBULANCES FOR HOME SERVICE.

THE scheme of the Joint Committee of the British Red Cross Society and the Order of St. John, to provide motor ambulances for the transport of patients in rural districts, has made considerable progress since we last referred to the matter. The Home Service Ambulance Committee has been in communication with all county directors. At the end of October applications for 296 ambulances had been received and approved, and 171 had been delivered. They have been fairly distributed over the whole country and have been dispatched as quickly as they became available, but both the delivery of cars at home and the receipt of cars from France were much delayed by the railway strike. The number of ambulances in garage for distribution fell short by fifty-one of the number the Committee had promised to allot, and it has therefore been determined to buy fifty-five Ford chassis and to make and fit suitable ambulance bodies. The Committee was encouraged to take this step because experience gained during the six months the scheme has been in operation showed that in many districts a light ambulance would be not only more economical than the heavier types used in the armies, but often more useful. At the instance of Sir Anthony Bowlby the Treasury has sanctioned the free issue of 3,000 Thomas arm splints and as many leg splints for use with the ambulances. As soon as the complete outfit has been received the splints will be at the disposal of county directors; printed instructions will be issued with each set. Reports received from county directors on the working of forty-two ambulances that have been in service for a full three months show that the number of cases carried was 1,097, an average of 26 to each ambulance. The number of miles covered was 18,516, an average of 17 miles for each patient. This shows that the desire of the Committee so to space out the ambulance stations that the distance to be covered should not exceed about fifteen miles is being approximately fulfilled. The reports furnish evidence that the service is appreciated throughout the country and is meeting a real want.

PHYSICAL EDUCATION.

A LETTER under the title "A C3 Population" was published in *The Times* of November 1st, asserting the urgent need of a more comprehensive and better organized system of physical education. It was signed by nine eminent members of the medical profession, and was of the nature of a manifesto. It called for:

1. The formation under the Ministry of Health of a Directorate of Physical Education, which will evolve a definite system; and which will advise, when asked, any volunteer movements connected with the improvement of the physique of the people.
2. A National Council of Physical Education composed of representatives appointed by those associations whose work and influence would warrant their inclusion.
3. The establishment of a peripheral organization on a territorial basis with the requisite power, money, and personnel to maintain an organized system.

All will hope to see the inadequate playgrounds, of which the letter speaks, made adequate in number and extent, so that the leisure after a day's labour may not be "unprofitable and disease-provoking"; but Dr. Brackenbury, writing as the vice-president of the Association of Education Committees, has pointed out that by an arrangement between the Ministries of Education and Health the medical inspection and treatment of school children has been practically retained in the hands of the Ministry of

Education. He goes on to show that even if eventually the work reverts to the health authority, to be carried out, by officers who would be medical practitioners, under the health authority, physical education must necessarily be organized in intimate connexion with the Board of Education and the local education authorities; for physical education, being an essential part of education in general, cannot be separated from other branches. Its effect upon mental and intellectual development is as important as upon physical, and in almost every case the instructors must be members of the teaching profession, and not of the medical, though the latter should have advisory or consultative functions. He points out, further, that in continuation schools and classes it is quite common for the education authority to require attendance for physical exercise as a condition of admission to other subjects, and that organized games are now a useful part of the work of such authorities. We are disposed to think, as Dr. Brackenbury suggests, that the signatories of the manifesto are hardly aware of what has already been done in these respects, and we also find it not easy to understand what sort of an organized system under a director of physical education they contemplate. The German system of gymnastic clubs has never been really popular in this country; but, on the other hand, the British boy and young man, with exceptions few enough to be ignored, will play outdoor games whenever the chance is given to him. Dr. A. C. Farquharson, M.P., in another letter in *The Times* has expressed the opinion that the proposal, stripped of its plausibilities, is that a department of the State shall establish and maintain—which would come to mean compel—a system of physical exercise or education to be applied during the leisure hours of the people. He contends that long hours of labour, with consequent absence of leisure, insufficient wages, and bad sanitary surroundings, both in home and workshop, due to intensive industrialism, have been the main causes of the physical deterioration of the people, and that now these evils are being remedied a compulsory encroachment upon the hours of leisure should not be enforced by statute. The object in view is, he rightly says, a very fitting one for voluntary effort, education and propaganda, but not one which the State should be asked to enforce by compulsion. The favourite game of the British boy and young man, at any rate in winter, when games are most needed, is, we would suppose, football, and we are under the impression that a quite sufficient "peripheral organization" would be provided by local football clubs if their opportunities of obtaining grounds for the game were increased. Unfortunately it is a game which requires a good deal of ground, and there is no doubt a risk that for want of space young people may tend to become spectators rather than participants.

NAVAL HYGIENE.

WITH the removal of the Censor's ban information of various kinds about the war is becoming public property, and though, judging from previous campaigns and the enormously greater material accumulated since 1914, it must be a long time before the official medical histories appear, many isolated records, especially those under the aegis of the Medical Research Committee, have been published. The vast majority of these naturally concern the army, but in a recent congressional address at Newcastle-on-Tyne Sir Robert Hill,¹ Director-General of the Medical Department of the Admiralty, gives an interesting account of naval hygiene. The necessarily limited allowance of sleeping and working space in a ship is no doubt the reason why in the navies of many countries tuberculosis is one of the chief causes of invaliding and discharge. Ventilation is therefore a most important but by no means easy problem; three essential points must be taken into consideration: (a) the circulation of a sufficient

¹ *Journ. Roy. Sanitary Institute*, 1919, xi.

amount of fresh air; (b) its distribution without the creation of draughts; and (c) the maintenance of an equable temperature. A committee appointed in 1912 to consider the ventilation of ships reported before the war, and improvements were carried out both then and during the course of hostilities. In the Royal Navy, in which a cubic space of 200 feet, with at least 20 inches between the hammock hooks, is the minimum for the sleeping accommodation, the ratio per 1,000 for tuberculosis was 2.83 in 1909, 1.93 in 1913, 2.12 in 1917, and 2.77 in 1918; but it is considered that, but for various factors incident to war, such as relaxation of the examination of the personnel on entry and the rejoining of large numbers of pensioners and previously invalided men, the incidence of tuberculosis between 1914 and 1918 would have shown a great fall. A detailed account of the heating and water supply of the ships is given, and it is satisfactory to learn that under the present system of storage and distribution dangerous pollution of drinking water is very rare, the most frequent cause of contamination being the escape of oil fuel. During the two waves of influenza in 1918 there were 15,694 cases among the 90,000 officers and men of the Grand Fleet, there being almost two-thirds of the cases in the earlier wave, in which, however, the percentage of pulmonary complication was only 0.4 as compared with 6.8 in the autumn outbreak, the corresponding death rate being 0.03 and 2.8 per cent. respectively. Among 556 cases of cerebro-spinal fever in the navy from August 1st, 1914, to December 31st, 1918, there were 64, or 11.5 per cent., in sea-going ships, 41 being in the Grand Fleet or attached squadrons, but in only three instances did more than one case arise in the same ship. The methods of combating venereal disease in the navy consist in educational lectures and pamphlets with full information about syphilis and gonorrhoea, ablution rooms, and for immediate prophylaxis calomel cream 33 per cent., in a lanolin case, for intra- and extra-urethral use. Sir Robert Hill adds: "Until the civil population is offered facilities for obtaining some form of direct prophylaxis, I do not see how venereal disease can be reduced to the ideal minimum in the navy, though undoubtedly the measures now taken under the Act (1917) will render the task easier of accomplishment."

CLEAN MILK.

In a pamphlet entitled "A study of two types of commercial milk,"¹ Freear, Buckley, and Stenhouse Williams relate the results of an inquiry made at the Research Institute in Dairying, University College, Reading. Having cited the loss due to dirty production of average milk as sold in our big cities, the authors proceed to compare this average milk of commerce with a milk in which every care has been taken to ensure cleanly production. For the production of clean milk there are two great essentials—money and knowledge. It is estimated that a charge of 3d. a gallon over and above the market price would meet the increased cost of elaborate apparatus and more careful methods. The loss on milk condemned after its arrival would, however, be avoided, so that the extra expenditure at the source would be recouped. The other essential, knowledge, or the desire to possess it, seems to present a problem far more difficult of solution, especially as the pecuniary advantage to the milkers would not at present be obvious, but the authors themselves appear to be not without hope. Those who live in the country will appreciate the difficulties of the small farmer, as opposed to those of the large concerns, especially in a matter of this kind. The bacteriological observations show that the main difference between milks lies in the fact of contamination at the outset; where this contamination occurs no subsequent cooling or other manipulations can remedy or in any way change matters. The various alterations in temperature, length of journey, and so on,

are details of comparatively minor importance. The paper shows a commendable and painstaking study, and adds another to the long list of pleas for a clean milk supply, and it further shows the possibility that the proposed scheme, besides being hygienically desirable, may be found also commercially sound.

RABIES IN ALGERIA.

Rabies is common in Algeria, where, on account of geographical and other considerations, prophylactic measures cannot be applied. Every village, every oasis, harbours its dozens or its hundreds of savage, half-wild dogs, and even in large towns there are always a large number of ownerless marauders very prone to infection. Algiers is provided with a well-equipped Institut Pasteur, with Dr. Edmont Sargent at its head, and to it all suspicious cases are sent. According to the annual report for 1918, just issued, 1,907 persons underwent the antirabic treatment during that year. Of this number 15 did not follow the full course of treatment, the dog having been found to be healthy, and 12 others discontinued the treatment. Six cases proved fatal, but in only one of these did death take place more than fifteen days after the date of the bite, consequently in only one could the treatment be said to have failed. This gives a mortality of 0.05 per cent. On looking into the figures we find that of 56 persons bitten by animals found by inoculation to be rabid, one died; of 498 bitten by animals diagnosed by veterinary surgeons to be rabid, 2 died while of 1,208 persons bitten by dogs merely suspected to be rabid, 3 died. The spinal cords of 47 animals were received at the laboratory, and of these 18 yielded positive results on examination, 20 were negative, and 9 were too decomposed for proper observation. Of the rabid animals, 108 were dogs, 71 cats, 5 jackals, 4 horses, 1 mule, 8 asses, 1 calf, 1 gazelle, 1 pig, 1 rabbit, and 4 rats. Further, in two cases of hydrophobia in man the patients contaminated persons in attendance upon them who had to receive a course of antirabic treatment.

REMUNERATION OF PUBLIC VACCINATORS.

The Minister of Health has issued a memorandum to boards of guardians in England and Wales stating that he is of opinion that in present circumstances the minimum fees of 2s. 6d. and 3s. 6d. prescribed for primary vaccinations performed at the homes of the persons vaccinated are inadequate. He has accordingly issued a new order, to come into force on December 1st, 1919, increasing the minimum fee to 5s. It does not affect public vaccinators who are already receiving the new minimum or a higher fee, and it is to be understood that the sum of 5s. is only a minimum, and that it is open to the guardians, if they so desire, to pay a higher fee, subject to the Minister's approval. The Minister's approval is not required if the guardians decide to pay the minimum of 5s.

COLONIAL MEDICAL SERVICES.

VISCOUNT MILNER, G.C.B., Secretary of State for the Colonies, has appointed a committee to consider the position of the medical services of the various colonies and dependencies, with a view to maintaining and increasing the supply of candidates, and to securing contentment within the service; and to consider whether the principle of assimilating the medical service of neighbouring colonies may usefully be extended, and, if so, how far and by what means. The members of the committee are: Chairman, Sir Walter Egerton, K.C.M.G., late Governor of British Guiana and recently Chairman of the Pool (Petroleum Supplies) Board; Lieut.-Colonel Sir Harry Verney, Bart., D.S.O., Surgeon Rear-Admiral Sir Humphry D. Rolleston, K.C.B., M.D., F.R.C.P., Major-General Sir W. B. Leishman, K.C.M.G., C.B., F.R.C.P., F.R.S., Lieut.-Colonel Sir James Kingston Fowler, K.C.V.O., M.D., F.R.C.P., Mr. T. Hood, C.M.G., M.R.C.S., L.R.C.P., Director of the Medical and

¹ *A Study of Two Types of Commercial Milk.* By K. H. Freear, Wilfred Buckley, and R. Stenhouse Williams. Cambridge: University Press. 1919. (Cr. 4to, pp. 32; six charts.)

Sanitary Service, Nigeria; Mr. A. Fiddian, Principal Clerk, Colonial Office, with Mr. J. E. W. Flood of the Colonial Office, as secretary.

We are glad to learn that Sir William Osler, who contracted a severe chill on a long motor journey during the railway strike, is making satisfactory progress towards recovery.

Medical Notes in Parliament.

National Health Insurance: Receipts and Expenditure.—In reply to Mr. Godfrey Locker-Lampson, Dr. Addison, on October 29th, presented the following return of receipts and expenditure for National Insurance for the year 1918, as regards England and Wales. The document was as under:

Return showing Estimated Receipts and Expenditure (in round figures) under the National Health Insurance Acts in the year 1918, for England and Wales.

RECEIPTS.		£
Cash at Bank of England, January 1st, 1918	...	530,000
Cash in hand of approved societies and Insurance Committees, January 1st, 1918	...	890,000
Contributions of employers and employed persons	...	16,250,000
Interest and sundry receipts	...	2,300,000
Exchequer—		
Medical and sanatorium benefit	...	2,767,000
Sickness, disablement, and maternity benefits	...	1,556,000
Sickness benefit (Women's Equalization Fund for 1917 and 1918)	...	445,000
Sickness benefit (recoupment, invalided soldiers)	...	322,000
Administration expenses of approved societies and Insurance Committees	...	687,000
Central administration expenses	...	395,000
		6,170,000
		£23,200,000
EXPENDITURE.		£
Medical benefit	...	4,840,000
Sanatorium benefit	...	731,000
Sickness and disablement benefits	...	5,600,000
Maternity benefit	...	886,000
Administration expenses—		
Approved societies	...	1,944,000
Insurance Committees	...	278,000
Central administration	...	412,000
		2,634,000
Sums invested—		
By National Debt Commissioners	...	3,737,000
By Approved Societies	...	6,110,000
		9,847,000
Cash at Bank of England, December 31st, 1918	...	832,000
Cash in hands of approved societies and Insurance Committees, December 31st, 1918	...	860,000
		£16,200,000
Expenditure in connexion with National Health Insurance is also incurred by other Government departments, the estimated amount of which in 1918 was as follows:		
Office accommodation (buildings, furniture, fuel and light, etc.)	...	30,400
Rates	...	3,900
Stationery and printing	...	53,700
Audit	...	73,900
Revenue departments, Customs and Excise	...	2,400
Post Office	...	100,700
		£265,000

The Special Grant to Insurance Practitioners.—Mr. Hayday asked the Minister of Health, on October 29th, whether he was aware that approved medical associations had not participated in the special grant to panel practitioners, although such institutions were approved by the National Insurance Commission for the provision of medical benefits to insured persons, and whether he would state the reason for this discrimination. Dr. Addison replied that no such discrimination had been made as was suggested in the question. Every effort had been made by the department to obtain from the Friendly Society Medical Alliance (representing these institutions) certain facts and figures which were necessary for establishing and measuring the amounts that might properly be payable to the institutions, and without which no such payment could be calculated. But the Alliance had so far declined to give that information.

Medical Services in Mesopotamia.—Mr. Hirst asked the Secretary for War, on October 29th, whether since May over 50,000 troops had been involved in the campaign against the Kurds; whether both British and Indian troops were on sealed rations for a period of weeks; whether the medical arrangements were inadequate; whether he was aware that no appliances were provided, and that the men sick with fever were strapped into panniers on each side of a mule during the July heat; whether the hospital at Salamaniah was a collection of tents, where men lay on the ground with one ground sheet and one blanket; whether cases of whisky and of beer were sent by convoy one hundred miles from the railhead long before even tents were provided for the troops; and whether he would call urgent inquiries to be made. Mr. Forster, in a written reply, said that the answer to the first part of the question was in the negative. It was quite possible that both British and

Indian troops were on field rations for short periods, as this was quite usual in similar circumstances. There was no reason to think that the medical arrangements were inadequate. As regards the sick being carried on mules, he was afraid that this was probably the only alternative to walking in this difficult country. There was no hospital at Salamaniah. What Mr. Hirst probably referred to was the tenth subdivision of the field ambulance, which formed the best accommodation possible during the initial stages of an advance. While he had no information on the subject, he thought it very improbable that cases of spirit were forwarded to the front in advance of the Expeditionary Force canteens. He was not in a position to give further details without reference to Mesopotamia. If, however, Mr. Hirst had evidence of matters which, on further consideration, he thought called for further inquiry, they would receive careful attention.

Influenza Precautions.—Dr. Addison, replying to Major Davies, stated on October 29th, that a standing committee of medical officers, including the Secretary of the Medical Research Committee, to deal with all questions concerning influenza had been in existence for some time. The Committee informed him that though there had naturally been an autumnal rise in the incidence of respiratory diseases, the notifications and mortality return did not at present indicate any recurrence of epidemic influenza. He proposed at an early date to issue a circular advising sanitary authorities and the public as to the preventive and other measures which should be taken this winter in regard to influenza, so far as present knowledge enabled advice to be given.

Staffs of New Ministries.—Mr. Baldwin, in the House of Commons, on October 29th, gave, in reply to Mr. G. Balfour, figures of the staffs employed by the two new Ministries of Health and Transport. After deducting the staffs employed in July, 1914, in departments absorbed by the Ministries the numbers were 1,942 (including over 1,700 engaged in temporary work) employed in the Ministry of Health, and 260 employed in the Ministry of Transport. The annual rates of expenditure on the staffs of the Ministries, after deducting the annual rates of expenditure in July, 1914, were £640,000 for the Ministry of Health, and £116,400 for the Ministry of Transport. Mr. Baldwin added that the figures of expenditure covered not only the cost of additional staff, as compared with July, 1914, but also the increases by way of war bonus to the staff of the absorbed department.

Milk for Mothers and Children.—The Paymaster-General, in reply to a question put by Major E. Wood to the Minister of Health, has stated in a written answer that the number of local authorities in England and Wales which had reported on the steps they had taken to provide milk for expectant and nursing mothers and children under 5 years of age was 200, or approximately 60 per cent. of the authorities undertaking maternity and child welfare schemes. Such authorities number 24 metropolitan borough councils, 33 county councils, 79 county borough councils, and 144 town and district councils. About 40 of the local authorities replied that no action was necessary in their district, and a number of others had furnished no information. Comprehensive schemes for the supply of milk had been adopted in 50 cases, but, as a general rule, the provision was limited to a supply of milk (including dried and condensed milk) to mothers and children attending infant welfare centres. In a number of cases health visitors were instructed to report the need of milk among children, and midwives were asked to supply information regarding expectant mothers who were not getting sufficient food.

Milk in Devastated Regions.—Replying to Lieutenant Commander Kenworthy, Mr. Harmsworth, on November 4th, said it was true there was an acute shortage of milk for children and invalids in the devastated areas of France and Belgium. The matter was one which solely concerned the French and Belgium Governments, but the Agricultural Relief of the Allies Committee had supplied from Great Britain a certain quantity of livestock to the areas of the Somme, the Marne, and the Aisne in France, and to the Yser valley in Belgium.

Rats and Mice Bill.—The bill introduced by Sir Arthur Boscawen (Secretary to the Board of Agriculture) to secure action by individuals and local authorities for the destruction of rats and mice was passed through the Commons on November 3rd, and now awaits progress in the Upper House. An occupier of land who fails to take necessary and reasonably practical steps for destruction of rats or mice on his land, or to prevent such land being infested with rats and mice, is made liable, on conviction, to a fine of £5 when no notice has been served upon him, or to a maximum penalty of £20 in cases in which notice has been served upon him by the local authority to require him to deal with the matter. For a local authority, when not satisfied that an occupier is doing what should be done, to enter his land within a time to be specified in the notice. It is also laid down that if a local authority refuses to act, the Board of Agriculture can act in its place at the occupier's expense. In the course of Sir A. Boscawen said it was probable that if we had our stocks from depredations we could have saved thirty and forty millions sterling of the bread and millions now being spent. Lieut.-Colonel Ray said the danger had accumulated and increased during the last five years of war. It was serious, not only from the enormous amount of destruction of foods urgently required, but because bubonic plague is spread from rats to hu

THE OPENING OF ENHAM VILLAGE CENTRE.

ON October 29th the Enham Village Centre for disabled ex-service men was opened by the Minister of Pensions, Sir Laming Worthington Evans. The estate is large—over a thousand acres—and situated in a healthy part of Hampshire, with three hamlets upon it, five farms, a post office, village hall, cottages, and smithy. It is about three miles distant from Andover, the nearest town and station. Most of the men live at Enham Place, the largest of the houses. This is furnished with ample recreation rooms, including a billiard room. A sub-centre for one hundred extra residents has now been opened at Littlecote. A village institute is in course of erection, and there is a men's club at the village hall, where bowls, billiards, and tennis are played.

The centre has been organized on a voluntary basis to assist the State in the great work of restoring the disabled man and fitting him for a civil life. Residents at Enham will receive from the Government their full treatment and training allowance, and when their course is completed, every effort will be made to place them advantageously in permanent occupations.

With restorative treatment is combined the training that will best enable each man to overcome his disablement and allow him to lead a useful life. Special facilities are offered for training in agriculture and horticulture and in industries and handicrafts suitable for village life, including wood carving, furniture making, electrical installation, watch making, boot making, ladies' tailoring, poultry, fruit, and ordinary farming. The occupation will be carefully chosen with a view to each individual's previous experience, home conditions, capacities, and tastes. The whole process of re-education and training is conducted under medical care, and is graded from week to week, according to the bodily and mental powers of each individual. After admission to the centre there is a short period of probation. All men who are considered suitable after probation will be accepted for the full course of treatment and training. The following kinds of cases are most likely to benefit at Enham: (1) Men suffering from the effects of shell shock, neurasthenia, and depression, for whom the encouraging and home-like influences of the centre are more suited than institutional treatment. (2) Convalescent surgical cases. (3) Men crippled by wounds or by stiff or wasted joints or muscles or amputations. (4) Men recovering from malaria or other fevers, and delicate men for whom a country life is prescribed. Incurable cases, that is to say, men who cannot reasonably be expected to recover any capacity for work, will not be received. The village centre is designed to enable injured men to make the best use of their reduced powers. The rules are few and reasonable, and the men themselves will have a voice in the direction and management of the place. It is the particular desire of the council that as cottages become available, married men with their families should be received at the centre. For this purpose a careful selection will be made, from time to time, from those men who have proved their suitability and made good progress in re-education and recovery.

The centre has actually been at work for five months now, and over one hundred men have been admitted. There is a long waiting list, and the committee hopes to have accommodation for at least five hundred men within a short time. In the new medical block all forms of hydrotherapeutic treatment will be carried out, including whirlpool baths, running water baths, as well as radiant heat, ionization, and electrical treatment. All kinds of cases, especially neurasthenic, rheumatic, and orthopaedic, will be received for treatment.

The Minister of Pensions, in formally opening the centre, expressed the hope and belief that it would be the means of restoring many a disabled soldier to health again, and enable them once more to be in a position not only to earn their living, but also to enjoy the amenities of life.

A PAMPHLET has been issued by the Assurance Medical Society containing the report of a discussion, initiated by Mr. W. McAdam Eccles, on war injuries as affecting the question of life insurance. It is a problem with which medical officers of life assurance companies are now being confronted. Mr. McAdam Eccles dealt briefly with various categories of injuries, and the discussion that followed, to which several well known insurance authorities contributed, should be of considerable value to those who may be called upon to advise assurance companies.

ACCORDING to statistics published by the *Secolo* of Milan, 800,000 deaths occurred in Italy from influenza in 1918, a figure which is 60 per cent. higher than the total Italian mortality in the war.

Scotland.

GENERAL MEDICAL COUNCIL ELECTION.

DR. NORMAN WALKER.

IN pursuance of his candidature for re-election as direct representative of the profession in Scotland on the General Medical Council, Dr. Norman Walker addressed a meeting at Edinburgh on October 22nd. Professor Lorrain Smith, who was in the chair, read letters from Professor Lovell Gulland and Sir Clifford Allbutt, expressing the earnest hope that Dr. Walker would be re-elected. Sir Clifford Allbutt wrote that after sitting for some ten years on the Council with Dr. Walker his respect for his sound and calm judgement and wide knowledge of affairs had steadily grown.

Dr. Norman Walker in the first part of his address dealt with the constitution and functions of the General Medical Council, and pointed out that it was concerned with preserving a sufficient standard of medical education and keeping the *Register*. It had no power to stop practice by unqualified persons. He then dealt with the recommendations of the special committee of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine, whose report on the teaching of obstetrics and gynaecology to medical students and graduates in London had been published in full in the *BRITISH MEDICAL JOURNAL* of August 30th and September 13th. He observed that the report called attention to certain defects and made a number of suggestions which would be of the greatest interest to the Medical Council. Dealing next with the report of the Edinburgh Pathological Club, he said that, although the proposals were drastic, none of them ran counter to the views of the General Medical Council. Finally, he dealt with the report of the National Board of Medical Examiners of the United States of America, and pointed out that the standard of medical education suggested was high—namely, two years of college education in chemistry, biology, and physics, and a foreign language, followed by four years of medical education proper in a Class A medical school, and that by one year of work either as a resident in a hospital or laboratory, with a final examination of a very high standard. Dr. Walker then referred to some observations made by Mr. Duncan on the previous evening, a matter which he dealt with more fully at the meeting in Glasgow, reported below.

Dr. Norman Walker addressed a meeting of the profession in Glasgow on October 30th. Sir Hector Cameron, who was in the chair, said that his experiences of affairs had taught him that when a representative was carrying out his duties satisfactorily it was wise to continue him. He had himself been a member of the General Medical Council for fifteen years, and knew that it was not easy to command its attention. The position Dr. Norman Walker now held in the Council was proof that he had made good his position.

Dr. Walker, in the earlier part of his address, dealt with the subject of medical education. He pointed out that Scotland in 1895 had added 565 names to the *Medical Register*, but in 1918 only 289, and it was probable that the addition in 1919 would be even lower. Against this was the fact that the number of students registered was by far the largest on record; it would, however, be at least five years before they reached the *Register*. Those who survived what would undoubtedly be severer tests would find more opportunities for organized work. Those who had served in the army, as nearly all young men had, saw that with all its disadvantages—and perhaps some had not seen its disadvantages so clearly as the older men—there were great advantages in organized work. He referred to Sir George Newman's memorandum on the practice of preventive medicine, and said that the Scottish Board of Health no doubt had something of the same general nature in its mind, but he hoped would strike out on its own lines. The formation of the Board of Health for Scotland was most important to the medical profession, but the full benefit of the new era could not be enjoyed unless there were a more complete alliance of the various medical interests in Scotland. The interests of the public and medical practitioners, of consultants, of the universities, and of the medical corporations were all essentially

the same, and it was desirable that there should be some body which could discuss the various points of view and deal authoritatively with the Board of Health. The nucleus of such a body existed in the Scottish Ministry of Health Committee, in joining which no body sacrificed its individuality.

Dr. Walker then said he was bound to take up the glove which Dr. Ebenezer Duncan had thrown down on October 21st when speaking in Edinburgh. Dr. Duncan then said that the profession had recently "been put under the control of the Board of Health, and that the Act establishing it had been rushed through without the medical profession being consulted." Speaking the next day, he (Dr. Walker) said he had read these words with amazement.

About a year ago he received a communication from the Scottish Office suggesting that as the proposals for the establishment of a Ministry of Health Bill were being considered by a committee in England, it was only fair that the profession in Scotland should receive equal treatment. After a good deal of negotiating between different parties a committee was got together, constituted as follows:

Members of the Scottish Committee of the	
British Medical Association ...	17
Representatives of Corporations ...	6
Representatives of Universities ...	4
Members of the Scottish Branch of the General Medical Council ...	9
The Society of Medical Officers of Health ...	2
Lady member ...	1
Total ...	39

These doctors came from all over Scotland, and one of the representatives of the Royal Faculty of Physicians and Surgeons of Glasgow was Dr. Ebenezer Duncan.

The first meeting was held on January 4th, 1919, when the Committee was constituted; the second on February 8th, when Sir Donald MacAlister was elected Chairman on the motion of the President of the Royal College of Physicians, Edinburgh, seconded by the President of the Royal Faculty of Physicians and Surgeons, Glasgow. Mr. Hodsdon proposed and Dr. Ebenezer Duncan seconded the election of certain gentlemen as vice-chairmen. At that meeting the Ministry of Health Bill, which was then a joint one for England and Scotland, was considered, and the meeting was adjourned for the further consideration of the clauses applying to Scotland.

The adjourned meeting was held in the Hall of the Royal Faculty of Physicians and Surgeons of Glasgow on February 21st, and the minute showed that Dr. Ebenezer Duncan was present and took part in the proceedings. At that meeting, on the motion of Professor Glaister, it was left to the Business Subcommittee to formulate the various resolutions of the Committee and forward them to the authorities concerned—Dr. Addison, Mr. Munro, and the Lord President of the Privy Council.

The Subcommittee met on April 5th. Letters were received from the Lord President and from the Scottish Office in reply to communications. The meeting then considered the bill, which by this time had been separated from the English bill, in order to ascertain to what extent effect had been given to the recommendations of the Committee; a memorandum was drawn up and circulated to all the members, with an intimation that a meeting would be held at an early date, and a request to members of the Committee desiring to do so to bring forward specific proposals for the amendment of the bill. A meeting was accordingly held in the Royal College of Surgeons, Edinburgh, on May 17th, and at all meetings Dr. Ebenezer Duncan was present.

Dr. Walker asked those present whether they thought he was justified when he said he read with amazement Dr. Duncan's protest that the medical profession had never been consulted. Dr. Duncan had taken up one point: he had ignored the much larger one, and had concentrated upon the statement that one particular recommendation of the Committee had not been accepted. At one of its meetings the Committee unanimously agreed that it ought to be provided in the bill that not less than one-third of the members of the board should be registered medical practitioners. Five drafts of the bill had been before the Committee: they were dated November 7th, 1918; February 17th, 1919; March 27th, 1919; April 9th, 1919; and May 15th, 1919; and the Act was dated June 3rd, 1919. In the first draft, where Scotland was dealt with in the English bill, it was proposed that the Board should consist of nine members; one of them was required to be a doctor and to possess the qualification of D.P.H. In the Ministry of Health Bill of February 17th—still the bill common to both countries—Clause 9, Section 3, line 20, said:

"The number of members (other than *ex officio* members) shall at no time exceed six," and the requirement of the D.P.H. still stood.

In the first Scottish Board of Health Bill, dated March 27th, the Committee's recommendation that there should be no restriction on the qualifications of medical men disappeared, as the Committee had recommended it should; and Clause 3 (2) repeated the words, namely: "The number of members (other than *ex officio* members) shall at no time exceed six," and in that form the clause appears in the Act. It came before the Committee in that form, and in that form it was considered by the Subcommittee and was dealt with in the memorandum. The reference to it was as follows: "Originally (Clause 3) the Board was to include all the members of the Local Government Board (six; three being *ex officio*), certain Scottish Insurance Commissioners, one registered medical practitioner possessing a D.P.H., and an advocate of seven years' standing. The number of members might thus be nine. The Parliamentary Under Secretary might not be a member of the Board.

"Now the Board consists of the President, Vice-President, and six others, including the three appointed members of the Local Government Board, and two Insurance Commissioners. The six must at all times include two registered medical practitioners (without special diploma), one or more women, and an advocate or law agent of ten years' standing.

"The President is the Secretary for Scotland, the Vice-President is the Parliamentary Under Secretary, and in the absence of both, the President may designate a member to be chairman. Thus, in the absence of the President and Vice-President, say, in attendance on Parliament, the Chairman and five other members constitute the Board and of these six two at least must be medical practitioners."

That memorandum was circulated to all members, and he never heard any suggestion that the two medical members were not the third of the Board which the Committee had in its mind, and honestly he could not at first understand Dr. Duncan's point that the Secretary for Scotland had not kept faith with them. He could hardly refrain from pointing out that the memorandum concluded with a request to members to bring forward specific proposals for further amendment of the bill, and at the meeting on May 17th one such proposal was brought forward by Dr. John Stevens; it was a proposal with which he personally agreed, and ran: "That even if it involves an addition to the membership of the Board there should be two members representing the clinical side of medicine."

He did not remember any one in the discussion raising the point that the third had not been conceded. The Committee, however, did not adopt that resolution, but the following resolution became the unanimous finding of the meeting:

That it be represented to the Secretary for Scotland that in making future appointments to the Scottish Board of Health, it is of great importance that at least one of its members should be a practitioner who has had an extensive experience in the general practice of medicine.

He did not enjoy personal controversy, but in this case he felt bound to take up the challenge, and to repeat that the Secretary for Scotland had dealt with the Committee in absolute fairness, and he regretted very much that Dr. Duncan should have made a further statement that "the Government had added insult to injury by putting at the head of the Board one of their political hacks who knew nothing about medicine at all. He had been one of the Lords of the Treasury under Mr. Lloyd George, and he supposed he had to get a post."

At this time, when the country was in difficulty, when great problems of reconstruction in which the medical profession was enormously concerned were being considered, he did not think that that was the spirit which ought to be shown by one who aspired to be the direct representative of the medical profession in Scotland. At any rate, it was not the spirit in which he (Dr. Walker) proposed to approach the problems of reconstruction; he did not believe it was the spirit in which the profession in Scotland proposed to approach them, and he asked them to endorse that view by re-electing him to the Council.

DR. EBENEZER DUNCAN.

In a letter addressed to the *Scotsman* on October 25th, Dr. Ebenezer Duncan replied to Dr. Walker's speech. Dr. Duncan in this letter states that the Committee unanimously recommended that not less than one-third of the members of the Board of Health should be registered

medical practitioners, but the Board as finally constituted consisted of eight members, only two of whom were medical members, both being Government officials, and both for many years before their appointment connected exclusively with preventive medicine. It was hoped that the vice-chairman to be chosen by the Secretary of State, who was the nominal head of the Board, would be a trained medical man, but the vice-chairman nominated, who would be the real head of the Board, was a politician with no training in public health or curative medicine. In support of his statement that the bill was rushed through Parliament, Dr. Duncan said that he was a member of a deputation from the Royal Faculty of Physicians and Surgeons which went to London on April 8th—one week after the bill in its final form was published; but even at that early date it was found to be too late to obtain amendments. Dr. Duncan reiterated his opinion that the Board of Health did not represent, as it should, the educated views of the universities and medical corporations of Scotland, and that the opinions of the three thousand general practitioners had been ignored.

Ireland.

GENERAL MEDICAL COUNCIL ELECTION.

We have received from Dr. J. C. McWalter of Dublin a note stating that he has been asked to offer himself as a candidate for election as direct representative of Ireland on the General Medical Council as representing the Irish doctors who have served in the R.A.M.C. "I am," he writes, "in sympathy with the reforms advocated by the British Medical Association and the Irish Medical Association." We understand that the retiring member, Dr. Leonard Kidd, of Enniskillen, is offering himself for re-election.

UNIVERSITY COLLEGE, CORK.

A committee has been formed at University College, Cork, to invite subscriptions from past and present members of the governing body, the teaching staff, officers and students, in order to present Sir Bertram Windle on his retirement from the office of president with his portrait. Any balance of the fund will be appropriated to other purposes which may commemorate his happy connexion with the college. Subscriptions should be sent to the Honorary Treasurers, University College, Cork. A few weeks ago we indicated briefly the reasons that had induced Sir Bertram Windle to resign the position he has held for over fifteen years. During that time he has had the satisfaction of seeing the buildings of the college nearly doubled in extent and the number of students nearly trebled, while the college has received gifts amounting to over £100,000. The number of students attending the college during the session 1918-19 was 629, as compared with 566 during the previous session. The number of new students in 1918-19 was 172. In discussing the financial position in his annual report he states that it is unsatisfactory, but adds that this disadvantage it shares with practically every educational institution in the three kingdoms. As a result of negotiations conducted by him in London and in Dublin the Government has allocated a sum of money for this year for the purpose of increasing the incomes of the full-term officials and professors of the college. Some time during the present winter the Government commission will visit all the institutions concerned, including University College, Cork, and discuss future expenditure. Sir Bertram speaks very strongly of the necessity for the foundation of a university for Munster. A deputation to urge the claim was received by the Lord Lieutenant, but the Government has announced that it is unwilling to proceed with the matter. This decision, he says, "leaves the College, as it has been in the past, tied hand and foot, and at the mercy of a permanent majority belonging to another college. . . . In such a case real progress is impossible, and partial progress is only possible as the result of an expenditure of time and worry which no person unconnected with the machine can imagine, and no person whatsoever should be called upon to undergo, or could undergo for more than a limited period." Sir Bertram Windle says that he would not have retired had the Government shown itself willing to fall in with the unanimous and oft-expressed

wish of the College, both governing body and academic council, and, as he maintains, of the province of Munster, for the establishment of a separate university in Munster. The governing body issued last year a statement in support of this claim, which gave a history of the college in Cork, and met seriatim the objections which have been raised to the establishment of an independent university in Munster. It is shown that the College has secured popular approval in Munster; on its governing body all shades of public opinion are represented and have worked together strenuously with marked success for the last ten years for the good of the College. The number of its students is not too small to justify a university, for Cork at the present time has more students than Belfast had when it was made a university. The College has received financial support from the public, private beneficence having since its foundation supplied a sum not far short of £150,000. With regard to buildings, great advances have been made since the Irish University Act became law; there is now an institute of physics and chemistry affording accommodation which compares favourably with that of any other institute of its kind; the engineering laboratories now make complete provision for testing materials, for hydraulics, and for concrete work; there is now a well equipped, self-contained building for botany, geology, and zoology; and the medical school, which was in a deplorably backward state so far as regards laboratories, has been enlarged by the provision of well equipped physiological laboratories, a pathological department, and an operative surgery department with a museum of instruments. Playing grounds of 15 acres have been acquired, clubs for men and women students built, and administrative offices erected. Finally, the Honan Hostel provides accommodation for nearly fifty men students; it has an endowment of its own but is organically connected with the College. With regard to staffs and subjects taught two entirely new departments have been opened, the first in commerce and the other in dentistry. Further, what is almost a new department for mechanical and electrical engineering has been established in connexion with the Crawford Municipal Technical School. In other departments the staff has been strengthened. The statement lays it down that a federal university can never be a real success.

ULSTER MEDICAL SOCIETY.

The opening meeting of the winter session was held on the evening of October 30th in the Medical Institute, Belfast; there was a large attendance of members. The retiring president, Dr. James Colville, introduced his successor, Mr. Andrew Fullerton, C.B., C.M.G., F.R.C.S.I. A hearty vote of thanks to the retiring president, proposed by Mr. Fullerton and seconded by Dr. Morrow, was passed with acclamation.

Mr. Fullerton then gave his presidential address on "Recent work on shock and haemorrhage." Before opening his subject he referred to the loss by death of one honorary Fellow of the society, Dr. Robert Esler of London, and of one Member, Dr. Logan, Ballynure, co. Antrim. He also made some observations on the reorganization of the profession, the raising of medical fees, and other matters of general interest, and then passed to the main subject of his address.

Shock and Haemorrhage.

After reviewing the work done during the war in France, America, and England on shock, he said the following conclusions appeared to be justified in the present state of knowledge:

1. Shock may be divided into primary and secondary shock. Primary shock, the nature of which is, as yet, undefined, comes on immediately after injury. Secondary shock, a later development, comes on gradually, the degree depending to some extent on the care the injured man receives during transit. The theory that shock is due to exhaustion of the vasomotor centre has not been supported by recent investigations. The same may be said of the theories of suprarenal exhaustion, cardiac failure, acapnia, and acidosis. There is evidence in favour of its being produced in certain cases by absorption of metabolites from injured tissue, especially muscle.

2. Low blood pressure is one of the outstanding features of shock. This is due to loss of blood by haemorrhage, to loss of blood by stagnation and concentration in the capillary area, or to a combination of these two conditions.

Contributory factors in the production of shock are cold, deprivation of fluid, hunger, pain, anxiety, fear, rage, fatigue, insomnia, and depressing conditions of all kinds, amongst which must be included anaesthesia.

3. *Preventive Treatment of Shock.*—In the injuries of civil life much may be done to prevent the onset of shock by gentle handling, immediate immobilization of injured parts, care in transit, and warmth. Thomas's leg and arm splints should be kept in readiness and skilled first aid should be available on the spot. To prevent the onset of shock during and after operative procedures much may also be done. Before operation we should endeavour to secure sleep for our patient, allay his pain, anxiety, and fear, promote as far as possible a calm and restful state of mind, and avoid starvation, undue purgation, and deprivation of fluids. The patient who is violently purged, starved for hours before operation, deprived of fluids, and strapped down before anaesthesia has been induced has received a poor preparation for the ordeal he is to undergo. Added to this, struggling under the anaesthetic, rough handling of the tissues, "carnivorous" surgery, inefficient haemostasis, undue exposure, and prolongation of the operation all tend to initiate shock. It is sound practice to give salines by the rectum or subcutaneously before or during the operation.

4. *Treatment of the Established Condition.*—This should be prompt to avoid the damage likely to occur to important organs deprived of sufficient blood supply by a continuance of the low blood pressure of shock. Recognizing that toxic products from injured tissue, especially muscle, can produce shock, all dead and damaged tissue should be removed as early as possible. The main object in the treatment of shock is to restore the blood pressure and thereby ensure an adequate supply of blood to the various organs of the body, especially the bulbar centres. The most successful agents are *warmth and rest*. The administration of stimulants found very little favour in France. Strychnine has long been abandoned in the treatment of shock. Vaso-constrictors have failed to establish a reputation in the treatment of shock. The increase in peripheral resistance produced by their administration may deprive the organs of an adequate supply of blood though the pressure in the main arteries may rise. Glucose solutions are unnecessary, as blood sugar has been found to be above the normal in wound shock.

Treatment directed to increasing the Blood Volume.—Fluids by mouth or rectum may suffice in the milder degrees of shock. Subcutaneous saline has proved disappointing in the graver degrees of shock.

Intravenous Injections.—The following were used:

1. Simple isotonic solutions produces only a temporary rise of pressure. Within half an hour or so the blood pressure falls to or below its original level.
2. Hypertonic saline produces effects hardly less transient than those of isotonic solutions.
3. Calcium salts, when added to solutions for intravenous injections, do not lessen the tendency of the fluid injected to escape.
4. Alkaline injections have been abandoned. Their use was based on the idea that acidosis was a potent factor in shock.
5. Injection of solutions which do not leave the blood vessels. The most suitable solution appears to be Bayliss's gum saline solution. This is a 6 to 7 per cent. solution of gum arabic in 0.9 per cent. sodium chloride. It has the viscosity of blood and the osmotic pressure of its colloids. It does not leave the blood vessels. It has had an extensive trial in France, and the reports are favourable. Bayliss finds that in animals, even when severe haemorrhage has taken place, restoration may be produced by gum saline solution alone. In cases of severe haemorrhage it may be used with blood to economize the latter. It must be used early and before the low blood pressure has had time to cause a loss of excitability of the bulbar centres.

Blood Transfusion.—It was not till 1916 that blood transfusion was used to any great extent by British surgeons in France. The arrival of the American surgeons in 1917 gave a fillip to its use, and in the later stages of the war it had a great vogue.

METHODS.

1. *Direct Method.*—Bazett, Dwyer, and Fullerton used the direct method early in 1916. This method requires more skill than the indirect methods and the quantity of blood transfused is not easily determined.
2. *Indirect Methods.*—(a) Paraffined tubes of 400 to 500 c.c.m. capacity. Those of Vincent and Kimpton were much used in France. The Canadians had used Kimpton's tubes early in the war, and in 1917 the American surgeons popularized tubes of the Vincent pattern. (b) Syringe methods. Record syringes with Lindemann's cannulae were popularized in France by Bruce Robertson and were much used, especially by some of the Canadian surgeons. (c) Citrated blood transfusion. This was used early in the war by Archibald and other surgeons. Later both British and American surgeons used it extensively.

(d) *Preserved blood.* The use of preserved blood corpuscles is based on the work of Rous and Turner, published in 1916. Blood from a donor is received into a mixture of dextrose and citrate of sodium solutions which is isotonic, and the blood corpuscles allowed to settle. In four of five days the blood is available for use. The supernatant fluid is drawn off and the sediment of corpuscles is mixed with a 2.5 per cent. solution of gelatin in normal saline. Gum saline solution may be used instead of the gelatin solution. The method was used in France by Oswald H. Robertson of the United States army and others. Good results were obtained by its use. The preserved blood corpuscles could be kept in good condition for several weeks and could be transported considerable distances without damage to the red cells.

In the later stages of the war tests of compatibility were always carried out. Moss's classification of donors was used. Roger Lee of the United States army showed that it was only necessary to test the serum of the recipient against the cells of the donor. The serum of the donor was diluted in the blood of the recipient, and did not cause agglutination or haemolysis of the latter's corpuscles, which were in addition protected by their own plasma.

Mr. Fullerton concluded by illustrating the use of blood transfusion in civil practice by giving particulars of several cases in which he had employed the method.

Professor Lindsay proposed and Professor Sinclair, C.B., seconded a very warm vote of thanks, which was carried with acclamation. Tea was kindly provided by the president at the close of the meeting.

England and Wales.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

THE National Hospital for the Paralysed and Epileptic in Queen Square, London, commemorated the sixtieth anniversary of its foundation on November 3rd. The proceedings were informal except for a service in the chapel (which was ordained from the first year of the institution to be a feature of its Founders' Day), when an address was delivered by the Rev. J. V. Macmillan, vicar of Kew. Afterwards the visitors, among whom was H.R.H. the Duchess of Albany, made a tour of the wards, which at present contain 170 beds, and of the electrical and physical exercise departments, and the neighbouring schools of massage and electrical treatment, which last are run in conjunction with University College Hospital. The annexe, also in Queen Square, for the reception of cases sent by the Ministry of Pensions, was thrown open to inspection. Here 32 beds are assigned to discharged sailors and soldiers suffering from diseases of the nervous system, and it was stated that with the extension at Clapham Park and the contemplated extension at Maidenhead, both of which also are under the Ministry of Pensions, the hospital is, or will be, responsible for 114 beds for cases of paralysis, shell shock, and neurasthenia among ex-service men.

MEDICAL REUNION DINNER AT LEEDS.

At a reunion dinner held under the auspices of the West Riding Local Medical and Panel Committee, at the Queen's Hotel, Leeds, on October 28th, a silver salver was presented to Dr. R. May, of Wakefield, who was chairman of the committee for more than six years. Dr. G. B. Hillman, of Castleford, presided, and made the presentation, referring to Dr. May's valuable and single-hearted services, and the sacrifice of time, energy, and money which had characterized his work for the committee. Dr. May, in his reply, mentioned that more than 200 out of 700 medical men on the panel of the West Riding had served in the Forces during the war, and there were only three appeals. Sir Berkeley Moynihan, who replied to the toast of the guests, speaking of the part played in the war by the medical profession, said that it had displayed more than any other the national virtues of heroism, steadfastness, and courage. After referring to the functions of medicine in the State, and to the establishment of the Ministry of Health, Sir Berkeley Moynihan enlarged upon the disabilities under which general practitioners as a whole had to carry on their work, and the consequent difficulty they experienced in keeping abreast with the latest knowledge and the newer instruments of precision. Whatever was done in the way of further State control must have as a paramount influence

the strengthening of the hand of the general practitioner, and not the robbing of his individual rights in every one of his patients. He declared that Dr. Addison's intentions were precisely those which members of the profession would desire him to have. The policy of the Ministry of Health, with its Advisory Council, was to find out what the general practitioner wanted, and so far as might be possible to give him a free hand in the developments of the future. His great hope was that the Ministry would manage to impress its own methods upon every department of medical practice throughout the country so that doctors would be able to do work which would satisfy their consciences.

India.

SANITATION IN THE UNITED PROVINCES.

THE death rate of the United Provinces in 1918 was the highest on record—82.37 per 1,000, as against a mean of the previous five years amounting to only 33.15. The deaths in 1918 exceeded the number in 1917 by over 2 millions, and the quinquennial average by over 2½ millions. This unprecedented mortality was due to epidemics of cholera, plague, and relapsing fever in the early part of the year, and, beyond all, to the ravages of the influenza epidemic in the autumn. The high birth rate of 1917, which had been surpassed only four times in the preceding thirty-seven years, was not maintained in 1918. It fell to 39.89 per 1,000, a drop of 6.19 on the figures of 1917 and of 5.16 on the average of the previous five years.

The epidemic of cholera was severe, but the Sanitary Commissioner definitely acquits that great pilgrim gathering, the Kambh Mela at Allahabad, of responsibility for the spread of this particular scourge. The medical and sanitary arrangements at the gathering were very complete and efficient, and the disease was certainly not spread from Allahabad by the home-going pilgrims.

Unfavourable climatic conditions were chiefly responsible for the persistence and spread of the epidemic throughout the year. The intense heat of the hot weather months and the failure of the rains undoubtedly led to deficiency in and contamination of many water supplies. Owing to the shortage of bleaching powder the required quantities could not be supplied, and it would accordingly be unfair to draw conclusive inferences regarding the effect of the "cholera scheme" on the incidence of the disease; and the experiment with bleaching powder will be continued; but systematic rat destruction has never given satisfactory results in the United Provinces, as the great mass of the people dislike it, and are passively hostile to it. The general conclusion drawn from past experience of plague preventive measures in the United Provinces is that evacuation of infected dwellings and inoculation are the only measures of any practical value. The people have begun to understand the benefits of evacuation of infected dwellings, and spontaneously carry it out.

The disposal of dead bodies in the recent influenza epidemic was a difficulty. A large number of corpses were thrown into the Ganges and the Jumna and their tributaries.

It is, the Commissioner remarks, always the custom among the poorer classes of Hindus to throw corpses into the rivers, and in times of epidemic many Hindu castes, who normally dispose of the dead bodies by cremation, also thus dispose of them. The disposal of these bodies last year was a matter of the utmost difficulty, but eventually the rivers were cleared of corpses. The most effective way of dealing with the difficulty was found to be the stretching of nets or the placing of fences at intervals across the river beds, boats manned by Dows being stationed at these obstructions to remove the bodies as they floated down and burn or bury them.

So far as is known no particular harm resulted to the public health from the accumulation of dead bodies in the rivers. Filtration at waterworks in large towns was thoroughly effective, and bacterial counts from every filter made regularly once a week showed that the purity of the water supply was absolutely maintained. No useful action can be taken beyond noting what occurred in the recent epidemic, and urging on district and municipal authorities

the necessity for taking in future epidemics early steps to erect barriers at intervals across the rivers for the more expeditious disposal of corpses, and to provide free fuel, so as, if possible, to induce the people to burn their dead rather than throw them into the rivers. But there is surely also scope here for the beneficent activity of the educated classes. If those with any influence in their respective communities could use that influence to discourage a practice which certainly detracts from the amenities of existence, if it does not actually endanger human life, there would be less cause for complaint than there was last year regarding the unpleasant sights and odours to be met with on the Ganges and Jumna.

LADY HARDINGE MEDICAL COLLEGE AND HOSPITAL FOR WOMEN AND CHILDREN, DELHI.

This institution was projected in 1912 by the then Vicereine, Lady Hardinge, to commemorate the visit of Her Imperial Majesty Queen Mary to India in 1911. The main purpose of the college was to educate Indian women for the practice of medicine through the agency of women instructors. The training of compounders and nurses was to constitute a subsidiary object of the school. A hospital was to be provided for the treatment of women and children and arrangements were to be carried out to enable patients so disposed to "retain their purdah and caste customs." The college was intended to supply the wants of the whole of India. A report, referring specially to the transactions of the year 1918, has recently been issued, and gives evidence of gratifying success. Lady Hardinge's appeal for funds was promptly and generously responded to by native chiefs and others. Government contributed a handsome annual subscription and scholarships were given by the Dufferin Fund, native states, local governments and authorities, and many native ladies and gentlemen of rank and wealth gave help in money, medals, and prizes. The foundation stone was laid on March 17th, 1914, by Lady Hardinge, and after her lamented death in June of that year it was suggested by the Queen Empress that the institution should bear her name. The college was opened in February, 1916, by Lord Hardinge, and the hospital in 1917 by the present Vicereine, Lady Chelmsford. The outbreak of the war and the epidemic of influenza gave rise to serious difficulties as regards building materials, labour, equipment and staff, but these have been overcome, and now, as demonstrated by the excellent full page photographs which illustrate the report, the arrangements for accommodation, instruction and treatment are very complete, and the working of both college and hospital in full swing. The report of the principal, Dr. Kate A. Platt, who, aided and encouraged by the late Director-General of the Indian Medical Service, Sir Pardey Lukis, has borne the burden of the initiation and development of the institution, indicates good and progressive work. The number of students has grown from 34 to 60. They are of all classes, and 42 out of the 60 are of pure Eastern birth. The course of instruction is up to date, and laboratories have been provided for practical work. The college has been affiliated with the Punjab University, and a respectable proportion of the students who attended the examinations passed. The number of indoor patients treated in the hospital in 1918 was 1,238 and of outdoor 6,206; 387 operations were performed, of which 72 were "major," including 15 abdominal sections. Fifty obstetric cases were treated indoors and 12 attended outdoor; of these 43 were normal and 19 abnormal. It is stated that "several very high-caste ladies have come into the hospital for their confinements." Suitable arrangements for the recreation of the students have been made, and games are encouraged and played with spirit. Altogether the future of the Lady Hardinge College is very promising, and the institution, together with the Dufferin Fund, undoubtedly render a much needed and much appreciated service to the native women of the Indian Empire.

AFGHAN FIELD FORCE.

Statistics of the amount of sickness and the number of wounded in the Afghan Field Force from the daily number of hospital evacuations from the front to the base have been issued. Including gunshot wounds, the rates were: British, 2.8; Indian troops and followers, 1.3.

Battle Casualties, May to August 9th.

	Killed.	Wounded.	Total.
British officers	19	46	65
British other ranks	32	155	187
British total	51	199	250
Indian officers	11	16	27
Indian other ranks	210	634	844
Indian total	221	650	871
Total British and Indians ...	272	849	1,121

Five officers, 13 other ranks British, and 44 other ranks Indian died of wounds. Total British and Indian, 62.

The only occasion on which a high number of wounded—322—had to be dealt with in a few days was between May 15th and 17th in the Khyber line.

Correspondence.

THE R.A.M.C. AS A CAREER.

SIR,—I read the address of Sir John Goodwin on the future of the R.A.M.C. with much pleasure, and, having spent thirty years of my life in the army, strongly advise young medical men to think of it as a career. No doubt it has some disadvantages, but I know the advantages far outweigh all the disadvantages. A man can always find plenty of congenial work if he wishes, and there is ample scope for any specialism.

I particularly advise young men to join now, as the future prospects of the I.M.S., in common with all the European services in India, are so uncertain, that nobody who has been in India of recent years would think of advising any young fellow to think of a career in India if he has an opening elsewhere.—I am, etc.,

October 28th.

LATE R.A.M.C.

SIR,—In your leader on the new R.A.M.C. rates of pay and pension, have not certain factors been rather overlooked? A R.A.M.C. officer rises in rank in peace time much more rapidly than does a combatant, and the ratio of lieutenant-colonelcies to lieutenantancies among combatants is much lower than the corresponding ratio in the R.A.M.C. It is true of the two brothers you ensample—the elder (or medical) would on entry draw only 1s. a day more than his brother, but in three years' time he would be a captain and his brother still only a lieutenant. Likewise the chances of the latter ever becoming a lieutenant-colonel would be small as compared with those of his medical brother. Consequently, even if the medical brother were exceptionally unlucky in the matter of drawing extra (specialist and charge) pay, his average pay throughout his whole service would be very much better, and his chances of retiring on £600 per annum at age 49 would be very much greater. Furthermore, while the combatant brother on retirement at 49 (the age you happen to mention) would be "down and out," the medical brother could make money by continuing to practise his profession. Finally, let me add a third brother to your family. He, too, is "medical," but goes in for general practice or public health work. What are his chances of being able at age 49 to buy himself an annuity equal in value to his brother's pension? To do so he must be able to save out of his annual income between £9,000 and £10,000. I submit these observations because it is a rule of advocacy to recognize the weak not less than the strong points of a case. Furthermore, though it is right to endeavour to get all we can, disguising the financial attractions of the service is fair neither to that service nor to yourself (and the Association) who have helped so materially to make them what they are.—I am, etc.,

October 25th.

THE WATCHER.

THE ORGANIZATION OF THE PROFESSION.

SIR,—The address of Dr. Le Fleming to the Dorset and West Hants Branch of the British Medical Association, published in the SUPPLEMENT to the JOURNAL of October 25th, 1919, on the subject of the "Organization of the profession," shows at the same time so keen a grasp of the situation and so great a restraint in expression and

desire above all to secure unity in the profession, that it is bound to exert no small influence on those who are sufficiently interested in the subject to read the SUPPLEMENT. At most of his conclusions it is impossible to cavil, but in two particulars, as it appears to me, he falls into error, and these two premisses are the foundation for his deduction that a strike of panel practitioners is not practicable. Were this indeed so, the efforts both of those of us who support the trade union idea, and those who believe in the present methods of the Insurance Acts Committee, would surely be doomed to failure.

The first point refers to the absence of strike pay, the second to the vested interests created by the Insurance Acts.

In regard to the first point, he asks, "What chance of success would a labour strike have if you not only abolished peaceful picketing, but offered the blacklegs a share in the wages of those who went on strike, and not only during the strike but permanently, and at the same time suspended all strike pay?" Contrariwise, I would say, "How certain of success would a labour strike be if the strikers could continue to perform their ordinary work, and to receive therefore rates of remuneration possibly higher than those for which they were striking?"

Dr. Le Fleming has surely forgotten that during a doctors' strike the patients must receive attention, for which they would have to pay ordinary private fees. With wages as they are there can be little doubt that the vast majority could afford to do this at a pinch; the pinch one would expect to provide the necessary incentive to the Government department to enter negotiations with a reasonable prospect of success—for the doctors.

The second point refers to the vested interests of panel practitioners, of which those who struck would risk the loss. But is not this a fallacy? Every striker risks the loss of his vested interest in that there is the chance, if the strike be hopelessly broken, of his losing his job; but the risk of the medical practitioner cannot compare with the risk of the wage-earning manual worker. The latter stands to lose everything—his work, perhaps a pension, perhaps his house. Naturally, therefore, no labour strike is ever settled (as distinct from broken) without a reinstatement clause. The same would apply to a doctors' strike, but with a distinction that even if the strike be broken no medical practitioner has lost his all. There is his private practice, augmented by such of his patients (one hopes not a few) who would prefer to stick to him rather than go elsewhere; and, besides, he can resume his panel work with a fair prospect of recovering the majority of those patients who have meanwhile been transferred. Risk there must be, but surely our risks are infinitesimal compared to those run by a labouring man.

The parliamentary influence recommended by Dr. Le Fleming would be a useful asset, and one hopes it may be secured; but such influence can only be effective if it has at the back of it the possibility of a strike in the last resort.—I am, etc.,

Heworth, York, Oct. 27th.

J. C. LYTH.

CREMATION AND MEDICAL FEES.

SIR,—Ignore entirely the advantages of cremation from the hygienic point of view, and regard only the matter of death certification from the financial standpoint.

We find in greater London alone that the deaths exceed 70,000 annually. If all these were cremated the signing of Certificates B and C at even a small fee would enrich the profession by a considerable sum, with next to no charges in working expenses. Assuming, for argument, than an equal charge were made for B and C, even the low figure of 5s. each would net the profession in greater London £35,000 per annum. But I consider this scale to be inadequate, so that whatever sum is adopted the subsequent gain to the doctors would be a justly earned remuneration for the services they render to the relatives of the deceased and to the State.

The State has always "sponged" upon the medical profession and has continued so to do with regard to death certification, in spite of the strong case made out and put before the various committees which have investigated the questions of death certification, coroners, and so on; yet the State throws the onus of protecting the living upon the doctor and upon him alone; yet the method whereby he is supposed to do this is rudimentary and grossly

inadequate, and, even so, this grave duty the doctor is asked—nay, compelled—to do for absolutely no remuneration.

By the methods enforced by the Cremation Acts, not only is much more adequate protection afforded the living, but the State acknowledges that the grave duty thus placed in the hands of the only person competent by training and force of circumstances to fulfil the duty, entitles the doctor to a substantial fee in remuneration of his services.

Thus only under the Cremation Act is justice done to the deceased, his relatives, the public in general, and the doctor.—I am, etc.,

London, W., Nov. 4th.

PETER DANIEL.

SIR,—In Kensington a divisional surgeon usually charges two guineas for a cremation certificate, but readily accepts one guinea, or even half a guinea, if requested to do so by the family doctor, an eventuality which does not often occur, as cremation seems to be regarded as a sort of luxury to be indulged in only by wealthy persons.—I am, etc.,

London, W., Nov. 2nd.

S. D. CLIPPINGDALE.

SCHOOL MYOPIA.

SIR,—Your article on the above subject and subsequent correspondence are very interesting, particularly to those like myself who are engaged in the work of school medical inspection.

There appears to be a diversity of opinion as to the bearing of near eye-work on the causation of myopia in school children, but every one is agreed that structurally it is due to an abnormal elongation of the antero-posterior optic axis. There is also an agreement that it is found in some school children and not in others who are equally subjected to the same kind of school work. This would naturally lead one to the conclusion that the hereditary principle plays a major part in its etiology.

It has been found, however, that in the progressive myopia of school children, a temporary cessation of near work coupled with Swedish drill exercises brings about a marked improvement in the condition, and on resuming near work, not only has the improvement been lost, but there has again been a tendency for the myopia to progress. This leads one to the view that near work at least aggravates the condition.

If one takes such pathological conditions as varicose veins or pulmonary tuberculosis, there is a unanimous belief that they are not congenital, but that there is a hereditary predisposition, and that the environment and subsequent life-history are exciting factors, such as occupations involving long standing in the former case, and living under unhealthy and ill-ventilated conditions in the latter. Neither would develop if the exciting factors were withheld.

In my view, myopia is somewhat similar—namely, there is in the main a hereditary predisposition, and it is often seen in several members of a family, but it is aggravated by near work, and I am therefore reluctantly forced to disagree with the last sentence in your interesting article, "that myopia is neither originated nor increased by near work."—I am, etc.,

J. N. MEADE, L.R.C.P., L.R.C.S., D.P.H.,

School Medical Officer, Ayrshire Education
Authority.

October 26th.

SIR,—In your leading article of September 27th you state "myopia is neither originated nor increased by near work." This conclusion has been adversely criticized. May I offer some observations? Does near work—reading, writing, and such like—produce myopia? In other words, does the converging and lowering of the visual axes, and especially the lateral movements employed in reading and writing, inflict muscular pressure on the eyeballs, increase the intraocular pressure, and so increase the length of the eyeballs? If so, why are the usual manifestations of increased intraocular pressure absent? A convergent squint does not produce myopia. A divergent myopic eye often becomes more myopic. Mechanical influences may aggravate cases of advanced or high-grade myopia, but it is extremely improbable that they can produce the so-called school, or low-grade, myopia.

A small percentage of cases is pathogenic—that is, due

to keratitis.¹ These usually have corneal opacities, and I leave them out of consideration.

As myopia manifests its presence before schooldays, during schooldays, and after schooldays, it should be studied as a whole. During adolescence all the features and organs grow in varying degrees in conformity with the impulses of heredity, and so do the eyeballs. The near work of school years is an industry that is contemporaneous with the manifestations of heredity. There is no such thing as school myopia *per se*.

Some years ago I made an investigation into the etiology of myopia.² It extended over two years, and involved the examination of 1,500 consecutive cases with their family histories. Among other things, it was found that myopia was transmitted by the father to two daughters for one son, and by the mother also to two daughters for one son. The 1,500 cases were of all ages; 992 were females and 508 were males—near enough to establish the two to one standard involved in the above observations. What I venture to call the law of transmission of myopia can only be obtained when large numbers are dealt with. It is a manifestation of sex limitation, and seems to be applicable to all cases.

Another interesting fact emerged from the analysis of the 1,500 cases—namely, only 14.5 per cent. were near workers—typists, clerks, etc.

Classes for half-blind scholars may be desirable, but no ophthalmic surgeon is warranted in advising an education authority that school work produces myopia.—I am, etc.,

Glasgow, Nov. 1st.

JAS. ALEXANDER WILSON.

THE SAFETY OF ETHYL CHLORIDE.

SIR,—Sir Charters Symonds, in his note (p. 558) on the removal of tonsils and adenoids, says that he does not consider ethyl chloride safe.

As anaesthetist to the Birmingham Ear and Throat Hospital and to the throat clinic of the Birmingham Education Committee I have used this anaesthetic very extensively. I have records of nearly 11,000 cases from 1907 to 1916, and since then have used it in over 2,000 cases a year—a total of nearly 20,000 without a death and with the rarest occasion for anxiety. It has disadvantages, but where a large number of cases have to be dealt with these are, in my opinion, outweighed by the advantages of speed and safety, provided always that the operator is an expert.

The idea that ethyl chloride is a dangerous anaesthetic seems widespread, but I have never heard of a death from it or seen a report of one, and I feel convinced that it is quite as safe as ether.—I am, etc.,

Birmingham, Nov. 2nd.

C. B. DALE.

HYPERNEPHROMA OF THE OVARY.

SIR,—It would not be right to allow Dr. Knyvett Gordon's memorandum with the above title (BRITISH MEDICAL JOURNAL, October 18th, 1919, p. 495) to pass without comment. The lutein cell and the adrenal-rest cell are so very similar that no diagnosis of the latter can be considered complete which does not exclude the former. I recall seeing a very ordinary lutein formation exhibited some years ago as an adrenal rest of the ovary. The naked-eye appearances, too, as given by Dr. Gordon, do not preclude a lutein origin.

I feel inclined to regret that the description of these specimens, possibly so very interesting, was not expanded to include the grounds on which a lutein origin was negated.—I am, etc.,

Liverpool, Oct. 29th.

H. LEITH MURRAY.

THE INQUIRIES OF LIFE INSURANCE OFFICES.

SIR,—I read with very great interest Dr. Charles Rigby's letter in your issue of October 18th in which he questions the propriety of a medical attendant answering the customary questions addressed to him by a life assurance office in connexion with a proposal. In England the proposal form does not generally contain, as I believe it does in France, any specific authority for the medical attendant to reply to inquiries made by the assuring office, but surely such consent is tacitly implied by the proposer

¹ Wilson: Keratitis as a Cause of Myopia, *The Ophthalmoscope*, 1912.

² Wilson: The Factor of Heredity in Myopia, *BRITISH MEDICAL JOURNAL*, August 29th, 1914.

furnishing the office with the names of his medical attendants, just as he does those of two private friends as "referees."

In fairness to the other policy holders of a life office it is essential to ascertain with the utmost precision the facts relating to the proposer's health and prospects of longevity, so that the risk may be properly assessed. The schedule of questions sent to the medical attendant is, in the majority of instances, supplemental to the actual examination, which is usually made by a physician chosen by the office. So far from damaging the prospects of the proposer as regards assurance, the evidence of the medical attendant is helpful and illuminating; while the applicant's replies to the questions in the proposal form respecting any past illnesses would certainly be detrimental to him, when the office came to assess the risk. If the medical attendant refused to furnish a report.

With regard to the question of fees, I notice that Dr. Rigby states that he has always been offered half a guinea for such reports. I can only say that so far as the society which I represent is concerned, the medical attendant is invariably paid one guinea for his report in the case of any adult proposer. This procedure has been followed here for at least sixty years, and a guinea is a very usual fee among life offices, except where the smallness of the premium renders such a payment prohibitive.

The real difficulty at the heart of this question is that the doctors themselves do not receive uniform payment for professional services. So far as life offices are concerned, it is a truism to say that any grudging of medical fees is recognized as false economy.—I am, etc.,

London, S.W., Oct. 27th.

A. D. BESANT.

PSYCHIATRIC APPOINTMENTS AND WAR SERVICE.

SIR,—A notice appeared in *The Times* advertising for a junior assistant physician at Bethlem Royal Hospital. This is equivalent to a hospital staff appointment, and the position has in the past been held by men whose names were already known as authoritative alienists. Although membership of the Royal College of Physicians is desired the age limit is placed at 30, which even excludes from application a number of those whose experience is limited to house appointments and five years' service in the army. As the Government allow war service to be deducted from age in applying for permanent civil appointments, it is surely not unreasonable that the governors of this hospital should adopt a similar course or raise the age limit by five years.

Some of us are only too well aware that we have spent a number of most valuable years in the army, and it seems unnecessary that by advertisements such as this these feelings should be painfully accentuated.—I am, etc.,

X.

THE GENERAL MEDICAL COUNCIL ELECTION.

SIR,—I shall be glad if you will give publicity in your *JOURNAL* to the following explanation of the anomalous position in which I am placed with regard to the forthcoming General Medical Council election.

A short time ago, and in good faith, I promised support to the four British Medical Association candidates.

At the time I had no knowledge that the Medico-Political Union contemplated any action in the election, but was informed at a later date that four Medico-Political Union candidates would be nominated—and at the last Council meeting I was unanimously voted to be one of the four.

Under these circumstances I feel it incumbent upon me as a member of the Council to support my union and accede to their decision, and consequently cancel my previous action.

Needless to say, I regret having got myself into so awkward a predicament and trust to the generosity of your readers to accept this explanation of the incident.—I am, etc.,

Southampton, Nov. 2nd.

ERNEST H. STANCOMB.

A BUREAU of narcotic research has been established in New York. Its purpose is to study the abuse of narcotics, to collect all data, remedial and legislative, bearing on the problem, and to provide machinery whereby such information can be distributed through proper channels.

Obituary.

FRANK FOWLER, M.D.,

Bournemouth.

We much regret to announce that Dr. Frank Fowler of Bournemouth died from pneumonia on October 26th, at the age of 54. He was born at Twickenham, and was educated at Merchant Taylors' School and St. Thomas's Hospital, taking the diplomas of L.S.A. in 1839, and M.R.C.S. and L.R.C.P. in 1890, and graduating M.D. Durh. in 1905. He was medical officer in charge of the electrical department of the Royal Victoria and West Hants Hospitals, Bournemouth, and since 1912 was Secretary and Treasurer of the Dorset and West Hants Branch of the British Medical Association, of which he was a vice-president. He was formerly the representative of that branch and of the South-Western Branch on the Central Council of the Association. He was a past president of the Bournemouth Medical Society. Dr. Fowler was a profound student of x-ray methods and most competent in their application. His loss is felt by a wide circle of medical friends. There are, indeed, few practitioners in the district who did not at some time or another seek his help and guidance. In the summer of 1914 he read before the Southampton Medical Society a paper on the place of x rays in the treatment of cancer, which was published in these columns.

Dr. Fowler was an exceedingly well read man, and his sunny character and great versatility made him a most pleasant companion. He was laid to rest in the Bournemouth Cemetery on October 29th, many of his colleagues attending the funeral. The service was held at St. Peter's Church.

A colleague writes: "When Fowler read a paper to the Branch or the Medical Society, what struck one most was his ability and his detachment. If he introduced a subject such as 'radiation after operation for cancer,' he did not seem so very anxious to convert us to his views. He did not rail at the apathy of general practitioners or surgeons. He did not try to controvert, or go one better than, Professor X.; he simply told us that such a one had suggested that form of treatment. He gave his own reasons for trying it. He described the method and dosage he employed. He narrated some cases, broadly, and without prejudice, for or against. Then he gave a very honest and impartial summing up, leaving the matter before his audience to adopt or reject, but pretty certainly to think over. Fowler was a very fair mechanic. He made a good deal of the apparatus he used. This craftsmanship made him a good motorist. He could generally take down a part of a car and fit a renewal; and he contributed to the attendance at Branch meetings by driving two or three of his neighbours into the pleasant country towns of Dorset. He was secretary of the Branch for some years, and was always keen, business like, and cheerful. We shall miss his skill, honesty, sympathy, modesty, and cheerfulness for many a long day."

JAMES CRAWFORD RENTON, M.D., F.R.F.P.S.G.,

Late Surgeon and Lecturer in Clinical Surgery, Western Infirmary, Glasgow, and Surgeon to the Glasgow Eye Infirmary.

JAMES CRAWFORD RENTON, who died in Edinburgh on October 20th, was a son of the manse, and was born in 1851. He studied in Edinburgh, and became M.B. in 1872, proceeding to the degree of M.D. in 1882. In 1874 he settled in Glasgow, and there entered upon general practice; having a special interest in surgery, he was shortly afterwards elected to the staff of the Eye Infirmary. In 1876 his opportunities in the field of his inclination were increased by his appointment to the out-patient department of the Western Infirmary, and upon its staff he became assistant surgeon, afterwards full surgeon and lecturer on clinical surgery, a position he held for seventeen years. When war was declared in 1914 and military hospitals were instituted, he was posted with the rank of Lieutenant-Colonel to the 4th Scottish General Hospital at Stobhill, near Glasgow. In all these important and responsible positions he did good work, the results of which and the experience gained he communicated freely to the profession, for he contributed to many medical periodicals, and he has left behind him many valuable and interesting records.

For many years, and up to the date of his becoming surgeon to the Western Infirmary, he conducted a large general practice in the west end of Glasgow, and gained by so doing what is, maybe, the best foundation in experience for the operating surgeon—that is, the early and intimate knowledge of the emergency cases which, for success in their treatment, demand the most prompt interference; thus it is that we find his most valuable teaching in connexion with such acute abdominal conditions as intestinal obstruction, intussusception, appendicitis, rupture of the hollow viscera, and twisted ovarian pedicle. He possessed in a high degree the clear perception and power of deduction which constitute the basis of correct diagnosis, and he had the clinical instinct which is the outcome of intimate and careful observation. He was a good operator, careful, deliberate, and courageous, for no accident upset him, and no difficult proceeding daunted him, for he had the knowledge and experience which casts out fear. The surgeon that could write as he did that excision of the Gasserian ganglion was "exceedingly safe and easy of performance" was gifted with manipulative skill and spirit of a high order. He was an excellent and popular teacher and a kindly and conscientious examiner.

One of his hospital colleagues who knew him well writes thus: "Renton" was certainly one of the kindest men I ever met; his consideration for the poor, the distressed, and those who had fallen by the way was constant, and no one has any idea how much gratuitous work he did." This from his colleague, while the writer, as his oldest friend, finds in the words of Carlyle, written of John Stirling, a summation worthy of Renton's character: "True above all things we call him; a man of perfect veracity in thought, word, and deed—there was no guile or baseness anywhere found in him—transparent as crystal; he could not hide anything sinister if such there had been to hide: A more perfectly transparent soul I have never known."

Universities and Colleges.

UNIVERSITY OF EDINBURGH.

GENERAL COUNCIL.

At the statutory half-yearly meeting of the General Council of the University of Edinburgh, which was held on October 31st, several of the matters of business had a bearing upon medicine. Principal Sir Alfred Ewing, the Vice-Chancellor, presided, but during the election of Assessors to the University Court he vacated the chair. On the motion of Professor William Russell, M.D., seconded by Mr. David Wallace, M.B., C.M., Dr. R. McKenzie Johnston was nominated for another term of office, and Dr. J. W. Ballantyne, seconded by Dr. Edwin Bramwell, nominated Sir George Andreas Berry, M.D., LL.D., also for another term of four years' service as Assessor. There being no other nominations these gentlemen were elected Assessors to represent the Council on the University Court. The appointments to the staff of the university formed a long list; the medical ones included the names of three professors (Sir Harold Stiles, Professor Francis Darby Boyd, and Professor Jonathan Campbell Meakins) and of some fourteen or fifteen lecturers in experimental physiology, histology, anatomy, practical pathology, morbid anatomy, clinical surgery, clinical medicine, etc.

Matriculations.

Interesting statistics were given of the matriculation returns as at the seventh day of the session as compared with those in 1913-14 and 1915-16:

	1913-14 (Pre-War Year).	1915-16 (Lowest War Year).	1919-20.	Increase on 1913-14 (Pre- War Year).
Arts	1,005	626	1,170	165
Science	325	113	861	536
Divinity	19	14	44	25
Law	124	17	196	72
Medicine	844	464	1,451	607
Music	15	6	10	-5
Total	2,332	1,240	3,732	1,400

From these it appeared that the most notable increases had been in the Faculties of Medicine and Science, and Dr. Alexander Morgan, the chairman of the Business Committee, stated that the problem of accommodation had thus been raised in a marked form. The total matriculations on the seventh day of the session were over 3,700, and he calculated that before the album was closed they would be more nearly 4,700. Already there were 600 more students in medicine and 500 more in

science than in the last pre-war year (1913-14). The University Court were looking at the need for the provision of additional buildings in a very serious way.

Medical Preliminary Examination.

The Council then discussed the proposal to raise the standard of the Medical Preliminary Examination to that of the Arts or Science one which had come to it in a communication from the University Court of date July 24th. Mr. Robert Dickson, on behalf of the subcommittee and of the Business Committee, moved approval of the proposal. A letter was read from Dr. John Haddon of Denholm, Hawick, suggesting that the Council should take a step further and recommend that the Medical Preliminary Examination should be the M.A. degree; thus for Medicine as for Divinity there would be the assurance that a high type of candidate would be secured. The Rev. James Davidson agreed with Dr. Haddon's aspiration, but thought the Council should be content in the meantime with the step in the right direction which the University Court was proposing to take. The Council then unanimously approved the proposal of the Scottish Universities Entrance Board that the standard of the Medical Preliminary Examination should be the same as that of the Arts or Science Preliminary Examination.

Grants from Town and County Councils.

A long discussion followed on the question whether attempts should be made towards applying for grants for university developments from town and county councils in Scotland, as was being done in England. In the end a motion by Dr. W. A. Tait, recommending the University Court to lay the matter before the town council of Edinburgh, was adopted.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

An ordinary Comitia of the Royal College of Physicians of London was held on October 30th, the President, Sir Norman Moore, Bt., in the chair.

It was reported that Mr. Jack William Jeffery had been appointed the twenty-seventh Jenks scholar.

The following candidates who had passed the required examinations were admitted Members:

Wm. John Adie, M.B. Edin., Phoebe Mildred Bigland, M.D. Liverp., Frederick George Chandler, M.D. Camb., L.R.C.P., Major Greenwood, L.R.C.P., Isaac Jones, M.D. Melb., Wm. Bernard Knobel, M.D. Camb., L.R.C.P., Fred. Donald Herbert Blois Lawton, M.D. Melb., John Ernest Albert Lynham, M.D. Belfast, Basil Thomas Parsons-Smith, M.D. Lond., L.R.C.P., Wilfred John Pearson, M.B. Oxon., Egerton Llewellyn Pope, M.D. McGill, L.R.C.P., Robert Maurice Ranking, M.D. Camb., L.R.C.P., Frank Arthur Roper, M.B. Camb., L.R.C.P., George Charles Willcocks, M.B. Sydney.

Licences to practise physic were granted to 79 candidates.

On the recommendation of the Committee of Management, the Salford Royal Hospital was added to the list of general hospitals recognized by the Examining Board in England.

Sir James Galloway was reappointed a member of the Committee of Management.

SOCIETY OF APOTHECARIES OF LONDON.

The following candidates have been approved in the subjects indicated:

SURGERY.—†R. A. D. Bernhardt, *O. H. Brown, *†C. E. G. Busbridge, *N. D. Dunscombe, A. Furniss, *†J. Kershaw, *†J. L. Walker.

MEDICINE.—*†C. E. G. Busbridge, *†de M. C. Cottens, *†J. A. Hart, *†G. K. Reeves, †E. W. Terry.

FORENSIC MEDICINE.—C. E. G. Busbridge, de M. C. Cottens.

MIDWIFERY.—M. L. Barst, J. E. Barrie, C. E. G. Busbridge, de M. C. Cottens, G. W. Robinson, F. Smith, A. Weinger.

* Section I. † Section II.

The diploma of the Society has been granted to Messrs. C. E. G. Busbridge, J. Kershaw, and J. L. Walker.

The Services.

TERRITORIAL DECORATION.

THE Territorial Decoration has been conferred upon the following officers:

R.A.M.C.T.F.—Colonel (temporary Major-General) Sir Robert Jones, K.B.E., C.B. Lieut.-Colonels: Richard R. Sleman, V.D., Sir William Thorburn, K.B.E., C.B., C.M.G., Cyril H. Hawkins, C.B.E., D.S.O., (Brevet Colonel) Wilfred Howorth, Major (acting Lieut.-Colonel) Thomas Kay, D.S.O. Majors: John G. Martin, Edward C. Stack, William M. Mackay, John B. McBride, Matthew B. Ray, D.S.O., Robert Lindsay, William C. Murray.

R.A.M.C.T.F.R.—Majors Donald G. Campbell and Peter M. Dewar, attached to R.A.M.O.

AUXILIARY ROYAL ARMY MEDICAL CORPS FUNDS.

At the usual quarterly committee meeting on October 31st five grants were made to cases in the Benevolent Branch for Officers, amounting to £350, and sixty-two grants in the Relief Branch for the rank and file, amounting to £2,007 5s.

These funds are for the relief of widows and orphans of commissioned officers and non-commissioned officer and men of

the rank and file of the Royal Army Medical Corps, Special Reserve, Territorial Force and New Armies, and also for the relief of the children of those who have been so severely damaged in the present war that they need help for the education of children. Requests for relief should be addressed to the honorary secretary, at the offices of the funds at 11, Chandos Street, Cavendish Square, W.1.

Lieut.-Colonel Edgar Francis Eardley Baines, I.M.S., has been awarded the Distinguished Service Order for distinguished service in connexion with the defence of Kut-al-Amarah.

Medical News.

SIR SHIRLEY F. MURPHY, K.B.E., F.R.C.S., has been appointed by the Minister of Labour to be deputy chairman of the trade board for the fur trade in Great Britain.

THE centenary dinner of the Hunterian Society will be held on Wednesday, November 12th, at the Trocadero Restaurant, at 7.30 o'clock, with Dr. W. Langdon Brown, the President, in the chair. Ladies will be invited. A special centenary award of the society's medal will be made to Mr. John Adams, F.R.C.S., whose work at the Thavies Inn maternity venereal centre has often been referred to in these columns.

THE members of the London and Country Rambling Society visited the Apothecaries' Hall on November 1st and were shown round by the librarian, who pointed out the many features of interest in the building, erected just after the great fire, and displayed a number of old books, including Gerard's *Herbal* (1633).

AT a complimentary dinner given on October 28th, by the "African World" War Comforts Service to the patients of the South African Military Hospital, Richmond Park, a silver tobacco jar and mirror were presented to the commanding officer, Lieut.-Colonel Sir Edward Thornton, K.B.E., S.A.M.C., and Lady Thornton.

AT a meeting of the Royal Aeronautical Society at the Royal Society of Arts, Adelphi, on Wednesday next, Dr. C. A. Swan will give a lecture on some physical and psychical effects of altitude. The chair will be taken by Sir Arbuthnot Lane at 8 p.m.

A DISCUSSION on the reconstruction of the public health services will be opened by Dr. E. W. Hope, M.O.H. Liverpool, at a meeting of the Royal Sanitary Institute at Bootle, on Friday, November 14th, at 7 p.m.

MR. J. D. ROCKEFELLER has made a further gift of £2,000,000 to the Rockefeller Institute for Medical Research, which he founded in 1901. The institute has already received from its founder successive gifts amounting to £5,500,000 and real estate valued at £500,000. The latest gift will enable research to be conducted in new fields in biology, chemistry, and physics, as well as in medicine itself, and practical problems relating to disease in men and animals to be studied.

THE National University of Ireland has conferred the degree of Master of Science *honoris causa* upon Captain C. J. K. O'Malley, M.C., R.A.M.C.

MR. CAIRNS FORSYTH, Surgeon to the French Hospital, London, has been awarded the Cross of Chevalier of the Legion of Honour for services rendered to France as *médecin chef* of a mobile English hospital attached to the armies of the Argonne and Verdun during the war.

MR. P. A. MOLTEÑO and his wife have offered the sum of £30,000 to the University of Cambridge, for the erection and maintenance of a suitable building, to be used as an institute for parasitological research in connexion with the department of Professor G. H. F. Nuttall, M.D., F.R.S., provided that the University finds the site.

THE Secretary of King's College Hospital Medical School, Denmark Hill, London, S.E.5, will be glad to hear from former students living within easy distance of London, who qualified in 1912 or later, and who would like to play in the hospital Rugby football team.

AFTER a hearing of eight days before Mr. Justice Shearman and a special jury the consolidated suits, *Everitt v. Everitt—Everitt v. Everitt and Whatley*, terminated on October 31st. Mrs. Everitt sued for a judicial separation from Major Sydney George Everitt, of Knowle Hall, Knowle, on the ground of his alleged cruelty, and Major Everitt petitioned for a divorce on the ground of Mrs. Everitt's alleged adultery with Dr. James Lawson Whatley. The jury found that Major Everitt had not been guilty of legal cruelty, and that neither Mrs. Everitt nor Dr. Whatley had been guilty of adultery. Upon these

findings Mr. Justice Shearman dismissed Mrs. Everitt's petition, and made the usual order for payment of the wife's costs. Major Everitt's petition for divorce was dismissed with costs, and the judge refused the application of Major Everitt's counsel that Dr. Whatley should be deprived of his costs, but directed that the usual order as to payment of costs by the unsuccessful party should be made. Messrs. Hempsons, acting on behalf of the Medical Defence Union, were solicitors for the co-respondent. The case is a striking illustration both of the perils of medical practice and of the value of a powerful defence organization.

IN the recent borough council elections Dr. Henry Dutch was elected for the City of Westminster, and at Burnley Dr. W. F. Munro and Dr. A. C. Glashan headed the poll for their respective wards. No doubt many other medical practitioners have been returned throughout the country.

IN the Edinburgh Sheriff's Court on October 28th Louis Parker Wade was charged that, not being a qualified practitioner, he in his premises 7 and 8, St. Andrew's Street, Edinburgh, did for reward treat a man for venereal disease, give him advice in connexion with the treatment of the disease, and prescribe a remedy. A plea of "not guilty" was tendered, but the charge was found proved after evidence had been given. The sheriff-substitute said that this was the first case which had come before the court and imposed a modified penalty of £25.

AT their last meeting the guardians of the Brentford (Middlesex) Union adopted recommendations which should have the effect of raising the medical and nursing services of their separate infirmary well above the Poor Law level. These recommendations provide for a children's and maternity block, the setting up of an x-ray department, the appointment of visiting specialists, and such an increase in the nursing staff as will permit of the introduction of a forty-eight-hour week. The specialists to be appointed at once will include a physician, a surgeon, a gynaecologist, and a radiographer; other appointments will be made hereafter. It is intended that regular weekly visits shall be paid, so that all new admissions may be seen, and the guardians have agreed to meet travelling expenses at the rate of a guinea a visit. In respect of variety and character, the admissions to the infirmary, which has 412 beds, have in recent years tended to approximate to the general hospital type, and in the new developments the guardians have been guided by hospital practice.

Nature, which has so firmly established its position as the leading journal of general science in this country, celebrates its jubilee this week by the issue of a special number. The first issue appeared on November 4th, 1869, under the editorship of Sir Norman Lockyer, who is now retiring. His successor, Sir R. A. Gregory, has for the jubilee number obtained the assistance of many leading men in this country, and some abroad. Among his contributors are Sir J. J. Thomson (President of the Royal Society), Sir Ernest Rutherford, Professor Soddy, Sir Clifford Allbutt, Professor Bateson, and many others.

Letters, Notes, and Answers.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Aitology*, Westrand, London: telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY and BUSINESS MANAGER (Advertisements, etc.), *Articulate*, Westrand, London: telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Melissera*, Westrand, London: telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

INCOME TAX.

"H. B." explains that the Inspector of taxes refuses to treat as exempt under Section 17 (2) of the Finance Act, 1919, a gratuity received during 1918-19 as M.O. to a V.A.D. hospital under the British Red Cross Society.

"*." If the payment in question is a "demobilization payment" the claim would be well founded. Our correspondent does not state whether there are any peculiar features in the case. We suggest that he refer the inspector to the section in question and to the cases of "*Stockham v. Simpson*" and "*Curtis v. Holdsworth*" (not yet reported), under which it has

been held that civilian doctors are entitled to "service" rates of tax for military hospital duty. The two benefits—lower rate of tax and exemption from tax on gratuity—would seem to be inseparable.

"ASSAM" is spending six months' holiday in this country. What is his position as regards (a) monthly remittances from the proceeds of his foreign practice; (b) interest on £1,000 Funding Loan.

*(a) Assuming that "Assam" has not been maintaining a residence in this country, he is not liable to income tax unless his stay here extends to six months. If that should happen he becomes liable as a "resident" to payment of tax on the amount of the remittances from the date of arrival. (b) Exemption should be claimed on a form to be obtained from the Repayments Branch, Australia House, London, W.C.2. It should be explained that the claim will be based on the fact that "Assam" is ordinarily resident outside the United Kingdom.

LETTERS, NOTES, ETC.

ANAESTHESIA IN TONSIL AND ADENOID OPERATIONS.

DR. H. L. HAMILTON (Southampton) writes: Ethyl chloride has been used as a general anaesthetic at the Southampton School Clinic for a number of years and has proved satisfactory. A Norman Porritt inhaler is used, with face-pieces of two different sizes. One minim of ethyl chloride for each year of the child's age is sprayed on the absorbent wad placed in the inhaler. About ten minutes is allowed for each operation, from the time the child comes into the operating room to the time it leaves. After the operation the child remains in a warm waiting room for about an hour and is then taken home by the parent or guardian. The advantage of ethyl chloride is its rapidity of action. It has been found safe, the recovery is rapid, and there do not appear to be any bad after-effects. Older children take longer to "go under" than the younger, and appear to be generally more resistant to the anaesthetic.

SCHOOLBOYS' WEIGHT.

DR. W. ATTERBURY (North Finchley) writes: I have been in correspondence with Dr. Hamilton of Parkstone, who says he was completely surprised to hear that at his boy's school it was regarded as the rule rather than the exception for a boy to lose weight during a school term, and he regards (rightly, in my opinion) this statement as most dangerous. If that is true, what would happen to these boys if there were no holidays? Would they continue to lose weight until they broke down or died? And how is it that a boy who has lost 2 lb. or 3 lb. during the school term will gain 5 lb. to 7 lb. during the holidays, as my boy did? The school medical officers say it is the strenuous life which causes loss of weight, but in my experience boys take far more exercise during the holidays, as they have the whole day for their amusements and play games or cycle from morning till bedtime. The school hours are short and the work, as a rule, not too exacting, so it cannot be the mental effort which pulls the boys down. I am convinced, and so, I think, is Dr. Hamilton, that the food is insufficient in quantity or quality, and the dietary should be thoroughly investigated. I regard the statistics of Dr. Lord (Colwyn Bay), which show that more than 40 per cent. of the boys lost an average of 2½ lb. during the healthiest term of the year, as highly unsatisfactory. The proof that many boys are insufficiently fed at school is in their loss of weight. One of the causes, I believe, is the staleness of some of the boys, who will, for example, not eat meat if too fat or underdone. In these cases obviously some supervision is required (by the matron), especially in the case of the younger boys.

PARTURITION AT ADVANCED AGE.

DR. WM. HOWIE (Waterloo, Liverpool) writes: It may be of interest to record a confinement—a midwife's case—to which I was called a few months ago. The patient told me her age was 52 years, and she certainly looked it. Labour was rather slow, and I delivered her, with forceps, of a healthy-looking child. She had had a large family—nine or ten, I think—most of them still alive.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

"Ex-R.M.O." writes: Many weeks ago the British Medical Association approached the Pensions Ministry with several recommendations, one of which was that the replacement of civilian medical referees by demobilized R.A.M.C. officers should be undertaken forthwith. It is eleven months since the armistice, and the civilian general practitioners have been allowed to hold the refereeships during the optimum time for fees—that is, the period of demobilization. Is it not time that the Pensions Ministry acted in this matter? In common with many other officers demobilized during the present year, I should be glad to know what further overtures the Association has made in the meantime or intends to make to secure the carrying into effect of the earlier resolutions. In Scotland the posts have been advertised, but up to the present no such move has been made in England. Why not?

TEMPORARY COMMISSIONS IN THE R.A.M.C.

"INDEX" writes from the Army of the Rhine: In a recent editorial you mention that the response of medical officers to the new terms of service has not been satisfactory. What is wrong is that there is not enough work during the last three months. I have never had more than half an hour's work a day, and I have spoken to many others in the same position; and leave is held up because we "can't be spared."

I know many who would stay if some opportunity for doing a fair day's medical work were given them, but they feel that the excellent remuneration offered them does not compensate for the time wasted.

"CAPTAIN, M.C.," writes: I have read the frequent appeals in the JOURNAL (backed by official weight) asking for new medical officers for the army. It is little wonder the response is so poor, and personally I would not persuade any doctor I knew to join the forces. On the contrary, I would urge them strongly to steer clear of it, as promises made are as valueless as they have been all along. Personally I joined up in 1914, and was demobilized at the end of June, 1919, having been invalided for dysentery. Up to date and after nearly four months of waiting and letter writing, I can get neither my gratuity nor an answer to my letters. Do you wonder at recruits being chary of such a service?

ORGANOTHERAPY.

DR. A. MACBETH ELLIOT (London) writes: The exhibition of internal secretions is a subject that has occupied the minds of many members of the medical profession with ever-increasing interest for several years. But it is being exploited in too many directions, and without sufficient scientific grounds or clinical facts for the promises held out. We read that it will make your hair grow, or if you are an unfortunate female with too much hair on your upper lip, some other secretion will remove this growth. We are apt to move too rapidly, and to those interested in endocrinology let me recommend Gley's little book on this subject. It will act as the necessary brake to much of the literature on organotherapy.

There are many preparations of internal secretions on the market. It is questionable if any two are alike. And herein lies the secret of many failures, and of the variety of opinions that are being expressed. What A. attains with B.'s preparation, C. fails to obtain with D.'s. There is still an immense amount to be learnt about the actions of these internal secretions, even in such an important matter as the proper time for administering them. W. H. Howell has shown that a second injection of pituitary extract administered soon after the first has not the same effect on the arterial pressure as the first. This fact has been proved by other observers. Gley asks: "Have we here to deal with another action of the same extract?" Why? May we not be dealing with a negative phase? If we wait long enough before repeating the second injection we do get the same effect on pressure as with the first. And also with corpora lutea, we do get the fall of arterial pressure by waiting a sufficient time before our second dose. Many of the failures or unpleasant results with organotherapy are in part due to too frequent administration or to too large doses. But most of the failures are due to the fact that we are exhibiting inert material. Gley has shown that organic extracts, even though specially prepared and preserved, quickly lose their toxicity. That organotherapy has a valuable future is more than evident. But already, to judge from the literature from America, we are promising too much. Not even three swallows make a summer; nor do three or even four similar cases cured by this or that extract warrant some of the conclusions that are being published.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 48, 51, 52, 53, 54, and 55 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 49, 50, and 51.

THE following appointments of certifying factory surgeons are vacant: Eastbourne (Sussex), Fleetwood (Lancs), Princes Risborough (Bucks.).

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *postes restantes* letters addressed either in initials or numbers.

ON CARDINAL PRINCIPLES IN CARDIOLOGICAL PRACTICE.

A BRITISH MEDICAL ASSOCIATION LECTURE DELIVERED TO THE SHEFFIELD DIVISION, OCTOBER 24TH, 1919.

BY

THOMAS LEWIS, M.D., F.R.C.P., F.R.S.

HONORARY CONSULTING PHYSICIAN TO THE MINISTRY OF PENSIONS;
LATE CONSULTING PHYSICIAN TO THE EASTERN COMMAND;
PHYSICIAN ON THE STAFF OF THE MEDICAL RESEARCH
COMMITTEE; PHYSICIAN TO UNIVERSITY COLLEGE
HOSPITAL, LONDON.

IN working for the Army Medical Services during the years of the war, and in working for the Ministry of Pensions since its inception, it has been my good fortune to have been more closely associated with my brethren of the medical profession in daily work than at any previous period. My duties have brought me exceptional chances of seeing the routine work of many medical men while they have been dealing with patients classed as cardiovascular. For a long while I have been aware that a large proportion of practitioners in this country experience a feeling of insecurity when they handle cardiac cases, and, during the period to which I have referred, it has been a special purpose of mine to understand why these maladies should be regarded as perplexing.

For very many years after Laënnec's discoveries the sounds of the heart and the murmurs produced at the several orifices have received extraordinarily minute attention. They have been divided and subdivided; they have been written of from this standpoint and that, though chiefly from the standpoint of the cause of the sounds. More recently, methods of percussion have undergone a similar and intensive study; more recently, and in great array, special instruments have been devised, including sphygmographs, polygraphs, electrocardiographs, sphygmomanometers, special stethoscopes, and from those who have employed these there has streamed forth a prodigious amount of writing. During the last few decades the eager search for the new has piled up the mass of detailed knowledge; the pile has been growing in geometric progression. The day has long gone during which any general student of medicine could keep pace with contemporary writings. He is now faced with an extraordinary medley of statements, simple, simply abstruse or technically abstruse, of which it is no longer possible for any one individual to test or judge the accuracy. We know that some vital facts have come to light; we suspect or know that a considerable proportion of the claims set forth will not be justified by time.

Side by side with this progress new terms have been introduced, old terms have changed in meaning; throughout hypothesis has run riot. A very great deal of the work, a very great deal of the thinking, has, from the standpoint of the exact sciences, been conspicuously slipshod. The over conscientious and passive student quickly acquires a clogged mind. To judge the true from the false, the large from the small, tries the faculties of those who select and pursue a limited sphere of study; it is impossible to those who have no intimate knowledge of the subjects discussed. The effort to keep pace has led many, unwisely, to acquire a smattering of things beyond their province—to use terms the meanings of which they have never been able fully to grasp. Time for tests and for reflection is shortened or is gone; the mind is confused by an ever increasing flood of new ideas and suggestions. In this maelstrom general principles have striven to survive; some have succeeded, some have been raised to undue prominence, others have sunk from sight; in the raging of troubled waters all have been, and still are, in peril. There arrives a time when an attempt must be made to sift from the wreckage—a time when it is expedient to assess values.

Medical men are hampered in their work to-day by the complexity of ideas, by a consequent absence of system, by the use of terms which being undefined convey inexact or different meanings; by a failure to judge what is within or without their province and power.

In discussing problems of diagnosis and of prognosis certain questions recur. Of the many prevalent ideas some appear to me no longer acceptable or serviceable; a few of the more prominent of these I propose to discuss,

using them as illustrations of my general theme. But the main object of my lecture is to point to what I regard as essentials, not in research work upon heart disease, but in the routine handling of unselected patients. To simplify my subject I shall deal with chronic maladies only. I shall also confine myself to common maladies, for if we can devise a system of managing such, for the moment satisfactorily, we shall have accomplished the larger part of our task.

THE DIVISION OF HEART AFFECTIONS INTO ORGANIC AND FUNCTIONAL GROUPS.

An idea is conveyed to us, we receive and adopt it, and it grows. Sometimes it grows unreasonably, sometimes beyond recognition. But it has seized our minds, we encourage it, and in the end, if we allow it to do so, it masters us. The old idea of dividing heart affections into organic and functional is an instance of this kind; it has grown out of all reason. This preliminary classification no longer occupies the place proper to classification; a good classification is a servant. It has been so fostered that it has come to occupy a predominant place; latterly its hold upon the professional mind has seemed almost tyrannical. When the war came it entrenched itself behind earthworks long prepared for it, those preposterous terms, "V.D.H." and "D.A.H." into which all patients with real and most of those with imagined affections of the heart were in the end strictly divided. Since the war the idea still remains firmly rooted, for with its great reserves it won the day; and with the fruits of that easy victory the medical services of the Ministry of Pensions are now ceaselessly struggling.

As it stands, the idea with its growth of associations is mischievous. It has become so by the inexactitude of its terminology. The most frequent question which I am to-day asked in regard to cardiac cases is this: "Is there or is there not organic disease?" The answer must be "Yes" or "No." It is a question which, personally, I studiously refuse to answer; it is a duty to refuse, and the duty, I think, of every medical man. The manner of the answer is dictated; "organic" disease is a disease in which there is structural change; the remaining cases are "functional."

The issue seems clear: Is there or is there not structural change? But the issue is not clear, nor is it useful; on the contrary it is mischievous. We must inquire the purpose of the question, the manner in which the answer is to be used. If, in diagnosis, the cases are divided into two groups—"organic" and "functional"—according as there is or is not structural change, this division and its meaning will not be respected; for while I am asked whether structural change exists or does not, the answer is read as "serious" or "trivial." It never has been shown, nor will be shown, that all instances of structural change in the heart are serious; it never has been shown, nor will be shown, that affections in which the heart is suspect, but which are accompanied by no evidence of structural disease, are of trivial import. Yet such are the almost universal and instant assumptions as the affirmative or negative answer is given. The question is a concealed trap of our own setting. The answering of it is a prevalent cause of needless wrangling and heart searchings; the answer, when it comes, is a fertile source of misunderstanding and injustice. If there is no structural disease of the heart, it is usually true that the disturbance of the heart is not serious; but that does not mean that the malady from which the patient suffers is not serious, it may be extremely serious. The heart is a very susceptible index of health, and maladies which in the past have been regarded widely as trivial (functional) though primarily cardiac, are almost certainly not primary cardiac maladies, but as a rule disturbances of the heart secondary to disease elsewhere.

A sound knowledge of those affections which perturb without injuring the heart is essential in dealing with patients supposedly suffering from cardiac maladies. Three-fourths at least of the cases classed as cardiac at the present time are not primarily cardiac at all. Because the heart's action is disturbed in these patients, and because the most obvious symptoms and signs seem

* I am aware of my own definition of this term; and yet it is frequently, if not always, used in a term is open to two definitions.

point to the heart, that organ gathers to itself almost exclusive attention. In such cases it is not infrequent that clear signs of disease in some other organ of the body are entirely overlooked; in such cases it is frequent that less conspicuous signs of disturbance elsewhere are passed by. It is a sound rule in dealing with a supposed cardiac malady to search the whole body minutely for sources of infection when signs of such heart mischief as is known to upset the circulation are not forthcoming. The question, "Is there or is there not organic disease?" is not a necessary question. A man who is wise cares little whether he has structural change in his heart or not; the State, if it were wise, would be equally indifferent. I place this statement in a context from which it is not to be removed. A wise man cares whether he is fit or not for work and if his prospect of health is good or bad; these are questions distinct from that under criticism. Here is an extreme illustration: A man has a scar in the skin of his leg and presents that leg for examination. Who cares that the scar constitutes structural disease? A man may have a similar scar on his pericardium or on the edge of his mitral valve, a healed scar which never has and never will cause him inconvenience, providing no medical man discovers in him the signs of it and misinterprets its significance. When we see the scar on the leg we want to know how the leg works; when we find the signs over the heart which may mean a scar in the heart, it behoves us to inquire how the heart does its work; that is the important consideration.

It will be perceived that I have in mind the systolic murmur and its significance. A systolic murmur over the precordium tells little or nothing of a man's capacity for work or the advisability of his engaging in it; it tells us little or nothing of the man's prospect in life. I do not propose to enter here in detail upon the evidence for this statement, for time is limited and I have somewhat recently written fully upon the subject.¹ But I suggest to those who still experience misgivings in the presence of systolic murmurs that they should examine a series of healthy young men, not, as is the custom, under conditions of rest, but after a few minutes of fairly strenuous exercise; they will discover that the healthy heart is not always so noiseless in its movements as has been imagined, and will, I think, be persuaded that systolic murmurs, soft, harsh or conducted, are natural phenomena when the organ is accelerated by exercise. They will find in these young men precisely the signs which have been used widely during the period of the war as evidences of "organic" disease of the heart, which have led to so many improper rejections of recruits, to so many improper discharges from the service, and now form the basis of many unnecessary or unnecessarily high pensions.

The other side of the picture shows men who are genuinely distressed when they exert themselves in any way, but who, presenting no cardiac signs other than those of a supposed "functional" condition, are dealt with casually or cavalierly. Thousands of these men were unwisely accepted as recruits; thousands more acquired their symptoms during service; and to the last group now belong many who, being regarded as "functional," suffer the innuendoes which that term frequently conveys, and receive as a consequence unjustly small pensions.

DISEASE OF THE VALVES.

Pick up an old, or modern, textbook of general medicine and you will find diseases of the heart classified. With one of the chief groupings I have dealt. A subgroup of structural disease is that of valvular disease, and this subgroup receives an emphasis to which it is by no means entitled. At the present day, if one asks graduating students directly, if one inquires less directly of medical practitioners, what varieties of chronic heart disease are recognized, the enumeration will almost always begin in the same way. There are four conditions which stand out in their minds; they are "aortic incompetence," "aortic stenosis," "mitral incompetence," and "mitral stenosis." As often as not the list begins there and ends there. Ask what cases lie in the wards of a hospital and, if there are serious heart cases, these are the conditions which will be most frequently named. Now these conditions are not diseases at all; they are descriptions of the events at two of the valvular orifices of the heart; they are dependent, if you will, on disease or imperfection of these valves. To the names as such there is no objection; the objection is

to the manner in which they are used. The terms are regarded individually as sufficiently descriptive of many a patient's case; actually each is wholly insufficient from this point of view; *a fortiori*, the term mitral incompetence is insufficient. If I state that I have under my care a patient who suffers from mitral incompetence, you cannot conceive whether the patient is engaged suitably in his everyday occupation or whether he lies moribund; you cannot tell whether his prospect in life is good or is bad; you cannot judge whether he requires treatment or not. The term, used in a diagnostic sense, conveys little or nothing of the facts of the case. "Mitral incompetence" constitutes a diagnosis by fashion only. Precisely the same remarks apply, though somewhat less forcibly, to the remaining terms.

A classification of heart disease of this kind has but a minor value for purposes of description, or for guiding prognosis or therapy. When medical men are so imbued with the supposed significance of valvular disease as to regard its diagnosis as the chief end point of the examination, then valvular disease occupies a grossly exaggerated position in their thoughts. Such, unhappily, it possesses in the minds of many, I would say of the majority of medical men to-day. How often is astonishment expressed when a patient comes for examination (or to autopsy) with dropsy, or a greatly enlarged heart, and no disease of the cardiac valves. The reiteration of such surprise is in itself remarkable. Grave disease of the heart, in the absence of disease of the valves, is extremely common in the elderly; it is also common enough in the young.

There is another curious way in which the emphasis of valvular affections leads to grave misconception. I have said that the named conditions of the valves are not diseases at all; yet they are commonly regarded as such by those who fail to reflect. Many intelligent students and graduated men are so misled by these terms that they come to regard the presence of two such conditions as constituting a double disease. The terms "double aortic," "double mitral" are sufficiently commonplace to bear witness to this tendency. Nevertheless, there is in these patients but one lesion of the valves. Loose speech of this kind consorts with loose thinking; the use of the adjective "double" conjures up a grave prognosis. Heedlessly, a man who presents aortic stenosis, and its almost invariably associated regurgitation, is regarded as in much more serious case than is he who presents regurgitation alone. I know of no evidence that this is so. The presence or absence of stenosis in a patient who shows regurgitation is certainly not a prime factor in arriving at the prognosis, it is at the most a very subsidiary point. The misconception is even greater when the mitral valve is in question. Often, after a diagnosis of stenosis of the mitral valve has been made, the doctor's expression grows ominous as he detects a systolic bruit. In point of fact, the detection of this second murmur adds nothing whatsoever to the seriousness of the prognosis; that it does is nevertheless a very common belief. It is a belief due to lack of reflection; there are good grounds for the view that stenosis of this valve is always accompanied by regurgitation. Might we not even argue in general that the greater the stenosis the less in all likelihood is the regurgitation? But it serves no good purpose to argue such matters, the practical test of those who watch the progress of these cases shows that the point is entirely subsidiary; so, incidentally, is a systolic apical murmur in a patient who has disease of the aortic valves. Detect mitral stenosis and you need waste no time inquiring into the question of incompetence; there are far more serious matters to weigh. At the present time cardiac prognosis, as it is widely practised, is perilously near to counting murmurs and assessing the gravity of the outlook in proportion.

Both for prognostic and therapeutic purposes there is value in ascertaining lesions of the aortic and mitral valve. Speaking quite broadly, there are two conditions of these valves which it is imperative should be recognized whenever it is possible; they are mitral stenosis and aortic incompetence. To recognize stenosis of the aortic valves when regurgitation is known to exist, to recognize incompetence of the mitral valve when mitral stenosis is known to exist does not advance us materially. To diagnose aortic stenosis in the absence of signs of incompetence is outside the province of general practice; it is for everyone a hazardous undertaking. To recognize that mitral incompetence is present, while mitral stenosis is

not, is a task fraught with not inconsiderable difficulties; furthermore, when it is done, it gives little or no aid when we come to the prophecy.

In brief, in dealing with chronic heart affections, there are but two conditions of the aortic and mitral valves, there are but two common conditions of any heart valves, which will repay a general physician expenditure of much time and thought; these are incompetence of the aortic valves and stenosis of the mitral valves. Both these conditions may usually be diagnosed with confidence, for it is their habit to present signs of an unequivocal nature. That is of high importance; a step taken with certainty is of far greater value than one taken even a little less confidently. A prognosis is too important a thing to mould on anything but a secure basis.

The comparative importance of those diseases of the aortic and mitral is to be emphasized from a second standpoint—the diagnosis carries conviction of an inflammatory or degenerative lesion of the heart. When we know that a patient has a regurgitant current of blood from aorta to ventricle, or when we know that the current is obstructed between left auricle and ventricle, we have learned something of extra burdens which the heart muscle must bear in its work. Nevertheless, that knowledge is outweighed by a further conclusion which may be formed for practical use. It is that the heart as a whole has been exposed to and has probably suffered damage; it is safe to assume, for practical purposes that when these valvular lesions exist the muscle of the ventricles is in greater or lesser degree faulty. There are some exceptions to this rule, but these are comparatively rare; one of the surest ways of diagnosing a faulty myocardium is to diagnose it in those who present mitral stenosis or aortic disease, and to diagnose it purely on the knowledge that these valve lesions exist; especially does this statement apply to aortic disease. It is my confident belief that, had systolic murmurs and modifications of the heart sounds never been discovered, the practice of the profession would have stood on a much higher plane to-day than it actually does. (I do not say that it *must* have stood higher, but that it *would* have stood higher.) As these signs are used by medical men in general at the present time, they are productive of infinitely more harm than good. They are not useless signs, but they are signs frequently misinterpreted; their value is limited. When a police officer on his night round spies an open window, it behoves him to inquire; he is unwise to conclude there is a thief in the house. These cardiac signs are hints to us, useful guides to possible local mischief; that is their proper status in an examination, but it is not the status which they have.

Prognosis in cardiac affections, as it is generally practised to-day, is pitifully inaccurate; because that fact is generally recognized it is equally diffident; what is not understood is that far greater accuracy is easily within reach. Accuracy, or, more strictly speaking, comparative accuracy, is regarded as unattainable; that is chiefly so because the broad principles and the outstanding facts have been lost to vision in a cloud of relative trivialities. Methods of examination, some useful enough in their proper sphere, many more of very dubious value, have been introduced. The subject as it is written and expounded has grown inordinately in complexity and the landmarks have vanished. Because a physician has possessed himself of an electrocardiograph, a polygraph, an x-ray machine, a blood pressure instrument, or some ingenious form of stethoscope, it does not at all follow that he has become competent to judge a patient's condition; not infrequently the very reverse is the case, for more often than not the limitations of these devices are far from being comprehended. In this opinion I am absolutely at one with the recent pronouncement of Sir James Mackenzie. The signs which foretell favourably or the reverse can be elicited at the bedside by simple means, and the devices to which I refer had far better be left untouched than handled, as they often are, improperly.

The remedy, so it seems to me, which alone remains to the general practitioner to-day is simple but drastic. It is to fasten on to certain cardinal points and seriously to study their values to take those cardinal points as a basis of everyday work and for the moment to discard what remains. It is to adopt a simple and broad scheme and to obtain a full knowledge of that scheme by applying it to patients; to disdain more comprehensive and flattering plans, of which at the most a mere smattering can be

acquired; to work with those instruments which are always at hand and familiar; to become expert in the use of simple means, rather than indifferent manipulators or puzzled worshippers of instruments wholly or partially beyond general comprehension; to start from an assured basis and to build from that slowly and steadily.

EXAMINATION OF CHRONIC CARDIAC AFFECTIONS.

I come to what I hold to be the cardinal points in the daily examination of chronic affections of the heart, and place first and foremost:

1. *The Symptoms and Signs of Cardiac Failure.*

These are subdivided into two categories:

(a) *The Early Evidences of an Impaired Circulation.*—These are constituted by the symptoms which produce distress on exercise, and the three chief are fatigue leading up to exhaustion, breathlessness, and pain. In all patients, whether they are the subjects of actual or supposed cardiac disease, to know the tolerance of physical work is more than half the battle in arriving at a correct estimate of the case. A knowledge of the body's reaction to exercise in health, in ill health, and in the chief forms of heart disease is paramount. I do not mean the rise and fall of pulse rate or of blood pressure; they are of service; but those who measure the reaction in this way almost completely fail to appreciate the essential, which is to know the amount of work which must be undertaken to bring forth distress. This method is of such importance that I shall emphasize it by the following considered statements.

No man is competent to manage affections of the heart who has not a thorough grasp of this method, a method which is within the easy reach of every medical practitioner. He may have an exhaustive knowledge of electrocardiography, polygraphy, blood pressure, percussion, the stethoscope, and what not; as a practitioner he is better without that knowledge if the first knowledge is lacking.

Standing by itself the method is of more consequence than the remaining cardinal points which I shall name. That is so because no patient who has a normal exercise tolerance has grave heart disease, and because the gravity of the disease in a series of real heart cases is proportioned to the degree of distress produced by a given amount of work more nearly than it is to any other observable phenomenon within our knowledge.

(b) *The Signs of Cardiac Failure of the Congestive Type.*—These require no description beyond the statement that I refer to cyanosis and to engorgement as observed in the veins of the neck and in the liver. The exercise tolerance is never normal or near normal when these signs are present; they are late signs. When signs of failure appear the disease is in an advanced state.

2. *The Signs of Cardiac Enlargement and its Degree, without Attempt to Differentiate Dilatation and Hypertrophy.*

Time will not permit me to expand on this subject. I would say only that, in respect of these, palpation ranks before inspection and percussion, and that the chief sign is the position and extent of the maximal thrust and the structures it involves.

3. *Signs of Valvular Disease.*

Cardinally these comprise (a) signs of aortic regurgitation, which are obtained reliably as often at the pulse as at the base of the heart, and (b) signs of mitral stenosis, of which but two are valuable—namely, a diastolic thrill in the apical region and a diastolic rumble of low pitch, audible over the maximal thrust, and best heard, often only heard, in the recumbent posture after the action of the heart has been accelerated by exercise.

4. *The Presence or Absence of Fibrillation of the Auricles.*

If the heart is beating irregularly it should be ascertained whether fibrillation of the auricle is present or not. To obtain the last knowledge a few simple tests nearly always suffice.

- If there is constant quickening of the pulse during deep inspiration, fibrillation is not present.
- If the heart beats at a rate of 120 or over,* or can be induced by any means to beat at such rates, remains irregular, fibrillation is almost certain.

* The faster the rate attained the more certain the diagnosis.

These tests are not exhaustive, but they are sufficiently so for general practical purposes. The remaining disorders of cardiac rhythm, either on account of their comparative rarity or because their significance in treatment is far smaller, cannot be regarded as cardinal.

5. Infection.

No examination of the patient is complete until the presence or absence of infection has been fully considered. The chief signs are:

- (a) *Pallor*, especially when accompanied by sallowness or duskeness of the facies. This sign is of particular value in cases of aortic disease. Pallor in these cases is of ill omen.*
- (b) *Palpable enlargement of the spleen*, which is not a reliable sign of engorgement of the viscera, but is usually a sign of active infection of the valves in cardiac cases.
- (c) The presence of small petechial hæmorrhages in the conjunctivæ, buccal mucous membranes, or in the skin around the base of the neck and shoulders. They are far more frequent than has been suspected until recently, and should be searched for repeatedly in all sallow cardiac patients.
- (d) *Clubbing of the fingers*, which when slight, is, so I am inclined to think, more frequently accompanied by infective endocarditis than by venous engorgement.
- (e) The presence of *fever*, constantly or only from time to time.
- (f) A *pulse rate* constantly over 90 or 100 while the patient rests and the pulse is regular.
- (g) *Gradual but steady loss of weight*.

Signs (a) to (c) are more especially signs of infective endocarditis, a condition which in its subacute and chronic forms is much more widespread than is commonly believed, and terminates the lives of a goodly percentage of all cases presenting aortic regurgitation or mitral stenosis; signs (f) and (g) are also yielded by intoxications.

6. When Evidence of Disease is found, its Etiology is to be taken into Consideration.

It may be of rheumatic, syphilitic, or other infective origin, or it may result from senile changes. The etiology will control prognosis and treatment in no inconsiderable measure.

The Cardinal Points.

These are to my mind the cardinal points, for, in my experience, the great majority of all cases of chronic affections of the heart may be summed up efficiently and sufficiently in terms of them. In routine work instrumental examinations prove useful in checking or revising the bedside tests, but are essential only in a very small percentage of the patients; they prove in practice to be subsidiary methods of examination.

The value of the cardinal points is, so I think, scarcely to be overestimated. I have said that no patient possessing a normal capacity for exercise has grave heart disease; if his tolerance is normal, but he presents cardiac enlargement—considerable cardiac enlargement is always accompanied by a reduced tolerance of exercise—mitral stenosis, or aortic disease, there need be no immediate anxiety. In very rare cases fibrillation of the auricles or a congenital malformation may be seen in patients in whom exercise provokes no undue distress; in these cases also the prognosis is favourable. If a patient presents none of the symptoms or signs falling under the first three headings—that is to say, if he takes exercise without undue discomfort, has no cardiac enlargement, no aortic disease and no mitral stenosis—and his doctor tells him on that basis that his heart is sound, this opinion will be justified in all but very exceptional instances, and the chief exceptions are the rare cases of fibrillation of the auricles and of congenital heart mischief to which I have referred already, and rare instances of paroxysmal tachycardia; even in such cases the blunder would be a minor one—it would be a blunder of less consequence than gravely to warn a patient solely on the basis of a systolic murmur.

Briefly, the first three cardinal points are those which command consideration first; the last three assume cardinal importance in cases in which, on the basis of one or more of the first three points, disabling heart disease is already diagnosed.

Exercise Tolerance.

I come to an important consideration—namely, the value of exercise tolerance in the diagnosis of a deficient

or overburdened myocardium. It is not a subject I propose to discuss here on a theoretical or detailed basis; my object is to formulate the following everyday rules which in my experience are at present sound:

(a) Where there is definite enlargement, or aortic disease, or mitral stenosis, or fibrillation of the auricles, then the safe course for doctor and patient is to attribute any undue distress on exercise to a cardiac lesion.

(b) In young subjects, if there is no such immediate evidence of heart disease as I have named in the last paragraph, then a deficient exercise tolerance should rarely, if ever, be ascribed primarily to the heart. To this class belong almost all patients who are supposed to be suffering from "heart strain," and a large number of patients incipiently infected with tuberculosis or chronically infected by pyogenic organisms.

(c) In elderly subjects, if there is no sign of structural disease, but a poor tolerance of exercise, the heart cannot be declared free of disease; on the contrary, the heart should be regarded as the probable seat of mischief. It is of course to this class that many cases of grave angina pectoris belong; but it also comprises many myocardial cases, in which the chief symptom is not pain but breathlessness or undue fatigue.

SOME GENERAL PRINCIPLES IN TREATMENT.

Regulation of the Heart's Work and Rest.

The cardinal principle in treating chronic heart disease is suitably to regulate the physical strains thrown upon the organ. When structural disease exists it is for the most part incurable, and as such it should be recognized. When, as an accompaniment of the minor forms of disease—for example, suspected scarring of the mitral valves—the capacity to exercise is unimpaired, there is no need to curtail the patient's energies. But if structural disease is judged to have limited the heart's reserve power, because effort is followed by undue breathlessness, by undue fatigue or by pain, then the patient's activities, in work and in play, should be controlled; they should be so regulated that such symptoms of distress are not provoked.

It is not often good practice to limit the activities because some physical sign other than a sign of distress is discovered.

It is not good practice willingly to allow a cardiac patient to call forth his whole reserve, and consequently to suffer pain, undue breathlessness, or fatigue. Those acts, strenuous or leisurely, which bring distress are to be prohibited; in one case strenuous games or heavy labour, in another case quick movement on stairs or road, in another the act of standing, in another unnecessary movement in bed, is to be forbidden, according as much or little exertion provokes symptoms. A cardiac patient is unfit to be on his feet if, when up, he becomes breathless, experiences cardiac pain, or quickly tires. The presence of symptoms in a cardiac patient when he stands at rest or moves leisurely is the first and chief indication of bed treatment. Cardiac patients who are breathless while in bed are usually very gravely ill, and in these it is necessary to try with all our means to reduce the work they do by waiting on them hand and foot. A very important consideration in such patients is to induce long hours of sleep, for during sleep the greatest measure of rest is obtained.

There are three indications which call for the bed treatment of cardiac cases. The first and most important I have indicated; it is that distress is caused by the act of rising to the feet or by walking leisurely. The second is that active infection is thought or known to be present. The third is that drastic treatment with a drug of the digitalis group is required.

The chief value of digitalis lies in its power to control the ventricular rate when fibrillation of the auricles has come. In most patients in whom this disorder of the heart is discovered the ventricles beat rapidly, at rates of 120, 140, 160, and even more per minute. It is this rapid action which fatigues the heart, and digitalis, by lessening the rate, lessens the fatigue. The normal heart rate, while the body is at rest—to take approximate and convenient numbers—is 60 beats to the minute. Each ventricular cycle lasts one second; of this, one-third is occupied by systole, two-thirds by the resting period of diastole. The heart works one shift and sleeps for two. But if the rate is 120 beats to the minute, then each cycle lasts half a second; systole lasts a quarter of a second and so does diastole. Work and rest alternate in equal shifts. As the rate of beating rises, so is systole increased relatively a

* And is not due, as is commonly thought, to the actual regurgitation.

the expense of diastole. Very important is it, therefore, to reduce the heart rate where this is excessive. A chief cause of rapid heart action where heart failure threatens or has come is fibrillation of the auricles, and it is in this condition that digitalis acts so beneficially; it reduces and holds the rate within normal bounds.

The reduction of accelerated ventricular rate is the only important action of the drug upon the human heart of which we have knowledge. There are few, if any, instances of which we know with certainty in which digitalis acts beneficially, except cases of accelerated action; there are few instances of acceleration in which the drug produces unquestionable benefit apart from those provoked by fibrillation of the auricles. The principle of digitalis therapy—and when I speak of digitalis I include the allied drugs, strophanthus and squills—is that, administered to suitable cases, the heart, by means of it, obtains rest. The giving of this drug to unselected cardiac cases is much to be deplored. Those who regard digitalis as a cardiac stimulant mistake its character; its chief action is to rest the heart. *To the heart foxglove is not tonic, but powerfully hypnotic.* It extends the diastoles of the heart; it extends the period of sleep.

There is a direction in which medical men are much hampered in dealing with chronic heart disease. It is in trying to order the future lives of working class men to suit the heart's power of reserve. Many cardiac patients leave our hospital wards after a short period of rest, a period during which there has been much improvement of the heart's capacity for work. Yet these patients are but too often totally unfit to take up again those daily tasks in and by which they have already suffered. To tell a working class man that his former work suits him ill, to tell him that he must find new work of lighter grade, is good enough advice; but how often is it within the man's power to act on that advice? how often is it within the doctor's power to see that his advice is followed? We greatly need in this country a system by which disabled workers are placed and cared for in suitable employment. Cardiac cases are for the most part conspicuously willing workers, frequently too willing; there are many men doing heavy work in this country to-day, and at the same time surely, but may be slowly, dying of heart disease. It is a shameful thing that these unfortunates are put by hard necessity to tasks far beyond their endurance.

Work is good for cardiac cases, as it is good for men in whom the voluntary muscles of the body are ill conditioned, but only such work as falls well within the bounds of the heart's reserve is beneficial. It is a most important matter, and a matter very little attended to to-day in hospital practice, to test a man's capacity for work before he goes to his home; it is not sufficiently understood that discharge from hospital is read by many as a sanction to return to the old work.

Infection.

As infection is the chief cause of heart disease, in the stage of its inception, and in the stages of its advance, so, when we come to treatment, to stay the advance by removing the cause is a chief principle. The treatment of early syphilitic lesions of the heart by appropriate measures is a field as yet little explored, but one which is in promise fertile. To treat drastically local invasions by pyogenic organisms is clearly indicated, and of proved benefit in many cases. Even more important is it to guard against infection. Cardiac cases run very serious risks, risks which but too often cannot be avoided, by contact with those suffering from some infection of the respiratory tract. Nevertheless, much harm may be avoided by timely warnings of dangers, met in the family circle, in crowded buildings and in ill ventilated rooms, by the prescription of the open air régime, and, in bad cases, by rigorous separation from febrile cases.

REFERENCE.

1 *The Soldier's Heart and the Effort Syndrome*. London: Shaw and Sons. 1918.

THE forty-third annual report of the Boston Medical Library recently issued states that on December 31st, 1918, there were 98,097 volumes catalogued and on the shelves, besides several thousands of others not yet catalogued. A number of current German periodicals were received after an interval of nearly three years. The number of foreign books received was small.

REMARKS ON THE FREQUENCY, DIAGNOSIS, AND TREATMENT OF CHRONIC PANCREATITIS.

By JAMES H. NICOLL, M.B.,

HONORARY LIQUOR-COLONEL, R.A.M.C.; CONSULTING SURGEON, BELLARHOUTON ORTHOPAEDIC HOSPITAL; RECENTLY SURGEON, WESTERN INFIRMARY, GLASGOW.

For some time it has been generally accepted that in many cases of disease in the abdomen a pathological tripod stands in that cavity with feet implanted in the appendix, biliary apparatus, and gastro-duodenal tract. The coexistence, or the sequential development in any order, of appendicitis, cholecystitis or cholangitis, and gastric or duodenal ulcer, is familiar to clinicians and surgeons. Opinions vary as to whether one or other of the three stands in causal relation to the others, or all three derive from a common and central source in the form of catarrhal inflammation of stomach and bowel. Much work has been done, and remains to be done, on the question.

Meantime, as the records of cases accumulate, it is becoming evident that the tripod is being gradually replaced in the problem by a quadrupedal figure. Pancreatitis is claiming increasing attention.

In the issue of the *JOURNAL* for July 12th last Sir Berkeley Moynihan publishes a very instructive lecture on "Disappointments after Gastro-enterostomy," in which he quotes me on one of them. In my experience chronic or subacute pancreatitis ranks next in order to chronic appendicitis and disorders of the biliary apparatus on the list of affections which mimic gastric and duodenal ulcer, and for which gastro-enterostomy is erroneously performed, with resulting disappointment.

Clinically pancreatitis occurs in two widely differing types—acute and chronic—which often prove equally elusive of diagnosis.

Acute pancreatitis (necrotic, hæmorrhagic, and suppurative) is rarely suspected until discovered at an autopsy or in course of a laparotomy undertaken for a supposed perforated gastric or duodenal ulcer, a fulminating appendicitis, or other similar acute abdominal affection calling for operation. The case commonly goes on to the operating table a surgical puzzle and leaves the hospital by way of the mortuary a surgical disaster, though prompt operative treatment is claiming an increasing number of successful results.

Chronic pancreatitis (catarrhal and, later, cirrhotic) may, especially in its later phases, present suggestive diagnostic signs. Many cases, however, more especially of the earlier and slighter types, present no such signs, and the disease closely mimics other abdominal disorders, particularly duodenal and gastric dyspepsia and ulceration and affections of the biliary apparatus, for which supposed diseases the appropriate operative measures are apt to be erroneously carried out. The error in the case of gastro-enterostomy is unfortunate, for, while gastro-enterostomy may do the patient no harm in some cases, in others it aggravates his distress. In either event the operation results in disappointment. In the case of the biliary apparatus the error may ultimately be harmful or helpful; and this raises the whole question of the technique of cholecystectomy. If in a case of supposed cholecystitis which is really one of pancreatitis, or in a case in which pancreatitis complicates cholecystitis, the gall bladder is only partially removed and the cystic duct, and possibly also the common duct, drained, the pancreatic patient may benefit, though not to the degree possible had his pancreatitis been diagnosed and suitable dietetic and medicinal treatment prescribed. If, on the other hand, complete cholecystectomy with closure of the duct is carried out, all chance of surgical treatment of the pancreatitis is, for the time being at least, lost. Pancreatic drainage can only be carried out later by a much more serious operation and after valuable time has been wasted. It should be an unvarying rule not to remove the entire gall bladder without drainage of the ducts unless the surgeon is satisfied that pancreatitis is absent.

Diagnosis of Chronic Pancreatitis.

Chronic pancreatitis is of more frequent occurrence than has generally been supposed. It commonly complicates

catarrhal affections of the duodenum, of the biliary apparatus (whether the seat of cholelithiasis or not), and of the vermiform appendix and colon, but apparently it may exist as an affection standing alone. Its diagnosis is nearly always a matter of difficulty. Frequently the difficulties prove insuperable until an excised portion of the gland is examined microscopically. Even after the surgeon has the organ between his fingers and thumb during an exploratory laparotomy uncertainty often remains, though in many cases such palpation goes far to settle the diagnosis.

Two recent contrasting cases may be quoted. Both were operated on for supposed duodenal ulcer, in the expressed diagnosis of which I had concurred. On operation no lesion of the duodenum was found, nor was any other explanation of the symptoms discovered till the pancreas was examined. In one case the gland to touch was clearly cirrhotic, in the other it felt normal. A small wedge of the gland was removed in each case, and the specimens were microscopically examined by Dr. G. Haswell Wilson. The hard gland proved to be the seat of "cirrhotic changes with small areas of necrosis." The apparently normal gland showed "typical haemorrhagic pancreatitis with areas of necrosis in the substance of the gland."

During the past eleven months I have operated on seven cases of supposed gastric ulcer, duodenal ulcer, or cholecystitis in which neither ulcer nor cholecystitis was found, but in all of which the microscope revealed the presence of pancreatitis. In all of these cases the diagnosis of ulcer or of cholecystitis, with which I had agreed, rested on the investigations of medical colleagues well qualified to form an opinion. In none of the seven was there anything to suggest pancreatitis until operative exploration revealed its existence. In one of them gastro-enterostomy had previously been performed without, of course, relief of the symptoms.

In the diagnosis of pancreatitis the following points may prove helpful:

Glycosuria (islands of Langerhans affected?). This characteristic symptom is, unfortunately, present in comparatively few of the cases.

Large light coloured greasy stools, or pale fatty diarrhoea. These equally suggestive symptoms are also found in a minority only of the cases.

Excess of fats and fatty acids in the stools as demonstrated microscopically. Except in advanced cases this test is apt to fail in definiteness. Much depends on the patient's diet.

Jaundice is not uncommon. Its presence naturally directs attention to the biliary apparatus rather than to the pancreas. It is, however, a reliable indication of the need for operation, and, if this is carried out thoroughly, pancreatitis if present, either alone or as a complication of cholecystitis or cholangitis, is discovered.

Schmidt's test for undigested tissue nuclei (consumed as food) in the stools.

Wohlgemuth's test for starch-splitting ferments in the stools. In a case at present convalescing after operation for confusing, though pronounced, abdominal symptoms, Dr. Hugh Morton had in April last, by employing Wohlgemuth's test, discovered that the pancreatic secretion was defective. The only lesion I found in the exploration was a cirrhotic pancreas, on an excised portion of which Dr. Haswell Wilson reports as showing "advanced chronic interstitial pancreatitis."

The two last-mentioned tests may prove valuable. As yet their reliability in the early or slighter cases remains to be proved, and it is the slighter cases which so closely mimic other abdominal affections.

"*Fat Necrosis*."—The discovery during exploratory abdominal section of the characteristic patches on the pancreas, peritoneum, and other abdominal structures leads at once to a diagnosis of pancreatic disease. Some years ago, assisted by Dr. Chas. Cuthbert, I opened the abdomen of a patient who had been ill for five days and whose case had been diagnosed as intestinal obstruction by one physician and perforation of gastric or duodenal ulcer by another. An exhaustive search failed to discover any lesion whatever (at that time I was not so alive to the necessity of a routine examination of the pancreas in obscure abdominal cases), and I prepared to close the abdomen. On eversion of the parietal peritoneum with forceps, preparatory to suture, patches of fat necrosis were at once discovered

limited to the inner aspect of the anterior parietes, and therefore not visible during the exploration. "Fat necrosis," which is pathognomonic of pancreatic disease, is, unfortunately, rarely present, except in cases in which the outflow of the pancreatic secretion is obstructed. It is absent in the larger number of cases of pancreatitis.

Palpation of the Pancreas.—This may reveal a cirrhosis so hard as to simulate carcinoma. Such a case occurred recently in my practice. In this case Dr. Roy Young, who co-operated with me, concurred in the view that the pancreas was the seat of cancer. Yet microscopical examination of an excised portion proved the presence of pancreatic cirrhosis, and not cancer. In other cases palpation discovers the bulky soft outlines and consistence of a gland the seat of catarrhal pancreatitis. In many cases in which the gland to palpation seems normal microscopic examination reveals the existence of pancreatitis.

Resection of a Small Wedge of the Gland for Microscopic Examination.—This has of late become in my practice almost a routine procedure in cases in which there is any doubt whatever as to the actual cause of the abdominal symptoms present. The results have convinced me that chronic pancreatitis is a common disease, and that meantime its diagnosis by other means is not infrequently impossible. Failure to diagnose it, whether it exists alone or as a complication of other diseases, entails various misfortunes. It may lead the surgeon during an abdominal exploration to do nothing, whereas drainage, by way of cholecystostomy, choledochostomy, or, preferably, cholecystenterostomy, would constitute the first step in effective treatment. It may lead the surgeon to do an inefficient operation—namely, a complete cholecystectomy without drainage. And it may lead the surgeon to perform an entirely erroneous operation, such as removal of the appendix or performance of gastro-enterostomy. Further, it deprives the physician, in the subsequent course of the case, of that precise knowledge on which medicinal and dietetic treatment could be successfully based, and of the opportunity of testing definitely the value of such tests as Schmidt's and Wohlgemuth's. Lastly, it deprives the patient of the mental comfort of knowing that, though his convalescence may be long (and chronic pancreatitis is a tedious trouble) his case is clear, and cure to be looked forward to.

Operation.

The pancreas may be reached for exploration in the course of a laparotomy by the gastro-hepatic, the gastro-colic, or the trans-mesocolic route, of which the gastro-colic is probably the most generally useful. The small gap left in the gland after excision of the wedge is closed by sutures inserted by an intestinal needle, and covered over by omentum tacked on by further sutures. Accurate closure in this way secures all haemorrhage, and prevents leakage into the peritoneum of the glandular secretion, which, in many of the cases, is not only infective, but in itself capable of necrosing effects.

Treatment of Chronic Pancreatitis.

Pancreatitis apparently often forms one of the four feet of the pathological intra-abdominal figure referred to above. Treatment, therefore, of any accompanying, and possibly causative, mischief in biliary apparatus, gastro-duodenal area or appendix, is essential. Pancreatitis itself, whether existing alone or accompanying other of the associated affections, is a persistent trouble, and its treatment is best carried out by the combined efforts of surgeon and physician. On the surgeon rests in many of the cases the ultimate diagnosis by means of excision of a portion of the gland for microscopic examination. On him also rests the initiation of the treatment, by drainage of the inflamed gland. With the physician remains the direction of the later stages of treatment on dietetic and medicinal lines, a much more definitely purposive effort after the diagnosis has been cleared up, the gland drained, and associated diseases dealt with.

Drainage of the pancreas is most often carried out by way of the biliary apparatus—cholecystostomy, choledochostomy, or preferably, when the conditions permit, cholecystenterostomy. Direct drainage of the duct of Wirsung is adopted in cases in which pancreatic calculi are present or obstruction of the duct suspected. Where such drainage is established the tube should be fixed as accurately as possible in the duct or up against the

opening made in the duct, and the junction reinforced by drainage wicks of gauze brought out through the abdominal incision, the whole arrangement being surrounded and isolated by omentum carefully fixed by sutures. The gauze acts as a drain for any leaking pancreatic secretion, and further sets up firm omental adhesions before its withdrawal at the end of two or three days. Neglect to isolate the drainage aperture in the way indicated may lead to serious or fatal results, for the secretion is not only in itself capable of necrosing effects on the peritoneum, but is in addition germ infected in many cases of pancreatitis. Drainage of the pancreas by incisions into the gland itself, while necessary in desperate cases of acute pancreatitis, is of doubtful expediency in chronic cases. If employed, it should be carried out only by means of the freest combination of large rubber tubes and ample gauze packing carefully surrounded by omentum, and, if at all possible, by the gastro colic route, which best lends itself to such an arrangement.

THE CAUSATION AND TREATMENT OF RICKETS.*

BY

ERIC PRITCHARD, M.A., M.D. OXON., M.R.C.P. LOND.,

PHYSICIAN TO THE QUEEN'S HOSPITAL FOR CHILDREN AND TO THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.

It is to my mind open to question whether the time has not now arrived for a reconsideration of the whole subject of rickets—its definition, its etiology, and its treatment.

The following may be taken as a typical definition of the disease:

Rickets is a chronic general disorder of nutrition occurring during infancy from faulty diet and hygienic deficiencies. It involves the whole body, but its most obvious effects are recorded in the skeletal system.

This definition, and the majority of those with which I am acquainted, appear to me to confuse cause and effect. If the term is not confined to the bony changes, but covers also all the various forms of malnutrition which ultimately terminate in rickets, the name means little else than a generic one for ill health in infants and young children. Some authorities classify such symptoms as sweating, muscular weakness, laxity of ligaments, delayed teething, spasmodic manifestations, and tendencies to catarrhs as rachitic. Francis Glisson included in his famous monograph on rickets every symptom and childish ailment which was known in his day.

The view which I propose to develop in this lecture is that practically all varieties of malnutrition occurring during infancy and early childhood tend to terminate in rickets, provided they are sufficiently severe or long enough continued. They should not, however, be regarded as evidence of rickets unless they are actually accompanied by the typical changes in bone which are characteristic of the disease.

Each variety of malnutrition has its own particular etiology and requires special lines of treatment, and cannot be dealt with rationally on the cut-and-dried lines that are usually advocated for rickets itself.

Shortly stated, the theory which I wish to propound is that the essential and central feature of rickets is the want of calcification or mineralization of developing bone, and that this in its turn is due to the existence of requirements for calcium, which for the time being are more urgent than those of developing bone. These urgent requirements are the necessity for neutralizing acid bodies in the blood; in other words, to neutralize or compensate an existing acidosis. My argument is that all chronic conditions of malnutrition, of whatever kind or from whatsoever cause arising, finally terminate in an acidosis, and that all claims on alkaline bases arising in connexion with the neutralization of this acidosis must be satisfied before those of developing bone are attended to.

It is not difficult to understand why all forms of malnutrition tend to end in a condition of acidosis, for in all cases, though in various ways, metabolic or oxidation processes are interfered with and curtailed. Any interference with the due oxidation of food elements to their normal

end-products, carbonic acid, urea and water, will conduce to the formation of semi-oxidized bodies of large molecular size and acid in reaction, which must be neutralized as quickly as they are formed to prevent a dangerous rise in the hydrogen ion concentration of the blood. It is in the satisfaction of these claims for alkaline bases that the injury is done to growing bone. One of the direct causes of an acidosis is a disturbance of the relationship between the caloric value of the food consumed and the actual output of energy, either in the form of heat or of work. If more food is consumed than is required for the physiological purposes of the body there will be an attempt to adjust this want of balance by excreting part of the food in an unoxidized, or semi-oxidized, condition. Any condition, therefore, which tends to diminish the efficiency of the human body as a working machine will tend to reduce the physiological demands for food, and so renders a pre-existing correct diet thereby excessive, or relatively excessive.

Most of the recognized etiological factors of rickets are factors which interfere in some way with the metabolic or oxidizing processes of the body—in other words, interfere with the proper utilization of food. Any condition, therefore, which interferes with the supply of oxygen will tend in the long run to be a factor in the production of rickets. So also will be any condition which interferes with the output of work—as, for instance, the poisoning or degeneration of nerve cells. Anything also which unduly interferes with the dissipation of heat—as, for instance, warm rooms or excessive clothing. The withholding of surface stimulation, such as is afforded by sunshine and currents of fresh air, will also have the same effect. Most of the etiological factors of rickets are included in this category of causative factors of an acidosis; and, in the light of these explanations, I propose now to review some of the theories on the pathogenesis of rickets which have been formulated from time to time, and which for the most part have been unwarrantably rejected as unsatisfactory, because, although possibly applying to certain cases, fail to do so to all. I shall hope to show that while there are different theories required to explain the various forms of malnutrition which are fore-stages in the common terminal result—namely, the production of an acidosis—there is only one explanation of the want of calcification of bone, and that is the urgent requirement of the body to have the acidosis neutralized at the expense of the alkaline reserves of the blood, reserves from which growing bone would otherwise draw its mineral material.

The first theory to be considered is that of a *deficiency of lime in the food*. It is clear, apart from any experimental proof, that without lime bones cannot be formed, but since there is an adequate supply of calcium in breast milk, and an excess of this base in cow's milk, it is obvious that want of this element cannot *per se* be the explanation of rickets in the majority of cases. None the less, a deficiency of lime is quite probably the true explanation of a small minority of cases in which certain patent foods are exclusively employed.

Defective absorption of lime is a more reasonable explanation, and colour is lent to this theory because in rickets an increased output of lime in the faeces can practically always be proved.

It is easy to understand that any available base such as calcium existing in the intestinal contents will be readily seized to neutralize any acid bodies formed as the result of putrefactive or fermentative changes in the bowel. It has been denied that this is the true explanation of rickets, for the reason that the administration of supplementary supplies of calcium salts in rachitic conditions is followed by an equivalent output of calcium in the urine. This to my mind proves nothing, for if under such conditions excess of calcium is absorbed into the blood, it may well be utilized for the neutralization of acid bodies coexisting in the blood. It is interesting to note that soap stools are very common in rickets, and these soaps consist largely of fatty acids in combination with calcium, a fact which is very suggestive of the occurrence of an excess of fatty acids in the bowel in the conditions which predispose to rickets. But whether calcium is eliminated in excess or not in the bowel, there is abundant evidence to show that it is eliminated in excess either in the faeces or in the urine, or in both.

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Intestinal intoxication has been regarded as an important factor in rickets, and there can be little doubt that there are many reasons for accepting this as one of the causes. Toxaemias of this kind are responsible for serious poisoning of the nervous system, for nerve cell degeneration, and for functional impairment of the organic functions in general, and for those of the muscular system in particular. The fact that severe rickets can occur without evidence of intestinal intoxication does not militate against the view that it does so in a certain number of cases.

Defective action of the endocrine glands has been suggested by many observers as the *causa causans* of rickets. There is much evidence to support the view that disturbances of the thyroid, parathyroid, adrenal, or pituitary glands are occasionally concerned in the rachitic processes. It is impossible to believe that such disturbances should be entirely absent in the great variety of conditions of malnutrition which ultimately cause unequivocal symptoms of rickets; but it is extremely improbable that in so common a disease as rickets any one glandular disturbance can be regarded as the primary factor. Moreover, rickets is a short-lived disease, while disease or disturbance of the functions of any of these glands is liable to persist. That the thyroid apparatus is concerned in calcium metabolism cannot be doubted; moreover, hyperthyroidism is apparently a compensatory phenomenon in septic conditions which may in themselves be a cause of acidosis and rickets. The adrenals undergo degenerative processes in those conditions of malnutrition which follow on deprivation of the accessory food factors (McCarrison).

Cassowitz believes that *deleterious respiratory influences*, or bad air (odour of the poor), play a direct part in the etiology of rickets, and bases this hypothesis on the rise in the incidence curve of rickets after the winter months. Foul air must necessarily depress vital functions, and so also must want of stimulation by currents of fresh cold air (Leonard Hill). Hence it would be contrary to my own theory if want of ventilation did not play an occasional part as a causative agent.

Dr. L. Findlay has conducted some experiments on animals to prove that want of muscular exercise plays an important part in bringing about the rickety condition. This entirely coincides with my own practical experiences in connexion with the management of infants. Exercise creates a demand for energy which is greater than all the other organic demands of the body taken in combination. If there is no output of kinetic energy, as in debilitated states, or from restraint owing to tight clothing, the physiological uses of food will be seriously restricted. There will be lessened incentive for oxidation processes, incomplete combustion, and a corresponding output of acids of large molecular size—in other words, with restriction of exercise an otherwise physiological dietary becomes at once relatively excessive.

Within recent years great importance has been attached to the part which the accessory food factors (vitamines) play in the determination of rickets. Three distinctive varieties of malnutrition have been recognized as due to starvation in respect of the three vitamins so far discovered. These are, first, infantile scurvy from want of the water-soluble accessory factor "C"; secondly, arrest of growth for want of the fat-soluble accessory factor "A"; and thirdly, a variety of malnutrition analogous to beriberi, and which is due to the want of the antineuritic vitamin, the water-soluble "B" factor contained in the cortical part of cereal grains. This latter form of malnutrition only arises in infants in whom decorticated cereal foods are largely employed. According to my view any one of these forms of malnutrition will ultimately lead to an acidosis, and consequently to the rickety condition, but in each case the distinctive features of the special variety of malnutrition will lend special character to the clinical picture. Hopes have recently been raised that want of the fat soluble vitamin contained in animal oils is the cause of rickets; if this hope were justified the distribution of a little cod-liver oil would free all civilized countries from the scourge of one of the commonest diseases. It is perhaps unnecessary to point out that if this hypothesis be true it is difficult to explain the reason for rickets amongst well-to-do children fed on an excess of cream.

Acid conditions of the blood or the excessive formation of acid bodies has frequently been claimed to be the cause of rickets. As I have already indicated, an acid condition of the blood is incompatible with life, and the most

delicate and efficient mechanisms exist for the maintenance of a constant and uniform degree of hydrogen ion concentration. No free acids can exist in the blood; they are at once neutralized at the expense of the alkali reserves. The first of these theories was that of Wachsmuth, who believed that the trouble in rickets was due to an excessive production of carbonic acid, which he believed was capable of depriving bone of its mineral rights. This theory is unworthy of serious consideration in view of simple physical and physiological knowledge. The lactic acid theory is quite inadequate to explain all the phenomena connected with the production of rachitic changes in the bone. Lactic acid is certainly produced in excess under conditions of restricted oxidation (anoxaemia), but this acid only represents one among many acids of large molecular size which are inevitably produced under these conditions. I pointed out as early as 1901, in a paper read at the British Medical Association's annual meeting held at Cheltenham, that the relative overfeeding of infants must necessarily lead to the production of a large number of acid bodies which would draw upon the alkaline reserves of the blood, and thus tend to produce a condition of acidosis. Since then Stoeltzner has elaborated his "oxypathic theory" of rickets which is very much the same as my own, although he does not harmonize it satisfactorily with all the known etiological factors of rickets.

An argument commonly urged against the acidosis theory is that it is inconceivable that acid bodies could exist in the blood sufficiently strong to dissolve the fixed salts out of bone. This is quite beside the question as far as rickets is concerned, for in this disease we are dealing with the withholding of the mineral material from bone which is in process of formation, and not with its extraction from completely developed bone, as is the case in osteomalacia, for instance. Further, it has been argued that if in rickets calcium is used up in neutralizing acid bodies, the amount of calcium in the blood should show a noticeable falling off in its calcium content, which has not, so far, been capable of demonstration. No doubt calcium would be among the last of the basic elements which constitute the alkali reserve in the blood to be used up for neutralization purposes; but in rickets there is an increase of the calcium in the urine, proving that calcium is to some extent used up and withheld from its normal destinations, even though there is no diminution in the blood.

Quite recently it has been shown that in tetany, which may be regarded as evidence of a severe degree of acidosis and a phenomenon of advanced rickets, there is a demonstrable falling off in the calcium content of the blood,¹ a piece of evidence which strongly supports my views on the etiology of rickets.

In any long continued acidosis it is logical to expect that among other elements iron itself will be seized upon for neutralization purposes, in which event a corresponding amount of iron must be withheld from developing blood corpuscles. This may explain a coexisting anaemia, and the compensatory activities of the red marrow and other blood-forming centres. On this explanation we can understand the beading of ribs, and the enlargement of the epiphysis of long bones.

Many investigations have been made to discover a bacterial origin of rickets. This seems to me a useless waste of time, for all infective and septic processes lead to a condition of acidosis, and there is no need to search for a specific bacillus of rickets when practically any variety is capable of producing the disease. Chronic infections, such as tuberculosis, syphilis, malaria, and those due to the *Bacillus coli*, almost invariably lead in infants to rachitic manifestations.

From the foregoing it is obvious that many etiological theories are required to explain the causation of the many varieties of malnutrition which are antecedent to the rachitic changes in the bones, but all of them lead to this goal through the common avenue of acidosis. From a practical point of view it is most desirable that we should recognize what are the common and what are the rare etiological factors which finally lead to the bony changes of rickets.

In different countries and under different conditions varying factors will be found to predominate. In this country, and especially among the urban population, I imagine that catarrhal and other infections play a most important rôle. Impure air, want of sunshine, want of

exercise, and want of surface stimulation—in other words, bad housing conditions—also play important parts, and conduce to that condition of relative overfeeding which I have insisted on as the essential element in leading to acidosis. Among the well-to-do classes overfeeding and under-exercise are the dual causes.

The treatment of rickets naturally resolves itself into prophylactic and remedial measures. Prophylaxis is concerned with the avoidance of those malhygienic conditions which favour the development of the various forms of malnutrition which have already been described. Correct dieting is essential to avoid catarrhal conditions of the bowel, intestinal toxæmias, and insufficiency diseases, all of which by their respective routes lead to the common goal—acidosis. Food in excess, even though otherwise beyond criticism, is as dangerous as unsuitable food itself, for in the long run it necessitates a short circuiting of the metabolic processes and the production of acids of large molecular size, such as uric, oxalic, butyric, lactic, propionic, and to some extent of such powerful acids as sulphuric and phosphoric, all of which must be neutralized at the expense of ammonium and other alkali reserves of the blood, including calcium. Any condition which interferes with oxidation will similarly restrict the completeness of the metabolic processes, and among them must be included want of fresh air, mechanical obstruction of the respiratory passages by adenoids, embarrassments of the respiratory movements, as well as all other conditions which lead to anoxæmia. Want of stimulation of the skin surface by cool air, good ventilation, or baths, will similarly restrict the oxidation processes.

Want of exercise—as, for instance, by the limitation of muscular activities, such as those concerned in playing, kicking, rolling, and walking—will also predispose to the same results; in fact muscular exercise is the grand prophylactic against rickets. Unfortunately, in the majority of cases of malnutrition which terminate in rickets, active exercise is limited owing to nervous depression, nuclear degenerations, and muscular debility, but none the less every opportunity to ensure free exercise must be provided for all healthy infants. No matter how correctly fed, or how good the other hygienic conditions, infants who are swaddled up in tight clothing so that the movement of the limbs is restricted invariably become rickety, unless the diet is correspondingly reduced.

The avoidance of infections, catarrhal and otherwise, is an essential element in prophylactic treatment, but more easily enjoined than carried out. In healthy, well-fed infants, infections, though they inevitably occur, soon run their course, and it must be remembered that it is chronic and not short-lived acute attacks that lead to the chronic conditions of acidosis which deprive growing bones of their mineral elements.

As for remedial treatment, this depends largely on the correct diagnosis of the cause of the acidosis, on the treatment of the acidosis itself, and on the management of the complications arising from the softening of bone and of the emergencies which are secondary to the acidosis.

The more common causes of the acidosis of rickets have been already indicated, and it is unnecessary to describe in detail the specific measures called for in each particular case. The treatment of the acidosis is by no means a simple task, especially in severe cases with air-hunger, Cheyne-Stokes breathing, tetany, laryngismus stridulus, or convulsions. There are, however, certain important indications, which are as follows:

1. To restore the reduced alkali reserves of the blood.
2. To ensure a free supply of oxygen, and relieve the embarrassment of the respiratory centres.
3. To raise the blood pressure.
4. To promote the excretory functions of the kidneys.
5. To suspend temporarily the intake of food.
6. To restore muscular tone by massage and shower baths.

These, with the exception of No. 6, are the measures which have been empirically proved to be efficacious in such extreme cases of acute acidosis as occur in cholera infantum, diabetic coma, and uræmic conditions.

The reduced alkali reserves and the fall in blood pressure can both be relieved by the intravenous or subcutaneous injection of isotonic saline, or, better, by a 5 per cent. solution of sodium bicarbonate and sodium citrate. Oxygen can be supplied by inhalations, best by Haldane's

continuous method (see BRITISH MEDICAL JOURNAL, July 19th, 1919, p. 70).

The excretory functions of the kidneys can be promoted by such cardiac stimulants as camphor, digitalis, strychnine, alcohol, caffeine, etc., or by such direct stimulants as scoparium and turpentine.

The treatment of deformities and mechanical disabilities due to softness of bone need not here be considered beyond referring to the uselessness of splints for the correction of deformities of the legs, if these splints interfere with the one grand prophylactic—namely, the taking of exercise.

The treatment of emergencies, such as laryngismus stridulus, convulsions, and tetany, is as a rule satisfactory and immediate, if conducted on rational lines directed to counteract the effects of a severe acidosis.

In all cases of rickets in which the nervous symptoms are prominent I have found that phosphorated cod-liver oil (1 in 10,000) affords most excellent results. The phosphorus may help to restore degenerated nerve cells. I cannot, however, regard it as a general specific for all forms of rickets, as has been claimed by certain German authorities.

In conclusion, I would once again emphasize that all varieties of malnutrition, from whatsoever causes arising, in infants ultimately lead to a condition of acidosis and the characteristic bony changes. Each variety has its own etiology and requires a special line of treatment.

REFERENCE.

¹ John Howland, *Johns Hopkins Hosp. Bull.*, October, 1918 p. 233.

RAT DESTRUCTION.

BY

F. NORMAN WHITE, M.D., C.I.E.,

MAJOR I.M.S., LATELY SANITARY COMMISSIONER WITH THE GOVERNMENT IN INDIA.

IN view of the interest now being taken in England in the subject of rat destruction I have been asked to place on record some of the results of Indian experience, more especially as regards rat poisoning. It is almost unnecessary to remind the reader that the "rat problem" has been for many years, and is, a problem of the highest public health importance in India; bubonic plague, so essentially a rat disease, has been responsible for upwards of ten and a half million deaths since the invasion of India by plague in 1896.

Though Indian experience may well be of assistance to those undertaking rat campaigns in England, it must not be forgotten that in India our greatest efforts have to be directed against the black rat, *Rattus rattus*, whereas in England the brown rat, *Rattus norvegicus*, is responsible for most of the damage done. The habits of the two species present striking differences. *Rattus rattus*, formerly the common rat of England, is now rarely seen outside our ports and large towns; its disappearance is generally ascribed to the advent of *R. norvegicus*. It would seem probable, however, that changes in the customs and habits of the people have had quite as much, if not more, to do with the elimination of *R. rattus*; both species flourish exceedingly in certain eastern cities such as Bombay, where there does not appear to be any marked antagonism between the two species. Their haunts differ it is true, but they have their common meeting places.

This short article deals chiefly with rat destruction by means of poison. It must not be concluded that this, or all the means of destruction put together, is the most important measure that can be adopted in our efforts directed to the elimination of the rat. The protection of foodstuffs from the depredations of rats; efficient scavenging; the proper construction of warehouses, stores, markets, shops, granaries, dwelling houses, etc.—all such measures are likely to prove of more permanent benefit and even cheaper in the long run. A direct attack on the rat involves a constant struggle against the remarkable fecundity characteristic of all species of the genus. As a temporary measure, however, rat destruction may be an imperative necessity, notably in the event of a threatened outbreak of a rat-borne disease.

Many well-intentioned and energetically-prosecuted rat campaigns in India, and doubtless in this country also, have yielded disappointing results owing to too little

attention having been paid to the habits and customs of the particular variety of rat against which war was being waged. This is a matter of very considerable importance. As in so many other matters, chief reliance has been placed in traditional methods, which are by no means always the most efficient. It is commonly stated, for instance, that rats are omnivorous and thrive best on a varied diet. Some go so far as to advocate that the baits of traps and the vehicle for poisons should consist of substances not readily obtainable by the rat. It is true that rats will eat almost anything if driven by hunger to do so; they will become cannibalistic in captivity if deprived of water; but *R. rattus*, at any rate, is for choice almost incredibly conservative in its diet, dislikes variety, and is a strict vegetarian. As a result of some most interesting observations carried out in Poona by Dr. Chitre, in an investigation started by Major Kunhardt, I.M.S., it was shown that rats from various parts of India exhibited a marked preference for the food grain, or dough made from the food grain, which formed the staple food of the human population of their place of origin. In comparison with this all other foodstuffs were comparatively unattractive. Moreover, the rats displayed an astonishing aptitude for detecting dough made from the grain to which it had been accustomed, when several varieties were offered to it in exactly similar form. For example, the Poona rats are "bajri" eaters, the Madras rats chiefly rice eaters, and so on. The experiments were most carefully carried out on a very large scale and under conditions as natural as the limitation of such an experiment permit; the results were confirmed time and again and are beyond dispute. The addition of such substances as cheese, for which rats are popularly supposed to have a marked predilection, sugar, various essential oils, and numerous other substances were tried, with the result that none of the flavoured baits were as attractive as the plain dough baits. Even butter and other fats and oils detracted from the attractive value of the plain dough bait; such substances are commonly recommended as desirable ingredients of poison baits.

The bearing of such observations on the efficient prosecution of a rat campaign, be it by means of trap or poison, needs no elaboration.

A comprehensive knowledge of the habits of rats is likewise essential to the designing of "rat-proof" dwellings and buildings if such are to be kept rat-free. *R. rattus* is unable to jump higher than $2\frac{1}{2}$ ft.; it is unable to circumvent a horizontal ledge of 9 in. provided this be smooth on the under surface; it cannot live on dry grain without a certain amount of water to drink; such points are all important. I am unable to quote similar facts about *R. norvegicus*; they could, however, easily be ascertained experimentally.

All the commonly recommended rat poisons, and several others, were subjected to investigation, with the result that none were found as efficient as barium carbonate, which is one of the very few poisons that the rat fails to detect. It is safe to handle, and in the amounts necessary for use it is not dangerous to children. It was found that 15 grains were necessary to kill a cat, 20 grains to kill a chicken, and that dogs could withstand a dose of 140 grains. Phosphorus poisons are relatively distasteful however offered.

In India poison baits are recommended to be made as follows:

One pound of barium carbonate is mixed thoroughly with three pounds of flour made from the grain which forms the staple food of the human population of the locality in which operations are to be carried out. The mixture can conveniently be made in an enamelled basin. Sufficient water is added to make the whole into a fairly firm paste. The resulting mass is sufficient for some 2,300 baits each containing 3 grains of barium carbonate. Clean hands and dishes are necessary to avoid the addition of extraneous taste and odour which might diminish the attractiveness of the baits.

Baits should be made fresh each day or at most every second day; a hard stale bait is very rarely eaten by a rat. The baits are distributed in groups of four in such parts of a building as are frequented by rats; this is best done in the evening. A record should be kept of the number of baits so distributed and the number taken. During poisoning operations special efforts should be made to keep all food usually available for rats covered up.

I make no reference to the use of bacterial viruses for the destruction of rats. I imagine such means of rat destruction have but a limited vogue at the present day. Quite apart from any possible dangers attending their use, experience of plague makes one sceptical of their effecting anything but a very temporary reduction in the rat population. No bacterial infection of which we have knowledge is more readily communicable from rat to rat or more fatal to rats than is plague. Plague has flourished among the rats of India for twenty-three years; nevertheless there were sufficient rats in India in 1917-18 to determine the fourth worst plague epidemic on record.

HERPES ZOSTER OF THE GLOSSO-PHARYNGEAL NERVE.

By C. T. NEVE, M.B., B.S., F.R.C.S.
CROYDON.

The following case presents several points of interest bearing on the pathology of herpes:

On July 12th Miss M., aged 57, complained of sore throat, which she attributed to a long and cold motor drive two days previously. She was first seen on July 14th. She had that day vomited, was feeling ill, and complained of vague pains behind the left ear and in the back of the neck on the left side. The temperature was 100°, there was paralysis of the left facial nerve (peripheral type), the tongue was furred, especially on the left side where it presented a patchy appearance, the soft palate and fauces were reddened, the former presenting a herpetic eruption, the vesicles being covered with sodden epithelium. One of these vesicles was just to the right of the mid-line. Taste was normal. The skin of the auricle was unaltered.

On July 17th the temperature had fallen to normal, and the tongue was nearly clean; vesicles were still present, though less marked. For two days she had noticed that she was deaf on the left side. The meatus and membrana tympani appeared normal, but there was marked deafness of the inner ear type, the acoumeter being heard at two inches only.

The facial paralysis was treated by the interrupted current, and on August 1st there was slight though definite return of voluntary power in all the facial muscles. The hearing was much improved, though still a little dulled, acoumeter being now heard at twelve inches. The palate was now normal and the general health fair.

In brief the symptoms presented were: (1) fever and vomiting, (2) facial palsy of peripheral type, (3) an auditory nerve affection, (4) on the mucous surface supplied by the glosso-pharyngeal nerve an eruption resembling that of herpes zoster, (5) pain felt behind the ear and down the left side of the neck posteriorly.

Ramsay Hunt in 1907¹ put forward the view that herpes auricularis, in which the eruption is limited to the tympanum, external auditory canal, and auricle, is due to herpetic inflammation (posterior poliomyelitis) of the geniculate ganglion. He describes four varieties:

- (1) Herpes auricularis.
- (2) Herpes auricularis with facial palsy.
- (3) Herpes auricularis with facial palsy and hypoaacusis.
- (4) Herpes auricularis with facial palsy and Ménière's complex.

These complications sometimes occur in herpes facialis, occipitalis, and cervicalis, and he explains this fact upon the theory that while the inflammation may predominate in one ganglion, others near by may participate in a milder form, the zones here named being controlled by the Gasserian, geniculate, and cervical ganglia.

In the case here described there was facial palsy and hypoaacusis, but not the herpes auricularis. In its place there was herpes of the palate. Was this due to herpetic inflammation of the ganglion of the glosso-pharyngeal nerve?

With regard to the possibility of this occurrence, Ramsay Hunt² says: "If the Gasserian and geniculate ganglia, by virtue of their unipolar type, belong to the series of ganglia liable to the inflammation of zona, the same would also be true of the ganglia of the glosso-pharyngeal nerve and of the vagus nerve. These ganglia are also regarded by histologists as belonging to the unipolar or spinal type, and therefore cannot be excluded from the realm of herpes zoster." Hunt does not describe any cases in which he has found evidence of involvement of the ninth nerve, though he describes one case of herpes auricularis in which stiffness of neck, frequent vomiting, and slow irregular pulse suggested that the vagus might be affected.

Sequeira (*Diseases of the Skin*, 1919) mentions buccal

herpes as a variety of herpes simplex, and as essentially different from herpes zoster; he says: "Buccal herpes is very rare. The mucous membrane of cheeks, palate, and tongue may be involved." He makes no mention of an association with facial palsy or deafness. Osler mentions herpes auricularis, quoting Ramsay Hunt, but makes no mention of buccal herpes.

If the eruption on the palate was, as seems probable, due to an affection of the ninth nerve ganglion, perhaps the pain felt behind the ear and the vomiting were due to an involvement of the tenth nerve ganglion, and the pains

in the neck to involvement of those of the second and third cervical. The case would thus present a pathological picture of posterior poliomyelitis of a succession of ganglia, the geniculate ganglion affecting both the seventh and eighth nerves, the ganglia on the ninth and tenth cranial nerves, and the posterior root ganglia of the second and third cervical, the infection being most acute in the upper ganglia, and less acute below.

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- ² *American Journal of Medical Sciences*, August, 1908.

TWO CASES OF SO-CALLED GYNAECOMASTIA IN YOUNG BOYS.

BY

HELEN INGLEBY, M.B., M.R.C.P.,

CURATOR OF THE MUSEUM, ST. GEORGE'S HOSPITAL.

HYPERTROPHY of the male breast is not a very uncommon condition in individuals over the age of puberty. The natural growth and development which occurs in the male breast at this time may become exaggerated after inflammation or trauma, or as a consequence of derangement of the internal secretions—for example, after atrophy of the testes from any cause. Enlargement of the breast due to mastitis in newborn children is also often met with, but in the majority of cases it leaves no sequelae. In boys below the age of puberty hypertrophy of the breast appears to be rare. Doubtless many cases have passed unrecorded, but in a search through the literature of the last fifty years I have only been able to find one instance. The following cases may therefore be of interest.

CASE I.

Thomas Y., aged 7, was admitted to St. George's Hospital, under Sir Crisp English, on August 24th, 1918, for enlargement of the left breast. According to the parents, the left breast had been slightly larger than the right since birth, but had recently increased considerably in size. There was never any pain nor had there been any discharge from the nipple. The disfigurement was, however, commented on by other boys at school, and the parents were anxious to have the organ removed.

On admission, there was seen to be a general enlargement of the whole left breast (see Fig. 1). There was no tenderness, no redness of the skin, and no retraction of the nipple. The breast was freely movable on the deeper structures. It was soft, and felt as though affected with a slight degree of chronic mastitis. Some small freely movable glands were palpable in the left axilla. In other respects the child was healthy. The right breast was normal, and there were no other congenital defects.

On August 27th Sir Crisp English removed the breast, leaving the nipple *in situ*. The boy made a good recovery.

Pathological Examination.—The excised organ measured 2½ in. across and 2 in. in depth. It felt firm and appeared to be composed of fibrous tissue in which small cysts were visible. Pieces were fixed in formalin and in Zenker's fluid, embedded in paraffin and stained in various ways. Microscopically the sections show a dense fibrous tissue stroma in which ducts can be seen running in various directions. These latter have a normal structure—that is, their wall consists of a membrane lined by two rows of cells, the outer cubical, the inner columnar. They are, however, as a rule, wider and more branched than in the normal gland. Some are considerably dilated. The lumen sometimes contains granular debris. In places the mucous membrane has proliferated and forms little buds which project into the lumen of the duct (Fig. 2). The ducts appear to end in a sort of cul-de-sac. No true acini can



FIG. 1.—Case I. Enlargement of left breast. The stain under the breast is due to iodine.



FIG. 2.—Longitudinal section of breast. Case I.

be distinguished in any of the sections. The connective tissue fibres are arranged sometimes around, sometimes parallel with the ducts. Near the latter the fibres are finer and take on a blue colour with Mallory's connective tissue stain. Away from the ducts the fibres are coarse and stain deeply with acid fuchsin. Where Mallory's stain is used without acid fuchsin the fibres, as a whole, are blue, but a few of the coarser ones take on the orange G. stain. With van Gieson the fibres are red, but those nearest the ducts are not so deeply stained. Fat is present here and there between the fibrous tissue bundles. The blood vessels are small and inconspicuous. A small-celled infiltration is present round many of the ducts, the cells being chiefly lymphocytes with an occasional plasma cell.

CASE II.

Ernest V., aged 9, was admitted to St. George's Hospital under Mr. C. H. S. Frankau on September 14th, 1912, for a gradually increasing swelling of the right breast of nine months' duration. On examination the right breast was found to be occupied by a fibro-cystic swelling the size of a farthing bun. There was no attachment to skin or to deeper structures. The left breast was normal, as also were the genital organs. Amputation of the right breast was performed on the following day, the nipple being left *in situ*. The patient made a good recovery.

Microscopically the organ showed precisely the same characteristics as in the first case, with the exception that round-celled infiltration was exceedingly slight.

Hypertrophy of the male breast is described by Paulus Aegineta, or has long been known under the title of gynaecomastia. But what is gynaecomastia?

The microscopical features have been described by Gruber, E. Israel, Scheiber, Stieda, Schuchardt, and Anna Kasimir. Their accounts agree very closely with each other and with the findings in the present cases. The characteristics of the condition are the excess of fibrous tissue, the large number of ducts, and the rarity of the acini.

Fat may be found in the interstices between the layers of fibrous tissue surrounding the ducts; round-celled infiltration may be present or absent. Very similar appearances are found in fibro-adenoma, which occasionally appears in the male breast, but this condition is easily distinguished, as there is then a circumscribed tumour localized to one portion of the organ, not a diffuse enlargement of the whole breast. The accounts of gynaecomastia in current textbooks are, however, decidedly contradictory. For instance, Sampson Handley, in his article in Choyce's *Surgery*, says: "Histologically the breast resembles that of the virgin female"; whereas in Rose and Carless the statement is made that "the organ is usually functionless since the overgrowth mainly affects the stroma, although lactation has been known to occur." The statement

that a male breast may secrete milk recurs in most textbooks, and appears to have its origin in the story, quoted by many authors, of the man who, on the death of his wife after childbirth, reared his infant by putting it to his own breast. The story is picturesque, but the occurrence of

lactation requires confirmation; for although discharge of albuminous fluid from the male breast is fairly common, chemical analysis has so far failed to show the presence of milk. This is only what one would expect considering the scarcity of acini in the tissues examined. Pathological evidence, therefore, shows that the term gynæcomastia is really a misnomer. The position is admirably summed up by Stieda. He says: "The term gynæcomastia is only justified in so far as it applies to the external form and increase in volume of the male breast; it must not be understood to express a histological conception, nor any similarity between such a breast and the female breast which is capable of function."

Gynæcomastia, as has been indicated above, has many causes and cannot be considered as a true pathological entity. The term has already to a great extent fallen into disuse; it would save confusion to delete it altogether from our nomenclature.

In conclusion, I wish to thank Sir Crisp English and Mr. C. H. S. Frankau for kind permission to publish these cases, and Mrs. Hughes for the excellent drawing which is reproduced here. To Mr. Frankau also I am indebted for much valuable assistance in looking up records.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ASPIRIN POISONING AND IDIOSYNCRASY.

In order to emphasize the constancy of the symptoms of aspirin poisoning I wish to record two cases, one of overdose and the other of idiosyncrasy.

CASE I.

Miss H., a highly neurotic young woman, suffered from facial neuralgia, and to stop the pain took fourteen to twenty 5-grain tablets of aspirin in two days. At night I received a message that she was choking. On arrival stertorous breathing was heard all over the house; the patient's eyes were watering, but there was no marked swelling of face, and no rash. I treated her for oedema of the glottis, applying poultices to neck, and giving hot coffee, castor oil, and brandy by the mouth. Next morning she was quite recovered.

CASE II.

On November 4th, 1919, Mrs. P. sent for me in the country at 1 a.m. for a swollen face. She had a sore throat, for which a neighbour prescribed one 5-grain aspirin tablet. The swelling of the face was almost instantaneous; there was great oedema of the eyelids and lips, together with lachrymation. The pulse was about 120. There was a slight urticarial rash on the face, but none on the body; there was no evidence of oedema of larynx. I prescribed coffee and castor oil (brandy had already been administered), together with hot cloths over the eyes. The patient was better the next morning, and most of the oedema had gone.

I am indebted to Dr. R. F. Bolt for his note in the *BRITISH MEDICAL JOURNAL* for November 1st for the diagnosis, which otherwise would have completely baffled me.

Woolston, Hants.

G. H. PRIDHAM.

SUGGESTION DURING NATURAL SLEEP.

The mother of a boy aged 4 years mentioned to me casually that he was terrified of motors, especially motor cycles. I use one myself, and she said he would often run away when he heard me coming, and disliked going to my house for the same reason. He became very frightened if a motor cycle passed him on the road. The fear even extended to a machine at rest.

On talking it over with his mother, I discovered that the cause of this fear was the action of a chauffeur about a year before, who had told the boy to put his ear to the trumpet of a Klaxon horn, and had then driven home the sounding rod forcibly. The child used to start up in sleep and cry out.

I had treated the mother by hypnosis for a nervous affection with success and had discussed her child's case with her at some length. A few days later I happened to go to her house to see her husband. The boy was asleep, so, after telling his mother what I proposed to do, I sat down by the bedside, laid my hand on his head, and told him that he would not wake up, but that he would hear what I was saying to him. In very simple language I related the original occurrence, and told him that his fear would go and that he would be able in future to face a motor cycle without any alarm. I talked in this strain for about ten minutes, repeating my suggestions in slightly varying form, then left the house.

His mother soon noticed that the fear had gone; in fact, a few days after the boy told her that he was no longer afraid. He did not know that I had been to see him until she informed him of it. The fear has left him completely, so much so that he will now touch and examine a motor cycle with interest.

I had read that the subconscious mind of a child can be approached during ordinary sleep, and I was glad to have the opportunity of proving it for myself. A few weeks after this I was consulted by an educated man about his son aged 5 years. The boy was continually handling his penis. I recommended his father to talk to him during sleep, which he did. Later on he told me that the result had been completely successful.

Henley-on-Thames.

THOMAS H. GANDY.

Reports of Societies.

SECONDARY DEPOSITS IN BONE.

At a meeting of the Section of Surgery of the Royal Society of Medicine held on November 5th, the President, Sir JOHN BLAND-SUTTON, in opening a discussion and exhibition of specimens of secondary deposits in bone mistaken for primary tumours, said that when secondary carcinoma grew in an organ not easily accessible to putrefactive micro-organisms the deposit might become big before attracting attention. This phenomenon had been particularly observed in connexion with the ovary. Large solid and semi-solid ovarian tumours had been removed under the impression that they were primary. The histology of such tumours had proved that the primary tumours arose in the breast, gall bladder, or gastro-intestinal tract, and the subsequent history of such patients had confirmed the histological findings. This was equally true of bone. Portions of long bones had been removed and limbs had been amputated for tumours regarded as primary, but the tumour tissue had contained epithelial elements. It was established that epithelial tumours did not arise primarily in bone.

Forty years ago the attention of surgeons was drawn to the occurrence of tumours in bone, regarded as primary, but which contained epithelium in shape and arrangement resembling the lining of the vesicles of the thyroid gland. Many examples had been recorded in which such tumours had been discovered and removed, or recorded in the belief that they were primary, but after a minute examination of the structure of the tumour the surgeon had re-examined the patient and found an enlarged thyroid body.

In recent years some remarkable bone tumours had been observed and removed in bones which, when examined, had been found to resemble the zona fasciculata of the adrenal. Subsequently a tumour of similar structure had been found in the kidney or in the adrenal. This matter was of clinical importance and well worthy the consideration of surgeons. He described a case which he had recorded in full at the opening meeting of the session of 1918.

A doctor, aged 45, had a swelling in the lower part of the right humerus. Clinically it furnished the usual signs of a myeloma, and it was excised under this impression. Two years later it recurred in the stump of the bone; this was excised within two inches of the humeral shaft. The patient remained well for five years, and died suddenly in hospital. After death a tumour was found in each adrenal and in the right kidney. The tumours in the humerus, and in the adrenals and in the kidney were so destroyed by extravasation of blood that the structure of the tumour could not be satisfactorily determined.

but a solid secondary nodule in the heart, in shape and size like a nut, showed the characteristic structure of the zona fasciculata of the adrenal.

On these facts the speaker had come to the conclusion that this was an example of an adrenal tumour, but Professor Shaw Dunn, who examined the specimen, believed that the primary tumour arose in the kidney and was a hypernephroma. The chief lesson to be drawn from the narrative was this: A man had a tumour in the right kidney which had run such a chronic course that no one suspected its existence, although a secondary deposit in the right humerus had become large enough to be clinically obtrusive and mimic a myeloma. After removal of the secondary tumour the patient lived in comfort and usefulness for five years. It also illustrated what he had often tried to emphasize—that cancer *per se* was an extremely chronic illness until it became septic; then misery attended until life was extinguished by a terminal infection.

Several specimens were shown bearing out this contention, among which was one of a tumour of the clavicle which was shown by Mr. V. WARREN LOW. The patient was a man of 55 years who had "ricked" his shoulder while practising physical exercises, and about a fortnight after the accident first noticed a lump on the clavicle. It was not painful, and caused him little inconvenience. An exploratory operation was performed, but it was found necessary to remove the clavicle. The contents of the tumour were examined by Dr. B. H. Spilsbury, who pronounced it to be carcinoma. There was no definite evidence of any primary growth in the prostate, intestine, or mammae; there was no swelling of the thyroid, and it was supposed that this was a case of bone tumour secondary to an adrenal growth.

Mr. CYRIL NITCH reported two cases which he described as examples of errors in diagnosis resulting from absence of any symptoms which would have led to recognition of the primary growth.

The first occurred in a man aged 52, who had a swelling below the right elbow, of two years' duration, which was causing great pain and had increased rapidly in size. Owing to the history and the severe pain the lesion was thought to be due to tubercle. Operation was performed and the tumour was widely excised. Dr. L. S. Dudgeon made a microscopical examination, and described it as typical of carcinoma of the adrenal cortex. The abdomen was then examined, and a nodular tumour was found in the right loin. Shortly after operation a soft pulsating nodule was discovered on the ninth rib. The growth on the arm recurred, and was now as large as at the time of operation six months ago. Until three weeks ago, when the patient had a severe attack of haematuria, there had been no symptoms suggestive of the primary growth.

The second case was that of a female with a large globular swelling of the upper end of the right humerus, and another in the body of the left scapula. These were thought to be sarcoma, and their real nature was not recognized until after a microscopical examination had been made of a portion of the tumour removed for the purpose. It was then discovered that the growths were secondary to adrenal carcinoma, which up to that time had given no signs of its existence.

The subject was discussed and illustrative cases were described by Sir CHARLES BALLANCE, Sir HUMPHRY ROLLESTON, Mr. G. W. NICHOLSON, Mr. CECIL ROWNTREE, and Mr. DOUGLAS DREW.

Mr. E. K. MARTIN showed a specimen of the upper extremity of the right humerus completely replaced by growth, with fracture of the surgical neck, in a woman aged 52. Sarcoma was diagnosed and the limb was amputated through the shoulder. Microscopical examination showed the presence of secondary carcinoma. Search for the primary growth revealed an extensive carcinoma of the cervix, and the patient died six months later.

Mr. Martin also showed a specimen of the upper part of the left femur of a man aged 65, with a lobulated tumour projecting from the lower aspect of the neck and adjacent part of the shaft, the bone being expanded posteriorly. The condition was thought to be sarcoma, and amputation at the hip was performed. There was a central deposit in the trochanter, neck, and head. Microscopically there was a delicate connective tissue stroma enclosing large alveoli, most of which were filled with spheroidal cells. In some alveoli the cells tended to assume a cubical shape. There was no evidence of the position of the primary tumour. Death occurred shortly after operation and there was no *post-mortem* examination.

Mr. CLAYTON GREENE recorded a case of carcinoma of the ilium in a woman aged about 56 years. She had

always been constipated, but there was no definite evidence of intestinal trouble. The tumour was explored and a section of a portion removed showed it to be a columnar celled carcinoma.

URINARY FLAGELLATES.

At a meeting of the Pathological Section of the Royal Society of Medicine, held on November 4th, with Dr. WILLIAM BULLOCK, F.R.S., in the chair, Professor ARTHUR POWELL made a communication on a bodonid residing in the urinary tract for five years. He summarized his findings under the following heads:

1. Four previous observers have found flagellates in urine, always decomposing and stale, never in freshly drawn urine.

2. Pathologists were therefore justly sceptical as to their parasitic nature. They had been found in human urine, not in the human body. They were regarded as accidental contaminations.

3. In the author's case the flagellates were constantly present in the urine drawn with aseptic precautions. They died when the urine decomposed.

4. The flagellates were first seen when the urine was chylous (filariasis). They persisted when the urine was otherwise normal. This pointed to the flagellates being emigrant via the lacteals from the alimentary canal.

5. There was a striking difference in the habits of the flagellates in 1914 and 1919. Was this an adaptation to the new environment?

6. As far as the author could judge, the parasites were harmless.

The author remarked that the case was not important, but interesting from a pathological point of view.

Dr. DENNIS EMBLETON then read a paper on schenoidal empyema and epidemic spinal fever, which will be published in full in a subsequent issue.

THE INCISION IN CAESAREAN SECTION.

At a meeting of the North of England Obstetrical and Gynaecological Society, held at Liverpool on October 17th, with Mr. MILES PHILLIPS, the President, in the chair, Dr. J. M. MUNRO KERR of Glasgow opened a discussion on the cicatrix of the uterine wound in Caesarean section. He put forward the following reasons why the ordinary longitudinal incision should be considered as unsatisfactory: (1) The scar was inevitably starved because sutures were used both as haemostatic agents and coaptors; (2) satisfactory coaptation was difficult to secure, because the sheets of muscle in the uterine wall were irregularly distributed and the uterus was in a state of unrest (normal contraction) and of involution; and (3) blood tended to collect between the raw surfaces, leading to a more or less broad band of fibrous tissue which might stretch or give way in a subsequent pregnancy.

He suggested three alternatives to the ordinary through-and-through sutures after delivery of the placenta: (1) Immediate suture after delivery, while the uterus was in a state of rest and before the placenta was delivered, this being left to pass through the cervix; (2) suture in layers; (3) delivery through a low transverse incision in the lower uterine segment, assisted by the Trendelenburg position, with expression of the child by a hand behind the fundus; the cord was to be replaced in the uterus and the placenta allowed to deliver itself naturally. He had practised this method, which led to very little bleeding, for the last two years, and strongly recommended it. The only pertinent objection that he could see was the possibility, in suspect cases, of the gravitation of deleterious material towards the uterus.

A spirited discussion developed which was notable for a frankly expressed distrust of the lower uterine segment, and for confidence in the more usual incision provided certain precautions as regards technique were observed. Dr. BURGESS (Liverpool) advocated that suturing with catgut in horizontal layers should be begun as soon as the child was delivered, while the uterus was at rest, and that the incision should be a small and longitudinal one. Dr. GEMMEL (Liverpool) sutured a high vertical incision with three layers of catgut, while Dr. CROFT (Leeds) preferred fine silk. Dr. CLIFFORD (Manchester), who adopted through-and-through catgut sutures omitting the mucosa, with

chromic catgut superficially, was supported by several members in his contention that the lower uterine segment was essentially weak, became more so during the course of a protracted labour, and was thereby an inauspicious site for incision.

Details from various clinics were put forward by members who did not consider there was sufficient evidence that a longitudinal incision in the contractile portion of the uterus was less satisfactory than one in the lower uterine segment. Dr. MUNRO KERR briefly replied.

At a meeting of the Leeds and West Riding Medico-Chirurgical Society held on October 31st, Dr. L. A. ROWDEN communicated a paper dealing with the principles of the treatment of hyperthyroidism by radiations. The technique of treatment was explained and indications were given as to the most suitable type of case for which radiations had proved their utility. An interesting discussion followed. Amongst the cases and specimens shown at the meeting were a case of oriental sore by Dr. R. A. VEALE, and a skiagram shown by Mr. J. F. DOBSON from a case of ureteral calculus removed by trans-vesical ureterolithotomy. Mr. W. THOMPSON demonstrated a case of carcinoma of the breast; the other breast had been removed for carcinoma sixteen years before.

A MEETING of the London Association of the Medical Women's Federation was held at 11, Chandos Street on November 4th; the President, Mrs. FLEMMING, was in the chair. The subject for discussion was "Medical work in the Mediterranean area," and several members who had been attached to the R.A.M.C. during the war gave an account of some of their experiences. Miss LEPPER, M.D., gave particulars of a fulminating case of cerebral malaria in which the symptoms began four hours before death took place, and showed microscopical preparations from the *post-mortem* material. She then described a case of black-water fever and one of liver abscess secondary to amoebic dysentery. Specimens and slides from both cases were shown. Dr. D. C. HARE reported on cases of paratyphoid fever occurring in Malta in the later months of 1916. The cases were all of mild uncomplicated character, and the chief interest lay in the diagnosis. The difficulty of basing a diagnosis on agglutination tests alone in inoculated patients was emphasized. Dr. ELIZABETH HURDON (Baltimore) described some of the cases under her care in Malta and Salonica. She referred to the difficulties in diagnosis between malaria and dysentery and in dealing with the mixed infections. Dr. EFFIE CRAIG gave an account of her work in Malta and Salonica, referring to the great prevalence of malaria and scurvy among the Serbs. Dr. M. C. BLAIR described some of the features of life in a camp and the way in which infection was avoided in cases of dysentery. No cases occurred among the hospital staff during the winter months in the camp to which she was attached.

Reviews.

THE CEREBRO-SPINAL FLUID.

THE spirit of Dr. LEVINSON'S monograph on the *Cerebro-spinal Fluid in Health and Disease*¹ is shown by its dedication to those who regard the practice of medicine as an ideal rather than a profession, who combine clinical insight with scientific research, and see in medicine both a science and a philosophy. The interesting chapter on the history contains portraits of Haller and Magendie who first described the cerebro-spinal fluid, and a reference to Corning's description of spinal anaesthesia as long ago as 1855. Dr. Essex Wynter's priority over Quincke in the performance of lumbar puncture is rightly noted here, for very commonly it is ascribed to the German professor.

The origin and method of absorption of the cerebro-spinal fluid are fully discussed in the light of recent researches, but though the author inclines to the view that the choroid (or, as he always writes, chorioid) plexuses are the source of the fluid, the question whether it is a secretion or not is left open.

For estimating the pressure of the cerebro-spinal fluid the author has devised a spinal puncture needle and

manometer to obviate the risk of losing some fluid before the pressure can be estimated. Due attention is paid to the practical points in the technique of lumbar puncture, and the untoward effects of puncture and the reasons for failure to obtain fluid are discussed. The section on the properties of the cerebro-spinal fluid contains much original work; thus the author has examined the hydrogen-ion concentration in more than 400 non-meningitic fluids. The accounts of the examination of the fluid for diagnosis and of the characters of the fluid in various diseases will be of the greatest use to those working in clinical laboratories. Lange's gold chloride test is fully described and illustrated by two coloured plates; Emanuel's mastic test, which is based on the same principle, should, when time permits, be employed to afford corroborative evidence, but until further data are available Lange's test is preferable. A summary of the characters of the cerebro-spinal fluid in various diseases brings this valuable monograph to a close.

HEART DISEASE.

Dr. BROCKBANK'S practical points on *The Diagnosis and Treatment of Heart Disease*² appeal not only to students beginning their clinical course, but also to those who wish to revise their knowledge of cardiology and to appreciate the reasons for the physical signs with which they are familiar. The appearance of a fourth edition is proof that the book fulfils a wide demand.

The first two chapters deal with anatomy, physiology, and routine examination. An account of heart sounds and murmurs and the general signs of cardiac disease occupies the bulk of the volume. Septic endocarditis, pericarditis, and angina pectoris are then briefly described. A chapter on cardiac irregularity follows, and the book ends with some very practical notes on treatment. The arrangement of the subject matter in short paragraphs with large type headings is extremely convenient, though for the sake of brevity the author is obliged to be somewhat dogmatic. Some statements may be open to misconstruction. For instance, it may be technically correct that "aortic systolic murmurs generally indicate actual obstruction to the flow of blood from the left ventricle," but the impression left on the student's mind is that an aortic systolic murmur is diagnostic of aortic stenosis, for no mention is made of its occurrence in the commoner condition of aortic reflux. No note is given of the relative frequency of the two lesions. Defects of this kind are, however, almost inevitable where a large amount of information is compressed in a small space. The book is crowded with excellent matter, and fully deserves its popularity.

THE X RAYS IN DIAGNOSIS.

*Roentgen Interpretation*³ is the title of a book by Drs. HOLMES and RUGGLES, designed as a practical aid to those in search of a working knowledge of how to understand the evidence afforded by the x rays. The idea is to give the essentials of diagnosis by this method, illustrated by a series of typical radiographs. Great stress is laid on the importance of a thorough knowledge of pathology if the radiologist is to be in a position to decipher the meaning of the various abnormal shadows which are met with.

The book consists of a number of chapters each one of which is devoted to a special subject; for example, there are chapters upon anatomical variations and development, on bone pathology, on the chest, on the genito-urinary tract, and so on. Whilst in each chapter all the abnormal conditions which may be met with are indicated, only the more common and those which are of greatest importance are fully described, and only the typical are illustrated. At the end of each chapter is a bibliography of some of the more important monographs bearing on its subject matter, to which the authors refer the reader who desires further information. This bibliography, however, is very far from being complete. An idea of the scope of the book may be gathered from the size of the chapter on the genito-

¹ *The Diagnosis and Treatment of Heart Disease: Practical Points for Students and Practitioners*. By E. M. Brockbank, M.D. (Vict. F.R.C.P.). Fourth edition. London: H. K. Lewis and Co. 1919. (Cr. 8vo, pp. 158; 22 figures. 5s. net.)

² *Roentgen Interpretation. A Manual for Students and Practitioners*. By George W. Holmes, M.D., Roentgenologist to the Massachusetts General Hospital, etc., and Howard E. Ruggles, M.D., Roentgenologist to the University of California Hospital, etc. London: Henry Kimpton. 1919. (Med. 8vo, pp. 211; 181 figures. 15s. net.)

³ *Cerebro-spinal Fluid in Health and Disease*. By Abraham Levinson, M.D., Associate in Pediatrics North-Western University Medical School; with a foreword by Ludvig Hektoen, M.D. London: Henry Kimpton. 1919. (Med. 8vo, pp. 231; 56 figures and 5 coloured plates. 18s. net.)

urinary tract. This is dealt with in about eight complete pages of letterpress, fifteen illustrations, and nine references to literature. Notwithstanding this compression there is little or nothing left out, and the chapter forms a concise and accurate guide to the general scope of x-ray diagnosis within this area and to the pitfalls which have to be avoided. It should be noted that x-ray diagnosis alone is considered, and that questions of apparatus, technique, and so forth, are not entered upon. The whole is well compiled, easy to read and understand, deals with essentials only, and can be recommended to those commencing x-ray work, or to those who desire to know something of its possibilities and wish to acquire a knowledge of how to read x-ray plates and prints.

STEREOCHEMISTRY.

THE second edition of Professor STEWART's book on *Stereochemistry*,⁴ or the chemical (and physical) investigation of the arrangement of atoms in space, gives the student of chemistry an admirable account of a subject of interest to both chemists and physiologists. It was in 1873 that Wislicenus gave a great impetus to the study of the intramolecular arrangement of chemical atoms in space, in the case of the isomeric lactic acids; in 1874 the problem was independently attacked by Van t'Hoff in Holland and Le Bel in France; their success encouraged others to attack the problem, and an enormous literature has accumulated. The study of stereochemistry has inspired directly a vast amount of important chemical work.

Professor Stewart's book is meant for readers with a fair chemical education; it is comprehensive, clearly written, well documented, and full of suggestions indicating lines for future research. From a perusal of the work it becomes clear that less and less as the years go on are chemists satisfied with the idea of uniformity in the molecules of organic compounds. Thus in the case of benzene the two-dimensional formula was replaced by one in three dimensions, at first rigid but later endowed with a capacity for oscillation, or with various dynamic capacities; Collie's formula, in which the carbon atoms are arranged at the corners of an octahedron, appears to give the most promising interpretation of the many chemical facts upon which the benzene formula must in the last resort be based. Without doubt the adaptability of this formula makes it highly attractive, and it does much to afford a rational basis for speculations as to the molecular structure of many other chemical compounds.

NATIONAL HEALTH.

DR. FERDINAND REES of Wigan dedicates his brightly written pamphlet on *National Health*⁵ "without permission to our first Minister of Health," and we learn on the last page but one that most of it was put together two years before the Ministry came into being. The author's object is to stimulate public thought on the reconstruction of our organization for maintaining health and combating disease. He writes from the standpoint of a thoughtful and experienced general practitioner who has always taken a keen interest in medical politics. He has observed the progress of preventive medicine during the past quarter of a century, and he writes with knowledge of professional organization.

His studies on superstition of the past and of to-day lead him to fear that the "Insurance Commissioners are putting real hindrances in the way of the progress of medical science by their exaltation of the 'bottle of medicine.' The insured person is taught to attach too great importance to it, and the panel practitioner finds prescribing stock mixtures an easy and expeditious method of emptying his surgery of the ever-present crowd. Careful diagnosis of the origin of the complaint, advice as to mode of life, dietary, etc., take up too much time." In the chapter on surgery and medicine Dr. Rees advocates

closer co-operation between the two sides of the profession and a more equitable division of remuneration. He is convinced that the present system of remunerating doctors puts temptation in their way; trading in patients plays into the hands of the enemy—disease. The organization of the medical profession, he argues, must be around the hospitals of the country, and here he crosses swords with the adherents of the voluntary system, which he regards as merely a phase in social evolution.

"It has served its purpose, a magnificent purpose; but it must make way for a more advanced social organization." Developing his views on this topic Dr. Rees associates himself with those expressed by Dr. Secretan in our issue of May 31st, 1919. In the chapter on the future of the National Insurance Act he maintains that the danger of lowering the general practitioner's status can be prevented by adequate remuneration, and by bringing the panel practitioner into close contact with the hospitals, to the advantage of the general standard of medical practice everywhere. But to achieve this end the different grades of hospitals must all be brought into working touch by means of liaison officers. Brief chapters follow on the Ministry of Health, on death certification, and on the woman doctor.

The concluding chapter gives a brisk summary of what has gone before, and the author adds by way of postscript some candid and amusing observations on the advantages and disadvantages of a State Medical Service, and on the medical trade union controversy. The pamphlet as a whole shows good sense, good humour, and a constructive outlook.

NAVAL HYGIENE.

A most excellent if somewhat tedious handbook on *Naval Hygiene*,⁶ written by Professor J. C. PRYOR, of the George Washington University, U.S.A., gives an exceedingly interesting and accurate account of life on a ship of war. The sick-bay arrangements appear to be especially admirable, and show a degree of foresight and of respect for expert medical advice that might well be emulated.

The book, as has been said, makes in parts somewhat tedious reading; this is owing to the fact that, in addition to the matter directly relevant to shipboard, there is much elementary material dealing at some length with general information on matters concerned with preventive medicine. This may perhaps be adjudged a necessary feature of a book designed primarily for the use of those undergoing instruction at a naval college; but at the same time if a large portion of this elementary detail were removed the work would benefit immensely.

It is to be doubted whether the author really approved the coloured plates dealing with the inspection of meat, and if they may be relied upon to form a good guide; they would appear to be far too brilliant in colouring.

The index of this book is good, and as a handbook for naval surgeons and others it will form a valuable addition to the literature of the subject.

PROGNOSIS BY MATHEMATICS.

THE book on general prognosis in health and disease,⁷ by Professor BRUGSCH of Berlin, is a massive German work dealing with health and disease, mainly from the point of view of constitution or diathesis, in a thoroughly German way. According to the professor, the problems of prognosis have never yet been attacked in a truly methodical manner, and his book is devoted to showing how this should be done on scientific lines. Thus, a person's constitution may be formulated as follows:

$$C = J \longleftrightarrow () \longleftrightarrow A$$

where C=constitution, J=the internal conditions of the organism, and A—the external conditions affecting it; the two sets of arrows pointing either way indicating

⁴ *Stereochemistry*. By Alfred W. Stewart, D.Sc. Second edition. London: Longmans, Green and Co. 1919. (Demy 8vo, pp. xvi + 277; 58 figures. 12s. 6d. net.)

⁵ *National Health: From Magic, Mystery, and Medicine to a National Health Service*. By Ferdinand Rees, M.D. Bristol: J. Wright and Sons, Ltd.; London: Simpkin, Marshall, Hamilton, Kent, and Co., Ltd. 1919. (Price 1s. 6d. net.)

⁶ *Naval Hygiene*. By J. C. Pryor, A.M., M.D., Professor of Preventive Medicine, George Washington University, U.S.A. London: W. Heinemann, 1919. (Demy 8vo, pp. 312. 10s. 6d. net.)

⁷ *Prognose in der Medizin*. By Professor Dr. Brugsch. Berlin: W. de Gruyter, 1918. (Sup. roy. 8vo, pp. vi + 498; illustrated. M. 24. 1918.)

a condition of equilibrium. In the same manner the equation for sickness is written thus:

$$K = f'([J \rightleftharpoons O \rightleftharpoons A] \cdot p)$$

where K =sickness, f =a function, and p =the agent producing the sickness. Death, looked at from a dynamic point of view, may be expressed by the formula—

$$J \rightleftharpoons O \rightleftharpoons A$$

where $J = A = 0$. The prognostic formula for gout is said to be—

$$K = J \rightleftharpoons O \rightleftharpoons A$$

whereas that for arterio-sclerosis is given as—

$$J \rightleftharpoons O \rightleftharpoons A_1 \cdot A_2 \cdot A_3 \dots$$

where A_1, A_2, A_3 are the integrals of the external circumstances. The volume is divided into three more or less equal parts, the first dealing with Habit and Organization, the second with Constitution, the third with Person—which includes as subheadings such things as inherited characteristics, adaptability, resistance, and the like. The book deals only with the general problems of prognosis on broad lines, and does not attempt to show how a prognosis should be reached in any individual case; the Professor hopes—or threatens—to produce another book on Special Prognosis later. The volume now before us is redolent of the midnight oil, wonderfully unpractical, and highly illustrative of the lucubrational divagations of which the Teutonic professorial intellectuality is capable. Its value we doubt.

NOTES ON BOOKS.

IN *Human Life and How it may be Prolonged to 120 Years*⁸ Colonel MACCABE provides a spirited summary of all the laws of health, most of which one would imagine to be as well known by the laity, to whom the book is obviously addressed, as they are to the medical profession. Perhaps the best feature of the book is the resolute attitude shown towards faddists of every description. The title suggests how advantageous it would be to live to the age of six score years, but one is rather inclined to agree with the words of the Psalmist on this matter (Psalm xc. 10). Unfortunately for the hygienist's contention, although the age period may in general be prolonged by a knowledge and careful observance of the laws which govern the human body, yet without doubt longevity is very largely a matter of heredity. The ancient of the English village living happily on amidst distressing sanitary conditions, with windows firmly closed against the admission of fresh air, is an excellent and ever-present example of the force of this contention. Possibly, however, some readers will be glad to observe that the author has failed to quote as an authority the judge mentioned in Whateley's *Annotations*, who, having observed and questioned all aged persons whom he met, found that one factor alone was shared by all alike—they practised early rising.

The twenty-eighth edition of *The Annual Charities Register and Digest*,⁹ issued by the Charity Organization Society, is a classified register of the charities in or available for the metropolis. Here will be found all the latest information about the thousands of charities to which application for relief can be made in affliction, sickness, permanent or temporary distress, and by those requiring the special forms of relief afforded by reformatories, miscellaneous associations, and, finally, a number of spiritual institutions. The book is as well known as it is indispensable to almoners of all sorts, and will often be useful to medical practitioners.

DR. R. W. MACKENNA'S *The Adventure of Life*¹⁰ contains a series of chapters in which the author discusses life and its meaning, its connexion with freedom, pain, sickness, work, and other conditions familiar to all of us, in a cheerful spirit of philosophy, religion, and optimism. The book should be soothing and sanative to many of those broken in or by the war—a message of hope and help; it should find many readers.

⁸ *Human Life and How it may be Prolonged to 120 Years*. By Brevet Lieut.-Colonel F. F. MacCabe, M.B., South Irish Horse, attached R.A.M.C. London: Grant Richards, Ltd. 1919. (Cr. 8vo. pp. 297. 6s. net.)

⁹ *The Annual Charities Register and Digest*. Being a Classified Register of Charities in or available for the Metropolis. Twenty-eighth edition. London: Longmans, Green, and Co., and Charity Organization Society. 1919. (Demy 8vo. pp. xx + 614. 5s. net.)

¹⁰ *The Adventure of Life*. By Robert W. Mackenna, M.A., M.D. London: John Murray. 1919. (Cr. 8vo. pp. xiii + 306. 6s. net.)

MOTOR NOTES FOR MEDICAL MEN.

By H. MASSAC BUIST.

THOUGH there are very few points in the exhibits at the Motor Car Show, which closes at Olympia on November 15th, that are of interest to medical men that we did not touch on last week, two matters call for mention. Owing to the fact that the process of elimination has already begun, some firms which drew the right to select stand sites in the ballot, and which took them up, found that they had nothing to show, therefore at a late stage there was a sort of game of General Post. Other exhibitors who had secured the less advantageous positions elected to engage those vacated. These changes affected the following exhibits mentioned in the table published in these pages last week; they are to be found at the stands bearing the numbers now mentioned in brackets: Angus Sander-son (67), Bentley (126), Chevrolet (96), Fiat (62), G. N. (6), Grahame-White (44), Lagonda (3), Riley (108), and Ruston-Hornsby (22). Happily the Exhibition management provided excellent illuminated signs at the end of each of the circulating avenues indicative of the exhibits, so that it was not needful for the visitor to have a catalogue to find the cars of which he was in quest.

THE PUTTING UP OF PRICES.

Unhappily, the second point is one that has produced a very unfavourable impression. Car prices are liable to be raised any time in the course of the next few months owing, for example, to the quarterly meetings at which the prices are revised by the trade unionists. That was generally understood; but that the makers should wait until the Show was about to open, and that some who had announced very attractive propositions should increase them by sums varying from £50 to £100 per chassis was, to say the least, very undiplomatic. Nothing had happened within twenty-four hours to cause this sudden change, which must have been arranged in advance of the opening of the exhibition. But as the movement has not been participated in by more than a third of the exhibitors it is idle to set out a list of prices again. Suffice it that, among the more interesting and novel cars calculated to appeal to the medical practitioner, the figures are mostly as returned last week; hence such vehicles show up to-day in all the more striking contrast in the matter of value for money. For the rest, the industry will be well advised not to risk offending the motor-purchasing public by repeating such action on the occasion of the next show of the kind, when visitors will not be so indulgent and competition will be a great deal keener. What does the individual trader suppose is the effect on the mind of the intending buyer who is specially attracted to single out certain stands by reason of the prices announced for the exhibits on it, and who, when he comes to place his order, discovers at the last moment that he has to pay a good deal more money than the sum which he understood would suffice? Doctors will not be willing to find £50, £75, £100, or even more, as a surcharge on the purchase price of the car they require. Undoubtedly, therefore, the firms that had the wisdom to refrain from announcing their prices until they were sure they could deliver cars at certain figures have scored heavily in public esteem.

AIR-COOLED CARS AND DOCTOR'S WORK.

As to chassis, a few cars only stand out as calling for further mention—namely, the air-cooled Cosmos and Enfield-Alday and A.B.C. vehicles; the 10 h.p. water-cooled Wolseley and the Willy-Overland machines; as well as the Hammond and Hampton novelties.

First as to the application of the air-cooled engine to the service of the medical man. These constructions come under one or other of two categories: those that derive more or less directly from motor-bicycle practice, and those that are the outcome of knowledge gained in connexion with aircraft. In neither case should the medical man resident in hot countries use these classes of cars, at least until the makers have standardized them for twelve months. For one thing, none of the new-style vehicles has been tested under tropical conditions. On

the other hand, the same precautions need not be observed in regard to home service. The air-cooled motor-cycle engine evolved, by those who have experience of it, for light-car service, as the Rover two-cylinder V-type proposition, need not be regarded askance by the medical man. Usually his work is not of the long journey sort. Here he has an engine the cylinders of which are not liable to crack through exposure to extreme cold for the simple reason that they are without water jackets. Moreover, the whole scheme of the engine comes well within the knowledge of the average local repairer with a motor bicycle *clientèle*. Such men can even understand the horizontally opposed twin cylinder A.B.C. light car, air-cooled engine with overhead valves worked by push-rods and rockers. This car has heavily finned cast-iron cylinder heads, between which and the machined steel cylinder barrel is interposed an aluminium insulator for the purpose of transposing the heat more readily from one side of the cylinder to the other; for which reason the exhaust port is placed on the windward side. The combustion chamber is hemispherical in shape, and the short, stiff camshaft runs on ball bearings. It is a type that can be quickly grasped by the average garage hand, should repair be needed.

A COMING TYPE.

But in this first season of standardization and issue to the public, the three and the five cylinder air-cooled radial engine light car, wherein the marked influence of knowledge gained from aviation can be seen, should not be acquired by the average medical man unless he has a liking for and a knowledge of mechanics, or is satisfied that conveniently near his residence there is an agent properly equipped for repair work, who engages hands specialized on the particular new style of construction he selects. In my view the biggest risk run by the sponsors of the air-cooled Cosmos car, and of the five-cylinder Enfield-Allday cars, is from the repairers. At least one of the manufacturers, the second named, is aware of this and is providing against it by testing the knowledge of the agents and of their staffs, at intervals after the delivery of the first examples, which are now out because production has attained the scale of twenty-five cars a week. Of course this is not anything like enough to meet demand. Consequently in the interests of a notable step in car evolution, quite apart from the interests of any individual firm, subsequent deliveries will be made to those agents who prove under periodical examination to have made themselves proficient in the distinctive qualities of such mechanism.

We have got to such a stage in the evolution of the air-cooled car engine that in the interests of the motorists of the future we cannot allow such a development to come to an untimely end through ignorant handling. I am satisfied that sufficient knowledge has been gained to render it possible to construct satisfactory air-cooled car engines. When, too, there is such a margin of power, as is provided in the Enfield-Allday for instance, the engine of which can develop over 3 h.p. per cwt. of complete vehicle, there is no reason why, for medical service, such mechanism need ever be put to anything like the top of its performance. I am in hope that this car, and the Cosmos three-cylinder air-cooled vehicle, will figure in the Royal Scottish Automobile Club's touring trial of Standard Light Cars, starting on June 14th, 1920. Provided the first few hundred buyers are of the right sort I think the time has now come when we can launch air-cooled cars with confidence. Several thousand would-be motor owners in this country will find the maintenance of such constructions child's play after their experiences with aircraft.

We ought to be especially on our guard against accepting unfavourable reports, should they come to hand from private users, because it will be extremely difficult to know how much or how little the individual owner really knows about such novel schemes. I quite expect to hear some of the cars damned in whole districts, but I am equally certain that they will earn unanimous praise in other districts. Nor will the circumstances of flat and hilly country account for such differences of opinion. Hills have little terror to engines with such a high ratio of power to weight. Certainly the Enfield-Allday has been tested very thoroughly on long hill climbs.

OUTSTANDING DEPARTURES.

The chassis of both these air-cooled cars are original. Neither has dumbirons, for the Cosmos chassis employs the patented bell crank and horizontal coil spring suspension back and front; while the Enfield-Allday, with its even more unconventional box girder centralized frame, has true cantilever springs—not the quarter-elliptic sorts that are being mis-styled cantilevers by their manufacturers—set most ingeniously at a tangent from the axles to the frame members, with a result that the body should keep an even keel at corners, though, of course, in all these light luxuriously sprung constructions no car can have the same trim when the owner-driver alone is aboard it and when he has a passenger seated beside him. Nobody expects that. Neither is it necessary. The riding is equally agreeable in both cases where the steering is of the conventional as distinct from the left hand sort, which importers of the American cars are trying to get us to accept as a saving of expense—or rather, a gain to their pockets. The driver must always be on the car when it is travelling, but there are not always other folk aboard as well. As our roads should always have a cauber of sorts, it follows that the driver ought to sit on the right, not the left hand, seat when motoring in this country.

The Cosmos engine is built up as a unit with the clutch and gearbox, whereas the Enfield-Allday engine is bolted to the aluminium casting at the front of the car frame, and the gearbox is suspended at the apex of the side members of that ingenious girder structure.

SOME OTHER CARS.

Among cars with water-cooled engines, the 10 h.p. Hampton has a four-cylinder overhead valve Dorman engine with adjustable tappets, aluminium block casting detachable cylinder heads, and cast-iron cylinder liners; while the Hammond is chiefly notable for having helical spring controlled suspension, a principle that will probably come into more general use for the simpler forms of cars.

The Stellite car may be said to have grown into the 10 h.p. Wolseley, in that, with its three-speed gearbox, tapered channel steel frame, among other additions, as well as a four-cylinder, overhead valve engine that develops as much as 20 h.p., this vehicle is now capable of a much faster turn of speed, and is, of course, really well equipped for hill climbing.

The Willys-Overland suspension is evoking much interest, not because it is being mis-called a cantilever system, which it is not, but because it is something new and good. Here, as in the 10 h.p. and 15 h.p. Wolseley cars, we have a big constructional departure, resulting incidentally in a total absence of dumbirons. On the Willys-Overland there are two springs only, each being of the semi-elliptic sort; but in plan the leaves take a broad V form, the extremities passing to that part of the axle where the pads are provided in normal practice; while at its mid-length the back spring is attached to the centralized extremity of the frame, which overhangs the back axle. At its mid-length the front spring is attached to the centralized front end of the frame, which projects beyond the front axle, so that the spring base is 30 in. longer than the wheel base, very plangent riding being provided in consequence.

SOME months ago the municipal council of Lyons established a "secret maternity" for the reception of unmarried mothers. It is the equivalent of the old foundling hospital, but freely open without inquiries or formality. It provides accommodation for forty-five patients; all the beds are now occupied, and there is a waiting list of 800. On the proposal of the mayor, M. Herriot, the General Council has voted £8,000, and an annual sum of £2,000 has been placed on the departmental budget.

THE total number of students of medicine in Switzerland in the summer session of 1919 was 1,678. These were distributed among the five universities as follows: Bâle, 244, of whom 21 were women; 40 were foreigners, including 3 women. Berne, 360, of whom 32 were women, 134 were foreign, including 21 women. Geneva, 342, of whom 66 were women; 159 were foreign, including 45 women. Lausanne, 237, of whom 25 were women; 57 were foreign, including 12 women. Zürich, 495, of whom 102 were women; 112 were foreign, including 41 women.

THE LISTER MEMORIALS AT UNIVERSITY COLLEGE AND HOSPITAL.

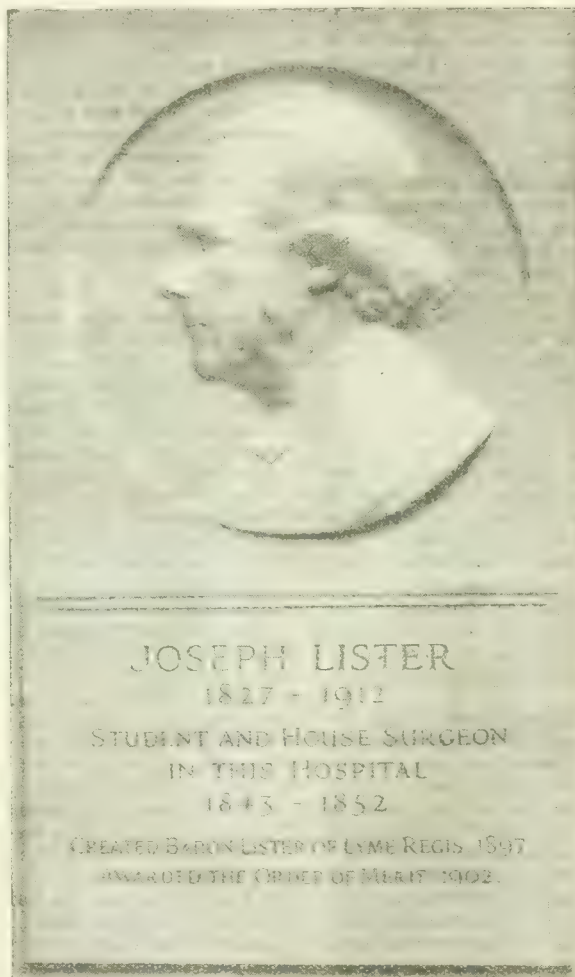
THE two tablets in memory of Lord Lister, the one to have a permanent place in University College Hospital and the other in University College, were unveiled on November 11th. The DUKE OF BEDFORD, President of the Memorial Committee, presided over a large and distinguished company.

Address by the President of the Royal College of Surgeons of England.

SIR GEORGE MAKINS said that they were met to inaugurate a memorial to the great student who left those walls sixty-six years ago to open up a pathway to a new domain of knowledge and practice. No memorial in stone was needed to perpetuate Lister's fame. Moreover, there was a splendid monument already in the collected edition of his scientific papers, and one of the professors of that College had furnished a very complete Life. But while the fame of Lister could never pale, it might not be so generally remembered that he emanated from that school, and nothing could be more calculated to stimulate the ambition of future students than to see the effigy of one of the College's very greatest alumni upon its walls. The value of the education which Lord Lister received in that school and the influence which its teachers exercised upon him in cultivating the spirit of research could not be over-estimated. After taking a degree in arts, Lister entered the school of medicine. His early work, particularly on the structure and function of the iris, showed a power of observation, the ability to record observations, a desire to undertake experiments, and a readiness to assimilate knowledge and to appraise the work of his fellows. Lister thus became able to take prompt advantage of the discoveries of Pasteur, to describe their true significance with regard to wound infection, and to apply them practically. His frequent migrations from London to Edinburgh, then to Glasgow, back to Edinburgh again, and finally to London, must have been of great importance in his development, for in each city he had to establish his reputation as a teacher and surgeon and to maintain it as a scientific investigator. Throughout his life he was a teacher, and this must have had its effect in developing his critical faculty and spurring him on to continue his investigations. His lectures, so far as could be judged, were on a very much higher level than was customary in the surgical lectures of the day. They were founded on pathology. The mind was caught (Sir George Makins continued) by the extreme simplicity of Lister's experiments, the directness of their purpose, and the fact that they were of a kind which could be readily understood and repeated; also by the thoroughness with which they were carried out. To put aside for the moment the great experiment which occupied his life, his collateral investigations had the same characteristics. The absorbable ligature was an instance in point. It struck him that certain animal materials might be absorbed by the tissues of the body.

He selected catgut, first found out the source of the material, the mode of manufacture, its minute structure, its texture, tensile strength, and breaking strain, and then proceeded to experiment with it, burying it in tissues, and watching what happened. Lister, of course, realized that in investigating a vital problem vital tissue was being dealt with. The animal experiment being finished, he applied the process to man and watched the operation, and recorded the results with all the care he would have given to an experiment in the laboratory. In Lister's writings exactly the same characteristics were found. The language was forcible by its simplicity. Any layman could read his scientific papers as easily as a man of science. The majority of his experiments, it might be useful to add, were done in his own home; a certain number of them in a slaughterhouse. At the present day there was a tendency to think that good scientific work could only be done in large and very expensively equipped laboratories. People were sometimes inclined to forget the importance of the experiment in magnifying the apparatus.

If Lister's methods were so simple and his expositions so clear, it might be asked, How was it that he had such difficulty in impressing his system upon the surgical world? It must be remembered that Lister was not the first prophet to cry in the wilderness. In France, when Pasteur tried to impress upon surgeons the advisability of passing the knife or forceps through a flame, so that they would thereby escape many dangers, he was asked, "What can a biologist teach us?" But the surgeons of to-day should not be too critical of their predecessors. The position of those men was one of great difficulty. It was quite easy for the present-day surgeon, who had been brought up in a bacteriological laboratory, to say that this or that was produced by a micro-organism, but when their predecessors were told that a micro-organism was the cause, for instance, of supuration, and they were shown the micro-organism under the microscope, it was something so minute, so far outside the range of their previous observation, and it was so difficult for them to make experiments of their own on the subject, that it failed to make any great impression on their minds. Consequently, what Lister had to say was received with incredulity, and even from those who took up his system he had to encounter misgiving. The speaker recollected the impatience which a surgeon of the old school exhibited when a more enlightened assistant was trying to prepare a patient for him before operation. The measures themselves had to be undertaken during the performance of an operation on which all their powers were concentrated, and it was difficult for them suddenly to take a number of minute precautions. The surgical profession also was considerably influenced by tradition. The future historian would see many sidelights when he read Lister's words: "I venture to assert that no one who has not a belief in the germ theory of putrefaction can ever perform satisfactorily the antiseptic treatment of wounds." In passing, Sir George Makins lamented that the word "asepsis" should have received such general acceptance.



In principle there was no difference between the aseptic and the antiseptic system; both were based on the preventive principle. Lister did not put forward the antiseptic system as curative. To him it was a preventive treatment pure and simple, and no surgeon had a stronger belief in the part the powers of Nature took in the healing of the wound. Lister's father, who was opposed to a surgical career for his son, had said, "Let Nature do her own work," and that was a prophetic saying, because, after all, Lister's great achievement in life was to ensure that Nature *did* her own work. He retained a fondness for the use of chemical media in the treatment of wounds because he believed that by their use the method was more easily and safely carried out. At St. Thomas's Hospital some twenty years ago four fine new theatres were installed and equipped for what was called aseptic surgery, and Lister was asked to come and open them. He came the day before the opening and made an examination, and on the morrow he delivered a speech which was a scathing though not unfriendly attack upon the aseptic theatre.

Lister spent his life as a practising surgeon and teacher. Would the harvest of his work have been greater had he been an academic professor, or had he given his life to the laboratory? The answer must be in the negative. Lister combined the humanitarian, utilitarian, and scientific aim, and thereby became the ideal surgeon. His work, moreover, was that of a general surgeon. He embraced the whole field, not the narrow path of specialism. What was known as team work did not enter into Lister's conception of scientific investigation. He stood upon his own, drove no team, yoked himself in no unequal harness, but he led. Prior to Lister's time the surgery of injuries was almost wholly of a mutilating character. It consisted generally of removing the injured part. Few operations of expediency were ever performed. This, of course, was on account of the dreadful complications which so frequently followed the infliction of a wound. Such complications as secondary haemorrhage had now in the main been swept away. No man under 50 could give any description of what "hospital gangrene" was; with Lister it was a familiar condition. Yet the organisms which caused these infections were as all-pervading to-day as they were fifty years ago. Lister promptly seized the opportunities which his own system gave him to enlarge the field of practical surgery. He had no fear of opening a large joint or converting a simple into a compound fracture. Speaking of the influence of Lister in the surgery of the war, Sir George Makins said that the old scourges all held up their heads, and the cycle of experiment had to be carried through again, but the surgeons in this case started from a new standpoint, which was nothing less than the bedrock of Lister's principle, and the experiments were carried through with great celerity. Lister's predecessors, great and able men, advanced both the science and art of surgery, some by small steps and others by giant strides, but Lister did far more: he established a great principle which transformed the mode of thought and revolutionized the practice of surgery in his time, and which asserted itself in every ramification of the science of preventive medicine. His achievement was as great as that of any of the great men of science, art, or literature who preceded him, and in the benefits conferred upon mankind perhaps excelled them all.

Sir George Makins then unveiled the hospital tablet—a marble portrait in bas-relief, the work of Mr. Havard Thomas.

Address by the President of the Royal Society.

Sir J. J. Thomson, O.M., said that Lister's intimate connexion with the work of the Royal Society began after his success had been won. In the Society his work was not so much in the prosecution of research as in organization and administration, which, however necessary, gave less scope to individuality. The Society could claim to have recognized the merits of Lister at a very early stage in his career. He was elected a Fellow in 1860, when 33 years of age. His father and a brother were also Fellows, as was a nephew now. In 1880 he was awarded a Royal medal, and in 1902 the Copley medal, which the Royal Society considered the highest honour it had to bestow. Lister's connexion with the administration of the Society began with his appointment as foreign secretary in 1893,

a position he held until elected president in 1895. He held that office for five years, during which time many important branches of work were undertaken, including the setting up of a committee for the investigation of tropical diseases and the establishment of the National Physical Laboratory. From his experience when serving on the Council with Lister he had been impressed by his courtesy. Discourtesy in him was unimaginable. His personality seemed to banish the microbe of discourtesy from the committee room as effectually as his discovery had banished the germs of foul disease from the surgical ward. His kindness was conspicuous. In deciding on the bestowal of medals and prizes, he sympathized with the unsuccessful more than he rejoiced with the victors. He was a benefactor of humanity, a great man of science, and a most courteous and kindly gentleman.

Sir Joseph Thomson then unveiled the tablet which is to be erected in University College. This is rather smaller than its companion, and of different shape, but the portrait head is identical. It bears the inscription:

JOSEPH LISTER MDCCCXXVII-MCMXII
STUDENT ARTS AND MEDICINE MDCCCLXIII-
MDCCCLII. FELLOW MDCCCLXI. CREATED
BARON LISTER OF LYME REGIS MDCCXCXVII
AWARDED THE ORDER OF MERIT MCMII.

Concluding Speeches.

Sir GREGORY FOSTER, Chairman of the Memorial Committee, then invited the Vice-Chancellor of the University and Emeritus Professor of Anatomy in the College to accept the tablet on behalf of the College, and the Chairman of the Hospital Committee and the senior surgeon to accept the other tablet on behalf of the hospital and medical school. Sir COOPER PERRY conveyed the thanks of the Senate for a life-like and artistic memorial of the greatest of British surgeons. Sir GEORGE THANE said that the tablet would be an incentive to the men to strive after the Listerian spirit. Sir ERNEST HATCH accepted the tablet on behalf of the Hospital Committee, and Mr. RAYMOND JOHNSON gave a few extracts relating to Lister from the old minute books of the hospital. It appeared that he was recommended as house-surgeon at a "meeting" of the Medical Committee, when only one person attended—namely, the Dean. Mr. Johnson said that the tablet would be placed on the wall at the end of the entrance hall, exactly opposite the foundation stone.

Sir JOHN TWEEDY, treasurer of the committee, expressed the general feeling of admiration for the work of the sculptor, Mr. Havard Thomas, whose chisel, he said, fulfilled the two requirements of memorial portraiture, a good likeness and a work of art. He added that the subscribers numbered forty-four and the subscriptions amounted to £326, which was raised to £398 by interest on investment. Sir JOHN ROSE BRADFORD thanked the distinguished Presidents for unveiling the memorials, and the proceedings concluded.

THE Ladies' Guild of St. Thomas's Hospital held its first annual general meeting since 1913 last week, under the presidency of Adeline, Duchess of Bedford. Mrs. Battle, who has been honorary secretary for nine years, was appointed chairman of the committee, replacing Lady Ballance, who has been elected president of the guild after many years of untiring work as chairman. In acknowledging a vote of thanks, Sir Arthur Stanley, treasurer of the hospital, said that the patients greatly appreciated the work of the guild, and he expressed the hope that many new members would be enrolled. Offers may be addressed to Mrs. Edred Corner, the new honorary secretary, at 37, Harley Street, W.1.

BEGUN in a modest fashion in November, 1914, the Auxiliary Hospital, 40, Weymouth Street, London, W., in March, 1915, became a recognized auxiliary hospital. From ten beds it increased in number to a total of fifty-five. Mr. H. T. and Mrs. Herring were responsible not only for the initiation of the scheme, but also for the daily burden of carrying it on for four and a half years. The hospital has provided beds free for 7,395 patients, of whom 4,300 approximately were patients sent from the 2nd London General Hospital, and the remainder men needing a home while on leave, including some from the Australian Command, and others, but all were soldiers. The medical and surgical and nursing staffs have received the thanks of the D.D.M.S. London District.

British Medical Journal.

SATURDAY, NOVEMBER 15TH, 1919.

THE FOOD OF EUROPE.

DR. WENCKEBACH, who in 1911 left the Dutch University of Groningen to become professor of medicine at Strassburg, and in 1914 accepted a call to Vienna to become senior professor of medicine there, has recently been in this country attending the conference summoned by the Fight the Famine Council, of which Lord Parmoor is chairman. The conference met in private last week, but from a report issued by the Council, the questions to which most attention would appear to have been given were really of a financial nature. Sir George Paish, at one time adviser to the Treasury on financial and economic questions, who opened the proceedings, said that the outlook for Europe was that in the spring of next year it would be subjected to famine conditions; to avoid such a catastrophe the whole world must effect economy in consumption and supply all the food and raw material possible, whether for goods, cash or credit. The amount of credit required by France, Italy, Belgium, Germany, Austria-Hungary, Rumania, Serbia, and Jugo-Slavia—possibly by Russia also—came, he said, to an amount which was beyond the power of any one country to provide; it would be necessary for all countries to supply things needed on credit, and the countries giving credit must themselves be able to obtain credit. Mr. Paul Warburg, who was a member of the Federal Reserve Board of the United States, has, on his return to America from Europe, reported in the same sense, and has pointed out that prices must continue to rise as long as the leading countries spend every year billions more than they collect from taxation and cover the resulting deficiencies by issuing additional currency and Treasury bills. This policy, if persisted in, must, he said, end in something like Russian or Austro-Hungarian conditions, where the savings of the past, invested in money securities, had been practically wiped out. To issue government obligations or currency for the purpose of paying idle men or providing below cost such things as transport and food, or for covering extravagant military or other expenditure, was an insane business practice which sooner or later must lead to the bankruptcy of every country indulging in such methods.

M. Avenol puts another aspect of the same matter in a letter published in *The Times* of November 10th. While recognizing that the nations of Central Europe are passing through a moment of extreme difficulty to which no European worthy of the name can pretend to be indifferent, he contends that the dominant fact in the situation of Western Europe is the devastation of the Franco-Belgian territories—regions whose industries and agricultural fertility, producing an abundance of coal, milk, butter, sugar, wheat, and meat, were among the richest of the whole continent. For months to come hundreds of thousands of men who would have been employed in getting coal or tilling the soil will be engaged in pumping mines, reconstructing factories, rebuilding dwellings, and restocking the farms plundered of their cattle. The absolute and utter desolation of the countries thus laid waste is one of the principal causes of the present critical

state of things throughout the world. France has ceased to be self-supporting; foreign shipping, coal and foodstuffs, as well as financial credit, are matters of absolute necessity to her while she is striving to restore order among her ruins. There can be no doubt of the truth of M. Avenol's statements with regard to the desolation produced by the wanton acts of destruction perpetrated by Austria's ally.

We cannot, however, pursue further these financial questions; but we may note that Dr. Wenckebach, who arrived in Vienna in September, 1914, and, with short intervals, has resided there throughout the war, states that the value of money in Vienna had decreased until there is now no real scale of prices. The food position, which had been growing gradually worse, became extremely bad after the armistice and the break up of the Austro-Hungarian empire. The standard of living in Vienna became generally low, but some classes have suffered more than others. Illicit trade in food has reached immense proportions, the people benefiting being those actually engaged in it, who reserve food for themselves, and the rich, who have ceased to regard the nominal value of money in the purchase of food. He states that children in particular have suffered. A large number of cases of scurvy occurred, and shortly afterwards there was what he calls an "explosion of rickets." He saw also many cases of osteomalacia, and an unusual number of examples of late rickets.

It appears therefore that, apart from any question of quantity, the diet of children and young persons in Vienna must be defective in quality owing to lack of vitamins. Professor Wenckebach expresses his gratitude to the action of the Accessory Food Factors Committee, appointed jointly by the Lister Institute and the Medical Research Committee, in sending a mission to Vienna. The mission consists of Dr. Harriette Chick, assistant in the department of experimental pathology of the Lister Institute, and Dr. Elsie Dalyell, a former Beit scholar who has been working there. They were instructed, first, to make inquiries as to the prevalence of scurvy, rickets, and other disorders attributable to malnutrition, and to study carefully the dietaries which have led to such symptoms; secondly, to assist those organizations—the British Food Mission, the U.S.A. Food Relief Mission, the Friends' Mission—engaged in the distribution of food by acquainting them with the results of recent experimental work on accessory food factors; and, thirdly, to ascertain in the case of children the value of methods of curing deficiency diseases which have been found effective by experiments on animals.

The mission arrived in Vienna on September 12th and was very cordially received by Professor Wenckebach, who arranged a meeting at which a short paper was read summarizing recent work on accessory food factors, with special reference to the prevention and treatment of scurvy and rickets. Before this the members of the mission had visited the children's hospitals, day nurseries, and infant welfare stations to study the incidence of deficiency diseases among children. The food situation had been somewhat relieved by the food brought in by the Allies and by the American Child Feeding Association, which was supplying 100,000 children with one good meal daily. There was at that time an abundance of fresh vegetables and fruit, though at high prices; milk and butter could not be purchased openly, but a small daily allowance of milk was reserved for each child under one year. It is feared, however, that the limitation of diet, due to present conditions of food supply and

transport difficulties, makes it likely that scurvy will again appear during this winter. Outbreaks of scurvy were common in children's hospitals and institutions during last winter and spring; for instance, in the children's clinic of the university under the direction of Professor v. Pirquet thirty-five children at ages from 6 to 13 years were affected, out of a total of sixty-six. The mission, guided by the results set out in the memorandum on accessory food factors, of which we gave an account a short time ago, has urged the preparation of a supply of anti-scorbutic material in the form of preserved tomatoes, lemons, etc. The inspection of hospitals and infant welfare centres in Vienna left the general impression that rickets was almost universal among poorer children from 1 to 4 years of age; it was placed by various authorities at from 70 to 80 per cent. There was also noted a delay in general development, of which some extreme cases were seen, especially in a finely equipped modern hospital opened in 1915 for mothers and children. The mission was informed that outbreaks of war oedema had occurred amongst the poorest inhabitants of Vienna in the late spring and summer of 1917-18. In the summer of 1919 some hundreds of cases of osteomalacia occurred, but there was no epidemic of war oedema. The mission seems to have gained the complete confidence of members of the Viennese profession concerned with child welfare and the treatment of children's diseases, and has been greatly assisted by the British Relief Mission in Vienna. There appears every reason to hope therefore that the work of the mission will be of great value to the child population of Vienna, and that the results of the scientific observations made on so large a scale will add to our knowledge of the essentials, other than calories, of a healthy diet, and put to a practical test the recent work done chiefly in this country, in India, and in America with regard to the nature, prevention, and treatment of deficiency diseases.

FIFTY YEARS OF SCIENCE.

THE jubilee number of *Nature*, published last week, contains a review by many hands of the progress of the sciences during the last fifty years, a statement of their present position, and indications of the problems that are now being attacked. The number is of very great interest to anyone who desires to gain a general view of the movements in science. The articles are all short. Their value is that each is written by a master of the subject, who picks out the observations he considers of fundamental importance, and traces the rise, the fall, or the modification of theories. No science can get along without hypotheses. The true mark of a progressive science is that its most active spirits show themselves anxious to put all to the test of observation and experiment, and are ready to discard a hypothesis or modify a theory as new facts come to light.

No candid critic can accuse modern men of science of worshipping at old shrines. Not one of Sir Richard Gregory's contributors—and they include for medical science Sir Clifford Allbutt and Dr. C. J. Martin—is *laudator temporis acti*; all suffer from divine discontent. In fact, the strongest impression left by the perusal of this remarkable series of essays is that every science is in a state of flux, and that great changes are expected.

Sir E. Ray Lankester, in his essay on the foundation of biological sciences, says that the great event in the history of biology was the publication in 1859, ten years before *Nature* was founded, of Darwin's *Origin*

of *Species by Means of Natural Selection or the Preservation of Favoured Races in the Struggle for Life*, which gave a new conception of organic phenomena. The essayist is careful to quote the full title, perhaps because before ending he deals faithfully with physiology, which, he says, "has yet to come under the full influence of the Darwinian doctrine—the preservation of favoured races in the struggle for life." As yet there has been no investigation of the *development* and survival of functions. It is necessary to study their evolution from simpler types and to analyse by experiment the progressive series of chemical activities involved in digestion, secretion, excretion, and so on. At present physiology is as incomplete as morphology would be if no forms below terrestrial vertebrates had been studied."

A few pages further on we have Professor de Vries writing of the difficulties inherent in Darwin's conception that species originate by the gradual accumulation of infinitesimal, ordinarily invisible, variations on account of their utility in the struggle for life. The mutation theory has developed the doctrine of two types of variability—fluctuating variability, which connotes the small but always present differences among individuals of the same stock; and mutability, the larger sudden variations by which varieties are known to arise in horticulture. De Vries believes that the mutational impulse originates in the sexual cell before fertilization, and calls in Mendelism to explain some of the difficulties of his own theory. But, in fact, mutation, though it affects some details of Darwin's argument, does not touch his main thesis, and in the next article we find Professor Bateson asserting that as bearing on evolutionary theory modern work in Mendelism "leaves us much where we were. Progress in genetic physiology has been rather a restraining influence."

Remembering how common it is to find the belief in drugs replaced by a kind of therapeutic agnosticism, we will not forbear to quote from Sir Edward Sharpey Schafer's article on developments of physiology. He points out that the immense progress on the old lines of investigation has been correlated with the parallel development of the sciences on which physiology is based—physics and chemistry. But he goes on to say: "Nothing under the sun is ever entirely new. From the earliest times with which history deals, and doubtless even in prehistoric days, it was known that the functions of the body are affected by chemical agencies. For have not drugs, many of them of a potent, not to say poisonous, nature, been administered from time immemorial?" Nevertheless he says that fifty years ago no one suspected that the body itself produces drugs destined to influence its own functions, that certain organs pass chemical substances (hormones) into the blood to affect distant parts, and that many functions of the organism are regulated by these self-formed drugs, sometimes in conjunction with the nervous system, sometimes without it. The facts may give encouragement to the pharmacologist and it indeed seems possible that his science is one of those which is about to undergo rejuvenescence.

Sir Edward Sharpey Schafer says that physical chemistry has more than all "enabled the physiologist to see—if still very dimly—into the processes which make up life itself further than could ever have been dreamed of" fifty years ago; and Professor J. C. Philip, who speaks for physical chemistry, rejoices that the physiologist, among others, finds valuable aid in the principles of his science. But ideas about physical chemistry are in a state of flux, and we have reached a stage in which the structure of the atom

itself is a matter of informed speculation and even of experiment. In investigations of the electric properties of gases it is possible, Sir J. J. Thomson tells us, to detect "the presence of a few thousand atoms, while the most delicate methods of chemical analysis will scarcely detect a million million." One result of these investigations is to show that at very low pressures the carriers of negative electricity are not atoms or molecules, but electrons, the mass of which is only about one 1,700th of that of the smallest known atom, that of hydrogen. These electrons can be obtained from atoms of every kind, so that they form an integral part of the normal atom, and their number is equal to the atomic number of the element. The electron, Sir Ernest Rutherford says in another article, is a disembodied atom of negative electricity which has hardly any mass, the mass of the atom being in the nucleus, which has a charge of positive electricity. Such observations have led to theories of the constitution of the atom, so that, to quote Professor Soddy's words, it is now regarded as a solar system, of which the massive central sun, comprising all but a negligible fraction of the whole mass, is an exceedingly minute positively-charged nucleus, attended by numerous rings or shells of the almost massless electrons. Now it appears that even the nucleus of the atom is no longer immune from the attacks of the physicist, for the latest results of Sir Ernest Rutherford on the passage of alpha particles through nitrogen make it appear that the nuclei of a certain exceedingly minute proportion of the nitrogen atoms struck by the alpha particle are shattered by the collision. The thoughts of physicists are turned towards the energy locked up in the atom. Its magnitude is shown by the study of the explosive disintegration of the atoms of the radio-elements. This change is attended by the liberation of energy a million times greater than is liberated in any previously known change of matter.

Finally, we have one of the fundamental bases of physics questioned by Einstein's generalized theory of relativity. At the joint meeting of the Royal Society with the Royal Astronomical Society on November 6th the Astronomer Royal announced that the measurements of the eclipse expeditions lead to the conclusion that the sun's gravitational field gives the deflection of light predicted by Einstein. Two out of his three predictions are held now to be verified, and the President of the Royal Society, who described the new observation as epoch making, suggested that it would probably have a bearing on electrical theory.

Do not these brief indications of what our contemporary has to tell fully justify the statement that every science, and not only biology and medicine, is in a state of flux?

THE ANNUAL MEETING, CAMBRIDGE, 1920.

As we have already announced, the eighty-eighth annual meeting of the British Medical Association will be held next year at Cambridge, under the presidency of Sir Clifford Allbutt, Regius Professor of Physic in the University. The last annual meeting of the Association in Cambridge was held forty years ago—in 1880—when Sir George Humphry was President. The meeting next year will take place a month earlier than usual, for the reasons given in the JOURNAL of October 25th. The proceedings will begin on Friday, June 25th, when the Annual Representative Meeting will commence its proceedings, which will be continued on the following weekdays. The statutory Annual General Meeting will take place on the afternoon of Tuesday, June 29th, and Sir

Clifford Allbutt will deliver his presidential address to the Association in the evening of that day, probably in the Senate House. The sectional meetings for scientific and clinical work will be held on the Wednesday, Thursday, and Friday, the mornings being given up to discussions, and the afternoons to clinical and laboratory demonstrations. Five sections—namely, Medicine, Surgery, Physiology and Pharmacology, Neurology and Psychiatry, and Pathology and Bacteriology—will meet on each of the three days. The following sections will meet each on one day: Obstetrics and Gynaecology, Tropical Medicine, Naval and Military Medicine, Electro-therapeutics and Radiology, Medical Education, Medical Sociology, and Venereal Diseases. There will be religious services on Wednesday, June 30th, at 5 p.m. The annual dinner, which it is hoped will be held in one of the larger college halls, has been fixed for Thursday evening. On Friday evening a popular lecture will be delivered; and Saturday, the last day of the meeting, will be set apart for excursions to places of interest in the neighbourhood. The various university and municipal buildings and the laboratories and lecture theatres of the medical school are all situated near the centre of the town, and are conveniently close to each other. The Guildhall, looking on to the Market Square, has been secured for use as a reception room, and the Annual Exhibition of drugs, instruments, and appliances will be held in the Corn Exchange, near at hand. There is ample accommodation for the work of the sections within the group of University buildings known as the New Museums, and from this Addenbrooke's Hospital is but a short walk, while the colleges, the university lodgings, and the principal hotels are nearly all within easy distances of one another and of the market place. The general plan for the meeting was laid down by the Arrangements Committee on October 17th, and was approved by the Council at its last meeting. The local Branch and Division have appointed as joint secretaries for the Cambridge meeting Dr. J. F. Gaskell and Dr. G. S. Haynes. A representative general committee is being constituted, and this in turn will appoint executive and other special subcommittees to work out the detailed arrangements for the Annual Meeting. We hope to publish in an early issue a list of the officers of the various sections.

A RETROSPECT OF NAVAL MEDICAL CONDITIONS.

At the initial meeting of the new War Section of the Royal Society of Medicine on November 10th, the President, Rear Admiral Sir Robert Hill, delivered an address of special interest owing to the new information contained in his comparison of the casualties at the battles of Camperdown, the Nile, Trafalgar, and Jutland. He gave the complements of the various ships, the total casualties per cent. of their complements, and the total British forces engaged in those four battles—namely, 8,221, 7,985, 17,772, and about 60,000. Out of the 6,688 total casualties at the battle of Jutland, 674 were wounded and 6,014 were drowned or killed outright, no fewer than 5,562 of the latter being in ships sunk with all or almost all hands. The total casualties amounted to 11.14 per cent. as compared with 10, 11.2, and 9.5 per cent. in the battles of Camperdown, the Nile, and Trafalgar. It is noteworthy that neither the total force nor the complements of the ships at Trafalgar are given in any historical account of the battle, and that these figures have now been obtained from the Admiralty muster books preserved at the Public Records Office. The analysis of the casualties at Jutland is another important piece of knowledge contributed in this address. The earlier part of the address contained a picturesque account, with graphic quotations, of the state of the Naval Medical Service between 1795 and 1840, a period with a glorious naval history but with few attractions from the point of view of the naval surgeon. There were, however, as was shown by a number of examples, many medical men of

originality and professional ability among the surgeons, in spite of their difficult conditions. There was no sick-berth staff until 1840, the surgeon's mates were sometimes quite ignorant, and the surgeon had to provide some at least of his drugs and professional equipment out of his own pocket. Sir Robert Hill hopes that in addition to providing opportunities of keeping up friendships formed in the war between the permanent and temporary medical officers of the various services, the War Section will provide a skeleton medical organization which, in the event of another war, would facilitate the utilization of the various branches of the profession with the minimum waste of specialized talent.

NORTH-WEST FRONTIER OPERATIONS.

WE referred on two occasions last August to White Papers containing correspondence between the Secretary of State and the Viceroy of India in regard to medical arrangements and comforts for troops on the North-West Frontier. Another White Paper has now been issued giving further correspondence, and to it Mr. Montagu has prefixed an introductory note. He states that the initial deficiencies noted in the previous White Paper were due to several causes—the rapid advance to Dacca, the fact that the political and tribal situation did not admit of the prior installation of a piped water supply through the Khyber, and to the sudden defection of the Frontier Militia. The field army normally mobilizes behind a screen composed of Frontier Militia and the frontier outposts. Circumstances necessitated a departure from this plan, and for a short time there was a deficiency of stores and equipment, which had to be moved hurriedly to places on the frontier. Further, the outbreak of cholera among the civil population at several points along the frontier added greatly to the gravity of the situation. From a telegram dispatched by the Viceroy on August 20th it appears that the epidemic of cholera among the civil population of the Punjab and the North-West Frontier Province was severe and widespread; the disease appeared amongst troops and followers at fifty different and far distant posts or stations. The number of cases at any post, and the time taken to stamp out the disease at any one place, depended mainly on the number of Indian followers present. It was often practically impossible to bring undisciplined mule and other transport drivers under control, so that when their number was large and they were suffering from intense heat no methods proved successful in restraining them from drinking polluted water, and in their turn perhaps polluting water channels not previously contaminated. Regular units accustomed to disciplinary control escaped. It is said that the comparatively short time taken in stamping out the disease at every post where it occurred, and the complete immunity of certain corps in which sanitary discipline was good, are evidence of the zeal and energy with which prophylactic measures were enforced. The same telegram admits that the operations disclosed the great need of more motor ambulance convoys. On the outbreak of hostilities only one was immediately available, although two others existed on paper. The War Office supplied one and a half convoys from Mesopotamia, and two more were improvised in India. The Government of India considers that motor ambulance convoys should be maintained in peace if they are to be available at the outbreak of hostilities, but adds that expenditure on medical preparation is to be considered on its merits with other proposals, and *pari passu* with the capacity of frontier roads to take motor transport. The opinion in favour of establishing motor ambulance convoys in peace seems to be further qualified by the statement that until the Government of India can arrange for the employment in peace of sufficient motor ambulances to meet the needs in war, and until frontier communications have attained the requisite standard for mechanical transport, wheeled ambulances

must continue to make up the deficiency, with unavoidable delay in evacuating sick. Delays in the installation of ice and soda-water machines, water supply and electrical fittings, are admitted and attributed to shortage of Royal Engineer technical officers. The total battle casualties from May to August 9th given in the telegram were reported in our issue for last week (p. 614). In a telegram dated October 4th the Viceroy states that the R.A.M.C. officers from Mesopotamia detained in India were: Special Reserve 29, Territorial 8, temporarily commissioned 70. Of these, 5 were granted regular commissions, and 22 were sent to the United Kingdom before the end of August; so that on September 1st 80 remained for disposal, of whom 31 were transferred to the United Kingdom during that month, leaving 49 remaining in India on October 1st. Of these, 38 were ordered home early in October, 2 have applied for regular commissions, and one has extended his service for one year at the revised rate of pay, leaving 8 only to be disposed of, for whom embarkation orders were about to be issued. The order of dispatch was determined by marks given on various grounds, special consideration being paid to claims of a compassionate nature, coupled with age, length of service, and time spent abroad. The Viceroy states that as the result of strong representations made regarding the loss incurred by officers on sterling rates of pay (24s. a day) owing to the rise in the value of the rupee, the desirability of substituting a remuneration of a fixed monthly salary in rupees was recognized and the issue of pay at the rate of Rs. 750 a month inclusive was sanctioned from July 1st, and of Rs. 800 to officers willing to re-engage for one year from that date. The general effect of the Viceroy's telegram is, first, to admit defects at the beginning of the operations, which he attributes mainly to enemy action, and, secondly, to traverse most of the criticisms, especially those with regard to provision made for the treatment of cholera. We give elsewhere in this issue the observations of the Secretary of State for India on the allegation that in the operations on the North-West Frontier the recommendations of the Mesopotamian Commission were ignored, and his statement as to the steps taken to alleviate the discontent in the I.M.S.

LABORATORY AND RESEARCH WORKERS.

THE Council of the British Medical Association, at the request of the Annual Representative Meeting in 1916, appointed a committee to confer and act with the Science and State Committee of the British Science Guild in the matter of the inadequate recognition and recompense by the Government and other bodies of medical workers in the field of science. A joint meeting was held in September, 1916, at which it was decided to obtain authentic information as to the salaries, security of tenure, and pensions of medical men engaged in scientific research. The pressure of business and anxieties during the war stood in the way of any further action, but the matter has now again been taken up, and a meeting was held last week, when it was decided that the committee should in future be known as the Joint Committee of the British Medical Association and the British Science Guild on Awards for Medical Discovery. The Committee also decided that each of its members should collect information regarding medical research work and discovery already carried out, in relation to the war or otherwise, which he considers deserving of recognition and recompense by the Government or other bodies. Sir Ronald Ross, M.D., K.C.B., F.R.S., a member of the Executive Committee of the British Science Guild, has undertaken to collect and edit information thus obtained and present it in the form of a report to the Committee as a foundation for further action. Before the meeting Sir Ronald Ross entertained at luncheon at the Ritz Hotel several members of the Committee, and others; the guests included Sir Alfred Keogh, G.C.B., Sir Richard Gregory (Editor of

Nature), Professor Bayliss, F.R.S., Dr. Leiper (of the London School of Tropical Medicine), Professor Benjamin Moore, F.R.S., Professor Sommerville, Mr. E. B. Turner, one of the representatives of the British Medical Association, Colonel Nathan Raw, M.D., M.P., and Dr. Dawson Williams (Editor of the *BRITISH MEDICAL JOURNAL*). Sir Clifford Allbutt and Professor J. S. Haldane, who had hoped to attend, were unable to be present. Sir Ronald Ross has already given much time to the question, which he was, we believe, the first to raise. He may be trusted to produce a report which will be of the utmost value in any action it may be decided to take. It may be recalled that the British Medical Association, on the advice of its Science Committee, has been giving attention to the question of the conditions of employment, remuneration, and superannuation for laboratory and research workers. It has appointed a Medical Research and Laboratory Workers' Subcommittee, and as a preliminary step the Association has drawn the attention of the Board of Education to the fact that the emoluments of whole-time professors in many of the medical schools of the University of London amount at the present time to no more than £600 a year, whereas in 1913 the Royal Commission on University Education in London expressed the view that the minimum salary of a professor in the faculty of medicine should be £1,000. The salaries of assistants and demonstrators are correspondingly exiguous. The Subcommittee has recently made inquiries in regard to the present terms of service, and the information received in reply has been considered at a meeting of the Subcommittee this week.

THE CINEMA IN OBSTETRIC TEACHING.

In the Obstetrical Section of the Royal Society of Medicine, on November 6th, Dr. G. Drummond Robinson, obstetric physician to the Westminster Hospital, demonstrated a cinematograph film illustrating the processes of normal labour, which is intended to improve the teaching of midwifery to medical students and midwives. The film has been produced under Dr. Drummond Robinson's direction by Mr. Joseph Best, B.Sc., and is published by the Cartographic Studios, 32, Charing Cross, London, S.W.1. The complete process of labour from the first dilatation of the os uteri to the expulsion of the placenta in both vertex and breech cases is shown by "animated diagrams" and by motion photographs of actual labours. By the use of the film the teacher can describe and explain on the screen each phase of labour, special points can be emphasized, and the film can be stopped at any moment, or repeated. In representing the animated drawings a certain jerkiness is hard to avoid without greatly increasing the expense by the preparation of many hundreds of additional diagrams. The film shown by Dr. Drummond Robinson comprised some 25,000 photographs from life and diagrams, and took about half an hour to project on the screen. In the discussion following the demonstration Sir Francis Champneys agreed that this film marked a distinct step forward in the teaching of medical students and nurses. He thought the method, when perfected, would give most valuable aid in imparting correct knowledge of the processes of labour. Dr. T. W. Eden spoke in appreciation of Dr. Drummond Robinson's pioneer production, regarding it as most useful for the purpose of preliminary tutorial classes, and equally applicable to the demonstration of operative proceedings. While satisfied as to the value of the photographs of actual labours, he thought care was needed in the use of the "animated diagrams" owing to the air of artificiality conveyed by their representation. Dr. Mary Scharlieb also expressed appreciation of the method. Mr. McAdam Eccles spoke on the general subject of the cinematograph in medical education, pointing out that the method was as yet in its infancy. The pooling of films by medical schools, he added, would greatly reduce the cost. Dr. Drummond Robinson, replying to the

discussion, agreed with Dr. Amand Routh and other critics as to certain defects in the pictures shown, some of them due to disadvantages inherent in the method. He wished it to be understood that he did not regard this particular film as the last word; on the contrary, it was the first. Some regret was expressed during the discussion that more appreciation has not been shown in this country of the French efforts to make the cinematograph of real value in medical education. There is a certain amount of truth in this complaint; we believe we are right in saying that the first effort in this country to show the capabilities of the cinematograph in this respect was made as long ago as 1898. During the annual meeting of the British Medical Association in Edinburgh that year, Dr. Doyen of Paris gave a cinematograph demonstration of various operations performed by himself. The moving pictures then shown were, considering the date, extraordinarily good, but, possibly in order to avoid jerkiness, the films were wound off so quickly that Dr. Doyen seemed in one case to be performing a conjuring trick rather than an operation.

THE REGISTRAR-GENERAL'S DEPARTMENT.

THE whole administration of the department of the Registrar-General of Births, Deaths, and Marriages, including the administration of the census of the population, has been transferred to the Ministry of Health. In the pamphlet on the Ministry of Health giving reasons for its establishment as one of the principal departments of the State, issued by the British Medical Association in April, 1918, when the constitution of the new Ministry was under discussion, this change was recommended. It was pointed out that one of the main duties of a Ministry of Health would be the prosecution of scientific research by, among other means, the analysis of statistics, and it was observed that the Registrar-General's department could easily be transferred directly to the Ministry of Health. At that time the Registrar-General reported to the President of the Local Government Board, through whom responsibility to Parliament was maintained, but the office was practically an independent Government department. It was pointed out that the information it was able to supply was essential to efficient health administration, both central and local, and it was suggested that on its transfer to the Ministry of Health it should take over the preparation of certain statistics such as those furnished under the Act for the Notification of Infectious Diseases. Dr. Addison has appointed Mr. S. P. Vivian, an assistant secretary in the Ministry of Health, to be Deputy Registrar-General of Births, Deaths, and Marriages.

THE ROSE RESEARCH FELLOWSHIP.

WE are glad to be able to announce that through the munificence of Mrs. L. B. Rose, of Bedford, St. Bartholomew's Hospital medical school is the recipient of a sum of money adequate to endow a Fellowship for research into the pathology and treatment of lymphadenoma. The donor has provided sufficient funds to make it possible for the research into this disease to be carried on for a period of ten years, if necessary. Moreover, the sum will suffice to support a second investigator should the board of electors to the Fellowship think this desirable; working expenses also are provided for. This generous endowment will, no doubt, attract workers from all parts of the country, since it is the intention of the medical school of St. Bartholomew's Hospital to throw open the Rose Research Fellowship for general competition. Lymphadenoma is still a disease about which little is known either from the pathological or the therapeutic side; the subject chosen for investigation, therefore, lends itself to intensive research. It is expected that the work will be carried on for the most part at St. Bartholomew's Hospital; but, recognizing that the material for research is comparatively scanty, those responsible for the foundation of the Fellowship have given power to the electors from time to time to

permit a part of the work to be performed elsewhere. In this country gifts for the endowment of medical research are all too rare, and we hope that others in a position to do so will follow Mrs. Rose's generous example.

CAMBRIDGE INSTITUTE OF PARASITOLOGY.

THE Senate of the University of Cambridge gratefully accepted on November 8th an offer by Mr. and Mrs. P. A. Molteno to provide funds for the erection and maintenance of an institute for parasitological research. In a letter intimating his intention Mr. Molteno states that he has long been interested in Professor Nuttall's work on parasitology and regards it as of the very greatest value to the Empire and particularly to Africa, the home of so many diseases transmitted by and through parasites. Researches already carried out by Professor Nuttall have, Mr. Molteno goes on to say, produced results of immense benefit in the control and prevention of diseases both of men and of animals, and he recognizes that research of this nature is indispensable if Africa is to be made habitable for white men and for animals of European stock. Being impressed by the absence of necessary accommodation for carrying on such research work at Cambridge Mr. and Mrs. Molteno offered a sum of £20,000 to provide a suitable building, with its fittings, for this work, and a further sum of £10,000 to form a fund to provide an income for the upkeep and maintenance of the institution, any surplus being used to further research carried on in the institute at the discretion of the director. The letter goes on to express approval of the plans drawn up by Mr. Harry Redfern, F.R.I.B.A., for the proposed institute as it would appear on the Downing site at Cambridge. The plans would afford accommodation for the library and museum, and rooms for the professor and persons carrying on research work. Mr. Molteno is a member of Trinity College, Cambridge, and a graduate of the university, and his beneficent gift is evidence of his high regard for the university, and for the great work which it has done and is carrying on.

THE STANDARDIZATION OF GAS.

THE Fuel Research Board, as the result of an inquiry into gas standards, has made certain recommendations which in the main have been adopted at a recent conference of the board with producers and consumers. The President of the Board of Trade is shortly to introduce a bill giving effect to these recommendations. The outstanding change proposed is that gas shall in the future be charged according to the number of heat units supplied to the consumer, instead of by volume as at present. The number of cubic feet registered in the meter will be multiplied by the declared gross calorific value of the gas per cubic foot, which value will be continuously measured and recorded by a standard form of calorimeter checked by referees. The gas undertakings will also be required freely to adjust or replace burners according to the calorific value of the gas they deliver. The unit to be adopted in charging the consumer is to be known as the "therm"; it is 100,000 British thermal units, equalling the energy required to raise 10,000 gallons of water 1° F.; in other words, one "therm" will raise sixty gallons of water to boiling point, supposing the original temperature of the water to have been 50° F. Subject to the acceptance of these and certain other stipulations, the gas undertakings are to be free to deliver any mixture of combustible gases free from sulphuretted hydrogen, and not containing, during the next two years, more than 20 per cent. of inert constituents, nor more than 18 per cent. during the two years thereafter, nor more than 15 per cent. subsequently to that. They are also, within a period of five years, to supply gas at such pressure that under normal conditions of equipment there will be a pressure of not less than 2 in. of water on the gas in any main or service pipe of 2 in. diameter and upwards.

FLORENCE NIGHTINGALE MEDAL.

At an International Conference of Red Cross Societies, held at Washington in 1912, it was decided to establish a medal both as a memorial to Florence Nightingale and to give international recognition to outstanding work by trained nurses in all parts of the world. A committee was appointed by the International Red Cross Committee in Geneva to make the necessary arrangements. It was originally decided that not more than six of these medals should be distributed either annually or in alternate years to the six most deserving trained nurses, to be selected by the International Committee from recommendations submitted by the various national Red Cross Societies, accompanied by particulars showing the grounds on which each recommendation is made. Owing to the outbreak of the war in 1914, the first awards of this medal were postponed, and the International Committee has now informed the British Red Cross Society that it is intended to award fifty of these medals in January, 1920, and has requested the Society to submit recommendations before the end of the year 1919. To enable the Society to comply with this request it asks that the names of trained nurses who have, especially during the war, proved themselves to be exceptionally deserving of recognition may be brought to the notice of the British Red Cross Society. A recognized training school is one in which there are not less than 100 beds, and where there is a resident medical officer. Full particulars of the services on which the recommendations are made and the names of the officials who can personally vouch for the accuracy of the information given should be forwarded as early as possible, and in no case later than November 30th, for consideration and selection. Recommendations should be sent (marked on the outside "Nightingale Medal") to the Secretary, British Red Cross Society, 83, Pall Mall, London, S.W.1. The medal is in silver and enamel, consisting of a portrait of Florence Nightingale, "The Lady with the lamp," with the words "Ad memoriam Florence Nightingale 1820-1910." On the reverse, surrounding a space reserved for the name of the recipient, is the inscription: "Pro vera misericordia et cara humanitate perennis decor universalis." The medal is attached to a white and red ribbon, on which is displayed a laurel wreath in green enamel surrounding a red cross on a white ground.

SIR CLIFFORD ALLBUTTS PORTRAIT.

At the meeting of the Council on November 5th the Chairman, Dr. J. A. Macdonald, announced that Sir William Orpen, K.B.E., R.A., has consented to paint the presentation portrait of Sir Clifford Allbutt, President of the Association, and that a mezzotint engraving of the portrait will be executed by Mr. H. Macbeth-Raeburn. We understand that Sir Clifford Allbutt has given his first sitting to Sir William Orpen this week. It will no doubt be a source of satisfaction to those who have subscribed for the portrait to know that the work is in the hands of so distinguished a painter, whose brilliant portraiture is admired no less in France than in this country.

THE Joint Peace Council of the British Red Cross Society and the Order of St. John of Jerusalem has been completed. It now consists of twenty-four members appointed by each society. The first meeting of the new council was held this week.

THE Royal Society has awarded the Copley medal to Professor W. M. Bayliss, F.R.S., for his contributions to general physiology and to bio-physics, and the Davy medal to Professor Percy Frankland, F.R.S., for his work in chemistry, especially that on optical activity and on fermentation. One of the Royal medals is awarded to Professor J. Bretland Farmer, F.R.S., for his notable work on plant and animal cytology. Among the members recommended for election to the council at the anniversary meeting on December 1st are Mr. J. Barcroft, C.B.E., Sir Walter Fletcher, and Dr. Sidney Martin.

Medical Notes in Parliament.

Training of Disabled Officers and Men.—Sir Robert Horne, in reply to Lieutenant Commander Dean, furnished on November 5th a written statement as to the training of disabled officers and men. He explained that the training schemes administered by the Ministry of Labour fell under three heads: (1) Industrial training; (2) training for commerce and the professions; (3) training of ex-officers under the Royal Pension Warrant. The first was administered by the Training Department, the second and third by the Appointments Department, in conjunction with the Educational and Agricultural Departments for England, Scotland, and Ireland. Facilities for training under the second head were not restricted to the disabled; all ex-officers and men of similar educational promise were eligible. It was not possible to give certain figures for the disabled and non-disabled, but the following table showed the approximate number of applications received, and grants sanctioned for disabled men and non-disabled men together under the maintenance and training grants scheme:

Dealt with by—	Applications.	Grants Sanctioned.
Ministry of Labour	21,000	7,700
Educational departments	31,000	19,000
Agricultural departments	6,500	2,000

The total number of applications for training from ex-officers under the Royal Warrant for Pensions was about 450. The following table showed the number of cases approved up to date, distinguishing cases dealt with by the Ministry of Labour from those dealt with by the Educational and Agricultural Departments respectively.

	Approved and in training.	Approved but not yet in training.	Completed training.	Total.
Ministry of Labour	95	34	48	177
Educational departments	31	1	26	58
Agricultural departments	102	15	25	142
Totals	228	50	99	377

In reply to a further question by Mr. Hirst, Sir Robert Horne said that the total number of men, other than ex-officers, in training in a whole country was about 12,000. The number known to be waiting and qualified for training was about 20,000. The total number trained with State grants since training began was about 18,000.

Pensions, Awards, and Appeals.—Captain Loseby, on November 6th, asked whether the Pensions Ministry had adopted the recommendations of the Select Committee on Pensions that soldiers appearing before medical boards should be informed immediately after examination, of the degree of disability, translated into terms of money, at which they had been assessed. Sir L. Worthington-Evans replied that as soon as the medical appeal boards were in operation in the regions, and in most regions they were, the pensioner would be told the degree of disability found by the board which examined him. In reply to a further question he said that medical appeal boards had now been set up, to which all men could appeal who were dissatisfied with the degree at which their disability was assessed. But he could not make any announcement on the question of granting a statutory right of appeal on assessment in cases of permanent award. The men concerned would be told by the board that examined them what was their degree of disability, and they would have the right of appeal. In reply to another question by Captain Loseby, Sir L. Worthington-Evans said that as each region was set up arrangements were made to ensure that the finding of the Medical Board of the Ministry should not be amended without the agreement of the board which examined the man or of a board which would re-examine him.

Pensions Appeal Boards' Arrears.—Captain Loseby also asked, on November 6th, to what extent pensions appeal boards were still in arrear with their cases, and what steps were being taken to assist disabled men during the period that the appeal was pending. Sir L. Worthington-Evans assumed that the question referred to the pensions appeal tribunals, which had been reconstituted, as from November 1st, under the jurisdiction of the Lord Chancellor, in accordance with the provision the War Pensions (Administrative Provisions) Act, 1919. A great improvement had recently been made. The cases in hand in May last numbered 16,000; in August the number was reduced to 11,000, and now to 6,000, including cases in the hands of local committees and those adjourned at the request of the appellant. Local committees were authorized, in cases where the medical referee was of opinion that the appeal should succeed, to make recoverable advances up to the probable rate of pension. The Ministry, however, was considering the simplification of the preliminary procedure in these appeal cases, so as to lessen the period of waiting, and make the present extensive provision of recoverable advances unnecessary.

Mr. Houston inquired whether the decision of the appeal boards was final, or whether when fresh circumstances were brought to light a case could be reopened? Sir L. Worthington-Evans said that the decision of the appeal tribunals was final, but it had been his practice, when they were under his control, if really new evidence was subsequently discovered, to communicate the facts to the president of the tribunal, leaving it to him at his discretion to order a new trial if he thought proper; otherwise their action was final.

The Standardization of Artificial Limbs.—Sir L. Worthington-Evans, in reply to Major Cohen, on November 6th, stated that the report of the Bacon Committee, which inquired into the question of the standardizing of artificial limbs, had been adopted in its entirety, except the recommendation that in every case the disabled man should have a permanent peg-leg in addition to the mechanical limb which was to be provided in duplicate.

The Claim of Suicides' Dependents.—Mr. R. Young asked, on November 6th, whether the Pensions Minister was aware that cases were continually arising where discharged soldiers invalidated from the army, many of whom had served abroad, committed suicide as a result of their physical and mental condition; and that the dependants of such soldiers were not entitled to a grant or pension under the terms of the Royal Warrant. He asked whether the Minister would arrange for such cases to be placed before those responsible for the administration of the Prince of Wales's Fund, with a view to all needy and deserving cases being assisted from the Fund. Sir L. Worthington-Evans, in a written answer, said that the statement by Mr. Young did not correctly represent the position under the Warrant. In many suicide cases it was possible to grant full pension to the dependants. Each case must be considered on its merits, as the grant of pension depended upon being able to connect the man's mental condition which caused him to commit suicide with his military service.

Tuberculosis in Ex-Service Men.—In a written reply to Lieutenant Colonel Raw, on November 10th, Dr. Addison said that the report of the Select Committee on Tuberculosis had already received careful consideration by the department, and an announcement of the increased capital warrant with a view to stimulate the rapid provision of additional sanatorium and hospital accommodation for the treatment of tuberculosis was issued on November 3rd. A scheme for the immediate provision at existing sanatoriums of facilities for the training of tuberculous ex-service men in suitable occupations had been prepared, and he hoped to be in a position to make an announcement in a few days. In reply to Mr. Finney he said that immediate steps were being taken with a view to a large addition being made in the amount of accommodation available for the residential treatment both of ex-service men and of civilians suffering from tuberculosis.

The Qualifications of Dentists.—Mr. Godfrey Locker-Lampson asked whether it was intended to introduce a Bill to give effect to the report of the committee appointed to inquire into the extent and gravity of the evils of dental practice by persons not qualified under the Dentists Act. Sir Tudor Walters, replying for the Minister of Health, said it was intended to introduce such a measure, but the issues involved were complex and numerous, and must be considered in relation to other necessary elements in the development of health services for the community. Hence no statement could yet be made as to the precise lines of such legislation.

Registration of Nurses Bill.—Dr. Addison, on November 6th, introduced the Registration of Nurses (No. 2) Bill. It will be recalled that No. 1 Bill was brought forward by private members, and, in face of differences of opinion in the Commons and also in the Lords, was not pressed.

Nursing Service in India.—In reply to Colonel Yate, on November 5th, the Secretary of State for India said that the bonus granted by Army Order 300, of August 18th, 1919, to members of Queen Alexandra's Imperial Nursing Service and other nurses on British rates of pay, had been extended to the Queen Alexandra Military Nursing Service for India and other ladies nursing in Indian Military Hospitals on rupee rates of pay. The recent appointment of some 250 temporary nurses should be sufficient to enable the Indian Government to give relief to the permanent staff in the matter of leave.

Women Discharged as Medically Unfit.—Sir Owen Philipps asked the Pensions Minister, on November 5th, whether he could state the number of women who had been discharged as medically unfit after a period of service with the Women's Branches of His Majesty's Forces, and whether he had in contemplation the extension to the women's branch of the service of the operation of the system of granting disability pensions or gratuities which at present was applicable only to discharged men? Mr. Forster replying to the question so far as it affected the Army and the Royal Air Forces said the numbers were approximately 7,000 in the case of the army and 1,300 in the case of the Royal Air Force. It had never been proposed, and it was not intended to propose, that these women should be placed on the same footing as soldiers. They came under the Injuries in War Compensation Scheme for injuries and sickness abroad, and under the Workmen's Compensation Act and National Insurance Act respectively for injuries and sickness at home.

Daily Cost of the Army per Head.—Mr. Forster, in a written answer to Major Glyn, stated, on November 6th, that the current rate of army expenditure divided by the number of all ranks serving, was about 16s. 8d. a day.

England and Wales.

LIVERPOOL MEDICAL INSTITUTION.

THE first ordinary meeting of the Liverpool Medical Institution was held on November 6th, the President, Mr. W. Thelwall Thomas, in the chair. Major W. H. Broad read a note on the blinded soldier as a masseur. He emphasized the necessity of skilled training in massage, now more than ever required in orthopaedic surgery, and said that this occupation was eminently suitable for the blinded soldier. Delicacy of touch, combined with cheerfulness of disposition, were characteristic of the men he had trained. He drew attention to the fact that a central institution for blind masseurs was in process of being established where, under medical supervision, massage would be carried out, and expressed the hope that the medical profession would support it, and thus enable the blinded soldier to earn his livelihood. Dr. R. W. MacKenna read a note on indolent sores of the finger, which will be published shortly. Professor Beattie read a paper on cerebro-spinal meningitis from the bacteriological standpoint. He described four types of meningococcus, and said that a homologous serum gave better results than polyvalent meningococcal serum. The mortality was always considerable, and he advised the immediate disinfection of the nasopharynx of contacts by some of the hypochlorous antiseptics now in vogue. In many cases lumbar puncture alone benefited, and when antimeningococcal serum was given it should be given daily. Several members took part in the discussion.

LONDON HOSPITALS' EXPENDITURE IN 1918.

King Edward's Hospital Fund for London has issued its statistical report¹ on the ordinary expenditure of London hospitals in 1918. This is the sixteenth year for which Mr. H. R. Maynard, the secretary, has analysed the public accounts and returns made to the Fund. The report again appears in a reduced form, partly for the sake of economy in printing, postage, and paper, and partly because most of the material useful in ordinary times would be useless under war conditions. The 109 hospitals whose accounts are reviewed are those applying for grants from the Fund, together with St. Bartholomew's and the Cancer hospitals; they provided a total of 11,566 beds in average daily occupation during the year. The in-patients admitted were 145,212 in number, while 1,203,573 persons attended at the out-patient departments. Of the in-patients just over 27,000 were naval and military patients treated by understanding with the authorities; they represented nearly 32 per cent. of the total average occupied beds. The demand for beds on account of the war led to an increase of 1,800 in the number of occupied beds, but the number occupied by civilian patients was reduced by 1,885. The total ordinary expenditure at these hospitals amounted to £1,946,155; whereas on an average 1.5 per cent. fewer beds were occupied than in the previous year, the total ordinary expenditure was 12.87 per cent. greater. The contributions from the authorities towards the cost of naval and military patients was rather more than 17 per cent. of the total ordinary expenditure. As compared with 1913, the London voluntary hospitals had last year to provide out of normal sources, for an additional working outlay of £468,470, being an increase of 41 per cent. The corresponding increase in 1915 was only about 4 per cent.; in 1916, 13 per cent.; in 1917, 27 per cent. Now that many of the naval and military beds have been evacuated, and are available for civilian patients, the hospitals have to provide the whole cost of maintenance, unaided by capitation grants from the Admiralty and War Office. This will greatly increase the strain on hospital finances due to the general rise in prices.

MILK FOR CHILDREN AND MOTHERS.

In February, 1918, orders were issued by the Food Controller and the Local Government Board empowering local authorities to arrange for the supply of milk for expectant and nursing mothers, and for children under 5 years of age, at cost price, less than cost price, or free,

according to the circumstances of the case (BRITISH MEDICAL JOURNAL, February 23rd, 1918, p. 242, and March 9th, 1918, p. 299). The Ministry of Health has now issued a circular to county councils and sanitary authorities pointing out that the recent order by the Food Controller raising the maximum prices of milk on and after October 1st, 1919, may increase the number of expectant and nursing mothers and young children who will be unable through lack of means to obtain a supply of milk adequate to their needs. The Minister therefore desires to impress on local authorities the importance of making full use of the powers under the Orders of 1918, and the Maternity and Child Welfare Act. Local authorities who have already arranged for the supply of milk to necessitous mothers and young children are instructed to consider whether any extension of these arrangements is required, and those who have hitherto made no arrangements should carefully consider the question of doing so without delay, in each case after obtaining a report of the local circumstances from the medical officer of health. The Ministry's grant for maternity and child welfare is available, and will amount to half the expenditure on approved schemes. The quantity of milk should be prescribed by the M.O.H. or the medical officer of the maternity and child welfare centre working in co-operation with the local authority, or by an authorized person, and the amount should ordinarily be that set out in the circular letter of the Local Government Board of February 9th, 1918, namely:

(a) For children under 18 months not more than one and a half pints daily; (b) for children between 18 months and 5 years not more than one pint; (c) for expectant and nursing mothers, quantities certified by the officer above mentioned.

If dried milk, or preparations of milk, are used, the quantity should be such as would, when properly reconstituted, approximate to the quantities of fresh milk given above.

The Food Controller has already issued instructions authorizing the issue by the Food Control Committees in districts where there are milk priority schemes, of priority certificates for one pint of milk daily for expectant mothers during the last three months of pregnancy, and the preferential allotment of milk up to one and a half pints daily for children under 18 months, the mother being entitled to use the child's allowance when she is nursing the child. Doctors, health visitors, and midwives should be asked to report to the M.O.H. any expectant and nursing mothers who in their opinion need an additional supply of milk. The question of the cases in which milk should be supplied at cost price, or free, is left to the discretion of the local authority. The Minister of Health trusts that all possible steps will be taken on the lines suggested in this circular¹ to secure that expectant and nursing mothers and young children shall not suffer during the coming winter from a shortage of milk owing to inability to obtain a sufficient supply at prices which they can afford to pay.

Scotland.

GLASGOW MEDICAL DINNER.

ON the evening of November 4th the Glasgow area of the British Medical Association gave a complimentary dinner at the Grosvenor Restaurant to the medical practitioners of the city who served overseas with the forces during the war. The chairman, Principal Sir Donald MacAlister, and the large company took their seats to the sound of pipes. After the loyal toast had been honoured, the chairman asked all present to drink in reverent silence to their fallen comrades, whose names he read. The company then stood in silence while the "Flowers of the Forest" was played. The toast of the "Imperial Forces" was proposed by Sir Thomas Dunlop; and Captain C. H. Fox, R.N., in his reply, said that at the armistice 1,025 civil practitioners were serving with the fleet; in the battle of Jutland, out of 180 medical officers serving in the Grand Fleet, 19 were killed and 6 wounded. Major-General Sir P. Robertson, who also replied, said there was no branch of the army which more fully deserved honour than the R.A.M.C. The toast of "The Houses of Parliament"

¹ King Edward's Hospital Fund for London: Statistical Report on the Ordinary Expenditure of One Hundred and Nine Hospitals for the Year 1918. London: Spottiswoode, Ballantyne and Co., Ltd. Price 1s. net., 1s. 2d. post free.

¹ Ministry of Health Circular 23. To be purchased from any bookseller, or directly from H.M. Stationery Office. Price 1d.

was proposed by Sir Kennedy Dalziel and responded to by Captain W. Elliott, M.P., in an amusing speech. Sir Donald MacAlister, in proposing the health of "The Guests," said it was a happy thought of Dr. Kennedy Glen and his colleagues to bring them together that evening for the purpose of offering to their Glasgow brethren a welcome home from the war. He asked the hosts to pledge their honoured guests with a warmth that would leave no doubt as to their admiration and gratitude for what they had done. In no war before had medical science and skill done so much to reinforce the might of their Forces in the struggle to mitigate suffering, to avert death, to check pestilence, and to restore and maintain health. The medical service of our Forces, moreover, was to an unexampled extent a civilian service. It was in large measure carried out by general practitioners with no ambition for military glory and no previous experience of military methods. In conclusion, he claimed that the profession of medicine in Scotland, and in the West of Scotland in particular, deserved a double share of the admiring gratitude of the country at large. In support of this he read messages praising the work of Scottish doctors in the war, from Sir Alfred Keogh, Sir John Goodwin, and Mr. T. H. Graham, secretary of the Scottish Medical Service Emergency Committee. Mr. Graham's letter gave figures showing the splendid response of the Scottish medical profession. Colonel G. H. Edington, in his reply, paid a tribute to the Scottish branch of the Red Cross Society and the Territorial Force Association of the City of Glasgow. In all the theatres of war, he said, Glasgow was well represented by medical officers. A very successful evening came to a close with the toasts of "The Corporation of Glasgow" and "The Chairman."

GENERAL MEDICAL COUNCIL ELECTION.

We have received the following letter:

Sir.—In your issue of November 8th you give prominence to an address delivered in Glasgow by Dr. Norman Walker, in the course of which he took objection to a statement made by me at a recent meeting of the profession in Edinburgh. I said that the profession in Scotland had recently been put under the control of a Board of Health, and that the Act of Parliament establishing this had been rushed through without the medical profession being consulted. Dr. Norman Walker says that he read this statement with amazement. He then proceeded at great length to narrate the meetings of the Scottish Medical Advisory Committee and its findings in connexion with a previous Act—namely, the Ministry of Health Bill—from which the clauses referring to a Scottish Board were eliminated during its passage through Parliament.

The bill I was referring to when I made the statement which amazed Dr. Walker was the Scottish Board of Health Bill, introduced into the House of Commons on March 27th last. This was a recast of the Scottish Clauses of the Ministry of Health Bill in which the constitution and membership of the Board was much altered. In this new bill the recommendations of the Advisory Committee sitting on the preceding bill were not carried out in the clauses constituting the new Scottish Board of Health. The Scottish Advisory Medical Committee was never summoned to consider or to offer any opinion on the new clauses of this new bill during its passage through the House of Commons. No University Medical Corporation or Medical Association was asked for opinion or advice. As soon as copies of the bill could be obtained meetings of medical practitioners were summoned by the British Medical Association in Edinburgh and Leith, and by the Royal Faculty of Physicians and Surgeons of Glasgow, and at both meetings unanimous resolutions of dissatisfaction with the constitution and membership of the new Board of Health were passed. Dr. Norman Walker moved a resolution "that even if it involves an addition to the membership of the Board, there should be two members representing the clinical side of medicine."

Without paying the slightest attention to this adverse criticism and asking for no advice from the medical profession, the Scottish Secretary went on rushing the clauses of the bill through the House of Commons. The Subcommittee of the Scottish Medical Advisory Committee, which ought to have called a meeting of the Committee to advise upon these objectionable clauses, met on April 5th, and sent out a circular to the members desiring them to bring forward specific proposals for the amendment of the

bill. They seemed to imagine that the Government would give them plenty of time to formulate their amendments. Meantime the Scottish Secretary was, in spite of the hostile criticism of the profession, pushing the bill as rapidly as possible through all its stages in the House of Commons. One week after the Royal Faculty of Physicians and Surgeons of Glasgow obtained a copy of the proposed Act they sent a deputation of their Fellows to London to represent their objections to the proposed clauses, but they were already too late. All the important clauses with reference to the powers and constitution of the Board were already passed by the Commons without time being given for adequate discussion. A deputation from the corporation of the City of Glasgow arrived at the House of Commons on April 9th to advocate the amendments they desired. They also were too late. Why this unseemly haste in such an important matter as the health interests of the nation?

A meeting of the Scottish Medical Advisory Committee was at length held on May 17th, a month after the bill had been passed through all its stages in the House of Commons. Dr. Norman Walker says that at that meeting he does not remember that any one raised the point that the representation of one-third of medical members on the Board had not been conceded. In seconding Dr. John Stevens's motion asking for the representation of general practitioners of the curative side of medicine on the Health Board, I pointed out that we had only secured in the bill a medical representation of one-fourth in a membership of eight, and that if we succeeded in getting a representative of curative medicine added it would make it up to one-third, which the Advisory Committee asked for but did not obtain. Dr. Norman Walker appears to desire to pose as a defender of the tactics of the Scottish Office and of the Government officials who constitute the present Board of Health, and at the same time as defender of the interests of the general practitioners whose votes are necessary to return him to the General Medical Council. I would respectfully suggest to him that whole-hearted loyalty to the profession and to the great health interests of the community is a better spirit than that of appearing to be hunting with the hounds and running with the hare.

—I am, your obedient servant,

Glasgow, Nov. 9th.

EBEN. DUNCAN.

Ireland.

GENERAL MEDICAL COUNCIL ELECTION.

We have received from Dr. Leonard Kidd a copy of his election address to the registered medical practitioners of Ireland, dated November 7th. Dr. Kidd seeks re-election on the ground that he is a provincial general practitioner, unconnected with any medical school or corporation. "From this independent standpoint I can consider, without prejudice, such proposals as may come before the Council with regard to examinations, course of study, and discipline." With regard to educational matters, he insists on the value to the General Medical Council of representatives of the rank and file of the profession who can from personal experience speak of the daily life of general practitioners and their requirements for efficient work. He is in favour of a "one portal" system of examinations for each division of the United Kingdom, such examinations to be subject to the inspection and control of the Council as to their sufficiency. He would like to see every medical student obliged to reside for six months in hospital after passing his final examinations, and before beginning private practice. With regard to discipline, Dr. Kidd insists on the need for the general practitioner to assist in the consideration of penal cases by the Council, "because it is he who suffers most from the evils of improper rivalry, and he, too, is most familiar with the temptations so common in the struggles of general practice." He supports an increase in the number of direct representatives, and the provision of direct representation for registered dentists. He stands also for the protection of the privileges and rights of registered practitioners by stringent measures against unqualified practice. Lastly, he is in entire sympathy with the grievances of members of the Poor Law and other medical services in Ireland, but recognizes that these matters are outside the functions of the General Medical Council.

Correspondence.

LOCAL CLINICAL LABORATORIES.

SIR,—The letter of "Clinical Pathologist" in your issue of October 18th must be answered. His roll of 2,000 medical men and 200 public health authorities proclaims the "commercial" laboratory and the non-applicability—ugly word, but a very useful army term—of the adjective of his signature. A "filled up" form can never replace personal contact at the bedside; the essential meaning of "clinical" seems to be lost.

He dilates upon the size of the laboratory "at a distance" and its facilities for apparatus. I suggested an army hut, 60 ft. by 20 ft., and its equipment from army medical stores, and I know that anything and everything that a bacteriologist and pathologist could want is stored in countless multiplication, and I have worked in much less space. My ideal laboratory with its area is certainly not parochial, and would serve some hundreds of thousands of possible patients, all within reach of the personal attendance of its director.

How does "Clinical Pathologist" do blood counts and blood cultures, examine cerebro-spinal fluid, contacts of cases of cerebro-spinal fever, etc., all demanding the personal attendance of the bacteriologist, with his accompaniment of counting apparatus, diluting fluids, fluid and solid culture media, hot water-jacketed containers, and so on?

A few illustrations may show what I mean. I have often received the following specimens from distant medical officers who ought to know better:

Two slides hopelessly stuck together with a blob of blood between for differential count or parasites.

A quarter-inch clot of blood in a capillary tube for a Widal, for T.A.B.

A small clot of blood in a test tube (twenty-four hours in the post) for a blood culture.

It is rather pitiful; the spirit is willing but the technique is lacking. A very clever book has for its introduction a German sentence meaning "technique is everything"; well, it isn't, but like "a little British Army," it "goes a d—d long way!"

The country practitioners I instanced in my letter published in your JOURNAL of August 30th know better than "Clinical Pathologist." One of them recently motored many miles to me with a cerebro-spinal fluid in a sterile bottle snuggled in cotton-wool close to his skin under his waistcoat. That is the spirit I am out to inspire. I would have gone to him and saved him the trouble if he had asked me to.

It is asked, "How many local laboratories would be able to support a chemical pathologist, bacteriologist, and histologist?" Histologist as such is a new term to me; a pathologist knowing nothing of histology is an impossible conception; a surgeon knowing nothing of anatomy would be his fit partner! A bacteriologist knowing nothing of the chemical side of his work is in like condition!

The director of my ideal laboratory would be a man who combines in himself the knowledge and experience these wordy distinctions seek to separate, together with real clinical knowledge, otherwise he would not be the right man for the job.

"Over the teacups, with tired eyes, and a cigarette." I should be delighted to discuss the standpoint with "Clinical Pathologist." In my experience it is usually my fingers that are tired!

My letter dated August 18th, and published in your issue of August 30th, requires the same signature.—I am, etc.,

October 21st.

BACTERIOLOGIST.

CREMATION AND MEDICAL FEES.

SIR,—Desiring, as I earnestly do, to see cremation more generally practised, I welcome Mr. H. T. Herring's letter in your issue of October 25th, raising the question of the amount of the fee that should be charged for giving certificates in Forms B and C respectively.

Inquiry is frequently made to cremation authorities as to what fee should be paid for giving these certificates, and it seems to me that if the profession fell in with Mr. Herring's proposal generally it would be satisfactory all round. The party seeking cremation would know exactly

what he would have to pay when he applied to any particular doctor, and the doctors themselves would be saved from the inevitable consequence where the public get to think that some are charging fees out of proportion to the service rendered.

In the case of deaths in the hospitals, infirmaries, and similar institutions a lower scale should be charged as, in the case of Form C in particular, the necessary inquiries are more easily and quickly made than in the outside cases.

Complaints also reach us that doctors sometimes give a certificate in Form C, and charge for it without being qualified under the Cremation Act, as when he is not of five years' standing. A careful reading of the certificate would avoid this.

If cremation is an improved method of disposal of the dead—and few would deny that it is—it would be against the public interest that its cost should be raised by excessive medical fees. The usual charge for cremation is about five guineas. If, as in a recent case, as much as four guineas is asked for signing Form C, the cost would be prohibitive in many cases. It should be borne in mind that no fee at all is paid to the doctor for the ordinary death certificate in a case of burial.—I am, etc.,

CHARLES CAMERON, M.D.,
President, Cremation Society
of England.

324, Regent St., W.1, Nov. 7th.

RADIUM TREATMENT IN IRELAND.

SIR,—There appeared in the *Irish Times* of October 30th a full column appealing for funds entitled, "St. Bartholomew's call to Ireland." The following statement which I extract is misleading, unintentionally I feel confident, and I think not just to the Dublin hospitals, which are also badly hit by the war:

You in Ireland may regard it as an invasion for this hospital in London to appeal to you, but St. Bartholomew's does not regard it as strange when people travel from Ireland to Bartholomew's. For instance, a man was sent by his doctor in Ireland to St. Bartholomew's; his fingers were contracted, stiffened, and as useless as wooden pegs. Radium treatment at Bartholomew's (not available in Ireland) restored the full use of his hand.

I first used radium in Dr. Steevens's Hospital in 1904, and published in the *BRITISH MEDICAL JOURNAL* of July 4th, 1914. I believe the first recorded case of treatment by radium of fingers which were contracted, stiffened, and even more useless than wooden pegs, as they kept the patient awake with pain at night. The treatment was most successful: I saw the patient, after five years, a few days ago.

We are fortunate in Ireland to be able to obtain from the Royal Dublin Society Radium Institute radium emanation for the treatment of patients in hospitals and elsewhere. I may add that the radium treatment of stiff hands due to war injuries has been authorized by the War Office on account of my work at Dr. Steevens's Hospital, and at Blackrock, Alder Hey and Shepherd's Bush Special Military Surgical Hospitals (vide *Lancet*, March 23rd, 1918, *Medical Press and Circular*, January 8th, 1919, *Archives of Radiology and Electrotherapy*, April, 1919). In addition to some 250 hospital cases treated for malignant disease at Dr. Steevens's Hospital, I have treated, with eminently satisfactory results, 453 patients for war injuries (stiff joints, adherent and painful scars, etc.), 349 of them in Ireland. Incidentally, it appears to me obvious from the result obtained at St. Bartholomew's, and my own experience, that radium should be much more extensively employed for the benefit of those wounded in the war than it has been heretofore.

I feel that these facts have only to be pointed out to the authorities of St. Bartholomew's to obtain justice for our Irish hospitals.—I am, etc.,

Dublin, Nov. 3rd.

WALTER C. STEVENSON.

CHILD WELFARE AND OPERATIONS FOR TONSILS AND ADENOIDS.

SIR,—I beg for the hospitality of your columns to endorse in the strongest way possible the letter of Mr. Douglas Drew (November 1st, p. 577). As one whose duty it is to perform a large number of these operations, I should like to say that I entirely agree with the opinion he gives that it is quite improper to regard them as

trivial. Mr. Drew points out the risks from haemorrhage, both immediate and secondary, and also from septic complications, as well as those of anaesthesia.

While I believe that the method of removing tonsils I published recently¹ lessens greatly the risk from haemorrhage, both immediate and secondary, it is nevertheless true that risks remain; and when patients say to me, as they frequently do, that they presume the operation is free from danger, I always decline to accept this view, and always say that the operation cannot be considered devoid of risk.

What I specially wish to do, however, is to dot the i's and cross the t's of the later half of Mr. Drew's letter. I agree with him that the conditions under which the great bulk of these operations are performed are highly undesirable, and I include the bulk of those I do myself.

I also have no doubt as to the answer to the question he puts:

Would any surgeon have his own child operated on in the manner described and sent home (to the homes the children mostly come from), or would any surgeon do the operation for a private patient under similar circumstances unless compelled?

The last two words of this question of Mr. Drew's give the reason why I myself perform a great number of tonsil and adenoid operations under conditions which I am perfectly aware are unsatisfactory. The choice open to me and to all hospital surgeons is to do these operations under the present unsatisfactory conditions, or not to do them at all; and the gain to health and life is, I believe, greater on the side of doing than not doing them, even under present conditions. This, however, is no reason for allowing the unsatisfactory conditions to persist. The local health authority has powers to make provision both for the performance of this class of operation and for suitable places for convalescence after them.

It is time that the local authorities woke up to their responsibilities in this and cognate matters, and it is time that the medical profession took its share in arousing them. Had Mr. Lloyd George properly consulted the medical profession when he insisted on interfering, without knowledge, in the practice of medicine in this country (and to consult the medical profession properly, he ought to have consulted the general medical practitioner), he would have learnt that what was chiefly needed was state aid for hospital practice, and that change in method of general practice might safely wait. Mr. Lloyd George chose the opposite course to the highly doubtful advantage of medicine. Had he been wisely advised, such comparative barbarities as the present conditions under which these operations are usually performed would now have been on their way to disappear. As it is, I would like to say how glad I was to read Mr. Drew's letter, and I hope he will send a copy of it to every mayor, and to the chairman of every health committee in the kingdom.—I am, etc.,

PETER MACDONALD,

Honorary Surgeon, Ear, Nose, and Throat
Department, County Hospital, York.

York, Nov. 3rd.

HYPERNEPHROMA OF THE OVARY.

SIR,—In reply to Dr. H. Leith Murray, may I say that it did not occur to me that the individual lutein cell might be mistaken for that of an adrenal rest. The latter is much longer, oblong in shape, and shows a tendency to branching at each end.

As regards the arrangement of the cells, I am familiar with small masses of lutein cells in the stroma of the ovary itself and in the wall of theca-lutein cysts, but as far as I am aware both these always show some remains of the Graafian follicle from which they are necessarily derived. In both my cases there was a definite tumour projecting into the peritoneal cavity, homogeneous in structure and quite separate from the normal ovarian stroma.—I am, etc.,

London, W.C., Nov. 10th.

A. KNYVETT GORDON.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

SIR,—I quite agree with the letter of "Z." in your issue of September 28th. I believe many Deputy Commissioners of Medical Services are extremely dissatisfied with the present conditions of office. The clinical side of the work

is strangled by red tape and the miasma of War Office methods seems to pervade everything.

Responsibility is pushed on to the D.C.M.S., but on the administration of the work he is seldom consulted. His position savours of that of a junior subaltern, instead of a professional equal of those who have comfortable appointments at head quarters. The salary of £700 a year is quite inadequate these days, especially when it is remembered that there is no security of tenure, one month's notice on either side being the existing regulation. No sensible man can take up a permanent residence on these terms. Consequently his domestic life is often uncomfortable and additionally expensive. Present conditions, whatever the Minister of Pensions may say, do not attract "men of standing and capacity." When the service commenced much was hoped for and expected, and many men of the highest ability entered the service. I scarcely think they are doing so now.

I believe many Deputy Commissioners of Medical Services are unsettled and perturbed, and unless the Ministry of Pensions bestirs itself on their behalf by making the appointment secure and decently paid, at the same time recognizing that they are "men of ability and standing," they will find that in future it will be extremely difficult to fill vacancies without the service suffering.—I am, etc.,

November 6th.

ALPHA.

THE CAPITATION FEE.

SIR,—There is no subject of such vital interest to 14,000 members of the profession at the present moment as the question, What shall be the remuneration for attending the panel patients during the next three years? Quite apart from the increased cost of living, the capitation fee never was adequate. But now that the wages of his patients have increased from 200 to 300 per cent., counting overtime, the average doctor has to work longer and longer hours and deny himself most of the pleasures which the manual workers enjoy, and even then has difficulty in making ends meet.

From many correspondents in the BRITISH MEDICAL JOURNAL one gathers that 7s. a year works out at 1s. 3d. for consultations at the doctor's house and 2s. 3d. for visits. This latter is less than the cost of a cab there and back. From the day I took this practice over I have always treated the panel patients the same as the private ones; indeed, it is difficult to do otherwise, as the latter are nearly always the relatives of the former. I have everything in my consulting room for making an accurate diagnosis—sphygmomanometer, ophthalmoscope, laryngoscope, urinalysis, and blood-testing apparatus; but they all have the great drawback of taking time. How much time can one afford to give for 1s. 3d.? If there are no record cards to be looked for and statistics entered up one can give more than if this purely clerical work has to be done. A little time must also be allowed out of the 1s. 3d. for writing out the certificate and prescriptions, of which three copies must be made. Many of my panel patients have paid another doctor £3 3s. for a thorough examination, and have asked me many times how a good doctor can do the same thing for 1s. 3d. The answer, of course, is that he cannot. But, as far as my patients are concerned, I can truly say that there is not one of them who has not had many times more for his money than he paid for.

From the patients' point of view the panel is a splendid thing, because without it they would have to wait for many hours in the out-patient department of a hospital and be attended at last by the junior member of the staff in many cases. While at their panel doctors' they have a comfortable, warm, and lighted room to wait in with plenty of books and magazines, and they seldom have to wait more than a few minutes. It is to the interest of the panel doctor to receive them kindly and not only to cure them of their present condition but advise them how to avoid a similar attack in the future. An experienced doctor can give much useful advice to a man with tachycardia or D.A.H. who smokes four hundred cigarettes a week, and it only takes a minute to do it in addition to the examination.

Many panel patients have told me they would be only too glad to double their contributions for the doctor's payment. They all realize that 336 farthings a year, which

¹ BRITISH MEDICAL JOURNAL, October 4th, 1919, p. 437.

is the seven shillings now paid, is not sufficient. I believe that they would all be willing to put on an extra two-penny stamp for this purpose, which would only amount to less than a farthing a day. This would give the doctors fourteen shillings a year a head. At this rate we would be willing to take all the soldiers, and children at 14 instead of 16 years as the coming on age; and we could give just twice the attention we can now afford, and also take a pride in our work. From the doctor's point of view also the panel would become a good thing, because, although the fee would still be small—two shillings and sixpence—it would be paid at regular stated periods without the uncertainty of collecting and the trouble of sending out bills. Let us hope that the panel doctor will thus find a happy issue out of all his trials.—I am, etc.,

November 5th.

M.D.

* * * Other correspondence on the remuneration of insurance practice is printed in the SUPPLEMENT.

POST-GRADUATE SCHOOLS IN LONDON.

SIR,—In his address entitled "Some Remarks on Medical Education," published in your issue of November 8th, and referring to the provision in London of post-graduate instruction, Sir George Makins alludes to the work attempted in this direction by the West London and the Seamen's Hospitals, mentioning the circumstance that the teaching in these institutions has been exclusively devoted to medical practitioners.

He, however, did not mention another institution which has done similar work during the last seventeen years—the North-East London Post Graduate College, attached to the Prince of Wales's General Hospital. Its teaching staff, fearing that this oversight might lead to some misapprehension as to its present position, requested me to write to Sir George Makins pointing out the omission, and he has been kind enough to reply, expressing his regret that he did not mention our school at the meeting in Manchester.

It is true that since the beginning of the war formal lectures and special classes have been largely in abeyance, as at the other post-graduate schools, but clinical teaching has been continuously carried on, and, although no set syllabus will be issued before Christmas, it is intended that the full activities of the school shall be resumed early in January next, and that they shall, so far as possible, be made to fit in with the larger scheme of post-graduate education now being developed.—I am, etc.,

ARTHUR J. WHITING,

Dean, North-East London Post-Graduate College.

November 10th.

The Services.

INDIAN MEDICAL SERVICE.

REFERENCE is made elsewhere (p. 643) to the White Paper (Cmd. 398) containing further correspondence regarding the medical arrangements and comforts for the troops on the North-West Frontier. In an introductory note the Secretary of State for India deals seriatim with the recommendations of the Mesopotamian Commission and with the criticism that the lessons of the Mesopotamian operations in regard to medical administration had been neglected by the Government of India. He gives a summary of the action taken on the recommendations of the Mesopotamian Commission:

(a) As to the recommendation of the Commission that the D.M.S. India should have far greater powers to authorize expenditure, medical purchases, and delegate such power to his subordinates, it is stated that the sanction of the Government could be obtained within a few hours, and that general officers commanding divisions, divisional areas, and independent brigades possessed the power before the Commission reported to sanction expenditure up to a limit of Rs.25,000 in each case on hospital and convalescent accommodation, furniture, clothing, and medical and other stores required for sick and wounded men returning from field service to India.

(b) The recommendation that improvements should be made in the standard of comfort and accommodation in the hospitals for British troops in India had been met by providing electrical installations, by the extended provision of operating rooms, recreation rooms, facilities for x-ray and laboratory work, and superior hospital equipment generally. The position had been examined by a committee under the presidency of Sir George Makins, which made recommendations with a view to bringing

station hospitals up to the level of war hospitals and of civil hospitals in India. The Government of India has accepted the principles, and effect is being given to them so far as funds and other circumstances permit.

(c) The principle of the substitution of station hospitals for Indian troops for the regimental system has been accepted, and station hospitals have been instituted on a provisional basis, the most suitable of the regimental hospitals being adapted for this purpose; the remainder are used as ancillary section hospitals. Improved scales of accommodation and diet, the latter being now free to both troops and followers when in hospital, have been issued, the aim being to bring the Indian hospitals as nearly as possible up to the same standard as the hospitals for British troops. The India Office has under consideration a scheme for the formation of an Indian Hospital Corps, which would be an essential feature of the station hospital scheme in its complete form. The Government of India appointed a travelling committee to inspect some of the station hospitals, both British and Indian, and to prepare plans for extensive structural improvements; but for the time being action is suspended, as other measures were held to have the first claim on such funds as were available.

(d) As to the recommendation that the mobilization equipment of general hospitals should be stored, kept in readiness, and inspected, it is stated that twenty-one general hospitals were available on mobilization for the frontier operations in May, and that fifteen were mobilized and opened in time to meet the requirements of troops as they were evacuated.

(e) A scheme for the reintroduction of base dépôts of medical stores has been sanctioned.

(f) The Commission recommended that a separate superior sanitary organization and staff, responsible to the P.M.O. of the force, but otherwise independent of organization for the care of sick and wounded, should be formed. On this head it is stated that the divisional head quarters of all forces include sanitary officers who form the staff responsible to the D.M.S. or A.D.M.S., and that during recent operations additional sanitary officers were appointed to the lines of communication and areas. During the war motor ambulance convoys were organized and the hospital train service considerably expanded.

(g) The field service ration, as the Commission advised, had received very careful consideration. The Commander-in-Chief in India was of opinion that while quality, especially in regard to meat, was not up to the home standard, which could not be expected in India, yet it compared favourably with the average standard procurable in that country. The peace ration of British troops in India was larger and more varied than the sanctioned scale at home. At the request of the Government of India two expert officers are being sent out by the War Office with a view to improving the methods of preparing the ration.

With regard to the Indian Medical Service the Secretary of State makes the following observations:

Medical arrangements for the Indian army (as distinguished from British troops on the Indian establishment) are in the hands of the Indian Medical Service. Representations were made to the Mesopotamian Commission and elsewhere before and during the war that grave discontent existed throughout the service as to the conditions and prospects. It will not be out of place to enumerate the steps taken to meet grievances and to improve conditions.

1. The rates of staff pay in the field were improved. A scheme of accelerated and acting promotion was introduced on the lines of that in force for the R.A.M.C., and promotions were made in the place of officers who had to be retained beyond the normal limit. Two temporary surgeons-general were appointed to meet the special needs of the war, and eight additional military administrative appointments were created for the period of the war, carrying the rank of colonel.

2. The adoption of the system of station hospitals for Indian troops is of considerable advantage from the professional point of view to officers of the Indian Medical Service, as it involves a more satisfactory employment of specialist officers and enables an individual officer by his attachment to a hospital, where patients from several, and in some cases many, units are concentrated, to do his work under more satisfactory conditions and provides him with facilities for studying subjects in which he is specially interested.

3. An increased scale of pay has been approved for the whole service, both on its military and civil sides. The principle of the increase is 3½ per cent. on the old rates of military pay of grade. The rates of pay for home leave have also been improved.

4. Reversion from military to civil employment was proceeding as rapidly as possible before it was interrupted by the Afghan war.

5. Another subject of discontent has been the restriction on leave to the United Kingdom, whether for health, for study, or for ordinary purposes. This cannot be fully remedied while the need for medical officers on the military side continues as urgent as it is at present, or until the cadre of the service can be replenished. Steps are being taken in two directions:

(1) Temporary officers already in the service are being retained and more temporary officers are being appointed. The supply of temporary officers has always been restricted by the requirements of the R.A.M.C. throughout the war and by the comparative smallness of the medical profession in India.

(2) The recruitment of permanent officers for the I.M.S. on a large scale was not possible during the war. But the Government of India have recently completed their estimate of their requirements, and steps have been taken to announce the conditions of appointment and arrange for selecting candidates. A special inducement is offered in the shape of a retiring gratuity of £1,200 after eight years' service.

6. The right of the administrative heads of the Service to direct official access to the Viceroy and to the heads of provincial governments has been conceded, and arrangements are being made to give effect to this.

7. The whole field of medical administration in India, both civil and military, and including under the latter heading the medical arrangements for British troops in India, has been explored during last winter by a committee appointed by the Government of India. This committee has presented a report which makes recommendations of a far-reaching nature. The consideration of this report by the Government of India was unavoidably delayed by their pre-occupation with the Afghan war, but the Government of India are now engaged in considering the matter.

AN Army Order recently published states that the King has approved of the following Corps of the Dominions and Union of South Africa being shown in the *Army List* as allied to the Royal Army Medical Corps:

The Army Medical Corps of the Dominion of Canada.
The Army Medical Corps of the Commonwealth of Australia.
The Medical Corps of the Dominion of New Zealand.
The Medical Corps of the Union of South Africa.

HONOURS.

D.S.O.

Surgeon Lieutenant Alan Andreas Cockayne, R.N., has been appointed a Companion of the Distinguished Service Order "for distinguished services under fire as medical officer of the *Zoraster*, *Venture*, and *Emile Nobel* in action off Fort Alexandrovsk on May 21st, 1919."

D.S.C.

Surgeon Lieutenant Walter Francis Raphael Castle, R.N., has been awarded the Distinguished Service Cross "for distinguished services during the action off Omega on October 1st, 1919, in attending to the wounded under heavy enemy fire."

Surgeon Lieutenant Commander George Gordon Vickery, O.B.E., R.N., has been mentioned in dispatches.

Obituary.

WE regret to record the death of Dr. THOMAS GRAHAM MATHEWS, of Kirkby Lonsdale, which occurred on October 20th, at the age of 50 years. By this sad event the profession has lost one of its truest representatives, and the public one of its best friends and most trusted advisers. The son of Canon Mathews, formerly of Carlisle and now a vicar in Cornwall, he early showed an interest in natural science, and this led him to adopt medicine as his profession. He was educated at Appleby Grammar School and afterwards at Edinburgh University, where he took the degree of M.B. and C.M. in 1891, and M.D. in 1896. As house-surgeon at the Cumberland Infirmary his genial personality and devotion to duty won for him a high place in the esteem of the staff and also of his co-workers. After some years in general practice in Derbyshire he migrated north, and succeeded Dr. Jackson of Whitehaven. Here he remained for a few years, but the call of the country was too strong, and in 1904 he removed to Kirkby Lonsdale, taking over the practice of Dr. Wyllie, and in the following year that of Dr. Ledgard. Here he quickly gained the esteem of a large circle of friends, and the skill and assiduity with which he carried out his duties over a wide district caused him to be admired and highly respected by his patients. He held several public appointments, being a Poor Law medical officer, public vaccinator, medical officer of health, medical assessor under the Workmen's Compensation Act, and a member of the War Pensions Medical Board. He worked in perfect harmony with his fellow practitioners, and was loved, trusted, and respected by all. The highest type of what a general practitioner should be, duty to his neighbour meant for him a constant readiness to help any or all and to give them of his best. It meant, even in the midst of a busy practice, keeping himself thoroughly abreast of the times and fully conversant with recent researches, as his library vividly testifies. A good sportsman and naturalist, a keen archaeo-

logist, well read in literature, taking a keen interest in the social welfare of his neighbours, having a fine sense of humour, and having the gift of remembering funny stories, Dr. Mathews was naturally the best of friends and companions. Latterly, although threatened by a breakdown in health, he refused to acknowledge any disability and went about his work as usual. He was at church on St. Luke's Day and also on the following Sunday evening, and soon after the commencement of the service he had an apoplectic seizure which proved fatal in seven hours. He was laid to rest at Hutton Roof, a short distance from Kirkby Lonsdale, in the heart of the beautiful country he loved so well, and among the people whose affection and respect he had so justly earned. He leaves a widow, two sons, one of whom has just entered as a medical student at Oxford, and one daughter, with whom the deepest sympathy is felt at their sudden bereavement.

WE regret to announce the death, at the early age of 32, of DONALD McCULLY, M.R.C.S., L.R.C.P., which took place at Mafeking, South Africa, on September 13th. He was educated at St. Paul's School and at University College and Hospital, where he won the Liston Gold Medal for Clinical Surgery. After qualifying in 1909 he held the resident appointments of obstetric assistant and house-physician at University College Hospital, followed by that of casualty surgical officer at the same institution. Early in 1912 he went to Mafeking to join in partnership with his uncle, Dr. T. W. P. Hayes. In Mafeking he held the appointments of district surgeon, railway medical officer, M.O.H., etc., and, in addition, after a year on the town council, he was, in 1916, elected mayor of Mafeking, a post he held for two years, while still under thirty years of age. Soon after his arrival there his uncle retired from practice, and the outbreak of war found McCully carrying on his practice and appointments single-handed. As soon as he could manage to find a partner he joined up in the S.A.M.C., and went through a considerable part of the campaign in German East Africa, remaining there till its successful conclusion. His death from malignant scarlet fever, contracted from a child patient, caused a remarkable demonstration of sorrow in Mafeking, an eloquent testimony to the affection he had succeeded in inspiring in all with whom he came into contact. He leaves a widow, who had landed in England on a visit only a few days before he was taken ill; he had hoped to join her in this country a little later for the first visit to his relatives and friends since 1912, but Fate decreed otherwise, and he rests in Mafeking—a victim of duty well performed.

WE regret to announce the death of JAMES VALEK ALBERT, who passed away after an acute illness on November 4th, having been in indifferent health for some years. He was born in 1848, and was educated at the City of London School and St. George's Hospital. He took the L.D.S.R.C.S.I. in 1878, and the M.R.C.S.Eng., L.R.C.P. Lond. in 1890. His death will be greatly felt by a very large number of friends; he was well known to many generations of St. George's students, where he often assisted his brother in the dental department. He had a striking personality, and his dexterity and rapidity in extracting teeth were the admiration and envy of all who saw him. He was most conscientious in his work, and had numerous activities outside the profession. He was much interested in the apprenticeship of working boys to skilled handicrafts, and spent much of his spare time in this work of national importance; without doubt his advice kept many a boy from drifting into blind-alley occupation.

LIEUT.-COLONEL FRANCIS ARTHUR DAVY, R.A.M.O. (retired), died at Richmond, Surrey, on October 18th, aged 73. He was the third son of the late William Davy of Clareville, Galway. He was born on February 17th, 1846, and educated at Queen's College, Galway. After graduating M.D. in the Queen's University of Ireland in 1867 and taking the L.F.P.S.G. in 1868, he entered the army as assistant surgeon on October 1st, 1868, became surgeon on March 1st, 1873, and surg-on-major on October 1st, 1880, retiring on October 10th, 1888. After his retirement he was employed for some time at Sheffield. He served in the Afghan war of 1878-80, receiving the medal.

Universities and Colleges.

UNIVERSITY OF OXFORD.

At a congregation held on October 30th the degree of doctor of medicine was conferred on C. P. Symonds.

UNIVERSITY OF CAMBRIDGE.

At a congregation held on November 9th the following medical degrees were conferred:

M.D.—W. G. Parkinson. M.B.—G. D. Sherwood.

UNIVERSITY OF LONDON.

A MEETING of the Senate was held on October 22nd. It was reported that the Vice-Chancellor had appointed Dr. W. G. Savage and Dr. W. L. H. Duckworth to the external examination in forensic medicine and anatomy respectively.

Dr. Amand Routh has been appointed a representative on the County Secondary School, Bermondsey.

An additional second examination for medical degrees, Part II, will begin on December 2nd.

ST. THOMAS'S HOSPITAL.

The University Entrance Scholarship for 1919-20 (£50) has been awarded to G. D. C. Tracey of Emmanuel College, Cambridge.

UNIVERSITY OF GLASGOW.

The following degrees were conferred on November 8th:

M.D.—*George Macleod, †H. Graeme Anderson, †George Fletcher, †H. M. Calder, C. Lundie, D. McIntyre, A. B. Maclean, N. A. Macleod, S. J. Moore, B. H. Robertson, A. C. Sharp.

* With high commendation. † With commendation.

Medical News.

THE old students' dinner of the London Hospital Medical College, postponed on account of the railway strike, has now been cancelled.

A PRESENTATION, consisting of an illuminated address and a sum of money, was recently made to Dr. and Mrs. John Halliwell by the residents in and near Winchcombe, Gloucestershire. Dr. Halliwell, who has practised at Winchcombe for nearly thirty years, has retired owing to ill health, aggravated by his exertions at the local Red Cross hospitals during the war.

THE next session of the General Council of Medical Education and Registration will commence at 2 p.m. on Tuesday, November 25th, when the President, Sir Donald MacAlister, K.C.B., M.D., will take the chair and give an address. The Council will continue to sit from day to day until the termination of its business. The session, we understand, is likely to be unusually short.

AN order in Council has been laid before Parliament transferring to the Ministry of Health duties of the Home Office with regard to the Anatomy Act. The duties transferred include the appointment of inspectors and the regulation of their duties.

THE medical men of Southend-on-Sea and district entertained at dinner on October 21st those of their colleagues who had served with His Majesty's forces during the late war. Over thirty sat down to dinner, and a thoroughly enjoyable evening was spent under the chairmanship of Dr. Cleveland Smith.

THE Aberdeen University Club, London, will hold its sixty-second half-yearly dinner at the Criterion Restaurant, Piccadilly Circus, London, W.1, on Thursday next, November 20th, at 7.30 p.m., when Professor Ashley Watson Mackintosh, M.D., will be in the chair. The annual general meeting will be held at 6.30. The secretaries will be glad to hear of any new members or of changes of address; communications should be addressed to Dr. W. A. Milligan, 11, Upper Brook Street, W.

INFLUENZA has again broken out in epidemic form in Spain. There is a rather severe outbreak in the Argentine Republic also.

AN announcement by the Ministry of Pensions in our advertisement columns states that the appointments of medical referees in the London region will be filled in December. Applications from boroughs north of the Thames must be received by November 30th, and from those south of the Thames by December 10th. Another announcement is to the effect that the Ministry can still give part-time employment to medical men on medical boards in some towns of Lancashire and Cheshire, especially Manchester; applications should be addressed to Dr. A. H. Williams, Commissioner of Medical Services, Ministry of Pensions, 13, Piccadilly, Manchester.

A POST-GRADUATE course will be held at the Victoria Hospital for Children, Tite Street, Chelsea, each weekday from Monday, November 24th, till Friday, December 5th, inclusive. The fee for the course is £1 ls., except for those taking the course in connexion with the Fellowship of Medicine.

So far as we have been able to ascertain the following is a complete list of the medical men who were elected mayors in England and Wales on November 9th: Kensington, Dr. A. J. Rice-Oxley; Droitwich, Dr. P. A. Roden; Faversham, Dr. S. R. Alexander (tenth term of office); Stafford, Dr. F. M. Blumer; Tunbridge Wells, Dr. H. A. Latimer.

AT a meeting of the Royal Meteorological Society, to be held at 70, Victoria Street, S.W.1, on Wednesday, November 19th, Lieutenant C. W. B. Normand will read a paper on the effects of high temperature, humidity, and wind on the human body. The upper limits of livable climatic conditions for the average healthy man, with special reference to desert and tropical conditions, will be considered.

THE Women's Branch of the Training Department of the Ministry of Labour has been authorized to arrange for the training of disabled nurses in accordance with the terms of the Royal Warrant. Persons eligible are nurses in receipt of a pension under that Warrant who, owing to disability incurred on military service, are prevented from following their former occupation. Letters of inquiry, marked "Disabled Nurse," should be addressed to the Controller, Women's Training Branch, Ministry of Labour, St. Ermin's Hotel, Westminster, S.W.1.

THE eighth Congress of the National Union of Students of France will be held at Strasbourg on November 22nd, on the occasion of the anniversary of the entry of the French troops into Alsace in 1918. On the same date Strasbourg will celebrate, in the presence of a large assembly of professors and students from all parts of France and other countries, the inauguration of the university, once more become French.

THE business of the Cambridge Scientific Instrument Company has been amalgamated with that of Mr. Robert W. Paul of New Southgate, and will in future be conducted under the name of "The Cambridge and Paul Instrument Company, Ltd." The head offices and showrooms will shortly be transferred to London.

THE Geological Survey of Great Britain and Museum of Practical Geology, Jermyn Street, S.W., have been transferred for administrative purposes from the Board of Education to the Department of Scientific and Industrial Research as from November 1st, but correspondence with reference to the work of the Survey should be addressed as heretofore to the Director of the Survey and Museum, Jermyn Street, S.W.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the *BRITISH MEDICAL JOURNAL* are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the *JOURNAL* be addressed to the Editor at the Office of the *JOURNAL*.

THE postal address of the *BRITISH MEDICAL ASSOCIATION* and *BRITISH MEDICAL JOURNAL* is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the *BRITISH MEDICAL JOURNAL*, *Atiology*, Westrand, London; telephone, 2631, Gerrard.

2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate*, Westrand, London; telephone, 2650, Gerrard.

3. MEDICAL SECRETARY, *Medisecra*, Westrand, London; telephone, 2654, Gerrard. The address of the Irish Office of the *British Medical Association* is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

INCOME TAX.

"F. C. P." has increased his fractional share in the profits of the practice in which he is a partner. How does this affect his liability?

* The Income Tax Act, 1918, Section 20, provides *inter alia* that the income of a partner from a partnership shall be deemed to be the share to which he is entitled, during the year, in the partnership profits "such profits being estimated according to the several rules and directions of this Act." "F. C. P.'s" share was increased from $\frac{1}{4}$ to $\frac{3}{4}$ as from January 1st, 1920, and taking the average partnership profits as assessable at, say, £4,800, his income tax liability as a partner would be $\frac{1}{4}$ of £4,800 plus $\frac{3}{4}$ of £4,800 = £1,300. It is

necessary to remember that the quantum of the assessment is determined by the average profits, what "F. C. P." does not pay on must fall to the share of some other partner. The fact that he may not receive the additional money during the financial year is immaterial.

"I.M.S." has paid income tax on income from *American* shares although he has been resident in India during the past nine years.

. He should write to the Repayments Branch, Australia House, London, W.C.2, for a form, for the purpose of a claim for the three past years to be made by himself as a foreign resident in respect of tax deducted in this country on *foreign* share interest. The form contains instructions as to the declarations and documents required in support of the claim.

"B. J. W." paid tax for the year ending April 5th, 1917, on an amount which, as he is now prepared to prove, was in excess of his earnings for that year. Has he now any legal claim to repayment? The practice was taken over by him in October, 1915.

. No. Although claims for "abatements" and other allowances may be made at any time within three years, a claim for a reduction of the quantum of an assessment must be made within twelve months from the end of the financial year in question, even in those cases to which the twenty-one days limited by the notice of assessment does not apply.

LETTERS, NOTES, ETC.

INCOME TAX OF CIVILIAN DOCTORS ON WAR WORK.

A REFERENCE to this subject appeared in our issues of September 20th and October 11th of this year, and as the matter may be one in which many of our readers are interested, we again return to it in order to refer to two cases which were decided in the King's Bench Division on June 19th last. Both cases raised the question whether in the particular circumstances of each case an assessment had properly been made in respect of a person entitled to the special relief given by Sec. 30 of the Finance Act, 1916.

Section 30 of that Act, which is re-enacted by Section 42 of the Income Tax Act, 1918, provides that where "any person who, during the current income tax year, has served or is serving as a member of any of the naval or military forces of the Crown, or in service of a naval or military character in connexion with the present war for which payment is made out of money provided by Parliament, or in any work abroad of the British Red Cross Society or the St. John Ambulance Association, or any other body with similar objects, proves that he is assessed or charged to income tax, or has paid income tax either by way of deduction or otherwise on his pay in connexion with any such service, he shall be entitled to claim such relief from income tax as will reduce the amount of income tax on that pay to the amount which would have been payable if the tax were charged on the pay at the rate of—

9d., if his total income from all sources does not exceed	£300
1s. 3d., " " " " " "	£500
1s. 9d., " " " " " "	£1,000
2s. 3d., " " " " " "	£1,500
2s. 9d., " " " " " "	£2,000
3s. 3d., " " " " " "	£2,500
3s. 6d., if his total income exceeds	£2,500

and, further, that "where the total income of the claimant does not exceed £160 he shall be entitled to [total] exemption, and where the total income, although exceeding £160 does not exceed £300, he shall be entitled to relief from tax by way of abatement upon £160 instead of upon £120."

The cases to which we refer are *Stockham v. Simpson* and *Curtis v. Holdsworth*, and it is unfortunate that neither case has been reported. The claimant in the first case, however, had been secretary to a territorial association, and in the second the claimant was an acting paymaster. Both claimants had received pay out of money provided by Parliament, and in both cases Mr. Justice Rowlatt held that they came within the section quoted above as persons "in service of a naval or military character." It may be that in spite of our inability to give the reasons for the judge's decisions in these two cases, members of the profession will find the above of use to them if this question arises.

KNOWLEDGE AND INTUITION.

"EYE SURGEON" writes: I was one of the company that gathered at St. James's Vestry Hall at the invitation of the Metropolitan Counties Branch to hear Messrs. Bolam, Macdonald, Turner, and Verrall, candidates for election to the General Medical Council. The meeting was of much interest. I learnt what four men who knew things had to say of the General Medical Council; and also what many of us (before attending the meeting) had thought the General Medical Council was. But I am not writing to tell you this, but of an incident of my getting to that hall. I made for the old church of St. James, thinking it must be close there. But I could not find the hall. Three local shop workers knew it not, and the fourth gave directions that were proved wrong. I routed out the church verger, or his

domestic; she knew nothing, and, to judge by the way she shut the door, cared less. In despair I asked a blind man, who stands like Bartimeus by the wayside. His answer was terse: "Three paces along this wall to the left is a fountain, beyond that some iron railings, where the railing ends the hall begins." His answer seemed to point a moral applicable to the General Medical Council election. Knowledge is better than intuition. But if both be combined, how excellent!

MOTORISTS' LIGHTING REGULATIONS.

THE many inquiries received by the Automobile Association regarding the lighting regulations indicate that numerous motorists are still in doubt as to the present requirements of the law. This is doubtless due to the revocation of the war-time restrictions, and the subsequent reimposition of certain of those restrictions during the strike period. The present position is summarized in a circular as follows:

Motor Cars: (a) Two front lamps showing a white light in the direction in which the vehicle is travelling, one lamp placed on the *extreme* near side and the other placed on the *extreme* off side. (b) A lamp at the rear placed on the off side of the car, and showing a red light in the reverse direction to that in which the vehicle is travelling. This lamp should also illuminate the rear number plate.

Motor Cycles with Side-cars: Similar requirements to the above, except that it is not necessary to illuminate the rear number plate if the front plate has duplicate faces and is illuminated by the front lamp of the motor cycle.

Motor Cycles Ridden Solo: (a) Lamp at the front showing a white light in the direction in which the machine is travelling. (b) Lamp at the rear displaying a red light in the reverse direction to that in which the machine is travelling. (c) Front number plate, if with duplicate faces, may be illuminated instead of rear plate.

There are now no restrictions as to size or power of lamps, and obscuration by tissue paper or paint is therefore unnecessary. At the same time, the Automobile Association hopes that all motorists will restrict their lighting to a power reasonably necessary for their own safety and that of other road users.

A DISCLAIMER.

DR. C. H. PRING (Ivor House, Trafalgar Road, Camberwell) writes: Will you allow me to say that I am in no way related to the Dr. Pring whose name has recently appeared in connexion with certain proceedings in the Divorce Court?

CORRECTIONS.

IN the note on Naval Hygiene in our last issue there was an obvious misprint on p. 698, seven lines from the end of the paragraph: "In a lanoline case" should have been "in a lanoline base."

IN the note on Anaesthesia in Tonsil and Adenoid Operations by Dr. H. L. Hamilton (JOURNAL, November 8th, p. 620) it was inadvertently stated that 1 minim of ethyl chloride for each year of the child's age is sprayed on the absorbent wad placed in the inhaler. For 1 minim read 1 c.cm.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 43, 44, 48, 49, 50, and 51 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 45, 46, and 47.

VACANCIES are announced for medical referees under the Workmen's Compensation Act, 1906, for Barrow-in-Furness and Ulverston, Ambleside, Kendal, Kirkby Lonsdale, and Settle County Courts in Circuit No. 3, and for Ashbourne, Bakewell and Ilkeston, Derby and Long Eaton, Wirksworth and Matlock, and Burton-on-Trent County Courts in Circuit No. 19. Applications to the Private Secretary, Home Office, by November 29th and December 3rd respectively.

THE following vacant appointments of certifying factory surgeons are announced: Downton (Wilts), Kingston-on-Thames (Surrey), Otley (Yorks, West Riding), Porthcawl (Glamorgan), Saintfield (Down).

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Seven lines and under	...	...	0 6 0
Each additional line	...	...	0 0 9
Whole single column	...	...	4 0 0
Whole page	...	...	12 0 0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *postie restante* letters addressed either in initials or numbers.

NORMAL AND MORBID CONDITIONS OF THE TESTES FROM BIRTH TO OLD AGE IN ONE HUNDRED ASYLUM AND HOSPITAL CASES.

BY

SIR FREDERICK W. MOTT, K.B.E., M.D., J.L.D.,
F.R.S., F.R.C.P.

DIRECTOR OF THE PATHOLOGICAL LABORATORY OF THE
LONDON COUNTY COUNCIL ASYLUMS.

[With Special Plate.]

THE material dealt with in this article was collected from 100 cases of deaths, occurring at all ages from birth to 86, in London asylums and various civil and military hospitals.

In a majority of the asylum cases, especially those dying at Claybury and upon which I made the *post-mortem* examination, the contents of the vesiculæ seminales were examined. In a small number of cases the thyroid, adrenals, and pituitary glands were also examined. In all the hundred cases the testes were weighed and subsequently examined by the histological methods to be described.

MACROSCOPIC APPEARANCES OF THE TESTES AFTER PUBERTY.

It was found that sections of fresh or formol-hardened testes, when examined with a hand lens, revealed naked-eye pathological changes in a majority of the asylum cases; the converse was noticeable in the adult hospital cases.

In the normal testes occurring in cases of death from injury or disease without mental symptoms, the weight of each of the organs, as a rule, was normal. Upon section the tubuli seminiferi appear white, plump, and closely packed together, without appreciable intervening fibrous tissue.

In the asylum cases the most marked deviation from the normal condition was found in two groups of cases—namely, (1) general paralysis, (2) dementia praecox.

(1) The weight of the testes in general paralysis varied considerably. It was not infrequent to find one testis considerably smaller than the other, and the tunica albuginea adherent. The weight is not always an index of the functional efficiency or otherwise. There was no correlation between the naked-eye cortical changes in the brain in general paralysis and the morbid changes in the testes.

In a relatively small proportion of the cases of general paralysis examination with a hand lens of a sectioned testis showed no abnormal naked-eye appearance. In the majority of the cases, however, strands and localized patches of fibrous tissue of variable extent and degree separated the white seminiferous tubules and some of the tubules might appear smaller than normal.

(2) In the regressive atrophic condition met with in the great majority of cases of dementia praecox the tubules appeared attenuated and less plump than the normal, and were either of a greyish colour or did not present the uniform milky white appearance of the normal tubules. There may or may not be an increase of interstitial tissue. As a general rule, the degree of morbid naked-eye change of the testes in dementia praecox conforms to the duration of the mental disease and the clinical signs and symptoms of the mental decadence rather than to any obvious naked-eye changes or defects in the brain. In general paralysis the dementia corresponds in great measure to the degree of cortical destruction; nevertheless, there is no correlation in this disease between the brain atrophy and the testicular atrophy.

With the exception of cases of senile dementia and congenital imbecility with epilepsy, the testes in other cases dying in the asylum did not, as a rule, show any marked departure from the normal—for example, cases of epileptic insanity, Korsakoff psychosis, paranoia, and manic depressive insanity.

* The expense incurred for drawings, illustrations, and aid for this research was assisted materially by a grant from the Board of Control. I also wish to express my obligations to the superintendents, medical officers, and others who have kindly provided me with some of the material for this research.

Table of Classification of the One Hundred Cases from which the Material for Investigation was Obtained.

Asylum Cases.		Hospital Cases.	
1. Dementia praecox	23	1. Born dead or dying before puberty	2
2. General paralysis	23	2. Dying after puberty of various diseases	4
3. Juvenile general paralysis	4	3. Under puberty death from injury shock	1
4. Psychoses—for example, manic depressive insanity, paranoia	7	4. Over puberty death from injury shock	1
5. Epilepsy	3	5. Military cases—injury of brain or spinal cord, with sepsis of variable duration	3
6. Congenital epilepsy, with idiocy or imbecility	4		
7. Organic brain disease	5		
8. Imbecility	2		
9. Senile dementia (octogenarians)	3		

HISTOLOGY.

The following methods of histological investigation were employed:

HISTOLOGICAL METHODS.

1. Examination of the contents of the vesiculæ seminales by dark-ground illumination and an oil-immersion lens.
2. An emulsion of the testis was prepared by rubbing up a small portion of the organ in a mortar with Ringer's fluid. The emulsion was examined with an oil-immersion lens and dark-ground illumination. The same method was employed in examining the brain for spirochaetes.
3. Smears of the seminal contents of the vesiculæ were stained by Delafield's haematoxylin and eosin; by Heidenhain's haematoxylin and eosin, and with Giemsa or polychrome aniline dye stains.
4. The organs were hardened in 10 per cent. formol solution, and portions of them were cut into sections with the freezing microtome. These sections were stained with scarlet or Sudan III and some were counterstained with haematoxylin; subsequently the sections were mounted in Farrant's solution. This method was employed to demonstrate the amount and distribution of the lipid substance. In some cases the sections were placed in Marchi fluid.
5. Portions of the gland were cut out into sections of uniform thickness, after embedding in paraffin or treating with the celloidin method. Some pieces were stained in bulk with haematoxylin and eosin, treated first by celloidin method, and after placing in chloroform subsequently embedded in paraffin. This method is very useful, as thin serial sections can be obtained without any shrinking of the tissue. Giemsa, polychrome or the Heidenhain, eosin and van Gieson stains were used for staining the sections. The films and sections were mounted in neutral Canada balsam.

THE DEVELOPMENT OF THE TESTES FROM BIRTH TO PUBERTY.

The development under normal conditions, and under abnormal and diseased conditions, other than congenital syphilis, will now be considered.

At Birth, and in Infancy and Early Childhood.

1. The testes of full term identical twins, born dead but in a healthy bodily condition, also of a healthy full term child, born dead, were examined.

The histological appearances of sections were as follows:

The seminiferous tubes, seen in longitudinal, oblique, and transverse section, are filled with embryonic cells, lying upon a thin membrana propria; there is no sign of differentiation. The cells have round or oval nuclei, with a delicate reticulum of chromatin and a dense membrane. The cells with round nuclei are the spermatogonia; those with oval nuclei are the cells of Sertoli. The amount of cytoplasm is relatively small, it is faintly stained with eosin and presents a homogeneous appearance. The interstitial tissue is relatively more abundant than the tubules at this stage; it is like ordinary connective tissue, except that there are groups of fairly large polygonal epithelioid cells scattered through the organ—the cells of Leydig; these cells may be seen occasionally in double rows, with an interval between like a tubular gland (Fig. 1). These special interstitial cells are very numerous in all the sections. The cytoplasm is three times as abundant as the nucleus; it is stained deeply by eosin. A lipochrome substance may be observed in many of the cells, exactly like the lutelin found in the cells of the ovary, in the form of fine light-yellow granules, distributed throughout the cytoplasm. These cells are not unlike liver cells; they stain red with scarlet (see Fig. 1).

2. Sections of a testis of a child, aged 4 months, dead of pneumonia, with a syphilitic rash on the legs, back and head, showed the following appearances: The seminiferous

* Scharlach.

tubes have developed considerably by a proliferation of the embryonic cells, so that they appear nearly double the size of the tubes at birth; the interstitial tissue appears relatively less (Fig. II). A few fine lipoid granules, stained yellowish-orange, are seen scattered in the seminiferous tubules, and abundant scarlet stained granules are seen in the interstitial tissue. Only a few interstitial cells are now seen; they are smaller than in the testis of the infant at birth. They can, however, be recognized by the clear outline of the cell—the round, comparatively deeply-stained basophil nucleus, which is easily discerned in the eosin-stained cytoplasm. The lipochrome in the interstitial cells is less obvious than at birth. The appearance of lipoid granules in the seminiferous tubules and in the interstitial tissue may be explained by supposing that it has been, and is still being, utilized by the embryonic sperm cells in their formative activity and proliferation; the interstitial cells now disappear or assume a resting stage, in which they will remain until puberty, when they again appear and become active in the spermatogenic function for reproduction (Fig. V).

3. The testis of a child aged 3½, dead of bronchopneumonia (Fig. III), exhibits smaller tubules than in Fig. II; there is more interstitial tissue, and these two facts suggest that there is some arrest of development.

It is possible that when the interstitial cells of the infant are no longer active the internal secretion has already performed its office of impressing on the body the male characters and upon the nervous system the special instincts and affective characters of the male sex. We do not find any evidence of maturation of the male germ cell; it is otherwise in the female, for sections of the ovary of a female infant aged 18 months showed complete Graafian follicles, with a perfect ovum, zona pellucida, discus proligerus and zona granulosa. It is a reasonable hypothesis to suppose that the cells of the zona granulosa and discus proligerus of these Graafian follicles of the infant produce an internal secretion which impresses on the central nervous system the instincts of the female and the psychic characters peculiar to the sex. Moreover, the continual formation of follicles which do not undergo dehiscence till menstruation occurs may, through a bio-chemical influence on the somatic cells, impress female characters, not only on the mind, but on the growth of the body. If the male characters are dominant in the somatic cells this internal secretion would play an important part in determining the female characters.

EARLY STAGE OF ACTIVITY OF THE GLAND.

4. The testes of a boy aged 9, who died of shock from injury, exhibited appearances very similar to the following, though less advanced.

5. The testes of a boy aged 11, who died of fracture of the base of the skull, were examined, with the following results:

The basement membrane of the tubules is more distinctly seen; the tubules are larger, generally speaking filled still with only cells such as are seen in the infant, but here and there are observable early stages of formative activity recognizable by karyokinetic figures in the nuclei of some of the spermatogonia and spermatocytes; the sustentacular cells of Sertoli may now occasionally be clearly differentiated, but these syncytial cells contain but few lipoid granules (Fig. IV). There is no evidence of spermatids. *There is some slight fine granule lipoid staining in the tubules, but no interstitial lipoid, so that the interstitial cells are still practically in the resting stage, appearing as flattened nucleated cells or round nucleated cells, with a small amount of cytoplasm, which when examined with an oil immersion is seen to be stained faintly pink.*

AFTER PUBERTY.

Adolescent.

The vesiculæ seminales and testes of a healthy boy aged 15 (Case 6), who died twenty-four hours after a motor accident which crushed the chest, showed the following histological appearances:

Seminal Fluid.—The spermatozoa, observed by dark-ground illumination and in stained films, of the semen from the vesiculæ seminales are not so numerous, and appear to be smaller than those in the semen of the normal adult. Spermatozoa were found also in an emulsion of the testis, but they did not appear to be as large as those found in the emulsion of the testis of the adult.

Sections of the Testis.—The tubules are now fully developed, closely approximated, and twice the diameter of those seen in the boy of 11. Nearly all the tubes now show abundance of

spermatozoa, and active spermatogenesis in all stages (Fig. V). Numerous groups of interstitial cells are seen, and coarse granules of scarlet-stained lipoid within and around these cells are observable. The interstitial cells appear to lie outside the lymph space surrounding the basement membrane of the seminiferous tubules. *The fine orange-stained granules of lipoid within the sustentacular cells are not nearly so abundant as in corresponding cells of the testis in the adult (Fig. VI).*

It is obvious, therefore, that with the dawn and development of the sexual desire there occur two histological changes—namely, the reappearance of the interstitial cells in an active state, and the accumulation in and around them of these orange-stained granules; and this may be regarded as an indication of the presence of a phosphorized lipoid, which may serve as the raw material from which can be built up the nuclein necessary for the active formative cell processes connected with spermatogenesis. I have purposely said *may* because the other view is that the nucleic acid is formed from protein and circulating inorganic phosphates (see below), but physiological chemistry has not yet settled the synthetic processes underlying the formation of nucleic acid, which is the main chemical substance in the constitution of the head of the spermatozoon. A further discussion of this subject will appear in another monograph when the results of chemical analysis of the testes in health and disease which are now being undertaken are completed.

Adult.

The following cases afforded an opportunity of examining the testes in healthy adults.

CASE 7.

W. L., an engine driver, fell off his engine and was killed. He was brought into Charing Cross Hospital. Sections of the testes showed normal spermatogenesis in all stages; the number of the spermatozoa in the tubules was not so great as in most normal cases. The interstitial cells of Leydig were extraordinarily well seen forming large groups in the loose connective tissue between the tubules (Fig. VII). The basement membrane of the tubules was not thickened. Frozen sections stained with scarlet dye and haematoxylin showed most clearly the cells of Leydig filled with the orange-stained granules of lipoid. The cells of Sertoli are likewise filled with these fine orange-stained granules.

Among the cases dying of injury and in which spermatogenesis is normal, it is remarkable how variable is the readiness with which the cells of Leydig can be discerned. In some, as W. L., they are seen in every low power field in every section; in others they can only be found by searching.

Among asylum cases it has struck me that the testes of general paralytics show these cells in greater numbers than the testes of other forms of insanity. Too much importance must not, however, be attached to this statement, for unless serial sections of both testes were made and examined, a definite conclusion that the hormone cells were in greater numbers in the testes of persons suffering with general paralysis than other persons dying in the asylums is unwarranted.

CASE 8.—Normal Spermatogenesis in the Adult.

F. H. C., aged 24, was admitted to Charing Cross Hospital suffering with multiple injuries of the pelvis, and died the same day from shock.

Sections of the testis from this case stained for lipoid showed abundant granules in the syncytial cells—so abundant as to form a ring around the tubule within the basement membrane (Fig. VIII). Comparatively little lipoid was seen in the interstitial tissue. Frozen sections stained with haematoxylin and scarlet and mounted in Farrant solution showed interstitial cells containing lipoid granules, but there was considerable congestive stasis in the blood vessels and capillary haemorrhage (doubtless the result of the injury), and this would account for the relatively small amount of lipoid in the interstitial tissue. The tubules show active spermatogenesis in all stages (Fig. IX). This case will therefore serve for the description of normal spermatogenesis.

NORMAL SPERMATOGENESIS IN THE ADULT.

A section of the normal seminiferous tubule shows a well defined membrana propria, with flattened nuclei, supporting several layers of cells. The layer of cells lying on the basement membrane consists of spermatogonia, and between the spermatogonia are the syncytial cells of Sertoli, which are larger, have oval nuclei, and project inwards between the various layers of cells which are undergoing successive stages of active mitosis, incidental to spermatogenesis. The cells of Sertoli, or sustentacular

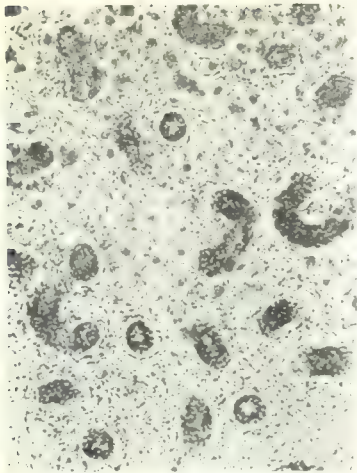


FIG. I.—*Testis of Twin Fetus.*
(Mag. 105.)

To the right between the tubules in the interstitial tissue are seen numbers of polygonal cells. These are the cells of Leydig.

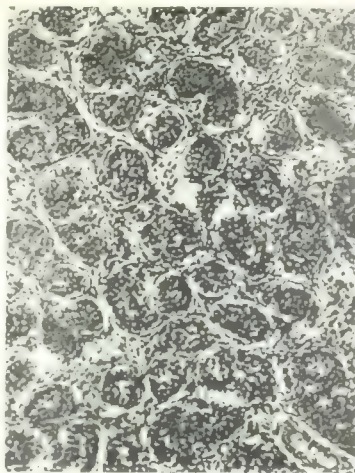


FIG. II.—*Testis of Infant aged 4 Month.*
(Mag. 105.)

The tubules have increased to nearly double the size; the interstitial tissue was correspondingly diminished. The cells of Leydig are not visible.

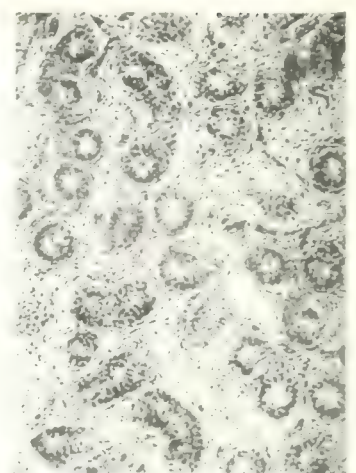


FIG. III.—*Testis of Child aged 3 Years.*
(Mag. 105.)

The tubules are smaller than in Fig. II. The cells of Leydig are not seen. There is much more interstitial tissue than in Fig. II.

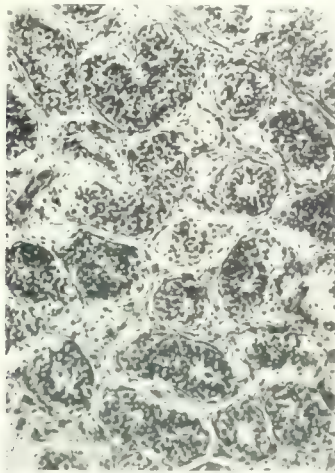


FIG. IV.—*Testis of Boy aged 11 Years.*
(Mag. 105.)

The tubules are larger than in Fig. II. The tubules are approximated. There is a small amount of interstitial tissue. The cells of Leydig are not visible.

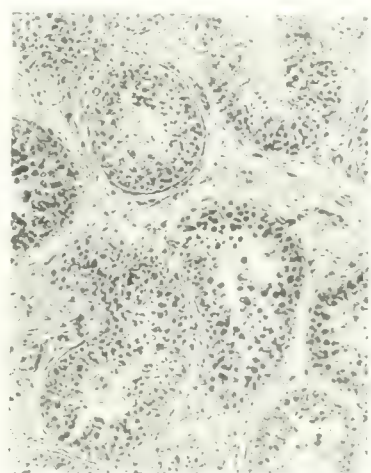


FIG. V.—*Testis of Boy aged 15 Years; died of Injury.* (Mag. 105.)

The tubules show active spermatogenesis. The fine black dots are the heads of spermatozoa.

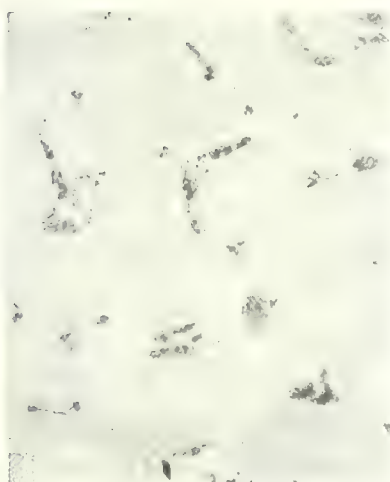


FIG. VI.—*Testis of Boy aged 15 Years; died of Injury.* (Mag. 70.)

Scarlet-stained preparation to show lipid. The interstitial lipid (black) is very well shown. Compare the staining of the tubule with the adult, Fig. VIII.

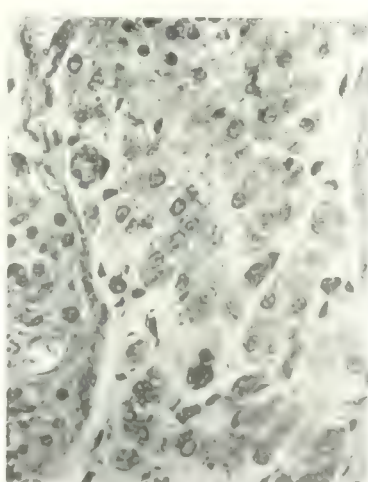


FIG. VII.—*Portion of spermatic tubule, from Boy who died of Injury.* (Mag. 385.)

Portion of spermatic tubule, with four heads of spermatozoa seen. To the right is a large collection of cells of Leydig, polygonal in form and with a large round nucleus.



FIG. VIII.—*Testis of Boy who died of Injury.* (Mag. 70.)

Scarlet preparation showing abundant interstitial lipid which appears black. Observe also the black zone beneath the basement membrane. This is due to the spermatozoa and cells of Sertoli being filled with lipid.

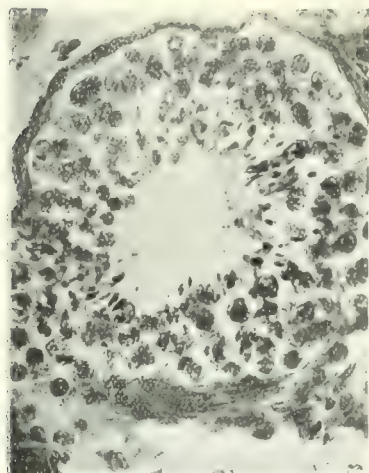


FIG. IX.—*Testis of Adult; died of Injury.* (Mag. 376.)
 Transsection of spermat tubule, showing active spermatogenesis.

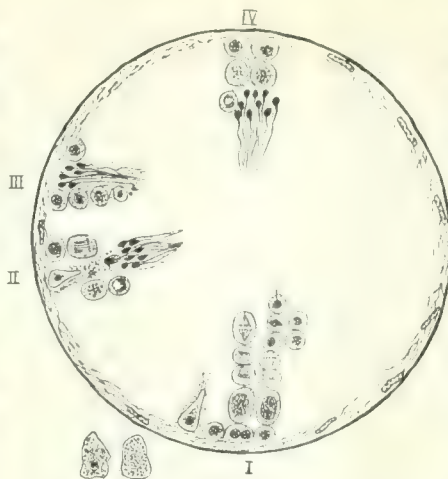


FIG. X.—*Diagram to illustrate Spermatogenesis.*
 I shows the various stages in the development of spermatozoa from spermatogenesis—spermatocytes—spermatids; II, the heads of the spermatozoa dipping into the cells of Sertoli; III, the further stage of development of spermatozoa; IV, mature spermatozoa with tails free in lumen prior to escape. Beneath are two interstitial cells.

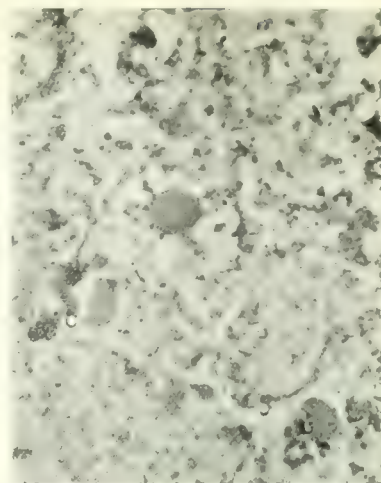


FIG. XI.—*Film of Fluid from Vesicula Seminalis of Case of Dementia Praecox Early Second Stage; died of Acute Lobar Pneumonia after three days' illness.* (Mag. 875.)
 The film was stained with haematoxylin and eosin. Only a few spermatozoa seen, and these take the acid dye and are degenerated. Compare with Fig. XII.

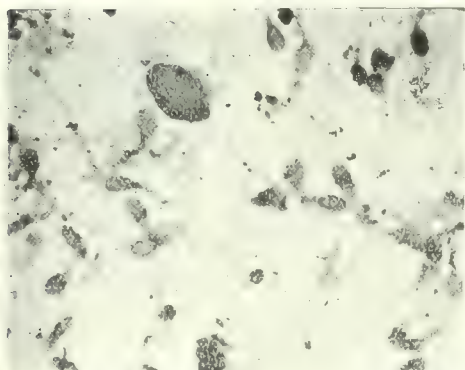


FIG. XII.—*Film of Fluid from Vesicula Seminalis of Case of Manic Depressive Insanity.* (Mag. 875.)
 The film was stained in a similar manner to Fig. XI. Observe that the spermatozoa are stained by the haematoxylin, and have a normal morphological appearance.

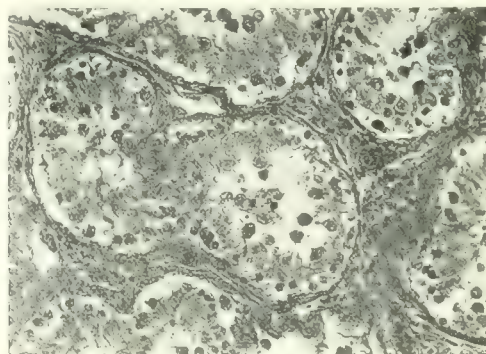


FIG. XIII.—*Testis from a Soldier dead from Sepsis caused by Bullet Wound of Lower End of Spinal Cord.* (Mag. 162.)
 Spermat tubules show no spermatozoa; most of the cells have undergone coagulation necrosis.

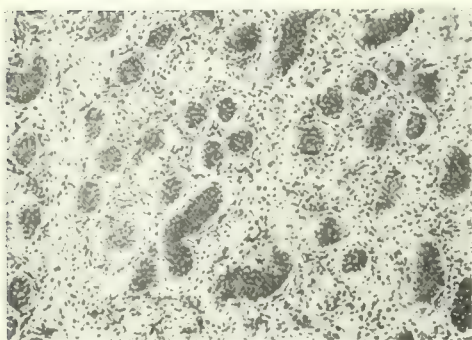


FIG. XIV.—*Testis from a Boy aged 7; dead of Chronic Tuberculosis.* (Mag. 105.)
 The tubules are the same in size as at birth. Round-celled infiltration of interstitial tissue. No cells of Leydig seen. Compare with Fig. I

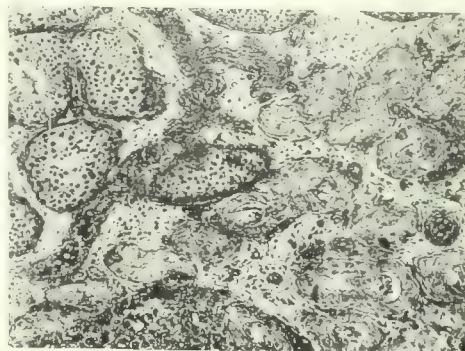


FIG. XV.—*Testis from a Case of General Paralysis.* (Mag. 96.)
 To the left are normal seminiferous tubules. To the right are completely atrophied tubules. Below is a part of a nodule of interstitial cells.

cells, are particularly rich in lipoid granules. Within the above mentioned outer layer of cells are larger cells (the spermatocytes), the large nuclei of which show all forms of karyokinesis. The spermatocytes are products of division of the spermatogonia, each of which, on dividing into two, gives rise to one cell like itself, and another which grows larger, and passes into the second layer to form a spermatocyte.

The spermatocytes undergo a division. A product of the division of the spermatocyte again divides, giving rise to spermatids, the number of chromosomes becoming reduced to half the number during this process. The spermatids are small cells with spherical nuclei; they elongate, and the nucleus becomes shifted to one end. The young spermatozoa thus formed collect into irregular groups, and appear deep in the sustentacular cells of Sertoli, which serve as a support and source of nourishment to the young spermatozoa. As they grow and acquire their tails at this stage of spermatogenesis the heads appear to be nearer the lumen of the tubule, and the tails of the spermatozoa project freely into the lumen of the tubule; a little later in the process of development the spermatozoa grow in size and are pushed further towards the lumen, and eventually become completely liberated (Fig. IX).

Examination of the spermatids in haematoxylin eosin stained sections with an oil immersion shows a nucleus stained deeply with the basic dye surrounded by a thin layer of eosin stained cytoplasm. These develop into spermatozoa in the following way: The nucleus becomes shifted to one end, and assumes an oval and then a lance-head shape, and behind this is seen the eosin stained cytoplasm which later, in the Sertoli cells, grows to form the main part of the tail.

The process is continually going on in the seminiferous tubules of the testis, successive crops of spermatozoa being continually produced. The various stages of development may be observed in the normal testis, or even within the limits of a single tubule (Fig. X).

The reduction in the number of chromosomes, which takes place in the formation of the spermatids, is analogous to the casting out of the polar bodies of the ovum; both processes constituting a preparation for the conjugation of the male and female gamete which takes place in the fertilized ovum.

THE LIVING SPERMATOZOON.

The spermatozoon is a living organism produced in incalculable numbers by the testis during the greater part of a healthy man's life, and it may be regarded as the most remarkable organism in Nature, for concealed in its minute structure and biochemical organization is the specific energy of the highest vital dynamics of evolution. In a normal emission of man, Lode calculated that there are about 226,000,000 spermatozoa, and that 339,385,500,000 must be produced in man between the ages of 25 and 55.

The semen is the mechanical medium in which the spermatozoa move, and when ejected it is mixed with the secretion of the prostate and Cowper's glands.

Examination of the Contents of the Vesiculæ Seminales Post Mortem.

The seminal secretion of the testes is stored in the vesiculæ seminales. There may be a biological advantage in this, for I have found that examination of the semen in the vesiculæ seminales of people dying of various diseases show spermatozoa in various stages of degeneration. Moreover, in two of the cases the contents of the vesiculæ, examined by dark-ground illumination, showed that some of the spermatozoa were still alive and active eight hours after the patient's death. Now the specific energy of these active spermatozoa must have been greater than the inactive dead organisms. Consequently, in a person suffering with disease it is probable that only those with a normal specific energy survive; thus only the fittest are left for fertilization. As will be shown, there is reason to believe that this degenerative process of the spermatozoa may commence in the early stages of normal spermatogenesis.

In many cases of disease, especially dementia praecox, the appearances of the spermatozoa proved that for some time past no living spermatozoa had existed; they all showed appearances of marked degeneration (Fig. XI). The staining reaction was not normal, the heads showed obvious biochemical and morphological changes; the tails

were broken off from many; the heads gave an oxychromatin reaction, staining with the eosin instead of the haematoxylin. Many showed only fine granules of chromatin stained by the basic dye.

I have placed seminal fluid from the vesiculæ in a sterilized sealed-up tube and kept it for more than four months, and the same forms could be seen as were observed in the films made at the time the seminal fluid was first collected. This fact is of importance, for it shows that spermatozoa may be found in the vesiculæ when active spermatogenesis has for a long time ceased.

SUMMARY OF NOTES OF SPECIAL CASES OF INTEREST.

In the vesiculæ seminales of a demented man, aged 81, who died of pneumonia, abundant spermatozoa were found; some in various stages of degeneration, but quite a number of the heads took the basic dye as if they were still capable of fertilization. Examination of sections of the testes showed that the majority of the tubules exhibited all stages of active spermatogenesis.

In a case of juvenile general paralysis of the insane, fluid from the vesiculæ seminales, examined by dark-ground illumination in pericardial fluid, was found crowded with spermatozoa, a few very active. The majority stained normally with the basic dye.

In a case of typical dementia paralytica, aged 69 at death, in which there was advanced brain degeneration, arterio-sclerosis and cirrhosis of liver, death occurring from bronchopneumonia, the fluid from the vesiculæ showed abundance of spermatozoa, mostly degenerated. Still, active spermatogenesis must have been going on while he was in a state of profound dementia.

In another case of paralytic dementia the patient was in good general health till he had seizures which continued for a fortnight, when he died of exhaustion. My notes state that there is little active spermatogenesis in the testes. It is probable that since the patient began to have seizures with prolonged asphyxial conditions spermatogenesis had been arrested. Prolonged venosity of the blood may have interfered with the oxidation process necessary for biochemical decomposition and recombination processes of nuclear formation. It may be concluded that the vesiculæ seminales, which were filled with spermatozoa, had them stored there before he had the seizures, and, as the patient was in an unconscious or semi-conscious state the whole time, they were never evacuated.

THE SEMINAL FLUID IN DISEASE.

THE EXAMINATION OF THE FLUID IN THE VESICULÆ SEMINALES OF CASES OF GENERAL PARALYSIS OF THE INSANE.

Among twelve successive cases of general paralysis of the insane, of all ages and in all stages of the disease, as regards cortical decay and destruction, spermatozoa were found in the vesiculæ seminales of eleven, and in such a condition as to support the view that they had, just prior to or not long before death, been possessed of vitality, and were capable of fertilizing. The one case in which no spermatozoa were found in the vesicula seminalis might have shown spermatozoa in the other vesicula had it been examined.

The evidence of recent spermatogenesis afforded by examination of the contents of the vesiculæ in these 12 cases of general paralysis of the insane, accords with the evidence afforded by histological examination of a much larger number of testes, including these 12 and other cases; for I did not find one young or old (excepting a case of juvenile general paralysis of the insane, which began at 8 years of age) in which there was not evidence of active spermatogenesis in some of the seminiferous tubules, although usually scattered through the organ was partial or complete destruction of the sperm cells of some of the tubes, leaving only the basement membrane and sustentacular framework (Fig. XV).

Now, one of the common characteristics of general paralysis of the insane is excessive sexual desire, and masturbation is frequent in both the early and demented stage. Yet, although this is so frequent and may extend over years, it has not been sufficient in any one of the large number of cases I have examined completely to arrest spermatogenesis or produce a similar regressive

atrophy of the seminal tubules to that met with in the great majority of cases of dementia praecox.

EXAMINATION OF THE SEMINAL FLUID OF THE VESICULAE SEMINALES IN OTHER DISEASES.

Severe head injuries, even with sepsis, do not, as a rule, arrest spermatogenesis. In one case there was a complete arrest. In two cases of bullet wounds of spinal cord with bedsores and prolonged sepsis there was complete arrest and an appearance of coagulation necrosis of the cytoplasm of the spermatogenic cells (Fig. XIII). Advanced chronic pulmonary tuberculosis of the most extensive nature may not arrest spermatogenesis. This is of importance, because a large proportion of the asylum cases, including especially dementia praecox, die of tuberculosis. Fourteen out of sixteen successive cases of this disease died of pulmonary tuberculosis.

MASTURBATION DOES NOT CAUSE ARREST OF SPERMATOGENESIS.

A case of mania was of interest in showing that the vesiculae seminales may be crowded with spermatozoa and the testes show normal spermatogenesis, although the notes state that the patient during twenty-five years in the asylum was a pronounced masturbator. It cannot be therefore asserted that masturbation *per se*, even when continued over a great number of years, can produce regressive atrophy of the testes and arrest of spermatogenesis in a male attacked by insanity in adolescence.

CANCER AND SPERMATOGENESIS.

A patient, J. G., aged 67, suffered with dementia and died of carcinoma of the stomach. The testes weighed respectively 17 and 15 grams. There was complete arrest of spermatogenesis, but the vesiculae were crowded with spermatozoa, most of them degenerated. This seems to show that the active cell formation of a rapidly growing carcinoma of the stomach may, by its devitalizing action and utilization of all the materials circulating in the blood for nuclear formation, arrest spermatogenesis.

Another case of chronic alcoholic neuritis, aged 65, with Korsakoff psychosis, cirrhosis of the liver and ascites, was of special interest, for the vesiculae seminales contained abundance of spermatozoa, but the testes showed a complete arrest of spermatogenesis. It may be assumed that the spermatozoa found in the vesiculae were formed during the morbid condition above mentioned. But an active carcinomatosis had taken place in the liver, and it is possible to associate the arrest of spermatogenesis, as in the former case, with the active nuclear formation in the liver. This, however, is merely conjecture; it may be only a coincidence, but it is a suggestive coincidence that makes it desirable to pursue the matter further by an examination of the testes in a number of cases of death from new growths.

EXCESSIVE SUPPURATION AND SPERMATOGENESIS.

A case of very extensive suppurative pericarditis of some weeks' duration showed arrest of spermatogenesis in the testes, although the vesiculae contained abundant spermatozoa, probably formed before the suppurative process occurred. Here, again, an enormous nuclear proliferation and destruction of nuclear matter must have occurred.

NO ARREST OF SPERMATOGENESIS IN CHRONIC MICROBIAL INFECTIONS.

In cerebro-spinal meningitis, in manic depressive insanity, epilepsy, melancholia, and cases of other forms of insanity dying in the asylum spermatogenesis was still active in spite of fatal microbial disease—for example, acute and chronic tuberculosis and dysentery, which are very common causes of death in asylum patients. Again, bronchopneumonia due to inhalation of food (sometimes with gangrene of the lung), influenza, and typhoid fever are frequent causes of death of the insane.

In hospital cases the same applies. This leads one to ask whether the important genetic function is protected from the effects of circulating toxins. The hypothesis I put forward is that the abundant lipoids, consisting of lecithin, cholesterolin, and fatty acids, around and in these seminiferous tubules, serve as a protective barrier against toxins.

SPERMATOGENESIS AND OLD AGE.

Arrest of spermatogenesis due to senility occurs at varying ages in different individuals. The organs of three octogenarians suffering with senile dementia who died at Claybury Asylum were investigated, with the following results. Normal spermatogenesis may occur in a very old man, as the following case shows:

CASE 1.—*Senile Dementia.*

W., aged 81, died of pneumonia, February 22nd, 1916. The organs other than the lungs were fairly healthy considering the age. Testicles each weighed 18 grams, and presented a normal naked-eye appearance; an emulsion of the organ revealed, by dark-ground illumination, spermatozoa.

Spermatozoa.—The vesiculae seminales contained abundance of spermatozoa, many taking the eosin stain only, but a large number showed normal basophil staining spermatozoa. Sections of the organs after hardening in formalin showed, when examined with hand lens, very little excess of interstitial tissue, the seminiferous tubes appeared full, plump, normal in size, and glistening white. Microscopic examination of sections stained by the two usual methods showed normal spermatogenesis in all stages; the basement membrane was not thickened; the interstitial tissue was not increased; the testicles were closely approximated and not atrophied. The cells of Sertoli were filled with orange-stained granules. The interstitial cells of Leydig were present and contained lipid.

In this case the testis was, in fact, as normal histologically as the testis of a much younger man. Indeed, the appearances of virility are far in advance of any case of dementia praecox, and of many other cases dying in the asylums. In contrast with this are the two following cases:

CASE 2.—*Senile Dementia.*

C., aged 85. Wassermann reaction negative in blood and fluid. Testes not weighed. Vesiculae seminales not examined. Scarlet preparations. Coarse lipid in the centre of the tubuli seminiferi. Tubules atrophied, interstitial lipid occasionally seen. Hematoxylin and scarlet: no spermatozoa observed anywhere. The seminiferous tubes were in all stages of degenerative atrophy, from an appearance of thick basement membrane, with a few layers of nucleated cells and coarse granules of lipid, to a condition in which the whole tubule was filled with large vacuolated cells; the only part which took the stain was the nucleus, which was flattened against the wall as in a fat cell. These filled the whole lumen, and were apparently the swollen sustentacular cells, filling the space previously occupied by the spermatogonia and spermatocytes. Here and there groups of interstitial cells containing lipid could be seen; they appeared to be undergoing atrophy. In other places they stood out clearly in groups between the markedly degenerated and atrophied tubules.

CASE 3.—*Senile Dementia, Pleurisy with Effusion, fairly Recent.*

T. S., aged 86. Testes: right 11.5 grams; left (small) 8.5 grams. Sections of the testicles showed microscopic appearances in some ways similar to those of the late stages of dementia praecox, except that the membrana propria was not much thickened, the interstitial tissue was less increased and the epithelium in the tubules showed more nuclear staining. There was a continuous layer of spermatogonia; the cells of Sertoli were not conspicuous. The layer of spermatocytes showed, as a rule, well stained karyokinetic figures of the nuclei but the cytoplasm was vacuolated. This vacuolation was due to lipid contents. Only very occasionally was a tubule found in which there was evidence of heterotypical nuclear division, reduction of nuclear substance, and formation of the spermatids. When spermatids were seen they took the basic dye well. In a few tubules occasional well shaped spermatozoa could be seen. Fairly numerous groups of interstitial cells, smaller than normal, and the majority containing lipochrome pigment, were observable.

Possibly the persistence of the interstitial cells may account for an increased and perverted sexual appetite in old men, due to a stimulation of the desire without the power to perform the sexual act.

ARREST OF SPERMATOGENESIS FROM BIRTH TO ADOLESCENCE.

1. *Complete Arrest before Puberty.*

Examination of the testis of a child, aged 7½, dying from tuberculosis pulmonalis, showed a condition of the tubuli seminiferi like those at birth (Fig. XIV).

There was a pronounced round cell infiltration of the interstitial tissue indicating a chronic inflammatory condition. No interstitial cells of Leydig could be seen. Scarlet stained preparations showed no interstitial lipid granules. A few granules could be seen in the embryonic spermatogenic cells.

Speculating upon the cause of this arrest, seeing that neither tubercle bacilli nor evidence of tuberculous deposit could be found in the testis, it may be supposed that the child possessed a low vitality and that nature never intended reproduction.

2. Arrest at Puberty.

The following are examples of arrest at or soon after puberty:

Boy, aged 16, died of chronic morbus cordis of long standing. The tubules were atrophic and showed miniature development. As in the testis at birth, the tubules were separated one from another by abundant interstitial tissue. There was no evidence of formation of spermatocytes or spermatozoa; in fact, the epithelium retained to a great extent its embryonic character, and there was little evidence of mitosis of nuclei. The membrana propria was thickened, and chronic passive congestion had given rise to an interstitial fibrosis; no interstitial cells could be discovered.

As a contrast the following acute case of morbus cordis may be cited:

A young man aged 21 died suddenly of cerebral haemorrhage caused by aneurysm due to infective embolism. There was ulcerative endocarditis. The seminiferous tubules are of normal size and are packed together with very little interstitial tissue; normal spermatogenesis with abundant lipid in the interstitial cells, the spermatogonia, and cells of Sertoli.

Chronic disease of long standing before puberty is associated with complete arrest of spermatogenesis at puberty. This fact has been shown by an important research of Kyrle¹ on the disturbances of the development of the male generative organs at all ages from birth to adolescence. He has demonstrated the fact that chronic constitutional diseases, such as tuberculosis, are associated with arrest of development. One hundred cases were examined; among these, seventy-six were highly undeveloped; of the remaining twenty-four by no means all were normal; more than half showed distinct underdevelopment. Only ten were certainly normal.

Kyrle states that at the first glance it would seem that the under-development of the testes in chronic tuberculosis was due to the effect of the toxin. He points out, however, that out of thirty-nine dying in the first year of life, twenty-nine had undeveloped testes, but only one of these died of tuberculosis. He thinks this proves that the undeveloped organ is already undeveloped when the individual is affected by the disease.

He concludes that a considerable number of children are born with undeveloped reproductive organs. The development of the whole organism is directly under the influence of the reproductive organs. Individuals with undeveloped reproductive organs have less vital resistance to disease than those with normal reproductive organs. Among the children dying with undeveloped seminiferous tubes far the greater number were physically undeveloped. The greater number of those dying in early life had undeveloped testes. Kyrle asks the question whether this is a kind of natural selection by which individuals of little genetic worth are cut off in early life.

REFERENCE.

¹ Kyrle, Dr. Josef: Ueber Entwicklungstörungen der menschlichen Keindrüsen in Jugendalter. *Wien. Klin. Woch.*, November 10th, 1910, No. 45. Aus dem pathologisch. Institute in Wien.

(To be continued.)

An Address ON CANCER.

WITH DEMONSTRATION ON THE EPIDIASCOPE.

BY

PROFESSOR J. RUTHERFORD MORISON, F.R.C.S.

A WEEK ago, when I was at the War Hospital, Gosforth, Major Render, on our round, showed me five cases of malignant disease in soldiers. The first had a cancerous stricture of the oesophagus; the second had cancer of the stomach; the third had intestinal obstruction due to general cancerous peritonitis; the fourth was a man with hopeless inoperable carcinoma of the rectum; and the fifth a man with cancer of the prostate and secondary deposits.

These soldiers, of course, were not old men. The man with cancer of the rectum was only 20 years of age. We used to think of cancer as being associated with old age. So it is; but there is an increasing amount of cancer in the country, and it is increasing more in the younger people than in the older, I think. When I saw the wounded

soldiers and saw those hopeless cancerous soldiers together, I thought what a blessing it was to be wounded instead of to have been caught with cancer.

The fact is this, that tubercle and syphilis and cancer—all of them very closely related—kill more people every year than were killed in any year of the war. We ought to face these facts and make war upon them. We have finished with the Huns, now we ought to make war upon cancer; and how is it to be done?

My brother, the medical officer of health for Cumberland, wrote a paper about a year ago in which he advised that periodical examination of every one in the country should take place at least once a year—he said once in six months, but at least once every year. That is the only way to deal with and to prevent these scourges, or discover them early enough for successful treatment. Sanatoriums for tuberculosis have been proved, almost proved, to be useless except for the individual. The treatment of syphilis in the new venereal centres may be satisfactory enough for the individual, but is of small national benefit.

What we want to do is to have everybody examined once a year and all the syphilitics to be sent to an island and to be kept there until they are cured; nobody to be allowed to enter or leave the island without a doctor's passport, and nobody to enter England without being examined by the Port Authorities. This would eradicate syphilis in two years as hydrophobia was banished. We know that this is true, and, whether popular or not, we ought to have the courage to preach it. That is the only way to prevent, or at all events to recognize, early cases of cancer.

We know about cancer a few things; we do not know the great thing—its exciting cause—but we do know a large number of predisposing causes, so that in many cases it is possible to prevent cancer. Then we know that cancer can be removed by operation, and, if a good operation is done early enough, with a large and steadily increasing percentage of success. I do not say operation is the last word in cancer; it is not. There will eventually be something better, but meantime we are to deal with what we know, and this is that from 75 to 90 per cent. of early cancers can be cured by a satisfactory operation.

PREDISPOSING CAUSES.

The following specimens and photographs, shown by the epidiascope, will impress upon you the predisposing causes of cancer and the importance of early diagnosis.

1. Here is a clay pipe smoker's epithelioma of the lip. It at first appeared as a little scaly, corny patch, which may have existed for three, four, five, six, and even ten years, and then it got a little crack in it. Even the crack could heal with some ointment, and things returned to their normal condition; but there came a day when this crack spread and it developed into an epithelioma of the lip.

2. Here is a chimney-sweep's cancer. This is a very unusual condition, because there are multiple primary foci. Now if you see multiple sores you think it cannot be cancer, but it is so in this case. From irritation of soot in the breeches we may get multiple foci of cancer.

3. This photograph is from an infirmity patient of mine. He was a paraffin worker and he got a paraffin burn, which developed, as you see, into an epithelioma.

4. Here is another example of chronic irritation—chronic superficial glossitis. This tongue spells syphilis, tobacco, alcohol, leucoplakia, and cancer.

5. A case of leucoplakic tongue, one developing carcinoma in the middle. The tongue had been like this for ten years. Some leucoplakic tongues are curable by x-ray or radium treatment about the only thing as yet which seems to do them any good.

6. A case of leucoplakia, also of long duration—very long duration—but no cancer. Of course you would not advise this man to have his tongue cut. You would knock him off his tobacco and alcohol, and give him some antisyphilitic remedies and x-ray treatment, and get him to come up for observation every three months; at the least sign of cancer you would have the tongue cut.

7. Here is an instance of leucoplakia of the vulva. Leucoplakia does not develop only in the tongue; it may come on the vulva and on the penis, and wherever it is it is apt to develop an epithelioma.

8. Here is a burn scar. In my own experience of old burns, if the scars do not heal very few of the cases escape cancer. This man had his leg burnt when he was young, and at the age of 30 an epithelioma developed on that burn. The scar never was quite healed. It broke down from time to time and discharged a little and then skinned over, but it never was a sound scar. That scar ought to have been removed and the scar area replaced by skin grafts or flaps from the other or the same leg.

X rays, of course, are another well-known cause of burn giving rise to epithelioma. I have seen quite a number of

^{*} Given before a Scientific Meeting of the North of England Branch.

lupus cases treated by x rays that have or have not been cured of their lupus, but have developed epithelioma in the same area.

Cancer in China is very common in the pharynx and in the oesophagus, and for a long time it was difficult to find any explanation of it. Eventually it was discovered that it occurred only in men, that women almost never developed either cancer of the pharynx or of the oesophagus, and the explanation of that was probably found. It was this, that at meals men are served first, and they get, and swallow, their rice boiling hot; ladies have to wait until the men are satisfied, and they get their rice cold.

9. The case of an old field lady. She worked in the fields, and her left eye was not very good at holding tears; the tears ran down the face, and here you see that the chronic irritation from cold, exposure, and tears has caused an epithelioma.

10. Here is a curious oesophagus with a stricture at the lower end, a congenital stricture, and here at the upper end is a cancer which has burrowed its way from the oesophagus into the trachea. Owing to the chronic irritation of food in the oesophagus, cancer has developed at the upper end of the dilated oesophagus.

11. Here is a carcinoma of the penis with the usual predisposing phimosis.

Simple Tumours.

Another predisposing cause of cancer is the presence of simple tumours. We separate simple tumours and malignant tumours, and we think we have done a clever thing; but there are many simple tumours that tend very strongly to malignancy. Most simple tumours predispose to it to some extent, but there are simple tumours so closely associated with cancer that I want to draw your attention to them.

Some of you who are old enough will remember the case of the ex-Emperor of Germany's father, and how the surgeons, English and German, quarrelled about it. He had either a simple papilloma or a malignant papilloma of the larynx. Now a papilloma is almost always, in a person above 40, potentially malignant; and it proved so in the German Emperor's case. He died of cancer of the larynx. On removal of a portion for microscopic examination it was reported to be simple.

These specimens will illustrate my point:

12. This is a woman with scirrhus of the breast. She had got a tumour of the thyroid. Now I have been struck with the frequency with which women who have thyroid tumours develop cancer of the breast.

13. Here is another papilloma that is very often indeed followed by cancer. I have operated upon a great number of these cases, and 75 per cent. of them have come back, after some years even, with cancer on the site of the papilloma of the bladder. Now these cases are very easily discovered. Cystoscopy will show you "red seaweed trees" growing into the boracic lotion in the bladder.

14. Here is another form of papilloma that is very apt to develop into carcinoma, a papillomatous condition of the ovary. This ovary is cystic, and in connexion with the cysts there are papillomata.

15. Here is a condition in the rectum described by proctologists as mucous polypi. These mucous polypi and adenomata and papillomata in the rectum and colon are very frequently indeed associated with cancer, and it follows their development.

16. This is an ordinary thyroid tumour. In a man you think that is a simple growth, and so it is. It is now not doing the slightest harm, but a certain percentage of these in later years develop into carcinomas. If a patient with a thyroid tumour finds that it is beginning to grow larger, and especially if it grows larger quite quickly after he is 40 years of age he is very likely developing a carcinoma or a sarcoma of the thyroid.

Another familiar type of tumour that is apt to end in a carcinoma is what we call parotid tumours. You find, the first time you see such a case, a nice movable tumour the size of a half-orange, and you cut it out without any difficulty, and you send it to the pathologist. He writes back to tell you that it is a myxo-chondro-myo-adenofibroma. The patient comes back to you after having it removed, with a recurrence, three, four, or even five years perhaps, and next time the tumour is a little more fixed—more difficult to get out; then it recurs more quickly still, and in the end that is the condition—a malignant growth of the parotid. So these parotid tumours, however simple they may seem, ought to be all removed in their earliest encapsulated stage.

We come now to another thing—sarcoma. Of course sarcoma is cancer.

17. This condition has many names—von Recklinghausen's disease, neuro-fibromatosis, mollusum fibrosum; all these things are the same. This woman came out in little spots, and

they look like little soft fibromata, but when you take them between your finger and thumb they melt away—there is no resistance. These patients are apt to develop large sarcomatous nerve tumours.

18. This is another instance of the same condition. People are not familiar with them. I am surprised to find that very often even the best of our students have never seen such a case. Look at the patchy soft tissue on her hand; her breast has thickened patches, and the skin is discoloured in spots and patches.

19. This is a different type of disease—what the pathologists and other people call keloid. It is a fibroid tumour in cicatrix, and some say a fibroid sarcoma in the cicatrix. As a matter of fact it is malignant, because if you excise it you get a bigger and bigger thing. Every time you excise you get a bigger growth.

20. Here is a photograph sent by Dr. Burman, an old house-surgeon of mine now in South Africa. This native came to Dr. Burman because nobody would employ him. He begged to have these enormous keloid tumours removed. Dr. Burman removed one and sent me this photograph. The patient had one ear tumour taken away, the other left. The tumours grow from earring holes. You see the keloids on the rest of his body. These, Dr. Burman tells me, are the result of native medical treatment. The natives and lay doctors put lances and punctures into everything; they are where we were fifty or one hundred years ago.

How Cancer Commences.

Cancer begins always in one of two ways: as a tumour or as an ulcer, or I should say as an ulcer and as a tumour. Characteristics of the cancerous ulcer are these—that there is growth in excess of destruction.

The cancerous tumour has four characteristics: its consistency is hard, its surface is nodular, its edge is merging off into the surrounding parts (not like a walnut or potato in the tissues), and it is generally fixed and infiltrating the surrounding structures. These are the characteristics you look for in cancer.

21. Here is a cancerous ulcer. This is the anus and a cancerous ulcer of the rectum. The rectum is split open. You see the thickened edge of the ulcer all round. There is growth, there is destruction in the middle, there is growth in excess all round.

22. Here is what is called a Cock's tumour, a rare form of epithelioma. I think this is the only case I have seen. I got this photograph at the infirmary. A very exceptional case. You will see it is like a cock's comb, but Cock was the name of the surgeon. This is between an ulcer and a tumour. The tumour is ulcerated on its surface and nodular.

23. Here is a breast showing how cancer can commence. If it begins in the breast you always think of cancer there as a tumour, because in 99 cases out of 100 it is a tumour; but it occurs as an ulcer, and when it does (Paget's disease or Paget's eczema) there are ulcerated red patches round the nipple, which in this case is retracted. That woman had a tumour as well as an ulcer.

24. This is a typical scirrhus—a large, stony, hard nodular tumour in this breast, with shelving edges and tucking the breast up. In the majority of women the left breast is rather lower than the right. The right breast is much lower than the left in this case and the nipple is retracted—quite a characteristic appearance, sufficient for you to make a diagnosis.

Method of Spread.

We now come to the method of the spread of cancer. Of course, to know anything about the prognosis and treatment of cancer, you want to know how it spreads. It spreads just the same as tubercle and sepsis do, in the same four ways:

1. By continuity.
2. By contiguity.
3. By the lymphatics.
4. By the blood.

25. Here you see carcinoma of the stomach. This is a cancerous ulcer of the pylorus which spread all the way along, involving the whole of the pyloric end of the stomach by continuity. It lies next the colon, close to the transverse colon, which is involved by contiguity. The lymphatic glands along the lesser and greater curvatures are evident.

26. Here is an example of probable blood infection. Some people say that cancerous bones are the result of the lymphatic spread. In this case the humerus is broken in the middle, through a cancer secondary to scirrhus of the breast. It is very common to get bone cancer secondary to scirrhus of the breast. I have seen quite a number of cases operated upon, patients who complained of "rheumatism" in their arms, "rheumatism" in their back, and they had cancerous growths. You must not operate upon a patient who complains of "rheumatism," however favourable the case, until you have had an x ray to see if there is any growth or not in the bones.

27. This girl had a pigmented wart on her back. It grew hard and was cut off. Within six weeks she was in this condition, dotted all over her body with deposits of melanotic sarcoma or carcinoma.

23. You see here the metacarpal bone of a child. Here is the lower epiphysis of the radius. That child had sarcoma of its testicle removed and developed a growth in the bone.

Diagnosis of Cancer.

It would be correct to say that no case of cancer begins with pain. There is a popular delusion that cancer is always a hideously painful thing, and people come with advanced disease who say they did not come before because they never had any pain.

The early diagnosis of cancer is one of the more difficult problems. A patient over 40 years of age comes with haematuria. What is to be done? Send him for cystoscopy straight off. In eight times out of ten the man of over 40 with haematuria has cancer somewhere in his genito-urinary tract.

If a woman over 45, or after menstruation has ceased, has haemorrhage, and no simple cause can be found, the sooner she has her uterus out the better. Nothing may be found in one case out of twenty, but in the other nineteen there is carcinoma somewhere.

In nineteen times out of twenty, if a man comes to you over 40 years of age and he cannot swallow, and he shows you he cannot swallow, he has got carcinoma of his oesophagus. X ray with bismuth meal will clear this up.

The first symptom of carcinoma of the stomach is "indigestion." A man of 50 who has never had indigestion all his life and comes to you complaining of indigestion which Gregory powder has not cured, nearly always has carcinoma. You must have him examined with a test meal to show whether he has got a normal acidity and have him x-rayed by a specialist. Now examination of the stomach by the radiologist is sometimes derided and said to be of no value, but that is because people have not got the right man to examine the stomach. The x-ray stomach specialist can diagnose cancer of the stomach in almost every case which comes early.

Stricture of the sigmoid colon is a very common result of carcinoma. These patients say they have never had any trouble with their bowels before. Now they have to take medicine and the longer the time the more the medicine, and the longer time the more the rumblings inside. If a patient of 50 comes to you saying he has got constipation and cannot get rid of it, and he has rumblings inside enough to keep his family disturbed or even to disturb himself—think of carcinoma, because if it can be diagnosed early it can be treated with great success.

ENLARGEMENT OF THE THYROID GLAND IN MALARIA.

By J. B. HUME, M.R.C.S., L.R.C.P.,

DEMONSTRATOR OF ANATOMY AT ST. BARTHOLOMEW'S HOSPITAL;
LATE CAPTAIN R.A.M.C.

ENLARGEMENT of the thyroid appears to have hitherto been an unrecognized complication of malaria. Some thirty cases of it came to my notice during the East African campaign; and I recorded some preliminary observations in a paper before the Dar-es-Salaam Medical Society on May 18th, 1918. My interest was the greater because in June, 1918, during an attack of malaria, I developed a marked enlargement of the gland myself.

The condition is characterized by an acute enlargement of one or both lobes of the thyroid gland during an attack of malaria, and occurring some twelve to thirty hours after the fall of the temperature.

All the cases were among white troops, soldiers with varying periods of service in German East Africa, the majority of whom had had several attacks of malaria. None of them gave any history of goitre, or even of fullness of the neck previously; in several instances I had made a definite note of the absence of thyroïdal swelling on admission. In no case could I obtain a family history of thyroid disease.

Malarial parasites were found in the blood in every case, usually in rather scanty numbers. Subtertian forms predominated, but benign tertian, and mixed infections also occurred. No opportunity presented itself of studying the condition *post mortem*.

In a typical case the enlargement of the thyroid appeared suddenly, in the course of an attack of malaria, from twelve to thirty hours after the fall of temperature. The previous

pyrexia had lasted from one to three days, and no subsequent rise of temperature occurred. One or both lobes became markedly swollen, and somewhat painful and tender to touch. There was no redness of the skin, the consistency of the swelling was uniform, and it showed all the characteristics of a generalized enlargement of the gland.

Dysphagia, in varying degrees, was a prominent symptom. Pain and throbbing in the head were frequent. There was usually a slight muscular tremor. In only two cases was there any exophthalmos. Tachycardia was very constantly present, the pulse rate being usually in the neighbourhood of 100-110, but sometimes as high as 130. Some alteration of the heart sounds at the pulmonary base was common—either a systolic bruit, or an accentuation of the second sound. The spleen was enlarged at some stage of the attack in about 70 per cent. of cases.

The treatment was usually carried out on routine lines. Quinine bishydrochloride was given by the mouth, and in a few cases also by the rectum. The usual procedure was to give 5 grains, three-hourly, omitting one dose in the night, over the first four days. Then a smaller dose, 15 to 20 grains daily, combined with arsenic, increasing to the full dose over the relapsing period on the ninth, tenth, and eleventh days.

In most cases there was, in from four to ten days, a marked reduction of the swelling, but in my own case it has not yet entirely disappeared. In subsequent malarial attacks it has invariably enlarged for a time.

The following cases occurred in No. 84 General Hospital, Dar-es-Salaam:

CASE I.

Lieut. J. M. C., aged 30. Temperature 101° on admission. Very scanty subtertian rings present. Slight enlargement of thyroid in an attack six months previously; scarcely any enlargement on admission. Nine or ten attacks of malaria altogether. Enlargement of both lobes occurred on the third day, twenty-four hours after fall of temperature. Dysphagia, dyspnoea, pain, and a fine tremor were all present. Pulse 120. No exophthalmos. Spleen enlarged. The usual quinine treatment was given. On the fifth day 3 c.cm. of adrenalin given subcutaneously. On the sixth there was a definite increase in the thyroid. There was a decrease from that time to the fourteenth day, when, following another slight rise of temperature, the gland again enlarged. When the officer was invalided it had not disappeared.

CASE II.

Pte. P. S., aged 20. Temperature normal, but pyrexia reported by medical officer on day before admission. Many previous attacks of malaria. Both lobes of thyroid enlarged, mainly right. Both benign tertian and subtertian parasites present. Dysphagia, slight dyspnoea, tremor, and some tachycardia. Pulse 103.

CASE III.

Spr. S., aged 20. Temperature 103° on admission. Subtertian parasites present. First attack of malaria. Bilateral enlargement appeared on second day. Slight exophthalmos and tremor present. Pulse 105-110. Spleen enlarged. Marked reduction in ten days, under quinine treatment.

CASE IV.

Capt. J. B. H., aged 25. Temperature 101.6° on admission. Second attack of malaria. Scanty subtertian rings. Pyrexia lasted twenty-four hours; enlargement of both lobes, especially left, occurred twelve hours after fall of temperature and reached its maximum twenty-four hours later. Dysphagia and dyspnoea present; neck painful and tender to touch. No tremor nor exophthalmos. Pulse 110. Spleen slightly enlarged. There was a definite reduction in size in seven days, but the swelling has never entirely disappeared. It increased three months later, following another attack of malaria, and was invariably larger after slight attacks. In July, 1919 (one year from first appearance), enlargement of left lobe was still present, but without symptoms.

The following three cases present rather different features, in that the tachycardia was much more marked and the thyroid enlargement, though of old standing, had in every case first arisen as a sequel to an attack of malaria:

CASE V.

Pte. T. P., aged 35. Eleven previous attacks of malaria. Subtertian parasites. Noticed choking, tight sensation in throat, and dyspnoea in four previous attacks. Bilateral thyroid enlargement present. Marked and persistent tachycardia; pulse about 140. Spleen slightly enlarged. Thyroid decreased under quinine and arsenic treatment. Tachycardia decreased very slowly, in spite of absolute rest in bed. Pulse about 110 when invalided.

CASE VI.

Pte. F. G. A. B., aged 22. Six previous attacks. Admitted with tachycardia. Was in another ward in No. 84 Hospital with subtertian malaria three weeks. Noticed enlargement of neck before readmission, &

Hospital with malaria. Bilateral enlargement, some discomfort in throat, but no dysphagia or dyspnoea. Pulse 120-130. Spleen not enlarged. Progress as in Case V.

CASE VII.

Cpl. J., aged 24. Two previous attacks. Benign tertian parasites. Constriction in throat and dyspnoea noticed after second attack. Had slight bilateral enlargement of thyroid, accompanied by marked tachycardia—120 and slight tremor.

The frequency of occurrence of marked thyroid enlargement is probably not greater than from 5 to 10 per cent., though the cases with some very slight temporary enlargement immediately after an attack of malaria might probably represent an additional 10 per cent. Since my paper was read, in May, 1918, the condition has been observed by a number of medical officers; and these facts would go to show that the thyroid enlargement is a definite clinical entity, evidencing a marked disturbance of the endocrine system in malaria.

What is, then, the cause? It may be due to sporulation of the parasites in the capillaries of the gland, analogous to the condition in cerebral malaria. This would cut off the supply of iodothyron from the blood stream, and upset "thyroid equilibrium." To regain this compensatory hypertrophy takes place, and equilibrium is regained in the course of time. The remaining thyroid swelling becomes purely a hyperplasia; or there is a compensatory hypertrophy of the other ductless glands. On the other hand, enlargement of the thyroid may be compensatory for the exhaustion of other parts of the endocrine system.

There is considerable evidence to indicate that the ductless glands are affected by malaria. In the case of the thyroid the tachycardia and tremor would show that the condition is one of hyperthyroidism, but against this is the very rare occurrence of exophthalmos. The observation that sexual infantilism is common in malarious districts is quite definite; the children are often semi-cretins, having large heads, poor physical development, and low mentality, whilst their protuberant abdomens cannot be wholly accounted for by splenic enlargement. Sexual infantilism is known to occur clinically and experimentally in cases of thyroid deficiency. Pigmentation of the skin occurs in Europeans in chronic cases of malaria, but this might be indicative of either thyroid or adrenal disturbance.

Degenerative changes have been described in the adrenals in malaria; and disturbance of these glands may be the cause of the "algid type" of malaria, which, clinically, injections of adrenalin are most valuable in combating. The low blood pressure, and the subnormal temperature, which often lasts for days after an attack, both indicate a condition of hypoadrenia.

Orchitis in malaria, first described by Charvot, is of not infrequent occurrence. Such cases are often admitted as venereal, but, after searching examination has failed to show any evidence of syphilis or gonorrhoea, malarial infection has been discovered. I have observed instances when, with rest in bed, specific malarial treatment and anodynes to the affected parts, the swellings have gone down in from seven to twenty-one days. Often testicular tenderness has been extreme, but without tenderness of the cord. The loss of sexual power so frequently observed after attacks of both treated and untreated malaria is likely also to be due to the effect of the disease on the testes.

These facts have led me to believe that the changes in the ductless glands in malaria may be far more marked than our present knowledge shows, and that physiological and pathological research may show that in these changes lie the explanation of some at least of the conditions that have been referred to.

AN American Memorial Hospital, to be established at Rheims by the American Fund for the French wounded, has been accepted by the French Government. The city gives the site and the Fund proposes to expend £20,000 in erecting a hospital of 100 beds.

THE medical practitioners of Madrid have decided to erect a building for the exhibition of Spanish and foreign mineral waters and pharmaceutical products. There will also be rooms for social gatherings and for meetings of colleges and medical societies. The top stories will be fitted up as a hotel for doctors visiting Madrid. The total cost is estimated at £240,000.

STUDIES ON ACUTE NEPHRITIS.

BY

PROFESSOR KARL PETRÉN.

(From the Internal Clinic of the University of Lund, Sweden.)

To begin with, I will remark that as none of my patients have taken part in the war, there is here not the question of that form of nephritis that we now know as trench nephritis, but only of the old forms long known from experience in peace.

The origin of these studies was that my attention had been aroused by the fact that in recent years the number of cases of acute nephritis treated in my clinic have been great—considerably greater than in general. The number of cases of acute nephritis in the different years that I have been at work at the clinic in Lund is as follows:

1911	15	1916	7
1912	3	1917	15
1913	3	1918	17
1914	7	1919 (to May 31st)	4
1915	3		

I must admit that the great number of cases of acute nephritis in the year 1911 had escaped my memory. I must add that the conditions for receiving the patients in my ward have, during these years, not altered; and even if, in general, our means of receiving the patients which were seeking treatment have been different at different times, we have always made room in the ward for patients suffering from acute nephritis. In consequence we must conclude that the number of cases of acute nephritis in the population from which the patients of this clinic are recruited has been very different in the different years which are here taken into consideration. Further, I may add that, as far as we know, in none of these cases was the nephritis caused by scarlet fever.

When we take the different facts here mentioned into consideration, we must raise the question whether the number of cases of acute nephritis occurring in a certain part of this country is influenced by what was formerly called the genius epidemicus. It seems to me that my experience gives good grounds for such a possibility quite apart from the influence of living in the trenches, but of course I do not mean that this experience suffices to give a clear answer to the question.

Since I began to revise the experience from my clinic of acute nephritis I have made a closer study of the cases of the later years, and have chosen for this purpose the cases of acute nephritis observed in my clinic during the years 1917 to May 31st, 1919.

Analysis of the Symptoms.

In recent years many authors in different countries have accepted the suggestion which has been formulated, especially by German authors (Friedrich Müller, Volhard and Fahr), that one can divide the cases of acute nephritis—I leave out of consideration the whole question of chronic nephritis—into different forms of disease: on the one hand acute glomerulo-nephritis (consisting in inflammatory changes of glomeruli, and on the other hand "nephrosis" (consisting in purely degenerative changes of the tubuli). According to these modern views the clinical characters which are most important for the diagnosis between these two different diseases would be the following: for acute glomerulo-nephritis the occurrence of red blood corpuscles in the urine, a rise in blood pressure, but no oedema; for acute nephrosis, on the other hand, the occurrence of oedema but not of red blood corpuscles in the urine and no hypertonia.

I limit my reference to these ideas, now so often accepted, to these few words, and will here only give the results of the examination of my cases on those points where these results have some interest for forming a judgement on the above mentioned ideas.

All the cases of acute nephritis observed during the period 1917 to May 31st, 1919, are here taken into consideration; their number was 36. Among them were only 6 that did not show oedema and only 7 where red blood corpuscles were not found in the urine. As no case occurred in both these groups, we come to the result that 23 of the 36 cases have shown both oedema and red blood corpuscles in the urine. In consequence, the greater part

of my cases did not correspond to the division of acute nephritis in the two different forms mentioned above as the prevailing classification.

The general opinion in recent times is that the infections of the tonsils play a special rôle in causing glomerular nephritis. Among my cases an infection of the tonsils occurred in 17 cases, at some time before the beginning of the symptoms of nephritis.

Among 16 cases* with infection of the tonsils in the history we have found hypertonia in 10 (62.5 per cent.), and among 19 cases without such infection in their history hypertonia was found in 9 (only 47 per cent.). In consequence, that result did to a certain degree correspond to the idea of the infection of the tonsils causing the acute glomerulo-nephritis. But when we go on to examine the occurrence of the other symptoms mentioned above, oedema and red blood corpuscles in the urine, we come to the following result.

Among 17 cases with infection of the tonsils in their history oedema is mentioned in 16 (94 per cent.), but of 19 cases without such infection in their history oedema was mentioned only in 14 cases (74 per cent.). Moreover, of the 17 cases with the above-mentioned infection in their history red blood corpuscles were found in the urine in 13 (76 per cent.), but among the other 19 cases red blood corpuscles were found in 16 (84 per cent.).

If we compare the occurrence of hypertonia and the other symptoms here mentioned we come to the following result: Of 19 cases with hypertonia 13 have shown red blood corpuscles in the urine (68 per cent.), but of 16 cases without rise of blood pressure we have found red blood corpuscles in 15 (94 per cent.); and further among the cases of hypertonia oedema was mentioned in 17 (88 per cent.), but of the cases without hypertonia oedema was mentioned only in 12 (75 per cent.).

The conception of the above-cited German authors was that one form of acute disease of the kidney (glomerulo-nephritis) is characterized by hypertonia, with red blood corpuscles in the urine but with no oedema, and the other form (the acute nephrosis) by oedema but without rise of blood pressure and without red blood corpuscles in the urine. It is evident that the results of the examination of my cases given above very distinctly speaks against the conception of the two different forms of acute nephritis above mentioned.

Vollhard and Fahr admit that beside the pure cases of acute glomerulo-nephritis and acute nephrosis there exist a certain number of cases that are to be considered as mixed forms. Though having found that the great majority of cases show both oedema and red blood corpuscles in the urine, this fact could still be explained if we assumed that the majority of the cases of acute nephritis (in the old sense of the word) constitute such mixed forms. But, on the other hand, the results of the comparison of the occurrence of the three symptoms here examined (oedema, hypertonia, red blood corpuscles in the urine) cannot be put in harmony with the conception of the German authors just given.

Certainly the researches of these authors on the pathology of nephritis and on the different types that can be found on microscopical examination are of very great scientific interest and most valuable. I have nothing to remark against this essential part of their work. But I have always been of the opinion that the time has not yet come to attempt to distinguish definitely between the different forms of acute nephritis (in the old sense of the word); that such a division of the cases could not be grounded on our definite clinical knowledge, but only on the anticipation that certain observations as regards the pathological examination would find their correspondence also in the clinical observations. This anticipation has not yet been confirmed, and I think that my results here published speak against a confirmation of the above-mentioned anticipation from the pathological researches.

From a clinical point of view (in a wide sense of the word) we have only in the experimental observations a clear ground to distinguish different forms of acute nephritis— as we know through the researches of Schlayer pursued during many years, and also through the works of Christian.

* One patient with infection of the tonsils died two days after entering the ward and the blood pressure was never determined.

Analysis of the Prognosis.

The examination of my cases as regards prognosis has given the result that 47 per cent. of the cases of acute nephritis treated in the clinic during the years 1911 to 1914 have attained to be free from albumin; during the years 1915 to 1917 it occurred in 70 per cent. of the cases, but for the period 1918 to May 31st, 1919, we have seen the urine free from albumin in 20 cases (95 per cent.) among 21 (the exception was one patient who died some days after entering the ward).

If we take into consideration only the 36 cases observed in the years 1917 to 1919, we find that of 17 cases with tonsillitis in their history 13 have attained freedom from albumin (76 per cent.) and 9 (53 per cent.) freedom from sediment (that is to say, red blood corpuscles and casts). For the 19 cases without infection of the tonsils in their history the corresponding figures are 16 (84 per cent.) no albumin and 11 (58 per cent.) no sediment. The difference is so small that it evidently can be only accidental.

From another point of view I have made a comparison as regards the prognosis between those cases in which the infection of the tonsils had passed away more than three weeks before the symptoms of nephritis appeared, and those where this time was less than three weeks. This examination has given the result that between the 7 cases where this period was not longer than three weeks the urine had become free from albumin in 6 (86 per cent.), and free from sediment in 4 (59 per cent.); further, that symptoms of uraemic origin (especially headache) had occurred in 6 (86 per cent.) and hypertonia also in 6 (85 per cent.). For the 10 cases where this period was longer than three weeks the corresponding figures are 7 (70 per cent.) free from albumin, 5 (50 per cent.) free from sediment, symptoms of uraemic origin in 6 (60 per cent.), and hypertonia in 4 (40 per cent.) cases.

It seems to me to be to a certain degree probable that this difference is not accidental. The fact that symptoms of uraemic origin and hypertonia have occurred more often in the cases in which only a shorter period had elapsed between the tonsillitis and the beginning of the symptoms of nephritis could be explained on the ground that the occurrence of these symptoms led to the patients having come to the hospital earlier. When we see that a greater majority of these cases have attained freedom from albumin and from a sediment than among the others we must ask if the circumstance that the patients have come at an earlier stage of the disease into the treatment of the clinic has not had as an effect that the prognosis has been better. The above-mentioned figures permit us to raise this question, but at the same time I do not venture to give a definite answer.

The examination of my cases has shown that the prognosis was better when the amount of albumin was small (below 1 per 1,000) than when the amount was greater. I do not find it necessary to give the figures for this fact, which certainly is not unexpected.

If we make a comparison regarding the prognosis between the cases with hypertonia and those without a rise of the blood pressure, we find for the 19 cases of hypertonia 16 (84 per cent.) free from albumin and 9 (47 per cent.) free from sediment. For the 16 cases without hypertonia these figures are 14 free from albumin (87.5 per cent.), and 11 free from sediment (65 per cent.). It seems probable that this difference is not accidental, but that the prognosis is not so good if the nephritis has been complicated with hypertonia. This result was not unexpected *a priori*.

From another point of view I have, however, found that the hypertonia itself has given a good prognosis. This symptom has often been well developed (in 4 cases 155 to 160 mm., and in 6 cases more than 160). One of the patients died, 2 cases were not examined later (the blood pressure in these cases was 135 and 145), in 1 case the blood pressure had gone down from 155 to 135. In all the other 15 cases it was ascertained that the blood pressure had gone down later to a normal value (to 130 or to a yet smaller value). In consequence, it is remarkable that the hypertonia— although it passed away— nevertheless seems to have a certain effect on the prognosis in an unfavourable direction.

Short Remarks on Treatment.

On the treatment I have only little to say. Everyone recognizes that, in addition to keeping the patient in bed,

the diet is the most important matter in the treatment of acute nephritis, and that it must not be too rich in proteins and salt. My demands as regards diet from both these points of view have been stringent. My custom is to give for the first days (ordinarily four or five days) only a combination of cream, milk and water, or only cream and water, and only after the elapse of this time to give also foodstuffs consisting largely of fat and carbohydrate such as bread, butter, porridge, and other oat-foods, later also green vegetables, and at last also eggs in moderate amount. From a psychological point of view I have found it opportune, if the symptoms do not pass away in a short time, to go back again and begin the same cycle—first only cream and milk; later, cereals and butter, etc.

During the whole treatment I try to diminish the amount of salt very greatly (the bread baked without salt, the butter without salt, the porridge and potatoes boiled without salt, etc.). I have followed these rules, even when the patient has not suffered especially from oedema, and even if oedema had never occurred. In the analyses of urine we have indeed sometimes found so small amount of NaCl as 1.1 gram.

I believe that during the years when the cases mentioned in this paper were treated (1911 to 1919) I have gradually come to a more rigorous position relative to my demands for reduction of the amount of proteins and salt in the diet. I have found that the issue of acute nephritis latterly has been better, and I have asked myself if the more rigorous reduction of the diet can have been the cause of the better results in the later cases. I can only raise this question, but do not here venture to give an answer.

The modern conception of the different forms of nephritis says also that the kidneys in the case of acute nephrosis have only lost their faculty to eliminate the salt but not the urea. In consequence, authors have proposed in cases of acute nephrosis not to reduce the amount of proteins. As is evident from what I have here said, I cannot follow such a rule, because I am of opinion that one cannot by means of clinical researches make the diagnosis that only the tubuli are affected, and, in consequence, prudence commands us to *diminish to the greatest possible degree the demands which we put on the functions of the diseased organs*, here as always in the treatment of diseases of the internal organs.

TREATMENT OF THE TUBERCULOUS CRIPPLE AT THE HOSPITAL FOR CHILDREN, LEASOWE.

By T. HARTLEY MARTIN, M.B., Ch.B. LIVERP.,
SENIOR MEDICAL OFFICER.

In view of the criticism advanced by Mr. E. D. Telford (BRITISH MEDICAL JOURNAL, October 25th) to the effect that the national scheme for the cure of crippled children, proposed by Sir Robert Jones, F.R.C.S., and Mr. G. R. Girdlestone, F.R.C.S. (BRITISH MEDICAL JOURNAL, October 11th), falls short of the best in its provision for the treatment of the tuberculous cripple, it may be of interest to many to know what is being done for these tuberculous cripples at the Hospital for Children, Leasowe, Cheshire.

When in 1912 the interim report of the Departmental Committee on Tuberculosis was published, in which the local authorities were urged to draw up a complete scheme for the extermination of tuberculosis in their areas, the Council of the Liverpool Invalid Children's Association, with the co-operation of Dr. Hope, M.O.H., secured a Treasury grant of £90 a bed towards the cost of erection of a hospital of 200 beds for the treatment of surgical tuberculosis, on a site of 14 acres at Leasowe, on the Wirral peninsula. The remaining funds were raised by voluntary subscription, and the building was commenced in 1913. In July, 1914, 100 beds were available, and the hospital was completed in 1916.

In choosing a site for a hospital of this nature the climatic requirements of the diseases to be treated had to be borne in mind. Dr. Jacques Calvé of Berck-sur-Mer, in his pamphlet on the importance of maritime hospitals in the treatment of surgical tuberculosis, states that cases of surgical tuberculosis need an open, barren, flat shore, exposed to the full force of the winds, with a fresh and equable temperature, moderate humidity, and abundant sunshine, where the tonic and equable action of a sea climate is exerted to the full.

The hospital at Leasowe, built within 300 yards of the sea and fully exposed to the winds which sweep from the Irish Sea across an extensive tidal area, is ideally placed to meet the climatic requirements.

The hospital is built on the block-pavilion principle, each block consisting of two stories, with twenty-four or thirty beds on each floor. The wards face due south, and

are light and airy, with excellent cross-ventilation. On the southern aspect they are provided with large glass folding doors which open on to roomy sun-balconies. On these balconies the beds are placed in all except the severest of weathers; thus the children enjoy every available hour of sunshine.

Before being admitted to the wards the children are kept under observation for three weeks in single-bedded cubicles, constructed on similar lines to the wards. This serves a threefold purpose: first, by using the folding doors a gradual acclimatization is secured; secondly, the risk of the introduction of infection is minimized; thirdly, the possibility of superadded pulmonary infection can be investigated. In the wards the majority of the children rapidly become accustomed to the open-air life, and although, as a glance at the section plan will show, the wards cannot be heated, they do not appear to feel the cold, and make light of what is often a hardship to the nursing staff.

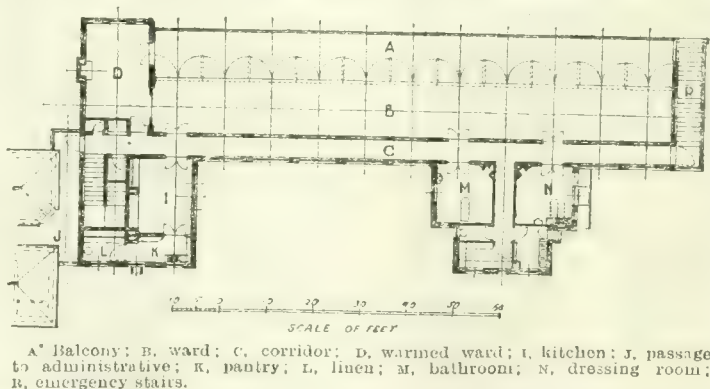
There is, however, a type of case which requires extra warmth in the winter. Calvé describes them as the nervous, excitable, irritable, and febrile types; for these special accommodation is provided in the warmed ward (D on plan).

The most marked results of the open-air life are shown during the first months of stay in hospital; on admission, pale, irritable, and restless, with a poor appetite, they soon become rosy-cheeked and contented,

the appetite improves rapidly when, under carefully selected local treatment, pain and discomfort have been relieved.

Heliotherapy is described by Calvé as an integral part of a marine climate, and is recognized to be one of the more important principles of open-air treatment. Exposure to the sun is practised whenever possible at Leasowe. Even in winter on sunny days local exposure of the diseased part is practised, but from April to October more radical measures are undertaken, the aim being to expose the whole body to the action of the sun's rays. From May onwards on sunny days nearly all the children can be seen naked in the sun save for their bathing slips. The results of this exposure are encouraging; the health of the children improves with the spread of pigmentation as the parts are successively exposed; locally the discharge from sinuses becomes less offensive and the granulations more healthy as the surrounding infiltration disappears.

The results are most marked in cases of tuberculous glands of the neck, where abscesses and deposits of tuberculous debris often clear up without interference.



On account of the prolonged stay in hospital and the enforced recumbency, a stern but kind discipline has to be maintained to ensure the happiness of the children, and in this the three and a half hours per day school tuition which is given has been of great help. In giving exercise to their minds and an occupation to their hands it proves a powerful aid to cure.

The details and technique of the local treatment are beyond the scope of this paper. It is carried out on conservative lines, and its aims are the preservation and restoration of the diseased parts. All cases of tuberculosis other than pulmonary are admitted, the majority being those with bony, articular, or glandular foci. With the exception of peritoneal cases no experience of visceral lesions has been gained.

Eighty per cent. of the cases admitted are discharged under the heading of "Disease arrested," but the degree of cure of necessity varies with the type of case. In the bony and articular types the convalescent stage of the treatment is prolonged as long as possible in order that the disability may be overcome. In cases where the deformities are severe corrective operations are performed.

It must be recorded that the type of case admitted has improved during the five years that the hospital has been opened, and that cases with marked deformity and long-standing sinus formation are not so common as formerly. The result of this is that the average duration of stay has been shortened, and the degree of cure has improved. With the spread of knowledge of surgical tuberculosis a still further improvement is hoped for.

The following statistics are deduced from the cases discharged during 1918:

Discharged, disease having been arrested—			
Tuberculous spine	Average stay, 617 days	19	
Tuberculous hip	" " 729 "	25	
Tuberculous knee	" " 438 "	6	
Tuberculous osteitis	" " 349 "	22	
Tuberculous glands	" " 239 "	25	
Tuberculous peritonitis	" " 162 "	25	
122			
Discharged as improved	" " " "	9	
Discharged as incurable	" " " "	9	
Discharged with infectious disease (subsequently readmitted)	" " " "	10	
Died	" " " "	17	
Total	" " " "	167	

It is impossible, however, to draw any conclusion from these figures as to the length of stay in hospital necessary to bring about cure or cicatrization, as many of these cases had been under treatment for some time before admission. The time which must elapse before a diagnosis of incurability can be made is in many cases a long one, and in view of the almost certain prospect of cure in early cases must be regarded as valuable time lost. By discharging all cases as soon as a diagnosis of incurability is made, and by giving preference to all cases of early disease over those which exhibit complications, the greatest good is done to the greatest number.

The hospital at Leasowe is linked to the Liverpool Health Committee's scheme for the extermination of tuberculosis, through the Liverpool Child's Welfare Association, which has access, through the courtesy of the Medical Officer of Health, to all cases of surgical tuberculosis reported, and which, through the channels of its Almoner work in the out-patient departments of the Liverpool hospitals, is in possession of valuable information about the home conditions of these children.

From the offices of this association in Liverpool the cases are selected according to a gency, priority being given to cases of early disease. Again, through this executive body, the cases are followed to their homes after discharge from hospital, and much valuable information is gained by this after-care work and supervision, in confirming the diagnosis of cure and in watching the progress of those cases in after-life.

Although 80 per cent. of the beds at Leasowe are allocated to the Liverpool Health Authority, beds have been allotted by the council of the hospital to other health authorities, and thus the hospital serves a wider field.

An additional twelve acres of land has been acquired adjoining the hospital, thus providing for future extension.

Mr. Telford in his letter pleads for the erection of large hospitals, such as that at Berek-sur-Mer, in the best

climatic situations we have, and proves, to his own satisfaction, that these cases do not do well during the winter months in the neighbourhood of Manchester. It would therefore appear to be advisable that a concentration of the national effort against surgical tuberculosis be made and larger hospitals be built in those areas where it has been proved that these cases do well.

SUPERIMPOSITION OF A RETROGRADE UPON A DIRECT INTUSSUSCEPTION.

BY

J. PHILIP BUCKLEY, M.D.CANTAB., M.S.LOND.,

F.R.C.S.ENG.,

HON. ASSISTANT SURGEON, MANCHESTER ROYAL INFIRMARY.

THE following example of a rare form of intussusception still seems worthy of record, even though its presentation for publication has been unavoidably delayed:

In November, 1914, I was asked to see in consultation a male child aged 2 years. The mother stated the child had been ailing for five or six weeks. During the earlier part of this period he had been fretful and sickly, with occasional vomiting and diarrhoea; latterly, and especially for the last twenty-four hours, he had been unable to retain any food. She added that he had passed faeces recently, and that no blood or slime had ever been seen in his stools.

The child was very emaciated and the muscles were so weak that his head fell helplessly backwards or forwards, to the right or to the left, as gravity dictated, according to the position in which he was carried. The abdomen was very distended; the child did not vomit while under my observation. He was obviously in an exhausted state and allowed abdominal palpation without much resistance and without appearing to suffer much pain. The temperature was 97° F. and the pulse 140.

Abdominal palpation revealed what appeared to be an isolated, firm rounded mass in the left upper quadrant of the abdomen, and a soft, less well defined mass in the lower abdomen, mainly in the left lower quadrant, but also to a less extent palpable in the right lower quadrant. (Fig. 1.) This soft mass could be more definitely detected by bimanual examination, one finger in the rectum and the other hand on the abdominal wall. The rectum itself, as far as the forefinger could reach, was empty.

I was unwilling to make a dogmatic diagnosis in my own mind as to the cause of the obstruction, looking upon the length of history as being against a diagnosis of intussusception, as was also the absence of blood in the stools, and being inclined to regard the apparently isolated, firm rounded mass as being an enlargement of mesenteric lymphatic glands. The child was admitted to the Manchester Royal Infirmary and I operated as soon as possible after admission.



FIG. 1.—A. Hard rounded tumour. B. Soft indefinite tumour.

An incision was made through the left rectus muscle. The first piece of viscus which presented in the wound was a Meckel's diverticulum about 2½ in. long, quite free and unattached at its distal extremity, blown out like a glove finger, and obviously having no causative connexion with the intestinal obstruction. The small intestine was much distended. Further examination showed that the trouble was an intra-intussusception of a very peculiar type (Figs. 2 and 3). The total length of the intussusception *en masse* before reduction was, as nearly as I can estimate it, between 10 and 12 in. long. The proximal 3 in. of the mass was firm and distally limited by a cuff-like edge from the remainder of the intussusception. It was this portion which could be so distinctly felt in the left upper abdominal quadrant by palpation. The distal 7 to 9 in. of the intussusception represented the soft swelling which could be felt in the lower abdomen.

It was at once evident that there was a retrograde intussusception superimposed upon the proximal 3 in. of a direct intussusception 10 to 12 in. long. The retrograde cuff gripped the proximal portion of the direct intussusception so tightly that it was apparent that before the latter could be "milked" back the former would have to be reduced. This was no easy matter. The "milk"ing" manoeuvre was useless in order to effect the reduction of the retrograde portion, and reduction was effected by squeezing the forefinger between the free edges of the retrograde cuff and the ensheathing layer of the direct intussusception, and exerting a gentle and carefully graduated "shoehorn" lever manoeuvre. By this means the retrograde cuff, which was tightly gripping the main direct intussusception, was successfully reduced, and as soon as this had been effected the direct intussusception was "milked" back with ease.

There was very little oedema of or haemorrhage into the submucous connective tissue layer at the apex of the direct intussusception, and only very weak fibrinous exudate between the apposed peritoneal coats of the entering and returning layers of the intussusception. From a marked dimple present after reduction at the caput caecum it appeared probable that the direct intussusception had commenced as a caeco-colic

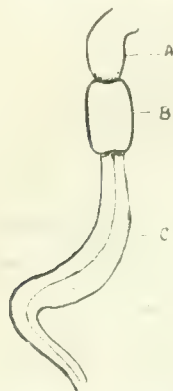


FIG. 2.—A, Small intestine. B, Tight cuff of retrograde intussusception. C, Direct intussusception.



FIG. 3.—A, Dilated small intestine. B, Retrograde intussusception. C, Intussusciens of direct intussusception. D, Returning layer of direct intussusception. E, Entering layer of direct intussusception. F, Appendix. G, Ileocaecal valve. H, Caput caecum.

intussusception. There was no gangrene of the bowel. The caecum, ascending, transverse, and descending colon had a well marked, broad, and continuous mesentery, so that after reduction it was possible to place, without undue tension, the caecum in any part of the abdominal cavity. Time being valuable, no attempt was made to fix the caecum to prevent recurrence. The wound was closed by two layers of continuous catgut sutures and a layer of interrupted silk-worm-gut sutures.

The reaction of the child was wonderful; he made rapid progress to recovery, almost at once displaying a voracious appetite, and was discharged from hospital fifteen days after the operation. The temperature kept alongside the normal line throughout, reaching its maximum (99° F.) on the third and fourth evenings after the operation.

This type of intussusception was quite new to me, namely, the superimposition of a retrograde upon a direct intussusception, but as a result of somewhat slight search I have found a very similar case reported by D'Arcy Power. He describes his specimen as follows:

"The primary invagination was ileo-caecal, of the ordinary descending type, the apex of the invagination, consisting of the congested and thickened ileo-caecal valve, with the openings of the ileum and vermiform appendix. The primary invagination was enveloped in a second intussusception passing in the reverse direction, that is to say of the retrograde variety, and this retrograde intussusception was itself complicated by a third intussusception also of the retrograde kind. The primary intussusception and the first retrograde invagination had occurred during life, for their apposed surfaces were glued together with inflammatory exudation. The third invagination was much smaller and was formed after death by a wrinkling of the bowel."

The direct intussusception in this case measured $3\frac{1}{2}$ in. and the retrograde $2\frac{1}{2}$ in. D'Arcy Power gives a semidiagrammatic drawing of the specimen. He adds: "... I believe it to be an example of an intussusception which is by no means uncommon. It is a particularly deadly variety, first, because distension of the colon has no effect upon it, and secondly, because after a laparotomy, any attempt to reduce the intussusception tends to increase the retrograde invagination and so makes matters worse."

Clubbe, in his excellent work *The Diagnosis and Treatment of Intussusception*,² very briefly mentions what appears to be a similar case, as follows:

The intussusception was of the ileo-caecal variety, but the mass, after reaching the descending colon, appeared to form a retrograde movement *en masse* and to be invaginated into the colon higher up the bowel. So, in reduction, pressure first in one direction, then in the opposite was necessary. ... The child made a rapid recovery.

Before passing on to the consideration of some interesting features of my case, I wish to allude to another case reported by D'Arcy Power.³ He describes the specimen as follows:

"It consists of a piece of intestine in which there are two intussusceptions, one ascending, the other descending. The first intussusception is at the usual seat—namely, the ileo-caecal valve. ... In the large intestine, three inches above the

end of the intussusception just described, is a second invagination about an inch in length." He mentions two similar cases having been previously reported.

I note that in the description of the former of the two cases reported by D'Arcy Power he refers to the direct portion of the intussusception as being the "primary invagination." This seems to assume that the direct invagination occurred first, and that the retrograde intussusception formed later by a retrograde swallowing of the direct intussusception by the colon. I have spent a good deal of thought on my case, and I am in great doubt whether this is a correct assumption. In my case the retrograde portion of the intussusception gripped the underlying direct intussusception so tightly that it seemed to me a physical impossibility that such a condition of affairs could have been brought about by the retrograde swallowing of a primary intussusception.

In considering this question let us commence by drawing for ourselves a diagram of a simple direct intussusception. The process of a further direct intussusception of the first intussusception *en masse* is a simple matter and easy to understand, but if the primary intussusception is going to be intussuscepted *en masse* in a retrograde direction one naturally asks oneself by what portion of the bowel is it going to be swallowed. If the condition seen in Figs. 2 and 3 is to be reproduced, then the primary intussusception must be swallowed by its own ensheathing and returning layers. I have said above—in reference to my own case, and bearing in mind the extreme tightness of the retrograde cuff—that this seems to be physically impossible. If a direct-intussusception itself is going to be swallowed again *en masse* in a retrograde direction, a glance at a diagram would make it appear that the natural swallowing agent should be the dilated small intestine above the intussusception; but if this occurred it would not reproduce the conditions found in my own case and in the other cases I have quoted.

In reference to Mr. Clubbe's case I wish I had amplification by a diagram of the statement "invaginated into the colon higher up the bowel."

I make the suggestion that it is much more probable that such an intussusception as I have described is formed as follows: A preliminary condition exists of a descending or direct intussusception of the ordinary type, together with an ascending or retrograde intussusception further along the bowel as described by D'Arcy Power in the second case of his to which I have alluded (Fig. 4 A). The apex of the direct intussusception eventually reaches the proximal end of the retrograde intussusception, and the former commences to be swallowed by the latter

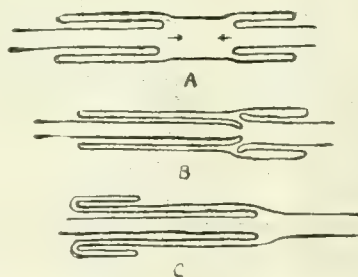


FIG. 4.—A, Direct intussusception approaches retrograde. B, Direct intussusception reaches retrograde. C, Swallowing of direct by retrograde complete.

(Fig. 4 B). This swallowing can go on until the retrograde intussusception forms a tight cuff surrounding the proximal end of the descending intussusception (Fig. 4 C), which would exactly represent the condition which I found in my case.

One has read of, heard of, and seen oneself cases where the direct and the retrograde invaginations are met with apart from one another in the same case. This combination cannot, therefore, be described as very rare. It might, therefore, quite fairly be asked, if my explanation is the correct one, Why is the superimposition of the one upon the other so very rare?—as I believe it is. The natural thing to happen, when the apex of the direct intussusception reaches the retrograde intussusception, is that the direct shall reduce the retrograde intussusception in front of it as it increases in size. When this does not occur, and instead the retrograde swallows the direct, one must

look upon it as an accident, and a rare accident, either due to rather stronger than usual adhesions between the peritoneal coats of the retrograde intussusception or due to a ballooning of the gut at the site of the retrograde intussusception as the direct one approaches it. I have given as my reason for thinking that the condition was produced by a swallowing process of direct by retrograde rather than by a secondary retrograde intussuscepting process of a primary direct invagination that the retrograde cuff was so tight that it was impossible for it to have been formed in this latter way. In my experience, one does not get this condition of extreme tightness in the case of the superimposition of a direct upon a direct intussusception, which condition is definitely recognized as the secondary intussusception of a primary direct intussusception *en masse*.

I have noted that the mother said the child had been ailing for five or six weeks; the greater part of this period no doubt represented a period of acute enteritis, which was the most important causative factor in the development of the intussusception.

In this case one cannot but be struck by the fact that, in spite of the size of the intussusception and the tightness of the cuff at its proximal end, the pathological changes which had taken place were only very slight. One can only attempt to explain this by surmising that the swallowing of the direct intussusception by the retrograde occurred very rapidly and recently, and that the tightness of the retrograde cuff became at once sufficient to completely obstruct both arterial supply and venous return, instead of, as in simple types of intussusceptions, the venous return becoming obliterated before the pressure was sufficient to obstruct arterial flow.

After the operation the child almost at once gave evidence of great hunger; considering that he had not retained much food for some time, this is not to be wondered at, but the fact that he called most loudly for tomatoes was certainly a clue to the cause of the original enteritis.

Regarding differential diagnosis I shall always bear in mind in the future the peculiarity of the tumour to be felt—namely, the upper firm rounded portion, representing the site of the retrograde superimposition, which was quite distinct from the larger, softer, and less defined lower portion, representing the portion which was purely the direct descending intussusception.

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- ¹ D'Arcy Power: *Trans. of Path. Soc. of Lond.*, vol. I, 1899, p. 121.
² Charles P. B. Clubbe: *The Diagnosis and Treatment of Intussusception*, p. 66. ³ D'Arcy Power: *Trans. of Path. Soc. of Lond.*, vol. xxxvii, p. 240.

KALA-AZAR IN MESOPOTAMIA AND ITS INCUBATION PERIOD.

BY

C. A. SPRAWSON, C.I.E., M.D., F.R.C.P.,

LIEUT.-COLONEL I.M.S.,

CONSULTING PHYSICIAN, MESOPOTAMIA EXPEDITIONARY FORCE.

AN interesting discussion has been taking place in the pages of this JOURNAL as to the indigenous existence of kala-azar in Mesopotamia. It started with Major Low's article on June 7th, 1919, and was continued by Dr. Hamill on July 5th, and by Lieut.-Colonel Ledingham on July 19th. To this last letter Major Low and Captain Billing replied on July 26th. That my contribution is so late is due to my continued presence in the country under discussion.

The most important point in settling the question of the presence of kala-azar in Mesopotamia is the maximum length of the incubation period of that disease.

Major Low and Dr. Hamill both consider the question of the existence of kala-azar in this country settled in the affirmative. Colonel Ledingham expresses doubts on the subject, and I am quite with him in this attitude, although I have met cases of kala-azar here where the interval between the commencement of an unbroken period of residence in Mesopotamia and first evidence of illness is much longer than in Major Low's and Dr. Hamill's cases. In Major Low's case, taking his own reading of the date of onset, the incubation period might be eight months.

The patient had been in Bangalore, a place from which I have met other cases of this disease.

Dr. Hamill's case I was acquainted with, and I think I am right in saying that repeated spleen and liver puncture by very competent observers failed to find the Leishman-Donovan body in this patient. Even, however, if the diagnosis of kala-azar were correct there was here also an interval of only eight months between the patient leaving India and the onset of his illness in Mesopotamia. In Colonel Ledingham's first case the interval appears to be the same; in his other cases the dates are uncertain.

I have met with several cases of kala-azar in Mesopotamia, and I have selected from my records of these cases five examples—four Indians and one British—where the interval between leaving India and the onset of the disease in Mesopotamia was more than double that mentioned above.

In each of these cases the diagnosis was confirmed by finding the *Leishmania donovani* in the spleen during life, and the man's movements were confirmed by reference to his service book.

1. *Follower A.* Nearly two years in Mesopotamia before admission to hospital in October, 1917.

2. *Bearer D.* Had been in Mesopotamia for seventeen months continuously previous to the first onset of the fever on August 31st, 1918.

3. *Private G.*, a British soldier. Had been in Mesopotamia (near Baghdad) for seventeen months continuously before onset of the fever on January 8th, 1919. Came to Mesopotamia from Bangalore.

4. *Follower M. M.* Had been in Mesopotamia continuously from September, 1917, up to the date of his admission to hospital for kala-azar on March 2nd, 1919—an interval of just over seventeen months. Came from Noakhale in East Bengal.

5. *Follower G.* Came from Dacca in East Bengal. Left Dacca in March, 1917, arrived in Mesopotamia, April 10th, 1917, and has not left the country since. Arrived in Baghdad in May, 1917, and remained in Northern Mesopotamia. Was in hospital for a month in the autumn of 1918 for some febrile disease (nature unknown), and was discharged as fit. Came to Basra apparently well on April 22nd, and was admitted to hospital for kala-azar on April 30th, 1919. There is here an interval of over two years between arrival in Mesopotamia and admission for the disease.

Long as these intervals are, I do not regard them as conclusive proof of the endemicity of kala-azar in Mesopotamia, though certainly they are weighty evidence. But with equal force it may be held that the disease in these cases was contracted in India and that the many months of health in Mesopotamia are evidence of a long incubation period in some cases of kala-azar. Moreover, each of the Indian cases I have seen in Mesopotamia has come from a known infected area in India.

Previous experience in India has led me to believe that kala-azar is not always the malignant disease we used to think it was, and that, independently of active treatment and independently of the occasional beneficial effects of such dangerous complications as can rum oris, cure may sometimes spontaneously occur. I think the resemblance to malaria may perhaps go further, and that the parasite may in some cases long remain quiescent in internal organs and only begin to evince its malignant toxicity when some other factor has lowered resistance.

As Colonel Ledingham says, proof of the existence of kala-azar in Mesopotamia must come from its occurrence amongst the native population, and such civil surgeons as I have asked have not seen a case here; neither have I in a limited experience of local Arabs and Persians; nor has any native practitioner that I have met. Dr. Rany, a Syrian physician of extensive practice, who spent three years in Khauqin and has practised for many years in Basra, and who is, moreover, familiar with kala-azar from his Syrian experience, tells me that he has never seen a case in Mesopotamia.

With regard to Dr. Hamill's reference to Arab belief in a generalized disease following Baghdad boil no more reliance can be placed on their ideas than on other oriental stories, and no such pilgrimage from Baghdad to Basra for inoculation purposes ever took place. It is true the Arabs call some boils "male," and others "female," but the distinction is fanciful and devoid of scientific support. The only connexion known between Baghdad boil and kala-azar is in the morphological resemblance of their respective parasites, and that is a matter beyond the Arab ken.

In conclusion, therefore, the evidence as to the existence

of kala-azar in Mesopotamia is negative. Perhaps when the Mosul area has been more opened up we may obtain some positive evidence from that direction; but meanwhile the matter must be considered unsettled.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TREATMENT OF CHILBLAINS.

As chilblains are now prevalent I send prescriptions for applications which I have used for many years, with or without the internal administration of calcium chloride, according to the state of the patient.

For Unbroken Chilblains.

R. Tinot. capsloi ... 3 ss
Lin. campb. co. ... 3 ss

Misce.

To be painted frequently over the affected area.

For Broken Chilblains.

R. Ung. resinae ... 3 ss
Ung. acidi carbolici ... 3 ss
Zinci oxidl ... 3 ij
Vasellini ... ad 3 ij

Misce. Ft. ung.

London, W.

T. MARK HOWELL.

SEVERE ANAPHYLAXIS: RECOVERY.

THE fatal case of anaphylaxis after diphtheria antitoxin recorded in the BRITISH MEDICAL JOURNAL of November 8th (page 596) prompts me to record an equally severe case with recovery.

The patient was a man suffering from compound fracture of the tibia. He had the usual doses of antitetanic serum, and had been rendered sensitive to horse serum. When seen by me on August 23rd, 1919, he was suffering from erysipelas spreading from the wound and spreading bronchopneumonia. His condition was critical, and it was decided to give him 30 c.cm. of polyvalent antistreptococcal serum intravenously. This was diluted in saline, but the mistake made was that no effort was made to desensitize the patient before administration. Within a minute after the injection he complained that he was choking, grasped his larynx, and breathed jerkily and spasmodically. He became cyanosed at once, his lips, cheeks, and neck almost assuming a black colour, and the pulse was flickering; breathing ceased in full inspiration.

The foot of the bed was raised immediately, and artificial respiration commenced by forcibly pressing in the lower ribs, whilst the mouth was cleared of much mucus by the nurse. I decided to try and relieve the spasm by making him take in any air which could be got in through a chloroform mask. A nurse held the mask, fairly well saturated with chloroform, over his mouth and nose whilst I continued to try and force in his chest, thereby getting a little air in with a mixture of chloroform. At the same time he was given 30 minims of adrenalin solution and atropine gr. $\frac{1}{10}$ subcutaneously. Very soon chloroform began to have its effect, for in about five minutes the patient breathed, and when fully under the anaesthetic breathed normally. The cyanosis disappeared and the pulse returned; when counted it was 150 to the minute and of very low tension.

About one hour later the patient was comparatively well, and the next morning the desired effect from the serum was manifest; the general condition was much improved, and the temperature and pulse only a little above normal. He eventually made an excellent recovery.

The decision to try chloroform in a man who was apparently dying seemed a bold one, but when it is remembered that death occurs from anaphylaxis with the chest in full inspiration, and that the condition appears to be a spasm of muscle fibres in the fine bronchi, there seemed only one thing to be done, and that was to try and relieve the spasm by an anaesthetic. It should also be remembered that it is not possible to produce anaphylaxis in an animal while it is under the influence of ether.

The death recorded on November 8th was after the administration of diphtheria antitoxin given as a prophylactic. Is this advisable? (1) May not this first dose render the child sensitive to horse serum, and risk a catastrophe should it require a horse serum at any future date? (2) Diphtheria antitoxin is antitoxic, and not antimicrobial.

Colchester.

WM. T. MUNRO, M.D., D.P.H.

Reports of Societies.

WAR LESSONS IN SPINAL SURGERY.

At a meeting of the Section of Neurology of the Royal Society of Medicine, held on November 13th, the president, Dr. W. ALDREN TURNER, being in the chair, Mr. PERCY SARGENT read a paper on some lessons of the war applied to spinal surgery.

In some respects, he said, gunshot injuries of the spine differed from those usually met with in civil practice. The primary outstanding difference was that of wound infection. The gunshot wound was invariably compound whilst the fracture-dislocation was not. The majority of wounds in which the cord was directly or indirectly implicated did not lend themselves to early radical incision. Whether or not a patient with a gunshot injury of the spine died of meningitis depended almost wholly upon whether or not the dura mater had been torn, and in no circumstances was it justifiable to open the intact theca in the presence of a septic wound in order to ascertain the state of its contents. It became evident in the earliest days that the escape of cerebro-spinal fluid almost certainly meant death from meningitis unless the leak could be stopped, and this, in an otherwise favourable case, he always regarded as one of the few definite indications for early operation. In many cases the theca had been punctured by a fragment of bone which, remaining *in situ*, plugged the hole which it had made, and prevented both the escape of cerebro-spinal fluid and the ingress of micro-organisms. An operation which uncorked the theca in the presence of a septic wound enormously decreased the chances of recovery. Mild infections of the spinal membranes from which the patient recovered might produce intrathecal adhesions such as gave rise later to that loculation of cerebro spinal fluid which so closely resembled the meningitis *circumscripta serosa* described by Horsley.

The second outstanding difference concerned the manner in which the cord was damaged. Most of the injuries of civil life were produced either by the massive displacement of one part of the vertebral column upon another, or by a crushing fracture of the vertebral bodies, whereby part of the comminuted bone was squeezed backwards so as to contuse and compress the cord. Momentary displacements of the two vertebrae upon one another, with immediate rebound, might also injure the cord. In any case the damage was most commonly produced by direct violence, and the result might vary from a slight contusion up to a complete shearing across of the cord. The cases of gunshot injury comparable with these were those in which a spent bullet or shrapnel ball, impinging upon some part of the spine, entered the vertebral canal, driving fragments of bone before it. But when a missile of high velocity struck some part of a vertebra without entering, or directly violating the contents of, the vertebral canal, effects were commonly produced which were less often seen in the spinal injuries of civil life. The resulting changes in the cord were usually described as concussion phenomena, and the lesions varied from transient oedema up to total disintegration of the cord at the point of maximum intensity. Momentary or very short-lived loss of function had been observed many times, not only from actual hits, but also as the result of the bursting of a high explosive shell close to the patient.

Morbid Anatomy of Cord Lesions.

After referring to the description of the morbid anatomy and histology of the damaged spinal cord given by Dr. Gordon Holmes in his Goulstonian Lectures (1915), Mr. Sargent said that in the light of these observations the pre-war conception of haematomyelia needed revision. Minute haemorrhages were present in every cord which had been at all severely damaged, and were relatively unimportant, but in fracture-dislocation haemorrhages of any size were very rare. Similarly, whilst a slight extra-medullary and extrathecal haemorrhage was commonly met with in recent examples of gunshot wounds, a haemorrhage of sufficient extent to cause symptoms of compression was rarely encountered. On the other hand, a small amount of effused blood within the theca might perhaps give rise later to adhesions and loculation of the cerebro-spinal fluid.

Although the functions of the damaged cord could only be re-established to the extent to which the nervous elements had not been actually destroyed, the cord was so "over-wired," as Dr. Henry Head expressed it, that quite a gross amount of destruction was not incompatible with a useful degree of recovery. All that surgery could do was to place the injured cord in the conditions most favourable for recovery by removing, as thoroughly as was practicable, any actual or potential cause of compression.

Conditions Found at an Early Date in Gunshot Injuries.—Cases selected for laminectomy within a few days of the wounding were those which were considered suitable as judged by the following criteria:

(1) Absence of serious concomitant injury, such as haemothorax; (2) leakage of cerebro-spinal fluid from the wound; (3) radiographic evidence of the presence of a missile or fragments of bone within the spinal canal; (4) some evidence, however slight, that the conductivity of the cord was not wholly abolished.

To this list might, perhaps, be added pain, though the necessity for surgical intervention on the ground of pain alone was much rarer than the textbooks would lead one to suppose.

The first twenty-four cases subjected to early operation two to ten days after being wounded could be grouped according to the gross anatomical features which they represented into (1) (nine cases) those with a missile and bony fragments within and narrowing the spinal canal but without laceration of the dura; (2) (six cases) those similar to the foregoing but with leakage of cerebro-spinal fluid; (3) (five cases) those with a missile within the theca, mostly with gross destruction of cord and all with leakage of fluid; (4) (four cases) those in which no evidence of injury could be seen within the spinal canal. In such cases the injury to the cord, whatever its degree, represented a pure concussion effect. Of these 24, 16 were followed for periods of from twelve months to four years. Only 8 showed any considerable degree of recovery; 2 were *in statu quo*, and 6 were dead. Of the 8 definitely improved, neurologically speaking, only 4 could walk, but in all of them part or complete voluntary vesical control had been regained. All but one had a piece of metal and bony fragments removed from the spinal canal, whilst in 4 cases cerebro-spinal fluid was leaking from the wound.

Conditions found at a later date in gunshot injuries included dense scar tissue, often with bony fragments embedded in it, adherent to the cord or to the nerves of the cauda equina, the scar perhaps forming a veritable annular stricture; definite cystic loculation of cerebro-spinal fluid; a pale and shrunken cord or intramedullary cyst; partial or complete division of the spinal cord, and fragments of bone and even metal embedded in it.

Conditions Found at Early Operation in Fracture-Dislocation.—Within twenty-four hours of the accident the unruptured theca was tightly stretched over an anterior bony prominence, and devoid of pulsation below that point. In all cases the salience of the bony projection was reduced by traction upon the spine and manipulation, whilst the theca and its contents were carefully protected from further injury. After a short time such reduction was no longer possible, and the salient ridge would have to be chiselled away, or two or three laminar arches both above and below the site of the dislocation could be removed, as this tended to straighten out the theca.

Conditions Found at Late Operations in Fracture-Dislocation.—In addition to the above, the lumen of the spinal canal might be still further encroached upon by callus, scarring of the membranes might constrict the cord or cauda equina, and meningitis circumscripta serosa was commonly present. In one case, four months after the accident, a pale, soft, swollen cord was found pressed against the dura mater by a definite cystic collection of cerebro-spinal fluid situated in front of it.

The conclusion to be drawn was that some of the extramedullary causes which militated against recovery could be eliminated or at least minimized by early operation, and that at a later date conditions might exist which retarded recovery, but which were capable of being removed by operation. Early exploratory operation should, perhaps, be more often undertaken in cases where there was no septic wound to contraindicate it. The experiences of the war had shown that there was no sign or group of signs by which a complete lesion could be diagnosed with precision in its earliest stages. The early appearance of a defence reflex from the soles and the presence of an extensor reflex in the great toe might be taken as favourable indications. He advocated

exploratory laminectomy, so as to secure a full and complete exposure of the spinal contents for some distance above and below as well as at the site of injury; in the hands of those familiar with the operation he considered the risks to be small and the dangers to have been exaggerated.

Cystitis and Bedsores.

No amount of care would either wholly prevent or cure cystitis in the absence of return of vesical function. If neither voluntary nor reflex function could be restored, the patient would sooner or later inevitably succumb to pyelonephritis. Until vesical function returned every precaution must be taken against infection, and overdistension of the bladder ought to be avoided. Overdistension probably played a part in allowing kidney infection, and recovery of function was delayed in the atonic bladder which resulted from overdistension. Head and Riddoch emphasized the fact that toxæmia inhibited the reflex activity of the spinal cord. Absorption through the wall of any pus-containing cavity was accelerated when the contents were under pressure, and in this way also overdistension of the bladder would retard recovery. Once the activity of the vesical reflex arc had begun (according to Head and Riddoch, about the third week after the spinal injury) the automatic action of the bladder could be established by methods which these authors had described in detail. The amount of fluid constituting the adequate stimulus for detrusor action is determined for each individual case; twice a day this quantity is poured into the bladder until the reflex is evoked. The evacuation can be facilitated by such means as deep breathing, hypogastric pressure, and by any cutaneous or other stimulus capable of evoking a flexor spasm of the legs. The re-education of the bladder was, he said, one of the most important of all the lessons learnt from the study of gunshot wounds of the spine, and should prove of inestimable value in the treatment of those cases of spinal injury which were met with in civil practice, as well as in the management of many cases of paraplegia resulting from diseases of the cord.

The work of Head and Riddoch had emphasized the importance of bedsores and shown their real significance. If the bed sore killed, it did so most frequently by way of the kidneys for it formed a link in a fatal sequence of events—namely, bed sore, toxæmia, depression of spinal activity, cystitis, and pyelonephritis. Besides, healing depended largely upon the recovery of the reflex functions of the cord, which were inhibited by the action of circulating toxin absorbed from the bed sore. It was during the period of spinal shock that the skin was most vulnerable, and it was therefore in the earliest stages that the greatest precautions should be taken.

The Paralysed Limbs.

The spinal injuries of the war had provided ample material for determining the signs whereby complete and incomplete lesions of the cord might be distinguished from one another.* From the purely practical point of view it was important to be able to ascertain not merely whether any minimal conduction persisted through the damaged segments, but whether enough useful cord remained undestroyed to allow of a useful degree of recovery in the limbs. Many parietic patients who could produce quite good voluntary contractions of the muscles were totally unable to put the legs to their primary and fundamental use as organs of locomotion.

When any considerable degree of recovery had taken place in an injured cord the usefulness of the legs might be impaired, not only to the extent to which sensory and motor paths had been permanently cut, but by other causes as well. The accessory causes which in varying degree contributed to the disability, and which were largely remediable, were:

(1) Inability to make proper and co-ordinated use of the recovered neuro-muscular mechanism, a power which could be restored by properly directed methods of re-education.

(2) Hysteria. The fact of putting a paraplegic patient out of bed and into a chair might have a strong psychical effect; the gradual systematic re-education of movements which had long been lost interested and encouraged him, and every stage brought about by these and other means was a powerful stimulus to further effort. The swimming-bath had been of

* See Riddoch's paper in *Brain*, vol. 41.

incalculable value. Patients who, on dry land, could perhaps just stand with support, but who could make no movement of progression, were sometimes able to walk almost unaided in the bath at their very first attempt.

(3) Deformities. A third cause of disablement in a recovering case was furnished by deformities due to neglect. Deformities should never be allowed to develop, but when established their correction by ordinary orthopaedic measures constituted an essential preliminary step in treatment.

(4) Spasticity. Spasticity should be regarded from two aspects—first, as it affected those with total transverse lesions, or with lesions so severe as to preclude any possibility of recovery of function in the lower limbs; and secondly, in those who possessed, or were on the way to regain, what would otherwise be a useful degree of voluntary power. Spasticity not only concealed and rendered useless any voluntary power that might exist, but the spasms were often so disturbing to the patient as to tell seriously on his health. Further, the constant friction against the bedclothes damaged the skin and caused bedsores, particularly in those cases where the cord lesion was so situated that outbursts of sweating accompanied the flexor spasms, whilst splinting for the prevention of deformities was rendered excessively difficult.

If spasticity were regarded as the manifestation of excessive and uncontrolled reflex action, one might either attack the afferent or the efferent side of the reflex arc; or else deal with the mechanical rather than with the neural aspect. To take the mechanical aspect first, by dividing the attachments of muscles their effective action might be temporarily at least, abolished or modified; by transplanting the spastic hamstrings into the quadriceps tendon their energy could be utilized for correcting the very deformity which they would otherwise produce. The afferent impulses evoking reflex action might be diminished also, by avoiding rough handling and every other sudden and strong impulse, especially massage and electricity; or some of the posterior nerve roots passing to the affected segments might be divided by the operation suggested by Professor Foerster for the spastic diplegia of cerebral origin. Mr. Sargent said that he exposed the conus medullaris and upper part of the cauda equina by removing the neural arches of the last two thoracic and first two lumbar vertebrae, and then divided alternate bundles of the lumbar and sacral posterior roots to the extent of about two-thirds of their total bulk, the actual number divided depending upon the degree of spasticity which it was desired to overcome. In cases of complete division of the cord, or with such a severe lesion as to render any useful degree of recovery impossible, he divided the anterior roots as well. Possibly in such cases, in order to preserve the power of facilitating automatic action of the bladder, it would be better to divide anterior roots alone. A useful minor operation for the temporary relief of spasticity, when it chiefly affected the adductor muscles, was to expose and crush the obturator nerves. In the hopeless cases these nerves should be divided, so as to produce permanent paralysis.

Mr. A. J. WALTON said there was a marked amount of destruction, even when the bullet had never entered the dura, and which was due to the momentum of the body causing the injury, and not to pressure on the cord. There was no immediate urgency in removing pieces of bone or bullet lying in contact with the cord, as the damage was done at the time of injury.

Dr. HENRY HEAD said there were certain criteria by which it was possible to tell that the cord was not divided. If in three months the patient had definite extensor spasms, if jamming up the sole of the foot caused an extensor response, then the cord was not divided. The first stage which the patient went through was the stage of shock; there were no reflexes, there was no bladder action, and no motor or sensory activity. During the second stage there was return of reflexes and automatic action of the bladder. If in the third stage there was a return of extensor spasms and response to stimuli the cord might be said not to be divided. He pleaded for hope in these cases. In the large majority, if the patients remained in a condition of helplessness for more than two months exploration should be carried out. Signs of extensor spasm and a response to stimuli should be looked for specially and repeatedly. Many patients whom he had seen were regarded as hopelessly paralysed, although they had had extensor spasms and should be got up. If the cord was divided the bladder should be got into condition and the bedsores cured; the patient might then live a very comfortable chair life.

The CHAIRMAN, Sir J. CHARTERS SYMONDS, Mr. DONALD ARMOUR, Dr. G. RIDDOCH, Dr. J. COLLIER, Dr. E. FARQUHAR BUZZARD, and Mr. BLUNDELL BANKHART also took part in the discussion; and Mr. SARGENT briefly replied.

FASCIAL TRANSPLANT.

A CLINICAL meeting of the West London Medico-Chirurgical Society was held in the Society's rooms at the West London Hospital on November 7th, with the President, Mr. HERBERT CHAMBERS, in the chair. Cases were shown by Dr. ARTHUR SAUNDERS of rheumatoid arthritis, with excessive affection of the right knee associated with pyorrhoëa, and tabes dorsalis with Charcot joint. Mr. E. LAMING EVANS showed a case illustrating the result of a free fascial transplant replacing the extensor tendons of the wrist. Before operation the patient, an officer wounded by high explosive casing, had complete loss of extending power in the long extensors of the third, fourth, and fifth fingers at the metacarpo-phalangeal joints. Six months after the wound, the proximal ends of the extensor tendons and the distal end of the extensor muscles were exposed, seven inches of intervening scar tissue was excised, and a free fascial transplant, eight inches long, from the left thigh was laid as one piece in the prepared bed, and was sutured by catgut to the muscle belly above and the tendons below. He was afterwards treated by massage, faradism, baths, etc., and education. As a result he now has good independent action of extension of the third, fourth, and fifth metacarpo-phalangeal joints, although no attempt was made to connect the proximal ends of the tendons by separate slips to the muscle belly. Mr. EVANS considered that the single transplant minimized adhesions and gave the best chance for subsequent independent action. Mr. O. L. ADDISON showed a case of a woman one year after interscapulo-thoracic amputation (La Conte's method) for sarcoma of the upper end of the humerus. There had been no recurrence. Mr. Addison showed also a woman with chronic ulceration of the tongue. Wassermann's reaction was a partial positive, but two injections of novarsenobillon were given without effect. There were no signs of malignancy, and it was suggested that the ulceration might be tuberculous. Dr. HALS DALLY showed a case of a boy of 15 with asthma and emphysema in association with generalized adiposis and delayed development, which Dr. ARTHUR SAUNDERS suggested was due to defect of the pituitary gland in association with deficiency of the other internal secretory glands. Dr. BURNFORD showed cases of (1) cyanosis with polycythæmia and congenital heart disease, red corpuscles 11,600,000, haemoglobin 140 per cent.; (2) elephantiasis of unknown cause of both legs in a woman aged 45; and (3) Raynaud's disease in a woman aged 28.

At the autumn meeting of the South Midland Branch of the British Medical Association, held at Bedford County Hospital, under the presidency of Dr. L. W. REYNOLDS (High Wycombe), a discussion on appendicitis was opened by Mr. W. GIFFORD NASH, F.R.C.S., whose valuable paper was divided into three parts: (1) History of the disease since 1759, when it was first recognized *post mortem*. (2) When to operate. Immediate operation was best when the case was seen early, but if an abscess had formed it might have to be drained and the appendix attended to later. (3) Foreign bodies in appendix. Mr. Nash also recorded three cases in which there had been *B. coli* infection of the urinary system which had subsided after removal of the appendix. Dr. ROSS read notes of three cases of foreign bodies in the gastro-intestinal tract which were successfully operated upon: A buckle and a stone removed from the stomach; an impacted gall stone in the ileum, with acute symptoms; and a brass button in the ileum. Dr. W. C. SHARPIN read notes of three recent surgical cases: (1) A case of a young man who presented all the symptoms of intestinal obstruction, in which no actual obstruction could be found either at the operation or at the subsequent *post-mortem* examination. (2) Dermoid cyst of ovary, of sixteen years' duration. Acute symptoms set in suddenly, and a large cyst was found which had ruptured into the bladder; it contained several teeth and a large plate of bone. (3) Chronic uterine inversion, three months after labour, irreducible per vaginam. Laparotomy was performed, and the inversion was easily reduced after an incision in the anterior wall of the cervix.

Rebicus.

A PHYSICIAN IN WAR.

SIR WILMOT HERRINGHAM'S volume *A Physician in France*¹ has one quality which all books, except time tables, for even some dictionaries have it, ought to possess: it is readable. He is always interesting, and often entertaining, whether talking about the causes leading to the war, farming methods on the plain of Flanders, the British medical organization in France, the chalk trout streams of St. Omer, trench fever and the louse, his hostess at Hesdin, or the advance of medicine in the war. It is the talk of a good talker on things he has seen and the opinions he has formed about them—shrewd, humorous talk about enterprises of great pith and moment.

He is conspicuously fair to the R.A.M.C.; he praises its achievements, but is not blind to its defects; he is as candid with its critics as its admirers. We may all agree that to have so reduced typhoid fever in the armies in France that it was a negligible factor in the statistics of disease and death was a very notable achievement. Also we may praise the readiness with which the Army Medical Service provided for the application of modern methods of research to new or unfamiliar infectious diseases; and we may praise, too, the way in which, on the one hand, the advice of specialist officers was accepted, and on the other the promptness with which these officers sought the help of civilian bacteriologists and pathologists. We may even in chastened spirit read the chapter on "The Critics" at home, in which they are described as "ignorant, sometimes amusingly ignorant, of organization," in their "chief complaint" that more medical officers were employed than were needed. A division of roughly 20,000 men had, the author says, on its establishment, counting seven allotted to the clearing station and the staff of a general hospital, seventy-two medical officers, or roughly an officer to every 300 men, not including those employed with motor ambulance convoys and hospital trains. He thinks this proportion not too large, and, while admitting that the staff of the field ambulances might be reduced, holds that the medical officers so saved should be given to the casualty clearing stations.

Sir Wilmot Herringham's opinion must have great weight, for he was consulting physician with the armies in the field from November, 1914, to the end. But it is certain that there were times, rather long times, when many medical officers not with the active armies had very little to do. He would probably retort that the same was true of all officers and men also. He tells us that in a division the proportion of officers to other ranks is 1 to 31.4, and states incidentally that 1 officer was killed to every 16.6 other ranks. Nor will he accept the criticism that in the interest of the wounded the hospitals close behind the front should have been largely increased. He gives two reasons: first, the difficulty of supply—a very real difficulty when food has to compete with ammunition on crowded railways and roads; and secondly, the risk of capture. To these should be added the risk of shelling; a forward hospital (casualty clearing station) within the area habitually or often reached by enemy shells cannot fulfil its functions. There is, we think, no doubt that instances occurred during the later stages of the war when casualty clearing stations were either pushed too far forward or kept on sites from which, owing to the advance of the enemy, they ought earlier to have been withdrawn. "The policy of evacuation is forced," Sir Wilmot says, "on every army, and every army has accordingly adopted it," but, as he recognizes, it must be applied with discretion, after striking a proper balance between military and clinical considerations. This balance was not maintained by some of the senior regular medical officers during the first year or two, owing not to inhumanity but to the lack of clinical experience and the inability to modify the rigid administrative methods in which they had been trained to the larger needs of actual warfare on a large scale. As Sir Wilmot Herringham says, "evacuation was at the beginning of the war an obsession which tended

strongly against good treatment." One effect was that men who needed immediate treatment by operation or otherwise were sent on, to the loss of their chance of surviving; another was that medical officers in the forward areas could not know what happened to their patients, and could not revise their methods in the light of experience. Attempts, he says, were made to open up a system of mutual information, but they were so unsuccessful at first that the plan practically fell through. "The official mind had not considered the problem. I once said to the D.M.S. of an army that I thought the want of communication was the chief weakness of the system. He said that he saw no necessity for it; that cases once sent down were out of the charge of the officer at the front, and there was no reason why he should concern himself any further." Improvements were forced on the recalcitrant D.'s and D.D.'s, and A.D.'s, by the civilian element, partly by the spread of a kind of public opinion from an army where the D.M.S. was a wise man, but largely, in the nature of things, by the consultants who moved about freely and were in constant communication both with the men who were doing the work and the persons in authority who were putting obstacles in their way.

In a chapter on "Red Tape" Sir Wilmot speaks with rather uncertain voice. He quotes the opinion of a business expert who said that from what he had seen of army filing he was not so much surprised that it took three months to find a file of papers, as that any were ever found; and he tells a story of the chain of offices through which an application from the C.O. of a field ambulance had to pass before the documents were labelled P.A. (put away). On the other hand, he says that all or nearly all of the innumerable records are justifiable; some being needed for the satisfaction of the patient's friends, some for the administration of the hospital, and others to ensure against waste. He does not, however, speak with any uncertainty about the treatment meted out to medical officers of the Special Reserve and Territorial Force. He observes that the pay given to the civilian, who enrolled in large numbers on the outbreak of war, was considerably larger than that given to those who had spent their time in training themselves. This, he says, created a sense of injustice which will prevent men from joining the Special Reserve if it continues to exist. He points to the shabby treatment meted out to many public-spirited medical men who had in peace taken commissions in the Territorial Force; while they were called up with the rank they then held, colleagues—in many cases their juniors, on whom the War Office had no claim—were induced to join by the offer of higher rank, but the Territorial officer was not promoted. Thus a physician of a large hospital might remain a captain, although other physicians, and even some of the assistant physicians of the same hospital, joined with the rank of major. Another mistake, he says, arose from the general maxim of the R.A.M.C.—that there is no room for special skill in a campaign, and that every medical officer must be considered competent for every kind of duty. In remedying this very serious evil the consultants, he states, were of great service; they knew from the positions of the officers in civil life what their special experience had been. The regular staff did not know.

We began by saying that the book is very readable; we will not spoil the reader's pleasure by attempting to pick out Sir Wilmot Herringham's stories, always apt and well told; most of the illustrations are good. It should be made clear that the book deals only with conditions in France; but those who served there as well as those who stayed at home will find the whole of extraordinary interest, even though they may not be able to agree with all the views expressed.

TREATMENT OF FACIAL NEURALGIA.

In *Facial Neuralgia and its Treatment*² Mr. J. HUTCHINSON amplifies and brings up to date his previously published writings on this important subject. He deals methodically with the clinical symptoms and the causes, so far as they are known, of epileptiform neuralgia of the face, and he discusses fully the various methods of treatment which

¹ *A Physician in France*. By Major General Sir Wilmot Herringham, K.C.M.G., C.B. London: Edward Arnold, 1919. (Demy 8vo, pp. viii + 193; illustrated. 15s. net.)

² *Facial Neuralgia and its Treatment*. By J. Hutchinson, F.R.C.S. Second edition. London: Bale, Sons, and Danielsson, 1919. (Demy 8vo, pp. xiii + 216; 37 figures. 15s. net.)

have been devised to combat one of the most distressing ailments to which flesh is heir. The author admits that the precise pathology of this condition remains unknown, but states that it is due neither to degenerative changes nor to inflammation. He insists that true tic douloureux does not depend on a dental origin, and that it is not due to a true neuritis. Spontaneous cure, it would appear, does not occur.

As the result of considerable experience he has formed the conclusion that a cure may be anticipated in practically every case which is submitted to gasserectomy. This has been the opinion of others, but the author's main contention is that the ophthalmic root can and should be spared in all cases.

The temporal route is recommended and a detailed account of the operation given. Certainly nothing in surgery appears easier. In view of the very considerable deformity which has resulted from operation by other routes, it cannot be doubted that the author's plan will be followed as long as the Gasserian ganglion is subjected to surgical interference. A warning is given against operation in cases of continuous facial neuralgia.

It may be that Mr. Hutchinson's views on the curative effect on epileptiform neuralgia of injections of alcohol will not find universal support. Many physicians can produce evidence that injections into the nerve divisions at their escape from the skull have resulted in complete cessation of symptoms for at least many years. A patient seen lately had experienced absolute relief for periods of eight years after each of two operations for nerve injection. Mr. Hutchinson points out that the procedure is incorrectly associated with the name of Schlösser.

In the account of the technique of injections no mention is made of the needle with a blunt stylette projecting beyond the needle point, which enables the surgeon, after he has pierced the skin and muscles, to make the passage to the foramina with the minimal risk of haemorrhage. Anaesthesia by the so-called "twilight sleep" is not alluded to.

Two misprints require correction in the next edition. On p. 30, line 14, "sore" should read "rare," and on p. 74, line 14, Figure 13 should read Figure 14. It is suggested that the author may be disposed to delete or modify the expression "surely this is satisfactory enough" in referring to a mortality of under 5 per cent. in a series of nearly 200 cases of his own, and another which were operated on by gasserectomy. A further small criticism is made of the expression "practically absent" on p. 15.

The book shows evidence of a great deal of painstaking work, and is a record of good surgery. It is well illustrated and very clearly written; it will compel the attention of physicians and surgeons alike. We should be glad to see in it a note on Gasserius.

AMOEBAE LIVING IN MAN.

"*Quot homines, tot sententiae.*" Could words more applicable than these be used in dealing with the different descriptions that have been given during the last forty odd years of the amoebae inhabiting the intestine of man?

If anyone is in doubt let him read the book, *The Amoebae Living in Man*, Mr. CLIFFORD DOBELL has just published.³ It is an endeavour to create a reasoned order out of chaos, and a careful study of its pages will convince the reader that the author has succeeded in his laborious and difficult task. To achieve it, however, he has had to be severely critical of past and present work, and he has certainly not spared the many students of the subject, both medical men and zoologists, who have preceded him. He shows clearly that one man above all others—to wit, Schaudinn—was chiefly responsible for much of the confusion and many of the inaccuracies by which the subject has so long been embarrassed. He rightly gives due credit to Walker for his splendid researches, which finally lifted the veil of obscurity and allowed the light to penetrate. Dobell looks on Walker's work as one of the most brilliant contributions ever made to medical zoology, and regards the chief problems connected with the relation of intestinal amoebae to dysentery and other diseases as being finally solved by it. We must not, of course, forget the part that Sellards played in the final experimental proofs on human beings, which allowed these conclusions to be reached.

³ *The Amoebae Living in Man*. A Zoological Monograph. By Clifford Dobell, M.A., F.R.S. London: John Bale, Sons, and Danielsson, Limited. For the Medical Research Committee. 1919. (Roy. 8vo, pp. vi + 155; 5 plates. 7s. 6d. net.)

Turning now to Dobell's own work we find that he proposes to divide the amoebae found inhabiting the intestine of man into four genera:

- Genus I. *Eutamoeba*—
Species *E. coli*; *E. histolytica*; *E. ginivialis*.
- Genus II (new). *Endolimax*—
Species *E. nana*.
- Genus III (new). *Iodamoeba*—
Species *I. bütschlii*.
- Genus IV (new). *Dientamoeba*—
Species *D. fragilis*.

This classification is based on the author's own work carried out upon a very large number of clinical cases from the different war areas, collected in different London hospitals, and also upon a critical study of the literature of the whole subject. This analysis of the literature is masterly, and must have involved an enormous amount of work. A careful study of these new genera and species clearly indicates that they are valid in every way; they are certain to pass into the literature of the subject in due course. They have already been accepted practically by all English workers, and Continental workers cannot pass them by. The whole work is a very high class protozoological monograph, and it ought to sound the beginning of a new era for English protozoology in general. Far too long has everyone looked to Germans and Germany for the last words on any protozoological subject. With the appearance of this valuable work all this will, we hope, be changed. *The Amoebae Living in Man* will remain as a classic on the subject of amoebiasis for many a day to come, and the author must be congratulated upon his great effort and the good he has done to English protozoology and medicine alike by its production. The work is well illustrated and has a good bibliography; its moderate price places it within the reach of all.

SIR HERMANN WEBER.

*The Autobiographical Reminiscences*⁴ of the late Sir Hermann Weber, written for his family in compliance with oft-repeated requests, have been printed privately for his son, Dr. F. PARKES WEBER, who has added annotations and a list of his father's publications—more than eighty in number. The reminiscences afford most attractive reading, not only on account of their matter but because of the frank and simple manner of their presentation. They contain, as is natural in a record meant for his descendants, intimate family and personal history, but in the account of his professional life there is much of absorbing medical interest. These reminiscences, written after 1911, though clearly intended to be continued, stop about 1866, when as it happened he became a naturalized British subject, except that in a separate chapter on "Some (16) Medical Friends" events of quite recent date are incidentally mentioned.

Sir Hermann's life fell into two distinct parts: the first from his birth (1823) in Bavaria to 1851, when he left Germany, and the second from the time when he became resident medical officer at the German Hospital, Dalston, to his death on November 11th, 1918, at the advanced age of 95 years. After two years' work as a resident, during which period he became a member of the well known but long extinct "Medical Society of Observation," and thus came in contact with many future leaders of the profession, he was elected visiting physician to the German Hospital and gave up his intention of returning to Bonn, where a career lay before him. Before presenting himself for the examination for the membership of the Royal College of Physicians he attached himself to Guy's Hospital, and thus came into intimate touch with Addison, Bright, and Gull. Of these now historical figures he gives shrewd character sketches, and compares the forcefulness of Addison with the reticence and hesitancy of Bright, adding that he had reason to believe that much of the credit for the discovery of Bright's disease was due to Addison. This is of special interest, as Addison's public recognition as the describer of the syndrome of supranuclear disease owed something to Sir Samuel Wilks's loyalty.

⁴ *Autobiographical Reminiscences of Sir Hermann Weber*. With annotations and a list of his medical writings by his son, Frederick Parkes Weber. (Printed privately for Dr. F. Parkes Weber.) London: John Bale, Sons and Danielsson. 1919. (Pp. 121; 21 illustrations.)

Sir Hermann does not refer to this, but in a later chapter he says of Wilks: "Great modesty was one of the leading features of his character, and this may have been the cause of his want of success in ordinary practice and in consultation. His pupils not only loved him, but had also complete confidence in him and asked his advice for themselves and their families, but were afraid of consulting him for their patients because he was not decided enough, not at all self-asserting, and not convincing to the ordinary invalid."

Throughout these reminiscences the lovable personality of the author stands forth, and adds to their fascination. The appendix contains a list of his writings between 1848 and 1918, the last, "On the influence of muscular exercise on longevity," appearing in this JOURNAL on March 23rd, 1918. There are twenty-one beautifully executed family portraits, and with a dutiful hand Dr. Parkes Weber has added a number of footnotes with biographical details.

THE INTER-ALLIED RED CROSS CONFERENCE.

DURING the first eleven days of April, 1919, as recorded in our columns at the time, a medical conference was held at Cannes at the invitation of the Committee of Red Cross Societies. The *Proceedings* of the conference have now been published in book form by the League of Red Cross Societies at its headquarters, 2, Rue du Cloître, Geneva. Professor Roux presided over the conference, which met daily in the Circle Nautique, and delegates attended from France, Great Britain, Italy, Japan, and the United States. The British delegates were: Colonel Lyle Cummins, A.M.S., Brevet Colonel L. W. Harrison, R.A.M.C., Dr. E. C. Hort, Professor Henry Kenwood, Dr. F. Truby King, Sir John Lumsden, Dr. F. N. Kay Menzies, Sir Arthur Newsholme, Sir Robert Philip, and Sir Ronald Ross.

The opening meeting was addressed by Mr. H. P. Davison, chairman of the Committee of Red Cross Societies, who detailed the circumstances which led to the formation of the Committee and the work it was hoped the conference would complete. Prof. Roux, in his introductory address, expressed the belief that the utmost co-operation of the scientists of the world would be secured for this new movement. Colonel Richard P. Strong, of the American delegation, submitted an outline for the establishment of an International Council and Bureau for Hygiene and Public Health, and his colleague, Dr. Hermann M. Biggs, set out in a memorandum the activities in which the Red Cross might profitably engage. At the close of four days' deliberations the general conference reached the conclusion that it was a natural and most desirable evolution for the Red Cross to extend its functions of relief during the war to that of promoting public health during peace, and this view was concurred in by the delegates from all the nationalities present. During the first week the different sections met daily to prepare reports of the activities which they represented. In the second week the conference considered the recommendations of the sections in the following order: Venereal diseases, child welfare, tuberculosis, malaria, nursing, preventive medicine, publications, education, and statistics. At the final meeting of the general conference on April 10th resolutions containing recommendations from the different sections were adopted. Just before the adjournment a telegram was read reporting the alarming situation in Central Europe by reason of the outbreak and spread of typhus fever; this matter was discussed at a meeting of the executive council next morning as the result of which a telegram was sent to the Governments in session at the Peace Conference, urging immediate action, and a commission was appointed then and there to direct Red Cross activities in the control of the typhus epidemic.

The second and third chapters of the *Proceedings* give the names and qualifications of the delegates and the full text of the resolutions and recommendations of the conference. In the subsequent chapters are recorded at length the proceedings of the ten general sessions. During the first five days the organization of the proposed Central Bureau of Health was the main topic under discussion. The volume is printed in large, clear type, on good paper; it is bound in cloth and illustrated with many full-page portrait groups of the delegates, and a plan suggesting the distribution of the personnel in the Bureau of Hygiene and Public Health.

NOTES ON BOOKS.

THE fourth edition of Professor MORTON'S *Genito-urinary Diseases and Syphilis*,⁵ a standard textbook in America, provides the medical practitioner with a comprehensive account of the subject, clearly written and well illustrated. Plenty of space is given to the treatment of the conditions described. The book may be recommended to practitioners in search of a sound and conservative book on venereal disease.

We have received a reprint of the discussion on *Influenza*,⁶ held at the Royal Society of Medicine in November, 1918, under the presidency of Sir Humphry Rolleston, K.C.B., and opened by Sir Arthur Newsholme, K.C.B. This valuable symposium of opinion and experience should be studied by all who are interested in the epidemiology and etiology of epidemic influenza.

To write a book on venereal diseases in the small compass of eighty-three pages might tax the resource of any author; for this reason many of the shortcomings of Dr. MYER'S *Lectures on Venereal Diseases*⁷ may be excused. The book is intended, as we are informed in the preface, for midwives, nurses, masseurs, and members of the general public who may be specially interested in these diseases. It is illustrated by figures and diagrams, and contains a glossary of the anatomical terms employed in the text.

The second edition of Messrs. MILLS and HUMPHREYS'S *Surgery for Dental Students*⁸ should be studied by all intending to become dentists, and also with advantage by all medical students. The authors are to be congratulated on the simplicity of their phraseology and on the classification of the subjects treated in each chapter. Specially should be noted the insistence on a good knowledge of bacteriology, a point much overlooked by students of dentistry. Also the special reference in the article on "oral sepsis" relative to imperfectly fitting crowns and bridges should be noted; it really condemns, and rightly so, 95 per cent. of these septic fixtures. The article on diseases of the eye with reference to affections due to dental origin is specially worthy of attention.

In *The Baby*⁹ Dr. SOPHIA SEEKINGS writes a simple account of infant hygiene for the million, with clear directions to mothers showing what they should do and what they should not do in such matters as clothing and feeding infants, and in the general management of their tender lives. The book contains much sensible advice, and may be recommended to laywomen generally.

The second number of *Medical Science* (November) is occupied for the most part with a series of reviews in which notes on recent work are arranged in an orderly manner. There are such reviews on influenza, on diphtheria, on the surgery of the thyroid and thymus glands, on gastric and duodenal ulceration, on the extra-pyramidal symptom-complex, and on other subjects. The periodical is published for the Medical Research Committee by the Oxford University Press. The annual subscription is 21s.; the price of a single number is 2s.

The second edition of Miss GOODALL-COPESTAKE'S *Theory and Practice of Massage*¹⁰ has the same excellences as the first edition, which was reviewed in this JOURNAL last year. It has been revised, and a chapter dealing in outline with the after-treatment of war injuries by massage and movements has been added. It may be recommended to the attention of masseuses and students of massage.

⁵ *Genito-urinary Diseases and Syphilis*. By Henry H. Morton, M.D., F.A.C.S., Clinical Professor of Genito-urinary Diseases in the Long Island College Hospital, etc. Fourth edition, revised and enlarged. London: Henry Kimpton, 1918. (Med. 8vo, pp. 807; 332 figures, 35 coloured plates. 36s. net.)

⁶ London: Longmans, Green and Co. 1919. (Sup. roy. 8vo, pp. 102, 3s. 6d. net.)

⁷ *Lectures on Venereal Diseases*. By Leonard Myer, F.R.C.S. London: The Albany Press, 1919. (Med. 8vo, pp. 83, 6s. net.)

⁸ *A Textbook of Surgery for Dental Students*. By G. Percival Mills, M.B., B.S. Lond., F.R.C.S., and Humphrey Humphreys, M.B., Ch.B., B.D.S. Birm., L.D.S. Eng. Second edition. London: Edward Arnold, 1919. (Med. 8vo, pp. xi + 340; 57 figures. 14s. net.)

⁹ *The Baby*. By Sophia Seekings, M.D., B.S., D.P.H. *Manuals of Health*, II. Edited by E. Barclay Smith, M.D. London: Society for Promoting Christian Knowledge, 1918. (Fcap. 8vo, pp. 63, 9d. net.)

¹⁰ *The Theory and Practice of Massage*. By Beatrice M. Goodall-Copestake. Second edition. London: H. K. Lewis and Co., Ltd. 1919. (Demy 8vo, pp. xxi + 265; 67 figures. 3s. net.)

MEDICAL RESEARCH COMMITTEE.

THE fifth annual report of the Medical Research Committee, dealing with the year 1918-19, was issued on November 18th. It falls into three parts. In the first the constitution and policy of the Committee are discussed; in the second the work of the Central Research Institute and its departments are described; and in the third particulars are given of the various research schemes instituted by the Committee.

CONSTITUTION AND POLICY.

The Ministry of Health Act provided that the duties of the Medical Research Committee should be transferred to a committee of the Privy Council on or before June 3rd next. Since the passing of the Act the duties of the chairman of the National Insurance Joint Committee have been transferred to the Ministry of Health, and the report states that consideration is at present being given to the future constitution of the Committee in its relation to the proposed committee of the Privy Council. It is hoped that the future committee will have opportunities, better in form if not in substance, for co-operation with the great organization for Scientific and Industrial Research, working under an existing Committee of the Privy Council. The relation between the renewed organization of the medical research services in general with the research and intelligence services forming an integral part of the Ministry and Boards of Health must be subject to some definition in general terms, but the Committee is of opinion that the actual boundary line should be allowed to find its natural adjustment in daily practice. The Committee believes that the new committee will provide a mechanism for directing upon any problems larger than those of the usual work of the Ministry of Health the scientific forces appropriate to them throughout the United Kingdom.

During the five years the Medical Research Fund has been in existence its annual average amount has been about £50,000; in the present financial year it may reach £60,000, but the present purchasing value of the Fund is now very little more than one half of its original value as provided by Parliament in 1913. The cost of apparatus and the rate of wages of laboratory attendants have increased enormously, and salaries and research grants have been raised to give a living wage to scientific workers, though the increase to meet a double cost of living has not exceeded the 20 per cent. sanctioned for the Civil Service. The difficulty of doing no more than maintain the work actually in hand has been felt acutely during the past year, when upon the return of peace conditions the Committee sought to give better aid to the existing fruitful work at the chief university centres to which men have been returning. The experience of the last five years has shown that apart from the saving of life and suffering, and apart from its contribution to the general intellectual life, the research work done by the aid of the fund has brought a large and immediate saving in money to the country. Instances are given of such direct saving; one of them is that the research work done upon heart diseases for the Army saved in one year in one Command approximately the whole of the annual value of the Medical Research Fund. While advancing these utilitarian considerations the Committee does not hesitate to affirm that knowledge of the laws of life must be fostered as being inseparable from the advance of higher education. "It is to be sought and promoted for its own sake as an indispensable part of the general intellectual progress of man." The conclusion is obvious. National economy is a necessity of the present financial position, but a larger sum than is at present available could profitably be spent in investigating the causes of disease and disability.

DEPARTMENTS.

Bacteriology and Experimental Pathology.

Sir Almroth Wright, who has been head of this department since August, 1914, has resigned the position in order to resume his work as director of the inoculation department of St. Mary's Hospital, but has accepted a whole-time research grant from the Committee. His investigations, which have special reference to the processes of immunization, and their study by new methods under laboratory conditions, are being continued at St. Mary's

Hospital. He has been succeeded as head of the department by Dr. S. R. Douglas, late Captain I.M.S., who will be assisted by Dr. Leonard Colebrook, who formerly worked for the Committee in France and at St. Mary's Hospital. Dr. W. E. Gye (formerly Bullock) has been appointed to the staff of the department for experimental pathology; Mr. Clifford Dobell, F.R.S., has joined the staff as protistologist, and has resigned his appointment as assistant professor of protistology and cytology in the Imperial College of Science.

In 1917 a special committee was appointed, under the chairmanship of Dr. J. G. Adami, F.R.S., to consider the possibilities of bringing improvements and greater uniformity into the details of pathological methods used at various centres and of setting qualitative and quantitative standards to which the results obtained at different times and places could be referred. Last June Dr. Adami, on his appointment to be Vice-Chancellor of the University of Liverpool, resigned the chairmanship and was succeeded by Professor F. W. Andrewes, F.R.S. Captain Douglas is secretary of the committee and has given the chief part of his time to its work. He is engaged in studying the possibilities of separating the organisms of cholera into different serological groups. The committee has been chiefly occupied in preparing a report on the best methods for the bacteriological diagnosis of acute infections of the intestines. This has involved a detailed study of the various cultural media, as well as of direct physical chemical tests such as that based upon the agglutinable properties of different groups of bacilli. The report dealing with methods of the agglutination test, in the preparation of which Professor Dreyer has greatly assisted, will shortly be published. A special subcommittee, under the chairmanship of Professor J. W. H. Eyre, has been investigating the physical and biochemical principles underlying cultural technique. At many points its work and that of the parent committee has been linked with the special studies made for the Anaerobes Committee and more generally into the chemistry of bacterial growth conducted in the Biochemical Department of the University of Cambridge under the direction of Professor Hopkins.

Biochemistry and Pharmacology.

Dr. H. H. Dale, F.R.S., who is the senior member of the staff of this department, has continued, in conjunction with Dr. P. P. Laidlaw, Dunn Lecturer in Pathology at Guy's Hospital, the work on the action of histamine; they have completed their analysis of the shock-like condition produced by that substance in large doses. They have brought it into relation with the similar shock-like phenomena caused by various protein derivatives, many of which have been recognized not only in anaphylactic shock, but also in the conditions of circulatory failure more gradually produced after massive trauma (wound shock). The central feature is the loss of the normal tone of the capillary blood vessels and the consequent tendency to peripheral stagnation of the blood. It is believed that the function of the capillary tone in regulating the flow of blood and maintaining a normal circulation has not hitherto received adequate recognition. It is noted that Professor Krogh of Copenhagen has recently been led to similar conclusions by a different line of investigation, dealing with the supply of oxygen to the tissues. The recognition of the influence upon this capillary function of various protein derivatives and products of bacterial action is thought likely to have an important influence on physiological or pathological conceptions. Since the armistice Dr. Dale has completed his part of a joint investigation begun some years ago with Dr. Dakin, with the object of throwing light on the chemical basis of the immunity reaction. An account of the work was given in the Croonian Lecture to the Royal Society, which will be published in the *Biochemical Journal*.

Dr. H. W. Dudley, another member of the staff of the department, has been investigating the chemical nature of the constituents of the posterior (infundibular) lobe of the pituitary body.

Major Kellaway, under Dr. Dale's supervision, has carried out an investigation into the effects on the circulation of exposure to low oxygen pressures, with special reference to the effect on the activity of the suprarenal glands and on the sugar content of the blood. He found that anoxaemia is the important factor in the accelerated

output of adrenalin and the resulting hyperglycaemia which are known as effects of asphyxia. He traced both effects to action on the central nervous system, and the work led to the practical suggestion that the rise in blood sugar produced by exposure for a limited time to a standard low tension of oxygen might be used as a test of fitness for flying at high altitudes.

The work undertaken as an emergency measure for the Board of Trade at the beginning of the war in testing bacteriologically the various preparations of salvarsan and neo-salvarsan of British and French origin has made great calls upon the time of Dr. Dale and his colleagues, and the committee makes mention of the laborious and devoted work of Miss Florence Durham and Mdlle. Marchal, a Belgian subject, who have been responsible for the routine work under Dr. Dale's directions.

Applied Physiology.

Dr. Leonard Hill, F.R.S., the senior member of this department, has been chiefly occupied in continuing his investigations into the science of ventilation and of open-air treatment. His paper on the defence of the respiratory membrane against influenza published in our columns of March last will be remembered. Dr. Benjamin Moore is continuing his study of photo-synthesis, and, as has been already noted in our columns, has found that the so-called active oxygen of fresh country air is not ozone, but nitrogen peroxide, probably formed by ultra-violet light causing direct union of nitrogen and oxygen.

Statistical.

The Committee has come into possession of the Mount Vernon building, Hampstead, used since 1917 as the central hospital for flying officers. The statistical department, of which Dr. John Brownlee is director, has been removed there. The results of his researches into the periodicity of measles and the epidemiology of phthisis have already been noticed in our columns. Another investigation has been made to determine how far the general influence of hygiene can be measured from existing life tables. It was found, as shown by a paper read to the Royal Statistical Society, that close relationships could be established between the laws of physical chemistry and the recorded information given by the tables. The compilation of the medical and surgical statistics of the war for the Army Council has been continued. During the past three years and a half the work has been done in rooms lent by the trustees of the British Museum; it has now been transferred to the building hitherto occupied by the Endell Street Military Hospital, which will afford larger space.

Clinical Research and Experimental Medicine.

The original intention of the Committee was to include a large number of research beds in the scheme of its Central Institute, so that the laboratory work of the several departments could be brought into the closest relation with the clinical workers. This plan has now been abandoned, partly on the score of expense, partly because it was felt to be at present of the first importance that the pursuit of clinical science should be brought into close touch with the great medical schools, so that young and able men, who will certainly be attracted by it, may be trained to be the research workers of the future. The staff consists of Dr. Thomas Lewis, F.R.S., and Dr. T. R. Elliott, F.R.S. Dr. T. F. Cotton has been appointed assistant, and has been engaged as a part-time research worker, and Miss Bain, who had worked previously at the Colchester Military Hospital, has been engaged to follow up the after-histories of patients and maintain the system of records. Dr. Lewis, who was appointed a physician on the permanent staff of the Committee in January, 1916, continued his work at the Colchester Military Hospital for military cases of heart disorder until last spring. The results of his work upon the research side were given in his book on the soldier's heart and the effort syndrome, published last spring, and some practical applications were explained in his lecture on "Cardinal principles in cardiological practice" published in our issue of last week. Dr. Lewis has organized a scheme of research work at University College Hospital, to which he is physician. He has beds for research work and higher teaching, and this clinical work will be in close relation to the cardiographic laboratory in the adjacent University College Medical School. Dr. T. R.

Elliott, who is also a physician to University College Hospital, joined the permanent research staff of the Committee on ceasing to be consulting physician with the armies in France.

LIBRARY AND PUBLICATIONS.

The library is being installed at the Mount Vernon building, to which the publications branch has also been removed. We have already explained the reasons which induced the Committee to begin the publication of a monthly periodical—*Medical Science, Abstracts and Reviews*—last October. The report now points out that English workers have in the past been tempted to rely in the main upon the numerous German compilations of abstracts, and that these compilations have not always given either due space or credit to British and American work. The need for an English publication of the kind was recognized, but it was recognized also that it is impossible for its publication to be conducted at a profit. In determining the scope of the new periodical the Committee has, the report states, kept in view the existing periodicals of similar aim and has endeavoured to supplement these without overlapping. It "had in mind from this point of view the admirable epitomes of current medical literature which appear in the medical press, chiefly for the information of medical practitioners," and it has endeavoured not to cover the same ground as that of the *Physiological Abstracts* which the outbreak of war prompted the Physiological Society to produce. The Committee has continued the publication of its Special Reports Series, of which eighteen numbers appeared during the year.

RESEARCH SCHEMES.

The Committee has endeavoured to reconstruct its original research schemes upon the return of many workers from war service, and it was found that many schemes of research first framed directly for war purposes have a wider application. To some of the researches reference has been made above.

Tuberculosis.

A number of investigations into the problem of tuberculosis have been resumed. Inquiries are being conducted at Dublin, Edinburgh, and Glasgow with a view of establishing the incidence of human and bovine types of bacilli respectively, in surgical cases of human tuberculosis, with special reference to the supply of milk. The inquiry by Dr. Stenhouse Williams at Reading into the presence of virulent tubercle bacilli in the dung of cows is being brought to completion. The bacilli have been found alive and virulent in droppings that have lain upon pasture land for five months. It was found also that a notable number of apparently healthy cows excreted tubercle bacilli in the faeces. The Committee has made grants towards the cost of following up the after-histories of patients treated at the sanatoriums at Midhurst, Frimley, and Peamount, Ireland.

Dysentery.

Working in close relation with the War Office Dysentery Committee, efforts have been made to gather up and collate the experience gained during the war. Much has been done with regard to the classification of the different types of dysentery bacilli, a subject of general importance, both military and civil, and likely to be of special value to the Board of Control in coping with outbreaks of dysentery in asylums. The investigation of various problems connected with amoebic dysentery has been continued throughout the year. Mr. Clifford Dobell has incorporated his results in his book, *Amoebae Living in Man*, a review of which is published elsewhere in this issue.

Typhoid and Paratyphoid Infections.

The Standards Laboratory at Oxford, under Professor Dreyer's general direction, has continued to supply the seven varieties of standard agglutinable cultures and agglutinating serums, and has also distributed standard cultures and serums of *B. aertrycke*. Recent researches having shown that the mannite fermenting group of dysentery bacilli was not sufficiently represented by the two types, Flexner and Y, the manufacture of five type-cultures and serums for this group has, in accordance with the recommendations of the War Office Committee, been undertaken.

Wound Infections.

In consequence of the fact that a large proportion of operations on old gunshot injuries of bones are followed, even when the wounds are apparently soundly healed, by a "flare," that is, a rise of body temperature, with or without local inflammation, a systematic inquiry into the bacterial flora of this latent sepsis has been carried out at Woolwich, and a method of intensive immunization devised; the method is carried out for ten days previous to operation. Much success has been attained. In a series of 169 operations in 75 immunized men there were 13 cases of "flare" (17 per cent.), while in the 94 similar control cases there were 54 cases of flare (59 per cent.).

Cerebro-spinal Fever.

Dr. Mervyn Gordon and Dr. T. G. M. Hine have been engaged at the Central Cerebro-spinal Fever Laboratory and Dr. Stanley Griffiths at the Field Laboratories, Cambridge, in the production of antimeningococcus serum. Investigation of a sample of serum proved clinically to possess exceptional potency brought to light the fact that it was distinguished from less successful serum solely by its capacity for neutralizing the endotoxin. Dr. Griffiths prepared a monotypical serum of each type; they were not issued until shown to possess anti-endotoxic power. At present, however, so little is known of anti-endotoxin, the existence of which is denied by some authorities, that the preparation and standardization of serum of the desired quality has involved much arduous work. Monotypical curative serum prepared against each of the four types separately has been tested. Of 34 cases infected by Type 1, showing previously a case mortality ranging between 30 and 60 per cent., all with one exception recovered when treated with the homologous serum. On the other hand, of 32 cases of Type 2, 7 died; 10 cases of Type 3 treated with homologous serum all recovered, and it is noted that several of them had failed to derive any benefit from the pooled serum (Type 1 and Type 2) with which they were first treated. The investigations are being continued, Dr. Hine giving the whole and Dr. Gordon part of his time to the work.

Influenza.

A large number of investigations into the bacteriology of influenza have been carried out at various centres, without at present any very definite results. It is to be noted, however, that Captain Douglas, working in the Committee's bacteriological department at St. Mary's Hospital, found that strains of the Pfeiffer bacillus collected from different sources could not be sorted into a relatively small number of separate groups. Each example isolated and cultivated appeared to elicit an immunity response characteristic of itself, and not shared by other strains. This multiplicity of type, it is considered, may have important bearings on the epidemiology and on the methods of preventive treatment of the disease. Reference is also made to the observations by Dr. A. Gregor on the influence of gaseous disinfectants in the prophylaxis of the disease published in our columns on October 25th, 1919.

Child Life.

A committee has been appointed to assist in making a detailed suggestion for inquiry into the causes of high infantile death rate; the committee consists partly of Scottish and partly of English members, under the general chairmanship of Professor Noël Paton of Glasgow. The Scottish members are Dr. J. W. Ballantyne and Sir Leslie Mackenzie of Edinburgh; Dr. A. K. Chalmers and Dr. Leonard Findlay of Glasgow. The English members are Dr. John Brownlee, Dr. Eardley Holland, and Dr. G. F. Still. Studies of the antenatal factors of the conditions found in dead births and premature births have already been undertaken in Glasgow and London, as have also social studies of the relation between environmental conditions and infant mortality, conducted in association with special clinical researches in children's hospitals.

Nutrition.

At the close of hostilities a memorandum from the Food (War) Committee of the Royal Society was transmitted to the Development Commission, the Medical Research Committee, and the Department for Scientific and Industrial Research, in which the opinion was expressed that the science of nutrition from a national standpoint had been

insufficiently studied, and that there was an urgent need for a central institute or organization. A conference between the bodies mentioned was subsequently held to discuss the possibility of establishing a Human Nutrition Research Board, deriving its financial resources from the funds of the three research departments. At this conference a committee was appointed to report upon the exact nature of the work such a board should undertake.

The Medical Research Committee has assisted work at Cambridge and at the Lister Institute with regard to accessory food factors (vitamines). The general position with regard to this subject was explained by Professor Gowland Hopkins in the lecture published in the *BRITISH MEDICAL JOURNAL* of April 26th, 1919. The scheme of inquiry into rickets in Glasgow by Professor Noël Paton is maintained, and some of the results were related in the paper published by Paton, Findlay, and Watson in our columns on December 7th, 1918. In London Dr. Mellanby has made progress with his studies of the accessory factors in food, the absence of which produces a rickety condition, though the energy supply of the food is abundant and growth rapid. His recent researches have included inquiry into the very important question whether the maternal body can supply in the milk the missing factor for the nutrition of the young. Evidence is growing that deficiency of this factor in the maternal diet is reflected in a corresponding deficiency in the milk produced.

THE HUNTERIAN SOCIETY CENTENARY.

PRESENTATION TO DR. JOHN ADAMS.

THE centenary dinner of the Hunterian Society was held at the Trocadero Restaurant on November 12th, when a distinguished company of members and guests assembled, including the Minister of Health, the President of the Royal College of Physicians, and the Astronomer Royal. The distinctive feature of the proceedings was the presentation of a special centenary silver medal to Dr. John Adams, F.R.C.S., for his work on the treatment of ante-natal and post-natal syphilis at the Thavies Inn (London) venereal maternity centre. Dr. LANGDON BROWN, President of the Society, in making the presentation, said that Dr. Adams had carried through this special work with most excellent results, in spite of the manifold preoccupations of a busy practice. His devotion, enthusiasm, and ability were an example and a lesson to them all.

Dr. JOHN ADAMS, after expressing his sense of the honour done him, described how, two and a half years ago, the authorities thought well to establish this special hospital of which he had medical charge. Everything he had asked of them had been granted, and he had worked without let or hindrance. He had also been most fortunate in a hard-working and enthusiastic staff. Official reports had given the mortality of congenital syphilis as 75 per cent. in the first year of life, but at his hospital, where they were dealing with cases in the most acute form, the result in the first year was that only 14 per cent. of the infants died, and in the second year less than 5 per cent. He believed that nearly all the cases of congenital syphilis could be made negative as a result of the treatment followed at Thavies Inn. The hospital was started more or less as an experiment. It contained only 20 beds, but these should be increased to 200 if only it was realized what sort of patients were received, more sinned against than sinning, full of the mother instinct, and most anxious for treatment and attentive to instructions. The hospital might well be made a centre where men could be trained to treat such cases and afterwards carry out in similar clinics elsewhere the things they had learned.

Sir NORMAN MOORE proposed the toast of the evening—that of "The Hunterian Society"—and in doing so added his own testimony to Dr. John Adams, whom he had known for nearly fifty years, and to the excellence of Dr. Adams's work, which he had personally inspected. The speaker then went on to open out some of the treasures of his historical knowledge in portraying the beginnings of the Society in 1819. The national conditions then were very like those of to-day; then, as now, the nation was exhausted after a long struggle, in which success had been given to its arms. The founder of the Society was Sir William Blizard, and the speaker well remembered Sir Richard Owen, who was intimate with Blizard,

describing to him the impression that courtly physician made upon his contemporaries. Blizard had a taste for poetry, and had he been longer contemporary with Pope he would have secured a place in the "Dunciad." Sir Norman Moore then spoke of the famous Hunter family: Matthew Baillie, nephew of John and William Hunter, wrote the first good book in English on morbid anatomy; his walking-stick was preserved at the Royal College of Physicians, and had upon it the arms of Radcliffe, of William III's reign; Mead, of George I and George II; Askew, of the middle of the eighteenth century; and William and David Pitcairn. William Hunter gathered together a remarkable collection of coins and books, which, on his death, was presented to his favourite city of Glasgow. John Hunter was a man various beyond belief. He had not quite as good an education as William, but he had instructed himself in every part of natural science, and what Hazlitt said of Burke could be said of him—that there was really no specimen of his work which gave a satisfactory index to the variety and power of his mind. Sir Norman Moore, in passing, pleaded that the specimens of war wounds, now in the Royal College of Surgeons, which were still the property of the army, though their grace of preparation and exquisite mounting were due to the staff in Lincoln's Inn Fields, might be made over permanently to that institution. He went on to give a rapid sketch of the growth of medical societies, and said that he did not doubt that the fact of society fellowship had been a great encouragement to many such as Adams in their admirable work.

Dr. ADDISON, who recalled that he had been a Hunterian professor at the Royal College of Surgeons, said he had been told ever since he entered political life that Government interference and assistance meant red tape and various encumbrances, and he was all the happier, therefore, to hear Dr. Adams testify that although, on the advice of the Ministry, 75 per cent. of the cost of his centre was defrayed out of public moneys, he had not been bothered with unnecessary inspection. There were now 160 ordinary venereal centres, and if many of them were not as competent as the special hospital for pregnant women with venereal disease over which Dr. Adams presided, Dr. Adams himself had suggested the reason, which was the lack of facilities for training men in the most up-to-date methods of treatment. In the programme, detailed and comprehensive, which he had charged Sir George Newman and others to work out in the hope that it might be realized in the coming year, provision was made for a wide expansion of facilities and assistance, not only in relation to this disease but to others, and all that could be done by scientific direction and finance would be done. He knew that he was suspect by the medical profession—"No!"—who asked what schemes he was plotting now; but he trusted that when next year his Ministry produced far-reaching proposals which would vitally affect the medical profession and would give it vastly greater and better-paid opportunities than it had ever had before, the profession would be prepared to consider them on their merits and without prejudice. The Ministry of Health was determined that, in the practice of national economy, it would be wasteful not to spend money on making the best use of discoveries in medical science. It proposed to spend not less but more money in research and in organization of medical services. When the time came he would put these proposals forward without apology. Research had been allowed to languish too long, and its necessities had been too tardily supplied, much to the national detriment.

Sir CHARLES SYMONDS replied to the toast on behalf of the Society, and referred to the pride of unbroken record of a hundred years of work. The PRESIDENT then proposed, in happy terms, "The health of the guests and of the sister societies," and Sir GEORGE NEWMAN, in responding, said that he himself had been taught by Sir Jonathan Hutchinson—a man of the same cast of mind as John Hunter—to admire Hunter for two reasons: first, because his work was based on inductive logic, and secondly, because he was a comparative pathologist. This twofold tradition greatly needed to be sustained. Sir HUMPHRY ROLLISTON, who also responded, said that on the amalgamation of various societies in the Royal Society of Medicine, it was fully recognized that the Hunterian Society, along with one or two others, was performing such a singularly useful function as a separate body that it

would be a pity and a detriment if it were to lose its individuality by absorption. Sir FRANK DYSON, the Astronomer Royal, also replied briefly to the toast. Lastly, the health of the Society's executive officers was proposed by Dr. ROWLAND HUMPHREYS and responded to by Dr. ARTHUR DAVIES, the Vice-President.

GENERAL MEDICAL COUNCIL.

ELECTION OF DIRECT REPRESENTATIVES.

ENGLAND AND WALES.

We understand that the result of the poll for the election of direct representatives is as follows:

VERRALL, SIR THOMAS JENNER (Bath) ...	5,362
BOLAM, ROBERT ALFRED (Newcastle-on Tyne) ...	4,872
TURNER, EDWARD BEA ON (London) ...	4,803
MACDONALD, JAMES ALEXANDER (Taunton) ...	4,745
Coke, Wm. Francis Harriott (Ashford, Kent) ...	3,534
Weply, Alfred (London) ...	3,491
Stancomb, Ernest Hy. Murly (Southampton) ...	3,303
Main, George Agnew (Stockport) ...	2,910
Blackhall-Morison, Alexander (London) ...	1,761
Brown, John (Blackpool) ...	1,636

A detailed report will, as is customary, be presented by the Registrar to the Branch Council, and we hope to give some further particulars in our next issue.

SCOTLAND.

WALKER, NORMAN (Edinburgh) ...	974
Duncan, Ebenezer (Glasgow) ...	823
Dewar, Michael (Edinburgh) ...	252

We understand that 4,800 voting papers were sent out, so that it would appear that less than one-half the constituency polled.

IRELAND.

KIDD, LEONARD (Dublin) ...	695
McWalter, James Charles (Dublin) ...	616

ROYAL MEDICAL BENEVOLENT FUND.

At the meeting of the Committee held on November 14th seventeen cases were considered and £212 voted to fifteen of the applicants. The following is a summary of some of the cases relieved:

Widow, aged 82, of M.R.C.S.Eng. who died in 1890. Left unprovided for with one daughter, now aged 49, who does secretarial work, but is at present out of employment. Applicant receives £10 from dividends and £30 a year from another charity. Was helped by the Fund many years ago. Voted £10.

Daughter, aged 65, of M.R.C.S.Eng. who died in 1868. Total income, £56 a year. Rent £36 paid by friends. Takes in a boarder at 21s. a week when possible, but at present without one. Cannot manage owing to the high cost of living. Was helped by the Fund many years ago. Voted £10.

Daughter, aged 70, of M.D. Edin. who died in 1886. Applicant endeavours to make a living by letting rooms, from which source she is usually enabled to pay the rent, £24. She receives £15 from dividends and £30 from brother, but the brother's help must decrease owing to his ill health. Voted £12 in twelve instalments.

Daughters, aged 55 and 47, of L.S.A.Lond. who died in 1903. Their joint income is £69, and they also let rooms when possible. Rent £51. Both applicants suffer from ill health. Relieved eleven times, £137. Voted £18 in twelve instalments.

Widow, aged 48, of L.R.C.P. and S. Edin. who died in 1916. Has no income. She earns about £6 by her own efforts, and pays £13 a year rent, which is provided by pecuniary help from friends. She applied for assistance owing to inability to obtain employment. Relieved four times, £30. Voted £12 in twelve instalments.

M.R.C.S.Eng., aged 50, married, is entirely incapacitated owing to disseminated sclerosis. Applicant's wife earns an average of £13 a year by making shell jewellery, and relations pay £26 a year. Rent £6 for cottage. One son, who is a foundation scholar at Epsom College. Relieved three times, £70. Voted £26 in twelve instalments.

Subscriptions may be sent to the Acting Honorary Treasurer, Dr. Samuel West, at 11, Chandos Street, Cavendish Square, London, W.1.

British Medical Journal.

SATURDAY, NOVEMBER 22ND, 1919.

THE TERMS OF INSURANCE SERVICE FOR 1920.

It is evident from the large number of meetings of panel practitioners that have been held all over the country—and from the correspondence we have received—that there is a good deal of dissatisfaction with certain provisions of the 1920 Medical Benefit Regulations and terms of service proposed under the National Insurance Acts. It is quite possible that this may in part arise from the fact that there has hardly yet been time fully to assimilate the mass of details contained in the draft Regulations. The necessity for innumerable cross references between one regulation and another, and between the Regulations and the Schedules—a necessity which in many cases arises simply from bad drafting—is now proving and will continue to prove a fruitful source of misunderstanding. It may be the duty of the Insurance Acts Committee, in discussing some of the features in the terms of service at the Panel Conference, to lay stress on points that so far have escaped the vigilance of the general profession, and it may rely on the Committee not to shirk this task. In the meantime it seems important to lay emphasis on the fact that in the resolution to be submitted to the conference on November 27th the Committee definitely states that the draft Regulations “do not in every respect fulfil its hopes and desires,” and the conference is only recommended to accept the Regulations “provided that the remuneration be on a satisfactory basis.” In other words, the Minister of Health has in the draft Regulations afforded additional reasons for an even greater increase in the capitation fee than would have been demanded under the old terms and conditions. Some correspondents are, indeed, inclined to ask whether any payment will adequately compensate for certain provisions in the new Regulations, and would reply in the negative as regards at least one of the terms of service. We refer to Regulation 16 (c) and Section 4 of the First Schedule dealing with the arrangements for transfer of practices on retirement or death. For a concise statement of what is involved, we may quote from document M. 23 of the Insurance Acts Committee:

It will be seen that the present arrangement by which patients are automatically transferred to the successor (unless they express a wish to be placed on the list of some other practitioner) is continued till the end of 1922 for all practitioners who are on the medical list of any Committee at the end of 1919. But for these practitioners after 1922, and for all others, after the new Regulations come into force, the system is to be changed—the patient becomes unallocated and is entitled to choose any other doctor when he pleases. All practitioners who in future buy panel practices will do so with full knowledge of the facts. Those now on the panel who sell, before the end of 1922, will have the same rights as at present. After that time the transfer of panel patients will rest on the introduction the doctor can give the purchaser, just as his private practice does. The inconvenience arising from a possibly large number of unallocated persons being created in this way is met by the new Allocation Scheme, which every Insurance and Panel Committee must jointly pre-

pare (Reg. 15). This scheme must provide for the assignment of all insured persons who after due notice have failed to select a doctor—not necessarily for every unallocated person, although this could be done if desired, but the scheme could and probably would be used to allocate all those persons belonging to the practice of a deceased doctor, and in such allocation the claims of the executors of such a practice would doubtless be recognized by a body which is half medical.

It may perhaps be doubted whether this explanation would be accepted as a whole in a court of law, for the drafting of Section 4 of the Schedule is so involved that disputes may easily arise as to interpretation, and this section alone affords a strong argument in favour of appeal being allowed from the decision of the Minister to a court of law. In the main, however, the passage cited may be taken as a correct summary of the position. It seems, then, to be clear that the provision will tend to prevent—as it is no doubt intended to prevent—any perpetuation of vested interests that may have arisen, or that might arise, under the Insurance Act; and the question has been put in our columns, Is this fair to panel practitioners? It could be shown that the rights of transfer of practices under the old Regulations interfered with any insured person's full and free choice of doctor the position would be different. But this cannot be shown. The present Regulations carefully and repeatedly safeguard the free choice of doctor, and under them no insured person who cares the least about the matter need be transferred to any but the doctor of his choice. The present arrangements about transfer in no way limit the right of free choice, and the profession has no desire to impose any such limit. They do not afford opportunity for the creation of any far-reaching vested rights. The 1911 Act, Section 15, and still further the 1913 Act, Section 11, allows the Ministry to alter the present panel system practically as it likes, and anyone who buys a practice does so knowing well that the whole system may be changed at any time and all panel lists be done away with. That possibility is part of a purchaser's risk, and the profession does not seek to evade it. It is not clear what the insured is to gain from the new proposal. The present arrangements for transfers are valued by panel practitioners; they are regarded as one of the assets in a service which is not too popular, and to take away this asset must tend to make the insurance service even less acceptable than it has been. It may be granted at once that there have been some abuses in the buying and selling of panel practices, and the Insurance Acts Committee recognizes that some provision to prevent this should be made. It might be suggested, for example, that some sort of guarantee should be given by a purchaser that he intends bona fide to carry on the practice himself, not merely to buy it in order to sell again in a short time at a higher price. But many members of the profession fear that the capital value of all insurance practices—and, inextricably mixed up with this, the capital value of any private practice that may be joined to the insurance practice—may be lessened, if not in some cases practically destroyed. This point will, no doubt, be elucidated during the discussions at the Conference.

The Insurance Acts Committee has been criticized for the way in which it has presented the case for an increase of remuneration. The criticisms have mostly taken the form of finding fault with the Committee for laying too much or too little stress on this, that, or the other point, but no fresh arguments of value have been advanced. It must be noted that the Committee has never yet suggested that 7s. 3d. was an adequate fee under the old Regulations. This sum has been

taken as a simple basic fact, and members of the Committee as business men recognized that it would be useless at this stage to start any discussion with the Government as to whether the profession was underpaid before the war. It may be admitted at once that the Minister of Health has made a reply to Memorandum 22 which, in some parts, is very showy, and may appear plausible to what may be called the gallery of popular opinion. His reference, for example, to the Committee's statements about income tax can hardly be regarded as a fair retort, though it may possibly tell with some people who have not studied the Committee's case. The gratuitous statement that medical incomes must be subject to income tax, just as other incomes, seems to assume that the Committee had argued for a partial escape from income tax for the profession. Of course, nothing of the sort was ever suggested, and it is difficult to understand why the Ministry should make the reference to this an occasion for lecturing practitioners on their duties as citizens. Again, it is disquieting to find that the Ministry refuses to allow that a 60 per cent. increase in remuneration can properly be made in respect of increased cost of living and practice expenses in an urban area.

The Ministry further disputes the demand for 10 per cent. increase in respect of extra attendance required for discharged disabled and demobilized soldiers and for general deterioration of health owing to war conditions. Every practitioner knows quite well that 2½ per cent. for treatment of discharged disabled soldiers is far less than it ought to be, as treatment has so often been given and not charged for. No doubt this was unbusinesslike, but the fact remains and should be taken into account. It would appear that the medical profession never will learn that it is an axiom of all governments that if the doctors act generously in giving their services free in emergencies, they shall after a time be compelled to continue such free service. Further, at the present time the Pensions Medical Boards are simply crowded out with thousands of demobilized soldiers, many of whom, in their hurry to get home, signed the Form Z. 22, stating that they had no disability due to military service, and then a short time afterwards claimed a pension for some disability. A large proportion of the claims are in respect of "D.A.H.," shell shock, malaria, bronchitis, rheumatism, and myalgia, all of which need far more attendances from panel practitioners than the wounds and injuries of discharged disabled soldiers. Many of the latter class used to attend the military hospitals and have only recently come to panel practitioners since the hospitals were closed. It is unfortunate that no statistics of these cases are available, but it is still more to be regretted that a Minister should take advantage of this fact against the panel practitioner.

Again, the Ministry of Health appears to make light of the added duties required under the new Regulations; and yet a single one of these affords ample ground for a very substantial increase in remuneration—namely, that which practically makes every panel practitioner liable for the whole insured population of his area in emergencies. It would be difficult to imagine a more distasteful responsibility than this—that every practitioner should be liable to be called on and compelled to attend at any hour of the day or night not only his own patients, which is hard enough, but any patient of any other doctor who happens not to be at hand at the time. In many such cases a whole year's capitation fee of the patient would not adequately compensate the doctor who is

forced to attend, especially as it too often happens that the so-called emergency exists only in the imagination of a patient who has a fancy for a second opinion.

We publish in the SUPPLEMENT this week an effective rejoinder by the Insurance Acts Committee to the reply of the Minister of Health to document M. 22. The general tenor of the Ministry's reply can only be described as officially unsympathetic towards panel practitioners. If this attitude be persisted in the prospects cannot be regarded as bright for the insurance service. It is not too much to say that in these negotiations the health of the people and the future of the medical profession are at stake; and this is no time for the exhibition of adroitness in debate by practised Government hands.

"NEW LAMPS FOR OLD" IN OBSTETRICS.

FROM the nature of things obstetrics has not received from the war the same stimulus as surgery and medicine. There has, however, been no standing still, and if there have been no striking advances, there has at least been a healthful spirit of inquiry at work. As in the case of the unrest in the social world, the immediate direction of its working may give rise to differences of opinion and may not always appear wholly good, but the ultimate result may be welcomed rather than feared by the progressively minded.

An important movement, illustrative of the spirit mentioned, is the crusade which was opened by Mr. Victor Bonney some months ago at the Royal Society of Medicine in favour of the fuller recognition of the essentially surgical nature of obstetrics. It has long been recognized that the mortality of childbed has not diminished to the extent that might have been hoped for since the adoption of antiseptic and aseptic methods in midwifery. This applies to the whole civilized world, maternity hospitals alone excepted. The figures for the latter show an improvement, following upon the advent of Listerism, so dramatic that it is manifest that strict antiseptic precautions, enabling aseptic technique to be followed where possible, form the key to the whole situation. The difficulty is to fit the key to the lock—in other words, to apply the principles of asepsis and antisepsis to home-conducted labours, for the number of labours conducted in hospitals and nursing homes is a very small fraction of the total births. Mr. Bonney believes that the application can only be made by a radical change in the conception of midwifery by both the profession and the public, and by a revision of the attitude of thought that dominates the teaching and practice of the art. Every obstetrician will agree with him that midwifery is a surgical art, but its recognition as a department of surgery is still far from being established. This is due partly perhaps to the fact that it is the oldest branch of the profession, and partly to the fact that it developed as a more or less independent subject, largely in the hands of women who had no general training in medicine. Only when it began to pass into the hands of men did it gradually become grafted into the main stem, and too many traces still remain of its original independence. Another factor contributing to the failure to recognize the essential surgicalness of midwifery is the contrast—which is placed before the student at his most impressionable period—between a labour conducted in a lying-in hospital with all the circumstances of surgery, and the similar procedure carried out in the extern

department under conditions that would often be a direct contraindication to "surgical" interference. Thus the student and practitioner as well as the public form a conception of midwifery as an art to which the principles of modern surgery only partially apply. As mentioned in our recent article on the teaching of obstetrics in London, this glaring contrast is a bad feature in the practical training of the student, only surpassed in its evil effects by a training, such as is still given to some London students, in which not even a vision of hospital practice is obtained, and therefore no such contrast is or can be drawn.

Mr. Bonney believes that this state of matters can only be remedied by educating the student and the public in the necessity of surgical surroundings and conditions for childbirth; and by dispelling the notion that childbirth, being a "natural" process, is or ought to be on the same level as other natural expulsive functions. "Labour should be considered and treated as a surgical operation, and the puerperium as a period of post-operative convalescence."

Such, in brief, is the contention. With the objects of the crusade and with the general lines of argument every obstetrician will agree. With a number of the detailed arguments used and conclusions reached by Mr. Bonney there will be considerable disagreement, but probably he pitched his argument high of set purpose. Our concern at the moment, however, is not with details or even conclusions, but rather to invite thoughtful attention to a movement which may be fraught with the greatest potential benefit. If the crusade is to succeed it must be shared in not only by every obstetrician and every practitioner practising midwifery, but also by those who influence medical practice and education in the Government and in the General Medical Council.

Another and rather different illustration of this spirit of inquiry which, regarding authority as too often only another name for tradition, desires to test and prove all things for itself, appeared in our columns recently in a reference to the conduct of the puerperium. Our correspondent was disposed to tilt against the custom of keeping the puerperal woman in bed for ten or more days. His experience in Australia was that early rising was the best way to avoid puerperal infection, inasmuch as it favoured proper drainage of the birth canal. Without detracting from the obvious advantages of adequate drainage, it must be said that the contention cannot safely be accepted. Prevention by strict asepsis and antisepsis is infinitely better than any method of cure. Moreover, as we pointed out, the modern method of conducting the puerperium does favour drainage, but without the concomitant risks of early rising in the form of subsequent displacement and the like.

There is, however, another aspect of this question besides the surgical which calls for attention, and that is what, for want of a better name, may be termed the psychological. Once a patient, especially the mother of a family, is allowed out of bed, she passes to a large extent out of the control of her nurse, and is prone to resume too soon the burden of her domestic cares. She does not understand that the nervous machinery needs rest as much as the muscular if it is to avoid undue wear and tear. After nine months during which every organ of the woman's body has been working under an increased pressure (whether there have been clinical manifestations of the strain or not), ten to twenty days' rest in bed is a wholly beneficial restorative. Most women frankly acknowledge this, and it is not improbable

that many of those who are most eager to cut short the resting period are amongst the very patients for whom it is most necessary and valuable—women of restless nervous energy, in whom "the spirit truly is willing, but the flesh is weak." There is no reasonable doubt that modern management of the puerperium, as compared with the old rigid, lowering treatment, provides for a suitable "post-operative convalescence," which early rising denies, or at least risks, without corresponding advantage in the long run either to the individual or to the race.

AMERICAN HONOURS FOR BRITISH SURGEONS.

THE President of the United States of America has conferred the Distinguished Service Medal on Sir Anthony Bowlby and Sir Robert Jones. They were invested by General Ireland, Director-General of the Medical Corps of the United States Army during the meeting of the American College of Surgeons in New York. Both these British surgeons were at the same time admitted Fellows of the College. Both ceremonies took place on the concluding day of the meeting (October 25th). Afterwards Sir Anthony Bowlby delivered the annual convocation address, taking as his subject some of the surgical lessons of the war. The meeting began on October 20th, and on the evening of that day the principal address on surgery was delivered by Sir Anthony Bowlby, who dealt with the treatment of gunshot fractures of the femur in France; he was followed by Sir Robert Jones, who spoke on the treatment of these cases in England. On the following day Sir Robert Jones contributed to a discussion on tendon transplantation for nerve injuries, and on October 22nd read a paper on stiff and flail joints following gunshot wounds, which we hope to have an early opportunity of publishing. After the meeting in New York Sir Anthony Bowlby and Sir Robert Jones visited by invitation Boston, Cleveland, Chicago, and Philadelphia, and addressed meetings of the profession in each of these cities. Everywhere their reception was most cordial, and those American surgeons who had served in France and Great Britain took every opportunity to express their appreciation of the manner in which they were received by the Royal Army Medical Corps and the facilities afforded them at the casualty clearing stations before the American troops had come into action.

THE PARIS SCHOOL.

THE Faculté de Médecine of Paris, although it no longer claims to have been founded by Charlemagne, is venerable in age no less than in reputation. It was founded in 1270, ten years after St. Louis had attended the consecration of the Cathedral of Chartres, and while the sculptors were yet at work on the transept porches—a curious reflection. But change does not wither the Faculty nor stale its infinite variety, as is displayed in an illustrated pamphlet we have received from M. H. Roger, its Dean. The Faculty has been completely reorganized, is reopening its clinical departments and its laboratories, and has turned to teaching with renewed energy. There have been periods when it was very much the custom for young British graduates to spend some time in Paris. This was particularly the case early in the nineteenth century, when Laënnec and his followers were establishing the arts of auscultation and percussion. Later on young physiologists readily went to Paris to place themselves under the influence of the inspiring teaching of Claude Bernard, one of the most powerful and original minds ever given to the subject. There is room for the revival of the custom, and some may be glad to know that the Faculté de Médecine has made this term special arrangements for the benefit of graduates, whether French or foreign. It may be explained that of the thirty-five civil hospitals in Paris all are used

for clinical instruction, and all, with one exception, are controlled by L'Assistance Publique; but no difficulty has been encountered in their utilization for the purposes of the medical school. In certain hospitals the Faculté appoints clinical professors, who are physicians or surgeons to the hospital. It appoints also the professors' principal assistants. The professorial unit or *Service* usually consists, in addition to the professor himself, of a *chef de clinique*, one or two assistant *chefs de cliniques*, one or two *chefs de laboratoires*, demonstrators, monitors, one or more internes, and six or eight externes. Some of the services include also a radiologist and various specialists, who attend two or three times a week. The professor gives two formal lectures to students every week, and teaches in the wards or out-patient department every morning. The other hospital services in these and other hospitals are under the direction of the physicians and surgeons of the hospitals. The Faculté itself has over twenty clinical services—four each in medicine and surgery, three in obstetrics (one reserved for the teaching of midwives), one in therapeutics, and one each in the diseases of children, in the hygiene and diseases of infancy, in dermatology, neurology, psychiatry, infectious diseases, the surgery of children, gynaecology, urology, ophthalmology, and otorhino-laryngology. The students for whom there is no room in the professor's clinic attend at the other hospitals for clinical instruction. Many of the professors have arranged special courses, and also post-graduate courses, for the benefit of graduates, French or foreign, visiting Paris. The instruction given is partly theoretical and partly practical. At the termination of the course a certificate of attendance is granted. In addition, courses open to foreign graduates are given in most of the hospitals by the other physicians, surgeons, and specialists attached to them. Some of these courses are given during the vacations; thus, during the Easter vacation of 1920 a fortnight's course on diseases of the liver, pancreas, and spleen will be given at the Hôtel-Dieu by Professor Gilbert and M. Villaret. A similar course, lasting a month, will be given in June on diseases of the stomach and intestines. At the same hospital Professor Hartmann, with the assistance of Dr. Parmentier (physician to the hospital) and Dr. Maingot (radiologist) will give a course on the methods of examination and surgical treatment of diseases of the stomach and intestine. At the Hôpital Cochin Professor Vidal, with the assistance of M. A. Lemierre, will give a course on the diagnosis of diseases of the kidneys, the liver, the respiratory and circulatory systems, the digestive organs, the nervous system, and the blood, and on infectious diseases. The course, which, according to the programme, is of a highly practical character, is now being given, and will be repeated in May. In this course, in that given by Professor Chauffard at the Hôpital Saint-Antoine, and in another by Professor Vaquez at the Hôpital de la Pitié on diseases of the heart, vessels, and blood, the teaching will be partly in English. Vacation courses will be given at Easter and again in the later part of September on obstetrics and puericulture, at the Clinique Baudelocque by Professor Couvelaire. Clinical courses in English and Spanish will be given in the obstetrical clinic at the Tarnier Hospital in May and June. In addition there are numerous courses in the various specialties. The course at the Medico-Legal Institute is open to foreign graduates; the teaching includes instruction in toxicology and in industrial medicine and surgery. To obtain admission to the various courses certain formalities have to be observed and fees, which are on a very moderate scale, paid. The French law is very stringent, and no one is allowed to practise in France who has not, after taking the *baccalauréat*, gone through the whole medical curriculum in France, and passed the examination for the State diploma. Foreigners are, however, allowed to enter for the diploma of Doctor of Medicine of the University of Paris. It is a purely scientific diploma, and does not confer any of the rights

and privileges which attach to the State diploma. Candidates for this doctorate may be dispensed from attendance at classes and from some of the examinations.

ANTISCORBUTIC VALUE OF COW'S MILK.

In an article continuing the record of their valuable investigations at the Lister Institute on the subject of scurvy, Misses R. E. Barnes and E. M. Hume describe their experiments on the relative antiscorbatic value of fresh, dried, and heated cow's milk.¹ Previous observations had shown that raw cow's milk, though it possesses antiscorbatic properties, is much less valuable in this respect than many raw fruits and vegetables; for example, whereas 1.5 to 10 grams daily of these vegetables will protect guinea-pigs from scurvy on a diet otherwise devoid of all antiscorbatic material, 100 to 150 c.cm. of raw cow's milk was required to give similar protection. As dried milk is being used for the feeding of infants to an increasing extent, and has definite advantages in convenience and in its freedom from the risk of tuberculous and other infections, it is important to determine if its antiscorbatic and nutritive values are lower than those of raw milk. Clinically some infant specialists have never seen scurvy as a result of feeding with dry milk; but Barnes and Hume's experiments on guinea-pigs and young monkeys prove quite definitely that dried milk is markedly deficient in antiscorbatic value as compared with raw cow's milk. Sir T. Barlow ascribed the subperiosteal haemorrhage in infantile scurvy to increased vascularity of the periosteum, but *post-mortem* examinations of slight and incipient scurvy in monkeys suggest that the bone becomes rarefied at an early stage of the disease, and that the blood oozes outwards, presumably from haemorrhage into the bone marrow. Rapidly scalding milk, so as to keep it at a temperature of between 70° and 100° for about five and a half minutes, which is commonly believed to kill the tubercle bacillus, causes comparatively little damage to the antiscorbatic vitamin. No evidence was forthcoming to suggest that the growth-promoting properties of fresh milk suffer any serious damage during the process of drying. An interesting point—also, we believe, observed recently in the Central Empires—is the influence of the cow's fodder on the antiscorbatic value of the milk; in these experiments cow's milk had a higher value in summer than in winter, depending on the difference between fresh herbage on the one hand, and hay, oil-cake, cereals, and roots, especially if the roots are mangolds and not swedes or turnips, on the other hand. Therefore, as cow's milk is a foodstuff of inconstant value as regards its antiscorbatic properties, and as the latter are much reduced by drying, there is good reason for advocating the use of an extra antiscorbatic, such as raw orange juice and raw swede juice, in the dietary of infants fed on dried milk.

THE STATE AND CHRONIC DISEASE

A Chadwick Lecture on the State in relation to chronic disease was given by Dr. R. O. Moon at the house of the Medical Society of London last week. He uttered a warning against the dangers of the specialism which isolated departments of knowledge; political economy and medicine should be regarded as parts of sociology. He thought that too static a view was taken of chronic diseases; their apparent definiteness, fostered by nomenclature, was fallacious. While science analysed the State should integrate. The chronic diseases at present dealt with by the State were insanity and tuberculosis. With regard to the former, he said that there was a great need for hospitals or special houses for borderland cases, and, with regard to the latter, that the exaggerated idea of the infectivity of consumption should be combated, and ample provision made for post-sanatorium treatment of

¹ R. E. Barnes and E. M. Hume, *Biochem. Journ.*, 1919, xiii, 386-394.

tuberculosis. Work similar to that done by employment bureaux for disabled soldiers should be applied to all persons suffering from chronic diseases. There was difficulty in defining what was meant by "light work," and medical men should make themselves familiar with the amount of work involved in various industrial and agricultural occupations. He concluded by pleading for closer co-operation between pension committees, labour exchanges, and the medical profession. After the lecture Sir James Crichton-Browne, who was in the chair, presented a Chadwick gold medal and prize for excellence in municipal engineering and hygiene to Mr. P. S. L. Bovey, a student of University College, London. The medal has been offered annually by the Chadwick trustees for competition by the engineering students of University College for twenty years, and has been awarded in every year but one.

THE TREATMENT OF CHOREA BY THE INJECTION OF HORSE SERUM INTO THE SPINAL THECA.

Among the many forms of treatment that have been applied with greater or less success in chorea is that of Goodman. This consists in drawing 50 c.cm. of the patient's blood, separating the serum, and injecting into the patient's spinal canal after the withdrawal of a somewhat larger amount of spinal fluid; this injection may be repeated from one to four times, and the treatment is reported by Goodman to have given excellent results. It has been modified by Dr. L. Porter, who gives an account¹ of seven patients with chorea treated by the injection of inactivated normal horse serum into the spinal theca. The first four patients received an initial injection of 20 c.cm. half an hour after $\frac{1}{2}$ c.cm. of the same serum had been given subcutaneously in order to test for hypersensitiveness to it. Five of the patients received second injections on the fourth, fifth, or sixth day after the first; two patients received 10 c.cm. only. In each instance an amount of cerebro-spinal fluid greater than that of the subsequent injection of serum was withdrawn; all the cases showed a high intraspinal pressure. Two sets of unpleasant reactions were caused by these injections—prostration, headache, and severe vomiting coming on soon after the operation, and distressing urticaria a week later, readily counteracted by subcutaneous injections of adrenalin. The results of this treatment may be described as encouraging, particularly in the very severe cases; before the serum was used two of the patients could be kept in bed only by the use of restraining packs, but less than forty-eight hours later each was able to carry a cup and drink without the nurse's help, and the emotional overflow was much lessened; while by the end of the third week it was with difficulty that choreic movements could be brought out. In future Dr. Porter intends to use smaller injections of not more than 5 or 10 c.cm., repeated as required. In a discussion that followed the reading of Dr. Porter's paper, Dr. Schloss remarked that twelve cases had been treated with several injections of their own serum intrathecally at Bellevue Hospital with results no better than those obtained by the usual methods; and Dr. La Fétra said that he had discontinued the use of this treatment, adding that he would like to see Dr. Porter's method used more extensively.

INTERNATIONAL HEALTH.

The Office International d'Hygiène Publique was established by international agreement on December 9th, 1907. Thirty-three countries now take a share in the work. They include Great Britain, India, Australia, and Canada; France, Algeria, and French Indo-China; the United States, the Argentine Republic, Brazil, and several other South American States; Turkey and Bulgaria; but not Germany, nor the States into which the Austro-Hungarian empire has been dissected. At a recent session of the

members of the Office, after considering its future relations to the League of Nations—which is required by one of its articles to interest itself in international questions of public health—it resolved to place itself unreservedly at the disposal of the Governments which form the League. The epidemic of typhus in Poland was discussed, and it was reported that the League of Red Cross Societies had sent a medical commission to Poland, which had investigated the measures of precaution and treatment taken on the eastern fronts in the occupation of the Polish armies and in the interior of Poland by the new Polish Ministry of Health.¹ It was found that the military and civil organizations were enlightened and efficient, but were hampered by shortage of food and of hospital and household equipment. The situation is aggravated by the constant movement of refugees and prisoners along the eastern frontier of Poland. The commission formed the opinion that there was serious risk of the spread of the epidemic this winter towards the western parts of Europe, and the League of Red Cross Societies, finding that its means were inadequate to cope with the situation, has brought the report of the medical mission to the notice of different Governments, urging them to render all assistance possible, by the supply of material and personnel.

THE CANADIAN ARMY MEDICAL CORPS.

The work of the Canadian Army Medical Corps in this country has come to an end, and its Director-General H.Q. London, Major-General G. L. Foster, C.B., has returned to Canada. He leaves behind him here many friends, who will not forget the energy, wisdom, and courtesy with which he discharged the difficult duties of the great office he held. The qualities displayed by him as the head of the corps were to us typical of those possessed by every one of its officers. Many names come to mind—Ross, and Birkett, and Rudolf, and Fotheringham, and Andrew Macphail, and John McCrae who died not far from the Flanders fields of which he sang in verse that will live. In the words of the great poet of all of us who dwell by the Seven Seas—

There is some soul of goodness in things evil,
Would men observingly distil it out.

Out of the evil days of the war we have distilled the fragrant memory of the loyal eagerness with which our Canadian comrades gave all they had: and how much it was—good measure, running over.

ROYAL COMMISSION ON OXFORD AND CAMBRIDGE.

In June last Convocation decided that the University of Oxford should apply for a Government grant, or grants, on the conditions stated by the President of the Board of Education—namely, that the University should co-operate with the Government in an inquiry into its whole resources and the use which has been made of them. A similar proposal had been carried at Cambridge. It is announced this week that the King has approved the appointment of Royal Commissioners to consider the applications made by the Universities of Oxford and Cambridge for financial assistance from the State. For this purpose the Commissioners are charged to inquire into the financial resources of the universities and of the colleges and halls therein; into the administration and application of these resources; into the government of the universities; and into the relations of the colleges and halls to the universities and to each other, and to make recommendations. The Commissioners constitute one body, but are authorized to sit for purposes of inquiry in three separate committees—the Oxford Committee, the Cambridge Committee, and the Committee on Estates Management. Mr. Asquith is chairman of the Commission, and of the Oxford Committee. Mr. Gerald Balfour is chairman of the Cambridge Committee, which

¹ *Trans. American Pediatric Society, Lenox, 1918. xxx. 217.*

¹ *BRITISH MEDICAL JOURNAL, November 1st, 1919. p. 555.*

includes two members of the medical profession: Sir Walter Fletcher, F.R.S., secretary of the Medical Research Committee, and Dr. H. K. Anderson, F.R.S., Master of Caius College. Science is represented also on this Committee by Sir Horace Darwin, F.R.S., and Professor Arthur Schuster, secretary of the Royal Society; while Sir Henry Miers, F.R.S., and Professor W. H. Bragg, F.R.S., represent science on the Oxford Committee. The secretary of the Commission is Mr. C. L. Stocks, of the Treasury, and an assistant secretary has been appointed for each of the three Committees—namely, Mr. M. N. Tod, Fellow and Tutor of Oriel College, Oxford; Mr. E. Bullough, Fellow of Caius College, Cambridge; and Mr. C. B. Marshall, member of a firm of solicitors and parliamentary agents. The Oxford and the Cambridge Committee each consists of nine members; the Estates Committee has five members, two of whom have held office in the Surveyors' Institution. The offices of the Commission are at 2, Queen Anne's Gate Buildings, S.W.1.

THE HISTORICAL MEDICAL MUSEUM.

The Wellcome Historical Medical Museum has been reopened, after redecoration and rearrangement of many of the objects. A number of additions have been made: among these is a cast of the statue of Asklepios, excavated at Hadrian's Villa, Tivoli, about a century ago. A Graeco-Roman original full-length figure in marble of the same deity, excavated at Carthage about six years ago, has also been acquired. A microscope made by Edward Culpeper of London in the early part of the eighteenth century is another addition; it is a fine piece of workmanship. The relics of Harvey have been enriched by the addition of a copy of the portrait, believed to be by Jansen, which hangs in the board room of the Canterbury Hospital. The portrait was little known until brought to light by Dr. F. William Cock. He called to it the attention of Lord Northbourne, who had it restored by the same artist as has now painted the replica. One of Zoffany's admirable group portraits, showing Dr. J. Lettson, with his wife and children, in the garden of their house at Grove Hill, Camberwell, has been acquired from a descendant of the family. Various curiosities have been added: among them is a French travelling bath of copper with carved wooden frame, made in the time of Louis XV; an Italian medicine chest, said to date from the sixteenth century; the ivory top of the walking cane used by William Hunter and the walking cane of Edward Jenner, both of which have vinaigrettes; and an Italian bed table and book rest of the seventeenth century, which seems to embody all so-called modern improvements. Dr. Parkes Weber has presented a large collection of old clinical thermometers, through which the history of the instrument can be traced.

SIR DONALD MACALISTER, K.C.B., M.D., F.R.C.P., President of the General Medical Council, has been invested by President Poincaré with the Cross of Commander of the Legion of Honour.

THE Thomas Vicary Lecture of the Royal College of Surgeons of England will be delivered by Sir John Tweedy on Wednesday, December 3rd, at 5 p.m. The subject of the lecture will be "The surgical tradition." The Bradshaw Lecture before the same College will be delivered by Sir Charles A. Ballance, K.C.M.G., on Thursday, December 11th, at 5 p.m. The subject is "The surgery of the heart."

MEMBERS who desire to receive regularly the half-yearly indexes of the JOURNAL, SUPPLEMENT, and EPITOME are invited to send a request to that effect to the Financial Secretary and Business Manager, 429, Strand, London, W.C.2.

Medical Notes in Parliament.

Nurses Registration: Government Bill.

THE bill entitled "Nurses Registration (No. 2) Bill," introduced into the House of Commons by Dr. Addison on November 6th, has now been printed. The measure has been framed by the Minister of Health in fulfilment of a promise he gave last July when the Nurses Registration Bill, introduced as a private measure by Major Barnett, was under consideration on report in the House of Commons. That bill had been drawn up by the Central Committee for the State Registration of Nurses, and was opposed by a number of private members who were in favour of another bill which had been introduced in the House of Lords on behalf of the College of Nursing, Ltd. Dr. Addison then said that the Government had endeavoured to obtain agreement between the various parties interested, but the conferences held had convinced him that this was not possible, and the Government had decided to take up the subject itself. On this understanding Major Barnett withdrew his bill.

The bill now submitted by Dr. Addison provides for the establishment of a General Nursing Council, whose business it shall be to form a register of nurses. The register is to consist of five parts: (a) A general part containing the names of all nurses other than those included in some other part; (b) a supplementary part for male nurses; (c) a supplementary part for mental nurses; (d) a supplementary part for nurses trained in the nursing of sick children; and (e) any other prescribed part. The Council is to make rules for administration. Under these rules it shall be provided, as a condition of admission to the register, that the entrant shall have undergone the prescribed training, and shall possess the prescribed experience; the prescribed training to be in an institution approved by the Council or in the service of the Admiralty, the Army Council, or the Air Council; there is also a provision to enable existing nurses to be registered within two years after the rules operate subject to evidence that such nurses are of good character, are the prescribed age, are persons who for three years before November 1st, 1919, were bona fide engaged in practice as nurses, and have adequate knowledge and experience as nurses. Rules under this section are not to operate until approved by the Minister of Health. Every rule under the section is to be laid before Parliament, and if an address is presented by either House within twenty-one days afterwards praying that the rule be annulled, His Majesty in Council may annul it.

The bill provides also for the appointment of staff at such salaries as the Council may determine, subject to the approval of the Minister of Health. The expenses allowable for administration are to be subject to directions to be given by the Minister of Health.

The fee for examination or registration is to be determined by the Council, but that for existing nurses shall not exceed one guinea for registration; the amount payable for retaining a name on a register shall not exceed 2s. 6d. a year.

Any person satisfying the Council that he or she has been registered as a nurse in any part of the Dominions outside the United Kingdom, to which this section applies, is to be entitled to demand registration. The section will apply to such Dominions as have similar standards of training and examination for registration.

Any person aggrieved by the removal of his or her name from the Register may within three months from the date of notice appeal against the removal in the manner provided by rules of the High Court, but there shall be no appeal to any higher court.

Any person aggrieved by the refusal of the Council to approve any institution for the purposes of the rules under the bill relating to training may appeal against the refusal to the Minister of Health.

The penalties for unlawful assumption of the title of registered nurse and for falsification of register are set forth as under: For unlawful assumption of title of registered nurse a fine not exceeding in the case of a first offence £10, and in the case of a second or any subsequent offence £50; for falsification of register a fine not exceeding £100, the offence to be deemed a misdemeanour.

The constitution of the Council is set out in a schedule. It is to consist of twenty-five members. On its first constitution the Council is to be composed of the following persons:

Two persons, who shall not be registered medical practitioners, or nurses, or persons concerned with the regular direction or provision of the services of nurses, appointed by the Privy Council.

Two persons appointed by the Board of Education.

Five persons appointed by the Minister of Health, after consultation with persons and bodies having special knowledge and experience of training schools for nurses, of the work of matrons of hospitals, of general and special nursing services, and of general and special medical practice.

Sixteen persons who are or have at some time been nurses actually engaged in rendering services in direct connexion with the nursing of the sick, appointed by the Minister of Health after consultation with the Central Committee for the State Registration of Nurses, the College of Nursing, the Royal British Nurses Association, and such other associations or

organized bodies of nurses or matrons as represent to the Minister that they desire to be consulted in the matter.

The first members of the Council are to hold office for such term not exceeding three years from the commencement of the Act as the Minister of Health shall determine. After the expiration of the term of office of the first members of the Council, the Council is to be composed of nine persons appointed respectively by the Privy Council, the Board of Education, and the Minister of Health, and of sixteen persons, registered as nurses under this Act, elected in accordance with the prescribed scheme and in the prescribed manner by the persons so registered at the date of election. Members of the Council other than the first members are to hold office for the term of five years. Vacancies are to be filled by appointment by the body or person by whom the members retiring were appointed.

The bill was read a second time on November 18th.

Rats and Mice Bill.—The Rats and Mice (Destruction) Bill was read a second time in the House of Lords on November 11th, on the motion of Lord Lee of Fareham. He recalled that the damage done by rats and mice annually in this country was estimated to amount to forty million sterling, that the number of rats was at least equal to one per head of the population of these islands, and that ten rats between them consumed as much breadstuff as a man and his wife under the bread ration.

Demobilization of Medical Practitioners.—Dr. Farquharson, on November 12th, asked the Secretary of State for War what was the total number of medical practitioners demobilized since April 1st, 1919. Mr. Churchill replied that the number of medical officers demobilized since April 1st, 1919, was 4,823. Dr. Farquharson then asked how many medical practitioners holding temporary commissions in the Royal Army Medical Corps, T.F., and the Royal Army Medical Corps, S.R., respectively were still detained under the terms of their contracts in Mesopotamia, India, and Egypt respectively; and whether the numbers given included any officers in respect of whom special recommendation had been made for early release by the Ministry of National Service prior to April, 1919. Mr. Churchill said he was not in a position to give separate figures for the several categories of officers referred to in the first part of the question, but the total figures were: Mesopotamia, 173; India, 152; Egypt, 244. These totals included the following, in respect of whom a special recommendation for early release was received from the Ministry of National Service prior to April, 1919:

	Temporary Commissions.	Territorial Force.	Special Reserve.
Mesopotamia	9	—	1
India	12	1	2
Egypt	5	2	1

The figures were only approximate, as a large number of officers were at present embarking for the United Kingdom from the countries in question.

Civil Employment of Demobilized Medical Officers.—Brigadier-General Croft asked, on November 17th, whether the attention of the War Secretary had been called to the fact that there were numerous medical officers who by joining the army sacrificed their practices; and whether steps were being taken to ensure that employment as far as possible should be given to demobilized temporary medical officers. Mr. Churchill replied that every sympathy had been shown to the officers referred to. Some time ago instructions were issued to military commands that when the part-time services of civil medical practitioners were required every effort should be made to employ those demobilized officers who had served overseas. He understood also from the Ministry of Health that endeavours were made to give preference, as far as possible, to ex-service candidates for appointments under local authorities. Brigadier-General Croft asked whether certain orders had been issued for giving demobilized temporary medical officers preference in Government medical work; and, if so, whether they were being carried out by all Government departments concerned. Mr. Churchill said he could add nothing to what he had said. Sir Worthington-Evans, on a similar question, repeated that in making appointments of medical men to positions under the Ministry of Pensions it was the practice to give preference to doctors who had served abroad during the war.

Furlough for Medical Officers in Mesopotamia.—Mr. Perkins, on November 17th, asked whether it was the case that several regular officers of the Indian Medical Service now in Mesopotamia had served there continuously for four hot seasons and that some of them had not been on furlough for nine years. Mr. Montagu (Secretary for India) said he was afraid that leave was overdue for a number of officers of the Indian Medical Service. This unfortunate state of affairs, to remedy which no effort was being spared, was not peculiar to Mesopotamia. As to Indian Medical Service officers in civil employ in Mesopotamia, it was hoped to replace them from home before very long.

Medical Inspection of School Children.—In a written reply to Mr. T. Thomson, on November 17th, Dr. Addison stated that he was informed that medical inspection in public elementary schools was fully maintained throughout the war in more than two-thirds of the areas of local education authorities. In the remaining areas where the provision had to be temporarily restricted they were now being rapidly restored as the requisite staffs were obtained. In the circumstances no special instruction appeared necessary. Section 18 of the Education Act was

brought into operation on August 8th, 1918, except in so far as it imposed a duty. The present intention was to bring it into full operation on April 1st, 1920.

The High Price of Milk.—Mr. Doyle asked the Minister of Food, on November 13th, if, in view of the hardship and injury caused to children of tender age by the high price of milk, he was prepared to consider a proposal that the price should be reduced to parents who could produce certificates that they had children under the age of 10; and whether he would issue instructions to the local authorities to deal more drastically with short measure. Mr. Roberts reminded Mr. Doyle that under arrangements already made necessitous mothers and children under 5 years of age were able to obtain milk at reduced prices, but he was willing to consider, in consultation with the Minister of Health, any practical proposal on the lines suggested. Drastic action was being taken in regard to short measure and a number of prosecutions were pending.

Medical Referees.—Mr. R. Young asked the Minister of Pensions if the War Pensions Committee for Hastings were appointing additional doctors to act as medical referees; whether in these appointments he would advise that priority be given to doctors who had served in the services abroad and whose practices had thereby suffered, and that in those cases where the doctor was not on the panel under the National Insurance Acts this would be favourably considered as an additional reason for appointment, provided that in all cases the medical qualifications were equal to those of other applicants. Sir L. Worthington-Evans, in a written reply, stated that the answer to the first part of the question was in the negative. Local committees were not, in fact, empowered to appoint medical referees. It was the practice of the Ministry to give preference to medical men who had served abroad, with a second preference to medical men who had served at home, and subject to those preferences to appoint men who had not served, and amongst them doctors not on the panel were preferred as likely to be able to devote more time to the work.

The Training of Disabled Men.—Mr. Hayday asked, on November 12th, whether the Minister of Labour was aware that since August 1st last the Shepherd's Bush Local Employment Committee had submitted the names of 171 disabled men for training, and that up to date only two had been able to begin. Sir Robert Horne said the facts appeared to be as stated. The cause of delay was the insufficiency of training accommodation. Every effort had been and was being made to increase as rapidly as possible the facilities available.

Discharged Service Men in Public Lunatic Asylums.—In reply to Lieut.-Colonel Chilcott, on November 12th, Sir James Craig (Parliamentary Secretary, Ministry of Pensions) said that service men in public asylums were not classed as "pauper lunatics," but as "service patients." As such they were entitled to the privileges of private patients, the cost of their maintenance and of the special privileges accorded to them being borne by the Ministry of Pensions. It was not considered that the provision of separate institutions was practicable, nor was it expedient, having regard to the desirability of placing patients where their friends could visit them.

Disability Pensions Bonus.—Sir L. Worthington-Evans, in answer to Brigadier General Colvin, on November 17th, stated that in the case of men the 20 per cent. disability pension bonus was now merged in the higher rates of pension which took effect from September 3rd last. In the case of officers the rate of disability retired pay had not been revised pending the further report of the Select Committee, but the Government had decided that the 20 per cent. bonus should cease to be a temporary addition and should form an integral part of the retired pay of temporary officers for the next three years.

Weekly Cost of Maintenance of Paupers, Convicts and Lunatics.—In reply to Mr. Charles White, Mr. Baldwin, on November 12th, gave the following information as to the average weekly cost for the years ending March 31st, 1914, and March 31st, 1919:

	1914.	1919.	Increase.
	s. d.	£ s. d.	s. d.
Paupers	10 0	1 0 6	10 6
Convicted prisoners ...	14 5	1 17 10	16 5
Pauper lunatics	10 9½	0 16 8½	5 11

Similar figures for persons sentenced to penal servitude were: 1914, 18s. 2d.; 1919, £2 2s. 9d.; increase, £1 4s. 7d.

Taxable Income in the United Kingdom.—Mr. Chamberlain, in reply to Mr. Haslam, on November 13th, has circulated the following table as to the taxable income in the United Kingdom:

Year 1918-19.			
Individuals with Income.	Aggregate Taxable Income.	Per cent. of Taxable Income paid in Income Tax and Super Tax.	Balance of Taxable Income after Deducting Income Tax and Super Tax.
	£	Per cent.	£
Exceeding £130 and not exceeding £2,500	1,327,700,000	8.2	1,218,276,000
Exceeding £2,500 ...	417,300,000	39.2	253,908,000

THE DARDANELLES EXPEDITION.

THE MEDICAL ARRANGEMENTS.

THE second and final part of the report of the Dardanelles Commission was published unexpectedly on Monday, November 17th. The first part of the report was presented in February, 1917, and dealt mainly with the higher organization—the War Council, the Admiralty, and the War Office—and with the results of the operations down to March 23rd, 1915. The Commission was appointed by Act of Parliament to inquire into the conduct of operations of war in the Dardanelles and Gallipoli, including the supply of troops, ammunition and equipment, the provision for the sick and wounded, and the responsibility of the various Government departments concerned. The first report did not deal with medical arrangements, but the second, which was signed on December 14th, 1917, discusses them at some length.

The medical arrangements were under the control of Surgeon-General Birrell from March 15th, 1915, to the later part of August, when he was succeeded by Surgeon-General Bedford. Surgeon-General Sir William Babbie was appointed Principal Director of Medical Services in the Mediterranean in May, 1915, and exercised general supervision over all the medical arrangements for the Mediterranean Expeditionary Force. Surgeon-General Birrell reached Alexandria on April 1st, 1915, but did not arrive at Mudros until April 18th, his representative in the interval being Lieut.-Colonel Keble. It is to the credit of Colonel Keble that he refused to accept an estimate of 3,000 casualties made by the general staff, and drew up a scheme of evacuation, subsequently endorsed by Surgeon-General Birrell, based upon an estimate of 10,000 casualties. The scheme provided for the accommodation of 1,995 serious cases on regular hospital ships, or, at a pinch, 2,409 cases, and for 7,300 not seriously wounded, or a grand total of 9,709. It appears that though at the time of the landing there was accommodation for the estimated number of serious cases in the hospital ships, the transports also allotted for the reception of wounded were not provided with the necessary appliances. The Commission is of opinion that in the actual circumstances of the landing the supply of hospital ships was insufficient, but the instructions given to Sir Ian Hamilton by the Secretary of State for War did not contemplate a landing, and therefore Surgeon-General Birrell had no opportunity of adapting his requirements to what actually happened. The Commission, however, thinks that if the administrative staff had accompanied General Head Quarters to Mudros the D.M.S. would have been in a better position to inform himself of the probable operations and to estimate the consequent requirements. Even when the intention to make a landing became known to him, however, he shared the assumption of the general staff that a considerable advance would be made, and that it would therefore be possible to collect and treat the wounded on shore. This expectation was not fulfilled.

Unfortunately the number of hospital ships, and even of hospital carriers, was very insufficient, and owing partly to the difficulty of sorting cases, a large number of serious cases were taken to the transports (black ships), which were only equipped for light cases. The condition of the transports appears to have been extremely bad for about a month after April 25th; many were very dirty and some were carrying horses. As it was impossible to land them the horses and the wounded travelled to Alexandria on the same ship. There was also great deficiency in the medical staff, and this seems to have continued, for it would appear that on June 29th the *Saturnia*, filled with wounded, had no medical officer until she was boarded on their own initiative by several. This story is denied, but the denial is not accepted by Sir Thomas Mackenzie. Here, as in many other parts, the report is difficult to follow. The general conclusions of the Commission are summarized in the following paragraphs:

23. The provision for the evacuation of the wounded, especially in the matter of hospital ships, proved insufficient to meet the emergencies which actually arose. We think that, if the operations to be undertaken in landing on the peninsula had been considered before the expedition started and a general plan prepared, further provision of hospital ships might, and probably would, have been made.

24. We do not think that the Director of Medical Services, Surgeon-General Birrell, before leaving England had any opportunity of estimating the number of hospital ships required, as he did not know what operations were contemplated.

25. We think that the separation of the Administrative Staff, including the Deputy Adjutant-General and Director of Medical Services, from the rest of the Head Quarters Staff during the time immediately preceding the landing was a mistake, and

that it would have been better if the Director of Medical Services had been kept more fully informed of the operations which were proposed. The time was very short in which to make preparations, and we doubt if it was then possible to obtain a sufficient number of hospital ships to accommodate the casualties which actually occurred. If Surgeon-General Birrell had been able to discuss matters with the General Staff he might have seen the necessity of, and been able to obtain, a fuller supply of appliances and equipment for the transports.

We think, however, that it would have been well if while in Egypt, where he was arranging for hospital accommodation on a large scale, he had made requisition for appliances such as would probably be required for even the less serious cases on the transports, such as bed-pans, blankets, pillows, and clothing. We recognize, however, that at that time he was separated from General Head Quarters, and therefore not possessed of adequate information as to the intended operations.

26. The scheme of evacuation drawn up by the Director of Medical Services was based on an estimate of casualties which was approximately correct, and would probably have worked satisfactorily if the anticipation of a rapid advance after the landing had been fulfilled. The failure of the scheme was mainly due to the fact that no substantial advance was effected, and that no hospitals could therefore be established on the land. This necessitated the immediate evacuation by sea of all casualties without any possibility of separating the serious cases from those of a slighter nature. The transports or black ships were therefore used for cases for which they were not intended, and for which they were not adequately staffed or equipped.

In these circumstances the greater part of the sufferings of the wounded in the first days after the landing seem to us to have been inevitable, but there appears to have been some want of organization in the control of the boats and barges carrying wounded to the hospital ships and transports, which occasioned delay in their embarkation.

27. For the dislocation of the arrangements for evacuation, owing to the non-fulfilment of the expectations of the military authorities, the Director of Medical Services cannot be held responsible. He could not do otherwise than be guided by the views entertained by the Commander-in-Chief, and conveyed to the latter's subordinates in the operation orders and instructions for the landings issued by General Head Quarters. It may, indeed, be contended that a prudent administrator, even though assured by superior military authority of the probability of success, would do well not to leave out of account the possibility of failure, but to be prepared alike for either contingency demands a flexibility of organization and an adaptability of resources which in war are seldom attainable.

28. After the first two or three weeks, until the heavy fighting in August, there was an improvement in the condition of the transports, though some of them continued to be unsatisfactory. The transports required close supervision, which was, however, much hampered by the want of means of communication between the several ships and the ships and shore.

29. The scheme for the evacuation of the wounded in the August operations was based upon an approximately correct estimate of casualties, and the supply of hospital ships was much larger than at the first landing. On the whole, this scheme worked well, though again there were cases in which the transports were not satisfactory, and the organization for transferring the wounded to the ships was imperfect.

30. After the middle of May the evacuation was made more difficult by the presence of enemy submarines. The transports were then unable to come to the beaches, the wounded being conveyed to them on trawlers and mine-sweepers, some of which were not suitable for their accommodation.

31. The field ambulances and clearing stations were, on the whole, efficient, considering the great difficulties under which the work in them had to be done.

32. The executive work of the medical officers and staff of the Royal Army Medical Corps and the Dominion Forces, and of the physicians and surgeons who placed their services at the disposal of the War Office, was performed with great energy, courage, and skill under very trying conditions.

33. The supply of medicines and other medical requisites was, on the whole, adequate, though at times there was a shortage of some drugs at some places. The food also was on the whole satisfactory, but at times it was not possible to give the sick and wounded all the variety of food which was desired, and at times the supply of water was insufficient.

34. The difficulties under which the evacuation of the wounded was carried out, especially in the early part of the operations, were exceptional and not easily surmountable. We think that in some cases there was a want of organization and supervision. The Director of Medical Services, Surgeon-General Birrell, did his best; we are of opinion, however, that he was not equal to the task of grappling with the exceptional conditions which arose.

35. Great help was given by the naval surgeons on the transports as well as on the trawlers and sweepers, and they were always ready to do everything in their power. It was not, however, possible to employ them on the transports during their voyage to Alexandria or Malta, as they could not leave their ships for an indefinite time. The naval officers concerned in the evacuation of the wounded gave every assistance and rendered excellent service.

The Anzac View.

Sir Thomas Mackenzie, who signs the general report, publishes also a supplementary report. Dealing with medical

matters, he says that the arrangements for the transport of the wounded were in a very unsatisfactory state until August, 1915. He expresses the opinion that the medical side of the campaign had never been thoroughly thought out. (He says the same of the War Office and military side.) Treatment of the wounded on the Gallipoli peninsula was, he says, as satisfactory as circumstances permitted, but many of the complaints as to the transport of men to the ships and overseas were justifiable. Though the medical authorities were informed that the military authorities expected the Turks to be driven back, so that room could be made for establishing hospitals ashore, provision ought also to have been made for the contingency of failure. Hospital ships were insufficient; troopships had to be converted into carriers and ambulance vessels, and were insufficiently staffed. The medical personnel did their utmost, but some of the wounded men had to shift for themselves. On some of the black ships the wounded were exposed to the sun and heat, without food or drink, for sixty or seventy hours. There was a shortage of equipment and supplies, and the sanitary arrangements on the converted trawlers were lamentably deficient.

That the medical arrangements, Sir Thomas Mackenzie continues, must have been inadequate and the organization seriously defective is confirmed by the fact that Surgeon-General Howse, V.C. (Major-General Sir Neville Howse, D.M.S. Australian Imperial Force), was impelled to give the following matured opinion:

That he personally would recommend his Government, when this war is over, under no conceivable conditions to trust the medical arrangements that may be made by the imperial authorities for the care of the Australian sick and wounded.

Upon this Sir Thomas Mackenzie observes: "This is doubtless a strongly expressed view, and I think it is beyond question that a great improvement has been brought about since that time; but it is impossible to hold Surgeon-General Birrell free from a great deal of responsibility for the serious condition of affairs to which Surgeon-General Howse and other witnesses drew attention."

The general impression left by the report is unfavourable. It seems clear that whatever the merits, from the larger strategical point of view, of the attempt to seize the Gallipoli peninsula, the possibilities of success were destroyed by the hesitations of the Secretary of State for War and his advisers, and by their failure to form any coherent plan which could be consistently carried out by the officers on the spot. This uncertainty, as is always the case, inevitably reacted with exceptional force on the medical arrangements. Whatever the faults of the late Surgeon-General Birrell—and we believe that he failed to grip the situation—it would have needed a man of very exceptional capacity, prepared to incur the opposition of his military superiors, to have carried through plans that would have provided adequately for what actually happened—failure to occupy more than a narrow edge of the southern part of the peninsula of Gallipoli.

England and Wales.

TRAINING OF MIDWIVES.

THE Board of Education has issued draft Regulations proposed to be made for the training of midwives. They provide that a recognized institution shall be entitled to a grant of £20 for each student who completes a course of instruction which has been approved by the Board. The curriculum is to be prescribed by the Central Midwives Board, and it is satisfactory to learn that it is to include such subjects as the hygiene of pregnancy, the management of the infant, the encouragement of breast-feeding, the hand-feeding of infants, and elementary hygiene, personal, domestic, and general. Before a grant can be claimed for a particular student she must have been for three years at least in full time employment as a health visitor, or have completed successfully an approved course of training for health visitors, or she must sign a declaration that it is her bona-fide intention to practise as a midwife. In a circular (No. 10) from the Ministry of Health which accompanies these draft Regulations reference is made to the extreme importance of increasing the number of practising midwives, and local authorities are reminded that they can give adequate subsidies to midwives under maternity and child welfare schemes in those areas in

which there is not sufficient employment to afford a midwife a proper livelihood. One half of such subsidies may be reimbursed by grants from the Ministry.

CENTRAL MIDWIVES BOARD.

At a meeting of the Central Midwives Board held on November 12th, Professor Briggs presiding, the principal decisions arrived at arising out of the report of the Standing Committee were:

That, provided a separate block and a separate staff of nurses are maintained, the Board sees no objection to the proposal of the medical superintendent of the Kensington Union Infirmary to treat cases of pregnant women suffering from venereal disease in the infirmary.

Any institution which contemplates training pupil midwives for the certificate of the Central Midwives Board should communicate its intentions before it invites or receives pupils. If it fails to do so and trains pupils, it renders itself liable to difficulties with pupils so accepted in the event of the refusal of recognition by the Board. If it notifies to the Board its intention of training, the Board may (if it thinks all the arrangements promise well) advise the institution to commence or to continue training, and to reapply at a later date. When this second application is made, the Board may (if it is satisfied as to the training) recognize the training carried on since the commencement.

A penal cases meeting was held on November 13th, with Sir Francis Champneys in the chair. The principal charges against the seven midwives cited were those of neglect of ophthalmia neonatorum or puerperal fever, and failure to notify. Five of the midwives were struck off the roll, one was cautioned, and in the last case sentence was postponed.

HEALTH OF LIVERPOOL.

The greatly increased death rate in Liverpool from 16.7 per 1,000 in 1917 to 19.5 in 1918 is attributed by Dr. E. W. Hope to the outbreak of influenza, which was, he states, the severest outbreak of the disease ever known in Liverpool. Neither age, sex, social position, nor the physical state of the patient afforded protection against it; the number of deaths recorded as due to it was 1,388. The restrictions upon the sale of alcoholic liquor was again accompanied by a decline in the mortality from excessive drinking, the decline being most marked in the case of women. This decline is associated with a diminution of destitution, child neglect, violence, and disorder. Dr. Hope states that considerable success has attended the venereal disease clinics which have been established at five different hospitals or institutions in Liverpool. He holds, however, that further legislation is necessary if an adequate return is to be obtained for the time and money spent on the scheme. He considers that a great defect is that no compulsion can be exercised on patients to complete their cure, so that large numbers of them give up treatment when the local manifestations of the disease have subsided and they are in comparative comfort. The suspension of building operations during the war years has seriously affected the housing conditions in Liverpool as elsewhere. This is evident from the bare but eloquent statement that while in December, 1914, there were 2,270 unoccupied houses, there were in December, 1918, only 375. It is estimated that at least 6,000 dwellings will be required before the needs of the working-class population are satisfied.

CONTROL OF MASSAGE ESTABLISHMENTS IN LONDON.

The Public Control Committee of the London County Council has decided that application should be made to Parliament next session for additional powers of control over establishments for massage or special treatment. Cases that under the present system of registration cannot be controlled have come to the notice of the Committee of registered persons having unsuitable associates, women carrying on business for persons of doubtful character, women immodestly attired when giving body massage to male patients, and the extension of registered manicure business to include body massage in unsuitable premises. In some establishments, also, the assistants possess certificates which are easily and quickly obtained after insufficient training. The proposals of the Committee are that annual licensing should be established, and that the licensing authority shall have power to refuse or revoke a licence on any one of a number of specified grounds, one of which is that a person giving massage or special treatment does not hold the certificate of either the Incorporated Society of Trained Masseuses or of some approved public hospital or teaching

school. A further provision to be included in the suggested legislation is that no massage or special treatment beyond that specified in the form of application shall be given except with the consent of the Council.

REUNION DINNER IN NOTTINGHAM.

Tribute to the late Captain L. Moysey, R.A.M.C.

On November 13th a most successful dinner was given by the doctors of Nottingham and Notts to those of their colleagues who had served during the war. About 120 sat down at the Victoria Hotel, with Mr. A. R. Anderson, F.R.C.S., in the chair.

In proposing the health of the guests the chairman cordially welcomed them back and proceeded:

The medical profession during the war has suffered severe losses both on land and sea, but we have been very fortunate, because of all the number of our men who left Nottingham and the district, only one lost his life on active service, Lewis Moysey, whose untimely death we so deeply regret, and I feel that I cannot, and ought not, to allow this occasion to pass without reference to him. Although Moysey played the part and died the death of a hero, it seemed to me that he disappeared amid the fog and turmoil of the war with as little notice as a leaf now falling from the trees, yet he was conspicuous among men in many respects. He was educated at Lepton, Cambridge, and St. George's Hospital, and began practice in Nottingham in 1900, and remained there until he went to the war. But although he continued his medical career he was much better known as a geologist than as a doctor. Geology was his hobby, and to it he devoted most of his spare time. He might be described as a geological specialist. He had a museum at his house which had acquired a wide reputation in geological circles, and had been several times visited by experts from the British Museum. He had written a book on *The Fossils of the Notts and Derby Coal Field*. He first described a fossil which bears his name and which has found a home in the British Museum. He was a Fellow of the Geological Society. There can be no doubt that had Moysey attained the same eminence in medicine that he did in geology he would have stood in the very front rank of the profession. In addition to this he was a distinguished sportsman. He was one of the best, if not the best, figure skaters in England. He won the medal in the first class at St. Moritz, and was selected to give an exhibition of figure skating before the late King Edward. He was a well known tennis player, a good cricketer, a fair shot, and a keen fisherman. When the war broke out Moysey was over military age, but after repeated applications, which were at first unsuccessful on this account, he obtained a commission at the end of 1914. He served in England, and after many endeavours to get to the front, he was appointed to a hospital ship in 1917. His ship, the *Glenart Castle*, was torpedoed in the Bristol Channel on the night of February 26th, 1918, when he lost his life by drowning. In addition to his other accomplishments, he was known to be a strong swimmer; probably he went down while endeavouring to save others. He left a widow but no children. Let us then do homage this evening to the memory of this all-round sportsman, of this learned and honourable and gallant gentleman, who never hesitated for a moment when his country called, and who gave up his life in its service.

Mr. Anderson dwelt for a few moments on the arduous time those who remained went through, but pointed out that this had no comparison with the dangers and trials of those guests who had served abroad. In proposing their healths he wished them all success on returning to their civilian duties. Colonel Herbert, I.M.S., in briefly responding, thanked the hosts for the splendid way in which they had combined to keep together the practices of the absentees. A well-organized musical evening terminated what was voted by one and all to have been the most successful and enjoyable medical dinner ever held in Nottingham.

Scotland.

HONORARY FELLOWS OF THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

FROM the date of its Royal Incorporation in 1681 down to the beginning of the nineteenth century the Royal College of Physicians of Edinburgh followed the practice of occasionally electing honorary Fellows. From the first the honorary roll contained the names of laymen as well as doctors. One of the last persons to receive the honour (then called the honorary membership) was Dr. Edward Jenner, the discoverer of vaccination. The Fellows some months ago decided to signalize the coming of peace and their admiration of the valour and humanity of the allied

forces by offering the honorary fellowship to certain eminent persons in recognition of their distinguished service during the long struggle.

The Honorary Fellowship has now been offered to and accepted by the following:

Earl Batty.
Mr. Henry P. Davison, chairman of American Red-Cross.
Marshal Ferdinand Foch.
Viscount Grey of Falloden.
Earl Haig.
Professor A. Laveran, member of the Academy of Medicine, Paris.
Professor Marchiafava, vice-president of the Italian Red Cross, Rome.
Burgomaster Max of Brussels.
Cardinal Mercier, Belgium.
General Pershing, G.C.B., commander-in-chief of the U.S.A. forces.
Professor Roux, director of the Institut Pasteur, Paris.
General Smuts.
The Hon. Sir Arthur Stanley, G.B.E., chairman Joint War Committee, British Red Cross and the Order of St. John.
Professor William H. Welch, M.D., LL.D., director of the School of Hygiene and Public Health, Johns Hopkins University, Baltimore.

After the declaration of peace the Prince of Wales was elected the first Honorary Fellow and accepted the invitation.

SCOTTISH TEMPERANCE ACT.

The position of Scotland with regard to liquor control in the future is peculiar inasmuch as the Temperance (Scotland) Act, 1913, comes into force on the first day of next June. The Act is designed to "promote temperance in Scotland by conferring on the electors in prescribed areas control over the grant and renewal of certificates, by securing a later hour of opening for licensed premises, and by amending the law relating to clubs; and by other provisions incidental thereto."

Under this Act one-tenth of the number of local government electors in the areas into which Scotland is divided may demand a poll by ballot at which the electors will be invited to vote for one or other of the following three resolutions:

1. *No-Change Resolution* (means that the powers and discretion of the licensing court shall remain unchanged).
2. *Limiting Resolution* (means that the number of certificates for the sale of exciseable liquors shall be reduced by one-quarter in accordance with the provisions of the Act).
3. *No-Licence Resolution* (means that no certificate for the sale of exciseable liquors shall be granted except for inns and hotels or restaurants in special cases in accordance with the provisions of the Act).

A no-licence resolution will be deemed to be carried if 55 per cent. of the votes recorded are in favour of it, and not less than 35 per cent. of the electors on the register for the area have voted in favour of it. If a majority of the votes recorded are in favour of a limiting resolution, and not less than 35 per cent. of the electors vote in favour of it, the resolution will be deemed to be carried; but if a no-licence resolution be not carried, the votes recorded in favour of it will be added to those recorded in favour of the limiting resolution. Finally, if a majority of the votes recorded are in favour of a no-change resolution, or if no other resolution be carried, a no-change resolution will be deemed to be carried. While a no-licence resolution remains in force in any area no certificate will be granted therein, except that the licensing court may at its discretion, after inquiry, grant one or more certificates for an inn and hotel or for premises used as a restaurant. Any certificate so granted will be deemed to include the conditions that there shall be on the certificated premises no drinking bars, or other part mainly or exclusively used for the sale or consumption of exciseable liquors; that such liquors shall be sold by retail only, and only to persons lodging or residing in the house or taking a meal on the premises of the restaurant, or, if the court so sanctions, of the inn or hotel, for consumption with such meal.

The alterations with regard to clubs are matters of detail mainly concerned with extending and defining the grounds on which objections to the continuance of a certificate may be made. A requisition for a poll must be lodged during the month of September in any year with the clerk of the local authority, and the poll may be taken on any day (not a market day) the local authority may fix in the following November or December. Those in favour of total prohibition will no doubt make a great effort to

have resolutions to that effect carried; but *Blackwood's Magazine* for this month contains a rather remarkable article, entitled "A Woman—to Women," in which the writer, who is clearly in favour of total prohibition, states that "there seems to be an almost universal consensus of opinion in Scotland that it cannot be carried." The writer therefore makes an appeal to the women of Scotland to use their influence to induce Parliament to amend the bill by adding a fourth choice, which is State purchase. She relies mainly on the work of the Liquor Control Board, and especially on the success of the Carlisle experiment, as to which Dr. Henry Barnes has kept readers of the *BRITISH MEDICAL JOURNAL* so fully informed.

THE INFLUENZA EPIDEMICS IN SCOTLAND.

Dr. J. C. Dunlop, Superintendent of Statistics, has issued a special report on the mortality of Scotland during the prevalence of the epidemic of influenza in 1918-19 (H.M. Stationery Office, Cmd. 282). In all, 17,575 deaths were registered with respect to which influenza was one of the alleged causes. The previous maximum was in 1900 (2,326). As a cause of mortality, the late epidemic was the greatest in the statistical experience of Scotland. Scarlet fever in 1874-75, with 11,041 deaths, is a bad second. As elsewhere, deaths from influenza underestimate the real toll of the epidemic, and the excess mortality probably attributable to the disease was, at a maximum, 26,199, a moderate estimate being 22,000 deaths. In the principal towns the influenza death rate varied from 5.3 per 1,000 in Edinburgh and in Coatbridge to 3.2 in Aberdeen, 3.1 in Motherwell and in Kilmarnock. The times of attaining the maximum of mortality were various. Of the 16 principal towns, 4 reached their maxima in October, 1918 (Coatbridge, Motherwell, Hamilton, and Clydebank), 5 in November (Dundee, Aberdeen, Perth, Kirkcaldy, and Kilmarnock), 3 in February, 1919 (Edinburgh, Paisley, Lenth), and 4 in March (Glasgow, Greenock, Falkirk, Ayr).

The age distribution of deaths shows the same peculiarities as have been remarked in other countries. 34.96 per cent. of the total deaths occurred in the age group 25-45, while in 1900 only 10.22 per cent. of the mortality was so distributed. The crest of the autumn wave was higher than that of the winter one so far as influenza is concerned, but bronchitis and pneumonia were more fatal in the winter.

One is tempted to suppose that the relatively greater mortality in Scotland during the third wave was due to climatic conditions, but that the gross mortality of an influenza epidemic is not necessarily greater under northern skies is proved by the experience of Italy, which seems to have suffered more than this country.

In forecasting the future, we should bear in mind that, as Creighton remarked, 1889-90 opened a new chapter in the history of influenza, a chapter which we have no reason to suppose ended last spring. Prior to 1883 pandemics, although often occurring in groups, were spaced out, twenty or more years separating the groups. Since 1889 the intervals have been much shorter. Thus in Scotland there were more than 1,000 deaths from influenza in twelve of the years between 1890 and 1909. The present is not the time for discussing the general epidemiological problem involved, but it may be remarked that if, as some hold, an important factor is the increasing congestion of railways, tubes and omnibuses which has characterized the last few years, then the state of affairs arising out of a railway strike, with the consequent overcrowding of what public transport is available, should be viewed with misgiving.

58TH GENERAL HOSPITAL DINNER.

The first annual reunion dinner of the officers of the 58th General Scottish Hospital was held in Edinburgh on October 24th, some twenty members of the mess gathering together at the Caledonian Hotel. There were many joyful greetings and memories of happy times spent in France when the hospital was encamped at St. Omer. Colonel G. D. Graham expressed himself in warm terms at seeing so many of his old officers around him once again. He recalled the many difficulties which he as Commanding Officer and his staff had had in the course of their duties while at St. Omer, and though there were painful recollec-

tions of the bombing period there were many happy ones reminiscent of the loyalty and perseverance of his staff in making the hospital a real success.

Colonel Mackintosh, who represented the medical side of the hospital, spoke in glowing terms of Colonel Graham, who was loved by the officers under him and by the patients. Colonel Mackintosh spoke in high praise also of the nursing staff. Major Scot Skirving (the mess president), in a humorous speech, related many happy incidents which had occurred in the mess.

Colonel Grant Andrew, who had shown great zeal and originality in organizing the surgical work of the hospital and bringing it to a high standard of efficiency, referred to the smooth running of the administrative side of the hospital, due to the ability and co-operation of Colonel Graham on the one hand and the perfect unison of the junior staff on the other.

After the loyal toasts had been honoured, Colonel Graham returned thanks for all the kind compliments paid him. The assembly broke up with the singing of "Auld Lang Syne," and in the hope that all would be able to meet next year in Glasgow to celebrate the second reunion. The arrangements for the dinner, which were most successful, were made by Lieutenant J. L. Green.

Ireland.

IRISH PUBLIC HEALTH COUNCIL.

THE Irish Public Health Council at its last meeting, when Dr. E. Coey Bigger, Chairman, presided, had before it the heads of a draft scheme for a comprehensive health measure for Ireland, the further consideration of which was adjourned until the next meeting.

The council decided to recommend the removal of the existing statutory limit in regard to expenditure upon buildings and equipment of county infirmaries, to payment of county infirmary surgeons, increase of staff, and improvement of conditions of service.

A proposal to constitute the county the administrative area in respect of curative as well as preventive health services was approved. It was also agreed to recommend the appointment of county veterinary officers and the transfer of veterinary functions to a county health authority.

The committee in charge of the regulations under the Public Health (Medical Treatment of Children) (Ireland) Act met subsequently and considered in detail the draft regulations submitted. Arrangements were made to permit of the views of school managers' associations and other interested bodies being submitted to the council.

POOR LAW MEDICAL OFFICERS' SALARIES.

At a meeting of the County Kildare Medical Committee the following resolution was passed and forwarded to the different boards of guardians within the county:

That we, the dispensary medical officers of the county Kildare, request the several Poor Law boards of the county to raise the salaries of their medical officers to the uniform sum of £300 per annum.

The Secretary was instructed to submit in connexion therewith the following considerations:

1. That the cost of living being now, according to the highest statistical authorities, 115 per cent. higher than it was six years ago, the sum we now ask for is equivalent, as nearly as may be, to the pre-war £140, which is less than many medical officers were receiving at that time.
2. That, therefore, the fact that since then they have been receiving a much less sum than that now asked for means simply that their salaries have been considerably reduced since then, as the only value of money consists in what it can buy.
3. That in the fixing of their salaries at £300 per year they ask you, therefore, not to increase but simply to revert to and maintain the pre-war value of their positions.

The Secretary was directed to add that the doctors of the county had thankfully accepted the smaller increases already granted in the hope that under improved conditions of living their increases would in practice prove adequate. But the cost of living remains at the same high level, and they regret they have to say that increases have not been adequate. Certain members of the board have attached what the Committee think an unfair importance to the fact that we are not whole-time officers. Only in a technical sense is that true.

Practically we are liable to service, and do render service every hour of the twenty-four. Day or night the dispensary service has first claim on us and when we treat private classes we do so at our own risk. The private practice is overtime work. No employer concerns himself with the surplus work of an employee, when, as in this case, the surplus work is not done for the employer. And in any case it is now recognized that a man's working life has its strict limitations, and that, "overtime" work is often too dearly earned in the end.

The note concludes by expressing the hope that each board of guardians will give a fair and full consideration to the reasons set forth for raising the salaries to a figure which will mean a "living wage" and no more.

TUBERCULOSIS IN BELFAST.

The report of the chief tuberculosis officer for the county borough of Belfast (Dr. Trimble) for the year ending March 31st, 1919, states that in April, 1918, the work of the City Tuberculosis Institute was transferred from temporary premises, which were unsuitable and much too small, to a bright and well ventilated building in the centre of the city, equipped with an x-ray apparatus and bacteriological laboratories. The total number of new pat ents examined in the year ending March, 1918, was 3,420; during last year only 2,358. Of this number the diagnosis of tuberculosis was made in 1,612, 246 were suspect, and 500 non-tuberculous. Compared with preceding years there was a marked increase in the number of non-tuberculous patients who appeared for examination. The percentages of these cases for the last three years are 4, 11, and 21.2. Dr. Trimble does not suggest any explanation. The pulmonary forms of tuberculosis steadily maintain a ratio of about 77 per cent. to all other forms combined, but the relatively small number of glandular (197), osseous (110), and abdominal (52) forms do not as truly indicate the incidence of these types as the number for the pulmonary indicate its incidence. The largest number of cases is found, as was to be expected, between the ages of 15 and 25, and females as usual are in the majority (F. 989, M. 749). Amongst occupations, the textile industries have a decided preponderance, but the relative proportion of these in the community is not given. As usual, labourers and housewives form a large percentage. From one of the charts by which the report is illustrated it is to be gathered that the highest incidence occurs in the most densely populated wards, which supports the generally accepted view that overcrowding contributes largely to the spread of the disease. Dr. Trimble sums up the results as to "contacts" in the statement that 42 per cent. of patients have had an admitted personal association with tuberculosis, and shows that the mother heads the list of relations suffering from the disease. The bacteriological work seems small, but doubtless with the new laboratories it will increase in time. Another feature this year is the large number of discharged soldiers and sailors presenting themselves for examination; Dr. Trimble, as medical adviser to the Belfast Insurance Committee, gives several tables illustrating this section of the work.

The patient may be treated at the institute, may be attended in his own home by his own doctor, or may be admitted to a sanatorium. A record is kept of each case, and all patients are visited in their homes by the nurse in charge of the district; upwards of 47,746 visits were made by nurses during the past year. As to the results of treatment, 153 cases were registered as apparently cured, and in 188 the disease had become quiescent. Dr. Trimble points out truly that the number of apparent cures does not represent the full benefit derived from the work of the department, for in this disease prevention is of paramount importance; many more incipient cases are seen now than in former years. Open air classes and physical drill for tuberculous school children are now being held. The deaths during the year numbered 1,343; of these 1,051 died of pulmonary tuberculosis, an increase of 119. Dr. Trimble accounts for this increase on two grounds: the one is that in the case of 65 discharged soldiers and sailors the disease was due to or aggravated by active service, and the other is the two epidemics of influenza; during them the deaths from pulmonary tuberculosis increased by 134 beyond the number dying from that disease in the corresponding period of the previous year. Some mention of the financial aspect would render the report much more complete.

Correspondence.

CHRONIC PANCREATITIS.

SIR,—In a paper published in your issue of November 15th Mr. James Nicoll discusses chronic pancreatitis. Most surgeons will agree with his main conclusions, but there are certain statements regarding diagnosis which may be questioned. Mr. Nicoll states that "the diagnosis is nearly always a matter of difficulty" and "frequently the difficulties prove insuperable until an excised portion of the gland is examined microscopically."

Although chronic pancreatitis is an insidious disease and rarely exists alone, it has a definite train of symptoms and, in spite of the fact that early signs are not infrequently masked by those of the underlying primary condition, in the great majority of instances a reliable diagnosis can be made. This may demand exhaustive examinations of the excreta by a skilled clinical pathologist, but the help afforded is well worth the trouble entailed.

In the investigation of pancreatic disease quantitative analyses are really essential, especially in the earlier stages. The only quantitative method which Mr. Nicoll appears to employ is Wohlgemuth's test. Of all the diagnostic aids, to my mind, the chemical analysis of the faeces comes first. It is quite true, as Mr. Nicoll points out, that large light-coloured greasy stools are only found in a minority of cases, but chemical investigation will always reveal that, on an average diet, there is a disturbance in the normal relation between the neutral fats and the free fatty acids, and also the proportion of "unsaponified fat" to "saponified fat" is much increased. The estimation of fats and fatty acids by the microscope alone is but a rough-and-ready method. Mr. Nicoll does not mention the determination of the "trypsin index" of the faeces, which has proved of considerable diagnostic value.

The reliability of the "pancreatic reaction" (Cambridge) has been questioned by many observers, but when performed quantitatively it is very helpful as a means of detecting early disturbances in carbohydrate metabolism long before glycosuria develops. When taken in conjunction with other signs it provides useful data.

Treatment, as Mr. Nicoll states, must be on lines calculated to cure the initial condition as well as the pancreatitis. In the cases secondary to gall stones—and these are by far the most common—removal of the stones and prolonged drainage of the ducts will generally bring about a cure. The question of cholecystectomy, when there is associated pancreatitis, is debatable. If there is anything in the view of Maugeret, recently championed by Deaver, that the route of pancreatic infection in gall stone cases is by the lymph stream and not by the bile ducts, then only good can ensue from the removal of a diseased and infected gall bladder.

It is pleasing to note that, with the lapse of years, chronic pancreatitis is becoming recognized as a definite clinical entity, and is not now regarded merely as an unimportant complication of other disorders.—I am, etc.,

London, W., Nov. 18th.

J. A. CAIRNS FORSYTH.

PHYSICAL EDUCATION.

SIR,—In your issue of November 8th you call attention to a letter in *The Times*—to which I was a signatory—which made certain proposals with a view to improving the physique of the people. The use of the term "physical education" seems to have given rise to some misconception as to the purport of these proposals.

Our letter defined physical education as that variety of education which deals with the rest, recreation, and exercise of the people, and did not propose a system of "physical drill." It is fully recognized that the physical education of school children rests with the Board of Education, but the Education Act provides for the "young person" only. Under present conditions, either at 14 or 18, the young person passes beyond the control of the Board and then finds no organized provision for rest or recreation in the form of clubs or games.

Dr. Farquharson strays wide of the mark in imagining that any system of State control is suggested in our proposals. On the contrary, it is recognized that such interference or the suspicion of it should be made impossible,

by the formation of a National Council established by the people themselves and absolutely free from Government supervision of any sort.

It is our wish to evolve a system that will provide and maintain outdoor games and indoor clubs for all the people throughout their active lives, utilizing for these purposes existing organizations. Present arrangements are far too haphazard, and at the same time too often dependent on casual generosity. Our letter therefore suggested an organized system providing both for the co-operation of the Ministry of Health and the approval of the people through a National Council.

The British Red Cross and Order of St. John, newly chartered to work for the general health of the community, have in their voluntary aid detachments a complete organization capable of co-operating, as in America, on the lines indicated. We have not presumed to advise their joint council, but we believe that their assistance will be as generously given for health in peace time as it was for sickness in time of war.

A directorate of physical education under the Ministry, and in touch with the Board of Education, would be in a position to collate, analyse, record, and distribute information, and by assisting to develop physical education on scientific lines would in time prove itself not the least important factor in preventive medicine.—I am, etc.,

London, W., Nov. 13th

C. GORDON WATSON.

SAFETY OF ETHYL CHLORIDE.

SIR,—With Mr. C. B. Dale's views on the safety of ethyl chloride I am in entire agreement. His own experience amply justifies them. When, however, he says that he has never heard of a death from this anaesthetic it suggests that he has not gone into the earlier literature of the subject. I have seen no deaths reported in the medical journals for several years past. Ethyl chloride has been an established anaesthetic since about 1905, and it is reasonable to suppose that the occurrence of a death under it might not now be deemed worthy of record by everybody. What is more impressive is that during this period, so far as I am aware, this anaesthetic has not been the cause of any coroners' inquests, notices of which, when an anaesthetic is concerned, are nearly always to be found in the lay press.

If Mr. Dale is interested in the matter he will find in my monograph on ethyl chloride a brief account of fatalities that occurred previous to 1907. The majority were due to its administration to unsuitable subjects. Given to children in suitable doses and in a semi-open method, I believe it is absolutely safe.—I am, etc.,

London, W., Nov. 9th.

G. A. H. BARTON.

SIR,—I quite agree with Mr. Bowen and Mr. Dale that ethyl chloride is, for the ordinary operation for tonsils and adenoids, an admirable anaesthetic, affording the right type of narcosis and just the requisite duration of unconsciousness. Given by those who are constantly engaged in this branch of work it is also reasonably safe. But the effects are produced very rapidly, and there is a definite risk of overdose in the hands of quite inexperienced persons. Mr. Dale gives ethyl chloride two thousand times a year, and has no deaths and few frights. Clearly a case of cause and effect.

As regards method, Mr. Bowen did not in his article of October 4th refer to the "vapour" modification of the closed system. If the vial containing ethyl chloride be brought gradually into contact with hot water contained in a cup, the drug may be volatilized under the eye of the administrator, and a more even increase of vapour strength obtained than by tilting the fluid into the bag. Theoretically this accords with the principles by which one likes to give any anaesthetic, and, practically, the results are very good.

I gladly take this opportunity to correct an error in this connexion which occurs in my *Handbook of Anaesthetics* just published by Messrs. E. and S. Livingstone, and to which my attention has been drawn. On p. 125 I ascribe the origin of the method to Dr. Logan Turner, from whom I personally learnt its merits, but who now tells me that the original suggestion came from Dr. J. H. Gibbs of Edinburgh. I must express my sincere regret that the credit for this real advance and safeguard is not given to him in my little book.

Apart from the operation for tonsils and adenoids, ethyl chloride has to compete with nitrous oxide and oxygen. The subject is too large to open in a brief letter such as this, but many of us, I think, look forward to the time when the former will have to give place to a great extent to the latter in its modern shape and developments.—I am, etc.,

Edinburgh, Nov. 11th.

J. S. ROSS.

SIR,—I was interested to see Dr. C. B. Dale's letter in the *BRITISH MEDICAL JOURNAL* of November 8th (p. 616) on the safety of ethyl chloride.

I have often heard that it is a very dangerous anaesthetic, but only know of one death—where, I believe, the cause was an overdose. I have used it in about 700 cases, and have seen a like number of administrations, and in no case have I seen the slightest cause for anxiety.

Blumfeld¹ gives a dosage table which I have found very useful. He points out that variations in the dose are necessary, according to the physique or habits of the individual. He emphasizes the importance of minimizing the dose.—I am, etc.,

Holt, Norfolk, Nov. 8th.

A. S. HENDRIE.

SIR,—I am quite in agreement with Dr. Dale that ethyl chloride in trained hands is by no means a dangerous anaesthetic; but at the same time I must express a little surprise that he has never heard of a death under this drug. In the third edition of *Anaesthesia in Dental Surgery*—by myself and Dr. J. Stuart Ross (1910)—he will find a list of twenty-five casualties under ethyl chloride.

I fully believe the deaths were due to lack of skill and training on the part of the administrator, if not to actual carelessness, but the fact remains. The idea seemed to prevail among some people that ethyl chloride was a sort of "pocket laughing gas," but they rapidly became disillusionized, and the pendulum rather swung the other way from scaremongering—in the metropolis for the most part. Deaths have since been rare apparently, for while preparing the fourth edition² of this book, just out, neither Dr. Ross nor myself found any records of such in the various journals.

The relative safety of the drug compared with ether is very difficult to estimate, but will depend largely on the class of the operation and the experience of the anaesthetist. In the early days—1900–1902—one worked pretty much in the dark, a dose of 7 to 8.10 c.cm. in an Ormsby inhaler being commonly used, and the administration stopped at the discretion of the anaesthetist. I certainly recall several very bad frights, due largely to respiratory spasm. The insertion of a Mason's gag and tongue traction, with sometimes artificial respiration, restored the patient quickly to the normal, but I fancy the surgeon had some misgivings at times!

For adenoids I used to regard it as the anaesthetic *par excellence* after trying ethyl bromide (nasty stuff), nitrous oxide (which gave too short an anaesthesia), and chloroform (which was too dangerous). This was specially so when one was asked—most unjustifiably, I think—to anaesthetize a nervous child in one room and "charge him up" for transport to the operating room and completion of the operation there—both tonsils and adenoids requiring removal, perhaps.

The *luck* of haemorrhage in such cases was sometimes significant, and it is not a thing which, in my opinion, should be attempted.—I am, etc.,

Peebles, Nov. 8th.

T. D. LUKE, M.D.

SIR,—I am rather surprised that Dr. C. B. Dale should not have heard of a death from ethyl chloride, in view of the fact that one large hospital in London about ten years ago held an inquiry into the subject, and, I believe, discarded the use of the drug as a general anaesthetic on account of a number of fatalities. I cannot agree that ethyl chloride is nearly so safe as ether. Though it takes longer to administer, I think most people who have had experience in the use of both would regard "open" ether as far safer than ethyl chloride, particularly in the case of children.—I am, etc.,

Leadbury, Nov. 12th.

LESLIE B. C. TROTTER.

¹ *Anaesthetics*, 1906, page 61.

² London: W. Heinemann

THE R.A.M.C. AS A CAREER.

SIR,—In the JOURNAL of October 11th one may read an address given by Sir John Goodwin, K.C.B., C.M.G., D.S.O., Director-General A.M.S., on "The R.A.M.C. as a Career," and in the same issue appears an article in which attention is drawn to the fact that the recent appeal of the War Office to medical practitioners to accept temporary commissions in the R.A.M.C. has met with a poor response, notwithstanding the pecuniary inducements offered.

The Director-General appears to believe that his service offers great attractions to young medical men as a permanent career, and he naively asserts that were he starting life again as a newly qualified man he would unhesitatingly choose it for himself. A very pleasing picture is drawn of his ideal commanding officer of a hospital, but one cannot help wondering if such a man would be likely to find favour in the eyes of the powers that be, and in a service in which proved inefficiency, even in war time, may be followed by appointment to the highest posts.

When I was a medical student the R.A.M.C. was chiefly recruited from those whose professional qualifications were below the average, and one of the ironies of the past few years is that civilian practitioners of repute have had as their "superior" officers some men for whom they could have but scant respect; but, nevertheless, they were expected to bear with patience and due humility the ineptitudes of these officials, who knew full well that they could look to the great Whitehall red-tape machine for support.

My advice to any newly-qualified medical man who contemplates entering the R.A.M.C. is to ponder well before he puts his future welfare in the grip of a soulless machine in which if at some time or under certain circumstances he should show symptoms of independence, individuality, or initiative, he will be in danger of being "crushed," and his call for justice will be as the voice of one crying in the wilderness.

Surely it is a better fate to wear out retaining one's self respect than to rust out as part doctor part soldier, but chiefly clerk, even though weighed down by the burden of so-called "honours." How great must be a people who could win the war in spite of manifold handicaps!—I am, etc.,

Cardiff, Nov. 7th.

W. M. S.

THE SERVICES.

SIR,—As an old naval surgeon and temporary major R.A.M.C., I have read the letters of your correspondents concerning the naval and military medical services with great interest. Except in the hour of dire necessity, both the Admiralty and War Office treat the medical profession with scant ceremony and absolutely no sympathy. This I can vouch for from painful personal experience after eight and a half years in the one and four years in the other service.

I would suggest that instead of the separate naval, military, and air force medical services, the whole three be amalgamated into a general war medical service. A broken leg is a broken leg and a case of measles is a case of measles, whether ashore or afloat. Moreover, naval medical officers have often served on land and R.A.M.C. officers in ships before now. There are many minor difficulties and some major to be met with in my scheme; but, after all, "difficulties were made to be overcome," and I believe a solution to many legitimate grievances would be found in my suggestion, which is not made without due consideration.—I am, etc.,

Sevenoaks, Oct. 18th.

GERALD SICHEL, F.R.C.S.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

SIR,—Would it not be possible to classify medical officers who wish to attend medical boards in the following way?

- (a) Discharged and demobilized doctors who have nothing to come back to.
- (b) Discharged or demobilized doctors who have to rebuild their practices.
- (c) Discharged or demobilized doctors who are in partnership.
- (d) Medical men who have had experience on medical boards but have never served in the Forces.

Preference should be given to medical men who fall in (a) and (b). The reasons for employing those in (a) are obvious—namely, that their whole attention and

unbiased opinion can be given both for the good of the pensioner and of the State; also it is a means of obtaining for them a living. It is not possible for all medical men to purchase practices.

Those in class (b) should come next according to the size more or less of their practices. In class (c) one must consider the number of medical men who are in partnership, for it is quite possible for two or more men to be in partnership and for each to be employed on Medical Board examinations, and thus taking from their less fortunate brother practitioners. If medical men who are in partnership wish to sit on the boards, only one of the firm should be allowed to do so.

The last class (d): these doctors have had the satisfaction of increasing their practices owing to other medical men being called up, and in the majority of cases have not endured the hardships of serving abroad; in fairness to those who have returned, they should voluntarily decline to accept any more boards, as medical men who have been demobilized and have nothing to do would only be too thankful for the opportunity of taking their places as an only means of their livelihood.

During my experience of Medical Board work I have noticed that the busy general practitioners are constantly consulting their timepieces, presumably wondering how many more cases there are to see before they are free to continue their private visits; therefore their attention is divided, and that generally means neglect of proper examination, resulting in injustice to the pensioner or to the State.—I am, etc.,

November 17th.

DISCHARGED MEDICAL OFFICER.

GENERAL MEDICAL COUNCIL ELECTION (SCOTLAND).

SIR,—Will you allow me through your courtesy to thank the registered medical practitioners of Scotland for again electing me as their representative on the General Medical Council, and to say that I shall spare no effort to merit this renewed expression of their confidence?—I am, etc.,

Edinburgh, Nov. 18th.

NORMAN WALKER.

Universities and Colleges.

UNIVERSITY OF OXFORD.

MR. T. B. HEATON, B.M., B.Ch., has been appointed Lee's Reader in Anatomy.

At a congregation held on November 15th the degree of doctor of medicine was conferred upon W. J. Pearson and F. O. Gladstone.

UNIVERSITY OF CAMBRIDGE.

At a congregation held on October 31st the following medical degrees were conferred:

M.D.—W. C. Hodges, R. G. Cantl.

M.B., B.Ch.—L. P. L. Firman-Edwards, E. W. Williams.

M.B.—F. N. V. Dyer.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MEETING OF COUNCIL.

AN ordinary Council was held on November 13th, when Sir George Makins, President, was in the chair.

Diploma of Membership.—Diplomas were granted to seventy-eight candidates found qualified at the recent examinations.

Dissection.—The Council passed a resolution expressing the satisfaction with which it had learnt that the control of unclaimed bodies of deceased persons in England and Wales had been transferred to the Minister of Health, and urging that the question of the shortage of "subjects" for the education and examination of medical and dental students in London and the provinces should engage the sympathetic attention of the Minister at an early date. It was determined that the regulation that candidates for the Licence in Dental Surgery should have performed dissections at a recognized medical school during not less than six months be suspended.

The vacancies in the Court of Examiners and in the Board of Examiners in Dental Surgery, occasioned by the retirement of Sir Herbert F. Waterhouse, will be filled up at the ordinary Council on December 11th.

Board of Scientific Societies.—Sir George Makins and Sir Charles Ballance were re-elected as representatives of the College on this Board.

ANNUAL GENERAL MEETING OF FELLOWS AND MEMBERS.

The annual general meeting of Fellows and Members will take place at the College on Thursday next, November 27th, at

3 p.m. The honorary secretary of the Society of Members informs us that the following resolutions will be sent in:

1. That this thirty-fourth annual meeting of Fellows and Members again affirms the desirability of admitting Members to direct representation on the Council of the College who as now constituted only represents those Members who also hold the Fellowship; and that it does so in order that the constitution of the Council of the Royal College of Surgeons of England shall be in keeping with modern ideas of true representation.
2. That as the Royal College of Surgeons is composed of about 19,000 persons, of whom nearly 18,000 are engaged in general practice, this annual meeting requests the President and Council to nominate at least two Members in general practice to represent the interests of general practitioners in the management of College affairs.
3. That the President is hereby invited to make a statement to this meeting as to the views of his Council on the subject of the second resolution.

CONJOINT BOARD IN ENGLAND.

THE diplomas of L.R.C.P. and M.R.C.S. have been conferred upon the following seventy-nine candidates who have passed the final examination in medicine, surgery, and midwifery, and have complied with the necessary by-laws:

W. J. McE. Allan, F. T. Allen, G. F. Baxter, Grace M. Beaven, W. H. Bennett, E. J. Biddle, C. M. Bilington, Alice Bloomfield, M. R. Bode, J. V. C. Braithwaite, P. C. Brett, H. Brookman, A. R. Campbell, J. D. M. Cardell, Marjorie C. Chappe, O. T. J. C. de H. Clayre, Enid M. M. Cobb, H. Cohen, H. N. W. Collins, R. G. Danst, Sarah H. Davies, A. K. Day-Lewis, J. P. De Silva, W. H. Dixon, H. Donovan, K. M. K. Duff, G. P. Evans, V. N. Fenlon, W. D. Forrest, Dorothy W. Gowers, C. Griffith-Jones, E. A. Hardy, H. W. Hardy, W. G. Hay, H. L. Heimann, E. P. Hicks, F. B. Holbbs, H. C. Hopkinson, Mabel M. Ingram, J. A. Iswariah, Shankar Ramchandra Jogekar, R. B. P. Lansdown, L. Lavine, R. C. O. Ledlie, H. T. Le Vieux, F. G. Lewtas, N. J. Macdonald, J. S. Moore, G. Y. Oliver, S. J. G. Overton, W. G. Owen, J. C. Panu, W. W. Payne, H. W. Pigeon, Eleanor M. Reece, A. H. Richards, S. Rose, M. Sarkies, E. R. Sarra, Ruth M. Scott, C. G. D. Siggs, J. V. A. Simpson, D. F. Sioncing, C. M. Strong, W. S. R. Thomas, R. Thurst, W. G. Tilleke, Ruth C. Townsend, G. M. Trist, D. L. Tucker, W. Walsam, W. E. M. Wardill, Ethel A. Wharton, A. C. S. Whiteway-Wilkinson, Margaret A. Williams, T. Williams, C. B. Wilson, M. L. Young, T. F. Zerolo.

Obituary.

INSPECTOR-GENERAL ADAM BRUNTON MESSER, R.N. (retired), died at Eastbourne on October 11th, aged 81. He was the youngest son of the late Adam Messer of Blainslie, and was educated at Edinburgh Academy and at Edinburgh University, where he graduated M.D. in 1858. He entered the navy as surgeon in 1859. As surgeon of the *Curacoa* he served in the New Zealand war of 1863-64, when he was in medical charge of the Naval Brigade at the battle of Rangiriri, was mentioned in dispatches for gallantry in attending the wounded under fire, specially promoted to staff surgeon, and received the medal. In May, 1867, he was appointed to the *Melville* hospital ship at Hong Kong, and in 1873 to the *Pearl*, the flagship of Commodore Goodenough on the Australian station; in 1875 he was present when the Commodore was killed by a native with a poisoned arrow, on a small Pacific island. He received the thanks of the Director-General for a report on the poison used in arrows, which was published by the Admiralty. He also wrote a valuable report on the Fiji islands, which led to the annexation of these islands by Great Britain. In 1877 he joined the *Temeraire* in the Mediterranean, then commanded by Captain (afterwards Admiral Sir) Michael Culme-Seymour, and in 1881 the *Northampton*, flagship of Sir Leopold McClintock on the North American station. As D.I.G. he was in charge of the naval hospitals of Plymouth and Malta successively. He was appointed Inspector-General in 1892 and retired in 1896. He became honorary physician to the Queen in 1899, and held the same appointment to King Edward and King George, and received the two coronation medals. On February 8th, 1904, he was awarded a Greenwich Hospital pension. He also had gained the Sir Gilbert Blane Gold Medal.

COLONEL ALFRED HENRY ANTHONISZ, R.A.M.C. (retired), died at Coonoor, Nilgiri Hills, South India, on October 27th, aged 74. He was born at Colombo on December 22nd, 1844, educated at Aberdeen, where he graduated M.B. and C.M. in 1867, and entered the army as assistant surgeon on April 1st, 1871, being posted first to the staff, and then, in 1873, to the 108th Foot, now the 2nd Battalion of the Royal Inniskilling Fusiliers. He became colonel in 1899, and retired in 1904. He served in the Egyptian war of 1882, receiving the medal and the Khedive's bronze

star; in the Sudan in 1885, at Suakin, gaining a clasp, and in the South African war in 1899-1900.

CAPTAIN M. P. BHARGAWA, I.M.S., was reported as killed in action, on the Indian frontier, in a casualty list published on October 25th. He took a temporary commission as lieutenant on October 5th, 1916, and was promoted captain after a year's service.

Medical News.

As a memorial of Professor J. Dejerine, Madame and Mlle. Dejerine have placed a fund at the disposal of the Paris Society of Neurology for research in neurology.

COLONEL A. H. TUBBY, C.B., C.M.G., will read a paper on some surgical experiences of the war in the Near East at the meeting of the Hunterian Society to be held at the School of Oriental Languages, Finsbury Circus, on Wednesday, November 26th, at 9 p.m.

THE annual dinner of past and present students of St. Mary's Hospital, postponed owing to the railway strike, will be held at the Connaught Rooms on Friday, January 9th, 1920, when Sir Almroth Wright will take the chair at 7.30 p.m.

WE are informed that the British Federation of Medical and Allied Societies (late Medical Parliamentary Committee) has secured permanent offices at 5, Vere Street, Cavendish Square, London, W.1.

M. DE LANESSAN, formerly Governor-General of Indo-China and Minister of Marine in the Waldeck-Rousseau Cabinet in 1900, who has died at the age of 76, was originally a member of the medical profession.

THE Chadwick trustees will award in the year 1920 a Chadwick gold medal and a prize of £100 to the naval and military medical officer respectively in the British service who during the past five years of war has most distinguished himself in promoting the health of the navy and army. The prize will be awarded on the nomination of the Directors-General of the Naval and Army Medical Services respectively.

SIR MALCOLM MORRIS presided over a luncheon on November 7th, at the Criterion Restaurant, in connexion with the private representation at the Alhambra Theatre of a cinematograph film, entitled "The End of the Road," approved by the National Council for Combating Venereal Diseases. The speakers included Lord Downham, Chairman of the London County Council and formerly President of the Local Government, Dr. Mary Scharlieb, Mrs. A. C. Gotto, General Secretary of the Council, and the Chairman.

IN aid of the appeal to the general public on behalf of St. Bartholomew's Hospital, which was inaugurated at a luncheon at the Mansion House, Mr. George Robey, C.B.E., is organizing a concert, to be held on Sunday, November 30th, at 2.30 p.m., at the London Coliseum. Contributions towards the People's Peace Year Commemoration Fund in aid of St. Bartholomew's Hospital may be sent to Viscount Sandhurst, Treasurer of the Hospital, London, E.C.

THE United States Public Health Service is calling on medical practitioners to volunteer their services for an effort to prevent a recurrence of last year's epidemic of influenza. A conference was recently held at New York at which a number of bacteriologists agreed to unite in a collective study of the causative agent of the disease. This conference marks the beginning of a Federal, State, and municipal effort.

MR. JOHN D. ROCKEFELLER has given to the General Education Board founded by him in 1902 the sum of £4,000,000 to be used for the improvement of medical education in the United States.

DR. W. O. BEDDARD, of the Inner Temple, has been called to the Bar.

THE war library and museum in Paris (39, Rue du Colisée) owes its origin to a gift made to the French Government by M. and Mme. Henri Leblanc. The library comprises books, periodicals, maps, and manuscripts relating to the war; and the museum, models, pictures, photographs, medals, and so forth. Contributions of medical interest are invited. The secretary is M. P. Fontana.

A NEW journal of military surgery, *La Revista della Battaglia* (Review of Battles) has been founded in Italy. The address is 16, via del Nazareno, Rome.

A QUARTERLY meeting of the Medico-Psychological Association of Great Britain and Ireland will be held at 11, Chandos Street, W.1, under the presidency of Dr. Bedford Pierce, on Tuesday, November 25th, at 2.45 p.m. Papers will be read by Dr. C. Hubert Bond, commissioner of the Board of Control, on the need for schools of psychiatry, and by Major W. S. L. Shaw, I.M.S., on the treatment and administration of mental diseases in India.

A NURSE discharged or demobilized from any of the services and in receipt of retired pay (or a gratuity) for a disability due to or aggravated by war service is entitled to assistance from the Ministry of Pensions, and any nurse suffering from a disability she believes to be due to or aggravated by war service who is not receiving retired pay (or a gratuity) is entitled to have her claim to retired pay and medical treatment considered. Applicants are advised, where possible, to furnish evidence of the causation or aggravation of the disability by service, and to obtain medical evidence of the present condition. Communications should be addressed in writing to the Secretary, M.S. 2 (Officers), Ministry of Pensions, 14, Great Smith Street, Westminster, S.W.1. A nurse who merely requires advice on these matters should apply to the Officers' Friend, Ministry of Pensions, Westminster House, Millbank, S.W.1.

AT A preliminary meeting of medical officers of infant welfare centres, held recently in London, it was resolved to ask the Association of Infant Welfare and Maternity Centres (which is a section of the National League for Health, Maternity, and Child Welfare) to convene a meeting with a view to the early formation of a permanent organization of such officers. The association willingly agreed to this, and a meeting has been fixed for Tuesday, November 25th, at 5 p.m., at the Royal Institute of Public Health, 37, Russell Square, W.C.1.

DR. GUTHRIE RANKIN left £54,362. Among the legacies was one of £500 to his old friend, Sir William Babbie, V.C. In memory of his wife the testator bequeathed £1,000 each to the Provident Fund of Epsom College, the Samaritan Fund of the Dreadnought Hospital, and the Samaritan Fund of the Royal Waterloo Hospital for Children and Women.

THE annual meeting and dinner (10s. 6d. without wine) of the Old Epsomian Club will be held in the Oak Room of the Trocadero Restaurant on Thursday, December 11th, 1919, Mr. S. Maynard Smith, C.B., in the chair. As there is important business to be transacted before dinner, the annual meeting will be held at 6 p.m., the dinner following at 7.30 p.m. The list of addresses of members of the club is to be reprinted, and it is desired that members will write to Mr. E. M. Corner, 37, Harley Street, W.1, or Mr. R. Farrant, Westminster Hospital, S.W.1, signifying their present address and whether they intend to be present at the dinner.

A MEETING of the Lancashire and Westmorland Tuberculosis Society will be held at the Public Health Laboratory, Manchester, at 3 p.m., on November 27th, when it will be proposed to extend the society to include Cheshire. Professor Sheridan Delépine will open a discussion on infection and predisposition in relation to tuberculosis. Further particulars can be obtained from Dr. G. Jessel, County Tuberculosis Dispensary, Leigh, Lancashire.

THE *Times* correspondent telegraphs that excavations adjoining the portico of the temple of Aesculapius at Epidaurus have brought to light a portico (stoa) with mosaics. Near the great reservoir two other buildings have been discovered, with columns, pedestals, and a statue of Hermes. The excavations at Epidaurus were begun by the Greek Archaeological Society in 1881. The reservoir lies about 500 ft. north of the portico which adjoins the temple.

A MEETING of the Supremo Economic Council is to be opened in Rome on Saturday (November 22nd). Among the subjects to be discussed, in addition to co-operation in the purchasing of food and the economic situation in South Russia, is a proposal for the establishment of an International Scientific Food Commission. The English deputation is headed by the Food Controller. As will be seen by the account given elsewhere in this issue of the annual report of the Medical Research Committee, a proposal to establish a Human Nutrition Research Board in this country is now under consideration, and we observe that among the delegates to Rome is Mr. A. W. Flux, a member of the committee which has been appointed to draw up a scheme. Mr. Flux, however, is an economist. It would, we think, have been well that the British delegation should have included a physiologist.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the *BRITISH MEDICAL JOURNAL* are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the *JOURNAL* be addressed to the Editor at the Office of the *JOURNAL*.

THE postal address of the *BRITISH MEDICAL ASSOCIATION* and *BRITISH MEDICAL JOURNAL* is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the *BRITISH MEDICAL JOURNAL*, *Aitiology*, 17, Strand, London; telephone, 2651, Gerrard.
2. FINANCIAL, SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate*, Westrand, London; telephone, 2650, Gerrard.
3. MEDICAL, SECRETARY, *Meliseeca*, Westrand, London; telephone, 2634, Gerrard. The address of the Irish Office of the *British Medical Association* is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

"C." asks for experience in the treatment of inoperable cancer by the method recommended by the late Dr. Lovell Drage.

DR. C. W. BRANSON (Bournemouth) asks for experience in the treatment of epilepsy by silver nitrate, and an estimate of the chances of success in a case of almost lifelong duration in a young man who also has albuminuria.

TREATMENT OF PRURITUS.

"SUBSCRIBER" asks for advice in the treatment of obstinate pruritus of axillae and breasts in a woman aged 48. The condition, which has now lasted some years, becomes pronounced on rise of blood pressure from any cause, or even when the patient becomes warm on exertion. Uncontrolled scratching follows and an attack leads to complete nervous exhaustion. One or two small nodules in axillary glands have lately appeared. Ordinary unguents and lotions have throughout failed to modify symptoms. Is the condition a menopause phenomenon likely to subside if the patient's health can be sustained?

INCOME TAX.

"P. H. B." inquires whether repayment can be obtained in respect of tax paid at the "earned" instead of at the special "service" rate of income tax.

*. The special service rate would not apply to payments made to him by a serving practitioner for whom he was acting as locum tenens, but in so far as he has paid tax on emoluments issued to him by the War Office for military hospital work at a higher rate than the appropriate service rate he can claim repayment.

The statement of claim should be sent to the inspector of taxes for the district in which the excessive tax was paid, and can be made within the three years following the year for which the payment was made.

"Z. Y. X." has been left a small estate in Chili, in trust, consisting of shares and house property. What should be the basis of his income tax declaration?

*. The Income Tax Act, 1918, Sch. D, Case V, Rule I, provides that "income arising from stocks, shares, or rents in any place out of the United Kingdom shall be computed on the full amount thereof . . . whether the income has been or will be received in the United Kingdom or not. . . ." but in our opinion this rule does not apply to "Z. Y. X." "Income arising" must mean income arising to the person assessed. "Z. Y. X." does not directly derive his income from stocks, shares, and rents but from his "foreign possession," which is his right as a beneficiary in the trust estate. He is therefore entitled to base his return on the amount actually received in this country—for the past year on the receipts of that year, for the second year on the same figure, for the third year on the average of the two first years, and thereafter on the average of the three years prior to the year of assessment.

"G. F. O." inquires whether he is entitled to deduct the cost of removal from one town to another as a professional expense.

*. Apparently not. Our correspondent is assessable in respect of each practice separately, and the expense of removal is not strictly incurred in the working of either practice.

LETTERS, NOTES, ETC

ANAESTHESIA IN TONSIL AND ADENOID OPERATIONS.

DR. WALTER GRIPPER (Wallington) writes: Dr. H. L. Hamilton may care to know of a method which I have used for a long time in giving ethyl chloride, especially to children for dental work. The bag and face piece of a Clover or other inhaler are connected, and into the bag is dropped a tabloid tube of

about $\frac{1}{2}$ in. diameter fitted with, preferably, a rubber stopper. The tube is graduated by file marks into 0.5 cm. divisions. Ethyl chloride is sprayed into it—never more than 2 c.cm. for ages from 2 to 16 years. As soon as the face piece is applied, and the bag somewhat distended by a breath or two, the little tube is left for by the hand through the bag, and by pressure of the thumb the stopper, assisted by the vapour pressure upon it, easily slips out. If the tube is kept upright the vapour is set free slowly, and usually within a dozen breaths the child is under enough for two or even three extractions. I find the inhalations may be stopped directly the eyelid reflex is lost. For tonsil and adenoid operations I only use this method for quite young children and with a quick operator, but frequently commence anaesthesia by spraying a little on to an open mask and following with chloroform or chloroform and ether. The usual cross-wires on the bag attachment should be removed to facilitate the insertion of the tube.

"ANÆSTHETIST" writes: In reply to Dr. Jephcott's inquiry (October 25th, p. 550), I have used ethyl chloride alone during the past five years for the anaesthesia of tonsils, etc., and have found it highly satisfactory and very rapid. It gives a long enough anaesthesia for a surgeon who is accustomed to removing tonsils. For one who only operates occasionally and requires a longer anaesthesia I administer the ethyl chloride $C_2H_5Cl_2$ sequence. Notwithstanding all that has been written about it being a dangerous anaesthetic I consider it fairly safe, and the administrator can always depend upon obtaining a satisfactory depth of anaesthesia. I have had no deaths under it, and never had to perform artificial respiration after it. When I administered it with a rubber bag (which is the closed method) I noticed once or twice that the patients were a bit livid and deeper than I intended. During the past few years I have only administered it by the open method. This consists of a Schimmelbusch's chloroform mask with six or eight layers of gauze fixed to it, and a piece of cotton wool six inches wide and long enough to surround the circumference of the base of the mask as it lies on the face, so as to exclude the air from entering between the mask and face. The dome of the mask must not be covered by wool in order that a plentiful supply of air enters. The ethyl chloride is poured onto the mask and applied to the face, and shortly the patient is fully anaesthetized. The dose for children is 5 c.cm. and adults 7 to 8 c.cm. Children under 5 years or very weak ones only require about 3 c.cm. We operate on eighteen tonsil cases per hour, and do all circumcisions and scrapings of glands under it. The great secret is not to overdose the patient to begin with, that is, do not exceed the above doses, and once deep regular stertor occurs remove the mask at once. If the surgeon is doing a minor operation and the patient is coming out, drop a little more on to the mask until he goes under again, and keep on doing so until the surgeon is finished.

MEDICAL DEMOBILIZATION.

"PANTHIA" writes: May I, through the medium of your paper, call attention to an unsatisfactory state of affairs in order that those responsible may read and perhaps investigate the matter? Many medical officers have been invalided home from the East after one or more years of malaria or dysentery. These officers are refused demobilization, even though they have house appointments offered them, or wish to study, the authorities stating that they have not served long enough in the army. In contrast to this, others who have never been abroad, even though qualifying in 1917 or 1918, are now demobilized and are securing the best positions. Also, we are told that we may expect demobilization in five or six months when an Act of Parliament will compel the medical authorities of the army to release us. Cannot something be done to hurry up our release, as though we are told we cannot be spared, former experience suggests that time will hang heavily on our hands till we are demobilized? In parenthesis, showing that the desire to get back to work again is genuine, I would mention that I spent my first leave for two and a half years in taking an examination lasting three weeks.

SCHOOLBOYS' WEIGHT.

DR. RICHARD HAMILTON (Parkstone) writes: I regret that no one who has replied to my letter in the JOURNAL of September 27th has been able to give weights for day scholars. I doubt very much if they ever lose weight in term unless from illness, whatever boarders may do. From what I have heard privately, I am convinced that there is a great deal of underfeeding in boarding schools, even expensive ones. In my opinion, "extra milk" and "tuck boxes" condemn the dietary of any school where they are required to supplement the ordinary rations. I regard this underfeeding at schools as a matter of the very greatest importance to the nation—one that the leaders of the medical profession might well investigate.

ASPIRIN IDIOSYNCRASY.

DR. B. THOMAS (Derby) writes: I have just been reading the short note on "Aspirin idiosyncrasy" under Memoranda in the BRITISH MEDICAL JOURNAL, November 1st, p. 560. A similar case came to my notice while serving as temporary surgeon, R.N. The case was that of an officer about 25 years of age, who for some years had been suffering from frequent transitory urticarial eruptions.

During the influenza epidemic of August, 1918, he was given 10 gr. of aspirin, and he very quickly developed a severe urticarial rash which, however, faded in the course of a day. A week afterwards he walked into my cabin in the early morning very distressed. His eyelids and practically his whole face were puffy and bloated, and he had a widespread rash over his body. His voice was husky, and he had severe respiratory distress. The rash cleared during the next day, and the puffiness of the face was quite cleared by the following day. I found that he had taken 5 gr. of aspirin before retiring that night, and the symptoms had developed about four hours afterwards.

PENAL REFORM LEAGUE.

THE Penal Reform League aims at the amelioration of the conditions of prison life and the improvement of criminal procedure, especially in the case of juvenile offenders. It contends that detention in prison should be utilized to elevate the ideals and moral aspirations of the prisoners, and so minister to the prevention of crime, apart from merely punitive measures. In a recent issue of the *Record* published by the league appeared a few points of medical interest. Amongst other matters discussed on the occasion of a deputation to the Home Office organized by the league last March was the demand that fully trained nurses should form an integral part of the staff of all prisons. The Home Secretary seems to have received this suggestion with favour, remarking as regards their sphere of usefulness in prisons for females that "if you have a trained nurse in and about watching these women, you may prevent a great deal of sickness, in addition to nursing that which occurs." It appears from questions he answered in Parliament that, although professionally trained nurses are at present only called in from outside when required for special cases, ex-R.A.M.C. orderlies are attached to the larger male prisons as hospital officers, after undergoing two months' special training, and that in female prisons many of the female officers have had previous experience of nursing, and all go through a course at the training school of at least one month's training in simple hospital duties, and the Prison Commissioners contemplate extending this period to six months. Some of the lady speakers urged the appointment of female medical officers for the treatment of women prisoners as likely to be more sympathetic towards their own sex than the male prison doctor. Further, it was suggested that at least two ladies should have seats on the Prison Commission, and that women's prisons should be administered by women governors, who would be able better than a man to deal "with the more intimate life of women." The Home Secretary seemed to favour increased powers and responsibility in the hands of the lady inspector and women visitors in furtherance of the objects desired.

"SHELL SHOCK AT MARATHON."

DR. R. MACD. LADELL (Killinghall, Harrogate) writes: My attention was called to this passage in Herodotus some months ago by Professor H. Rose, now of Aberystwith. I have been carefully hoarding it to produce on the next suitable occasion, but *Science* has forestalled me. There must have been something peculiarly dreadful in the aspect of his Persian antagonist to have thus "shocked" Epizelus into amblyopia, as hitherto, we are told, he had been "fighting valiantly." Possibly the antagonist was not a Persian, but some barbaric mercenary of unfamiliar form. No doubt the subsequent notoriety and kudos resulting to Epizelus from his misfortune would go far to reconcile him with his lot and to establish his functional trouble as permanent.

R.S.V.P.

"DEMOBBED" writes to urge that there is an obligation upon principals to reply promptly to those who respond to their advertisements for assistants or partners. "I have written to four such, and in no case succeeded in obtaining a reply in less than a week. Many of us who wish to settle down are living on our war savings, and some of us are married."

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 37, 40, 41, 42, 43, 44, and 45 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 38, 39, and 40.

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NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.

PREVENTIVE TREATMENT IN INFLUENZA.

A BRITISH MEDICAL ASSOCIATION LECTURE GIVEN TO
THE SOUTHERN BRANCH, AT SOUTHAMPTON,
NOVEMBER 13TH, 1919.

BY

SIR THOMAS HORDER, M.D., F.R.C.P.,

PHYSICIAN WITH CHARGE OF OUT-PATIENTS AT ST. BARTHOLOMEW'S
HOSPITAL.

QUESTIONS of preventive medicine are very much to the fore just now, and the country has been stimulated to all kinds of expectations by the formation of a Ministry of Health, by the appointment of a consultative council, and by the wide circulation and advertisement of attractive memoranda upon the need for further measures of a preventive kind in regard to national health. In connexion with preventive treatment the difficult problem of influenza takes a prominent place, partly from the memory of the recent epidemic, with its heavy mortality and still heavier resulting disability, partly from fear of the next epidemic, whenever this may chance to come. What preventive measures can we adopt to ward off the disease or to check its spread and its severity if it appears?

The question falls for consideration under four headings: (1) The prevention of epidemics. (2) Prophylaxis as it concerns the community. (3) Prophylaxis as it concerns the individual; and (4) The control of the epidemic when it arrives.

I. PREVENTION OF EPIDEMICS.

I have scarcely anything to say on this point. The science of epidemiology is even less exact than medicine itself. Some say it is not a true science at all, but only a hybrid science, a combination of bacteriology, statistics, and history. Others say that, given proper study and research, it is capable of great expansion of knowledge, the value of which is at present lost to us. Be this as it may, we are to-day so much in the dark concerning the factors which determine epidemics of disease, and especially the factors which determine epidemics of influenza, that this branch of medicine is almost barren of results of a practical kind. What are the causes of the enhancement of the virulence of pathogenic micro-organisms? What are the causes of a rise or of a fall in susceptibility to infection? On these matters we have next to no knowledge, and without it we can scarcely hope to put up a barrage against an epidemic wave of incidence of influenza.

II. PROPHYLAXIS IN REGARD TO THE COMMUNITY.

What can be done to lower the susceptibility of the nation to infection by the influenza virus?

It is usually held that the maintenance of a high standard of general health in the country is a safeguard against an epidemic of disease appearing amongst us and against its making headway if it should appear. During the last epidemic of influenza a good deal was said as to the possible influence of war conditions upon the incidence of the disease. Some went so far as to suppose that the epidemic owed its existence largely to these conditions, and that it was of the nature of a pestilence which came in the wake of the war.

But there is little or no evidence in support of any such supposition. On the contrary, there are several facts that together make a strong case against this view. If the food restrictions, the nerve strain, the fuel shortage, the exposure and the fatigue consequent upon the war, exercised so debilitating an effect upon the health of the community that there resulted a rise in the susceptibility to infection, then we should expect a rise to have occurred in the incidence of sickness generally during the few months prior to the influenza outbreak. But there was no such rise.¹ Then, again, the maximum morbidity, and the maximum mortality, fell, as we all know, upon young adults and adults, the very class best able to stand these adverse conditions, and not upon children and the elderly, the two classes known to suffer most from them. Moreover, by March of this year food had improved considerably, both in quality and in quantity, and fuel was

not so scarce nor so necessary, and yet there appeared the second big wave of the epidemic.

Two other interesting facts may be recalled in connexion with the point I am discussing. One of the centres from which the epidemic originally spread was Spain, a neutral country, where adverse economic conditions certainly did not obtain more than elsewhere. In Switzerland, where food and fuel were not so scarce, the mortality from the disease was higher than in Germany, where they were much scarcer.² Lastly, no adverse economic conditions preceded the 1889-91 epidemic in this country.

I do not, therefore, think it can be held that, even if we succeed in converting a country of C3 citizens into one the great majority of whose members would pass the medical boards as A1 individuals, we should thereby protect ourselves against influenza and its ravages. Some micro-organisms are prone to attack and to infect persons of low general resistance: tubercle and the more chronic pyrogenic infections are examples of this. But in another group of micro-organisms infection depends much more upon the virulence of their elements than upon the resistance of the host; the influenza virus certainly belongs to this group. As a barrier against the first class of micro-organisms there is no doubt that to keep the general standard of health at a high level is the best form of prevention: to provide air, light, exercise, rest and good food—in short, so to arrange matters that this country, in the words of the Premier, is made "a place for heroes to live in," constitutes the best defence against attack. But for defence against infecting agents of the latter class we seem to need a much more specific means of prevention.

III. PROPHYLAXIS IN REGARD TO THE INDIVIDUAL.

What can the individual do, or what can be done to and for him, in this matter?

To keep himself fit is, on general grounds, a sound piece of advice, but this does not really touch the root of the matter, any more than keeping the whole community fit is likely to ward off an epidemic. If the individual is fit, no doubt that helps him if he gets infected, but there are no facts justifying the assertion that if he is fit he thereby avoids infection. Influenza attacks the weakly and the strong, as the rain falls upon the evil and upon the good. Indeed, since to be weakly carries with it some protection against normal routine and the conditions of life leading to contact with infected persons, the robust individual is often more open to infection than his weakly brother. No doubt this factor came into play in connexion with the age-morbidity and the age-mortality of the disease as seen in the last epidemic, when the war intensified this disproportionate exposure to infection between the able-bodied and the weak. In the face of considerations like these it is difficult to see what else than some method of specific immunization can really solve the problem.

This brings us at once to the biggest gap of all in our knowledge of the disease: we are still without any certainty as to the essential causative agent in influenza. That it is a single agent, even, is not clear, though the argument is strongly presumptive in favour of the view that it is. But whether this agent is Pfeiffer's bacillus, or some other microbe as yet not isolated—possibly a member of the "ultra-microscopic" group—we cannot say. We are even farther away from exact knowledge on the point than we thought we were eighteen months ago. We entered upon the epidemic with more confidence that we knew the causative agent than we had when we emerged from it. This was partly because the clinical picture of the disease made us doubtful, and partly because bacteriological evidence failed of complete demonstration, and this with abundant material to work upon and greatly improved technique since the epidemic of thirty years ago. The most carefully devised and thoroughly undertaken experiments with Pfeiffer's bacillus have failed to produce the disease in human beings, even when the bacilli have been quite freshly isolated and sprayed in enormous quantities into the nose, eyes, and throats of volunteers. Virus taken directly from influenza patients, sprayed in similar fashion, has failed also. Nor has it been possible to get healthy individuals to filter off Pfeiffer's bacillus from influenza patients placed in close contact with them, coughing and breathing freely within two inches of the

months of the volunteers." Negative results teach us nothing of positive value, it is true, but, in view of such experiments as these, and many more facts throwing doubt upon the claims made for this microbe, it seems clear that we must consider the nature of the exact causative agent as not yet established.

Of the secondary invading micro-organisms we know a great deal, and this knowledge is of considerable value, but until we are clear as to the cause of the primary infection we are not likely to advance very far on the lines of specific immunization. It does not, however, follow that we must necessarily wait for this knowledge; the earliest of all our methods of immunization against infectious diseases—I refer, of course, to small-pox—warns us against this; for even now we do not know the essential nature of the small-pox virus. And yet, as the result of vaccination, small-pox has become, in this country, a curiosity rather than a dread.

The gist of it all is that we require more and more work done upon the etiology of influenza and more and more investigation into the essential cause. The onus in this matter does not lie with the practitioner, but with the responsible Government of the country. I do not mean that we practitioners need not keep alert and observant—we must not forget that Jenner was a practitioner—for such an attitude is of the utmost importance; by preserving it we may give a valuable lead to the laboratory worker and to the research organizer in the field. But it is essential that the stimulus given to medical research by the exigencies of the war should not die down in this country, as seems not unlikely to happen. There is stigma enough in the reflection that it required a world war, and a bitter struggle for our very existence, to drive us into a belated investigation of the causes of disease and the means of preventing and of curing them. There will be national disgrace if peace finds us sinking again into somnolence or, what is much the same, into bureaucratic self-satisfaction. Let economy be practised by all means, and let the Government preach retrenchment, but money spent upon the national health is the soundest investment the country has ever made, and to sell out this particular stock is the height of folly.

In the present state of our knowledge the available materials for preventive inoculation "against influenza" are not very convincing in regard to their specific value. And yet, when I am asked my advice on the matter, I generally favour the use of a prophylactic vaccine, not because I think it is a specific preventive—like typhoid vaccine in typhoid fever, for example—but because there is some reason for considering that a certain degree of protection is conferred against serious grades of catarrh and secondary infections, and because the more of such experiments there are carried out with care and with proper records the better for the advance of our knowledge. Preventive inoculation of single individuals, whatever results, teaches us little or nothing, but similar treatment of collections of individuals in schools, in other institutions, in the navy and in the army, may teach us a great deal. In this matter the Ministry of Health should provide ways and means—for this also is research, and of a very valuable kind. Large stocks of vaccine, of known and approved content, should be at the disposal of the medical officers of health, who should co-operate with medical officers in charge of various institutions and should be responsible for collating the results. "More work for the medical officers of health," it will be said. Certainly; I should like to see medical officers of health so busy with work of this and similar kinds that they had no time for private practice at all. They should invariably be whole-time men, and they should be paid salaries consistent with their training, their expert knowledge, and the great responsibility attaching to their office. At present some medical officers of health are paid about a third the salary which a town council pays its clerk, who has a staff to do his work, is pensioned when he retires, and has in many instances received no special nor expensive education to qualify him for his post. Until national health comes to be considered of as much value as paving the streets and running the tramways these anomalies will continue to exist. The health of the country never has been regarded as an asset of much value, and for this reason the money invested in it has never been adequate to its real needs.

IV. WHAT CAN BE DONE TO CONTROL THE EPIDEMIC

WHEN IT HAS ARRIVED? — — —

I will take the question of public control first. Isolation of the patient, promptly and thoroughly undertaken, is, of course, the essential thing. Here we have a branch of preventive medicine which can be exploited straightway, without waiting for the results of research into causes. During the war it was not practicable to carry out even the first principles of isolation. Hospitals were already full of wounded and sick soldiers; movements to and fro of large bodies of men were inevitable; transports arrived with men in all stages of the disease and of convalescence; more and more virulent strains of the virus were being continually imported; doctors and nurses were very scarce, and those that were available were grossly overworked. The conditions for spread of the epidemic were, in fact, very good, and for its control very bad.

No doubt grievous blunders occurred, and much thoroughly bad organization took place here and there; most of us could write about these things if we wished to emulate certain admirals and generals. We are either too discreet or too busy to do so, and since the sailors have forfeited their right to the title, we might claim it for ourselves, and be designated "the silent profession." We may reasonably hope that these handicaps imposed by the war will not be repeated for some time. But we need positive aids, in addition to a guarantee against negative handicaps.

1. Quarantine at the ports, we presume, has already returned to its efficient pre-war state.

2. Early diagnosis and notification, however difficult the problem raised, are matters in which we can all give important help whilst in the daily pursuit of our own practice. The careful observation and recording of the sporadic cases, which may link up the epidemics in a manner not yet made clear, must be a valuable aid to the student of the epidemiological factors.

3. But I have no doubt that the greatest of all our checks to the spread of an epidemic would be a proper system of hospitalization, adequate to the peculiar features presented by the disease. It is hoped that one of the earliest pieces of work undertaken by the new Ministry of Health will be in this direction. A thorough scheme should at once be drafted, by which several large hospital units are established up and down the country for prompt mobilization in times of epidemic emergency. Each unit should have its base, consisting of a well-chosen set of buildings—a fever hospital, a large block of schools, or an infirmary—its staff of doctors, bacteriologists and nurses, its laboratory, and its dispensary. In this matter the lessons of the war should be utilized for the exigencies of peace. And a great deal of useful experience in regard to base hospitals is already fresh in mind, and in potential organization. It would be possible to mobilize these units one by one as required by the incidence of the disease, and have them running smoothly with a few days of their requirement. The staff would be a whole-time staff during the active service of the unit, and demobilization would take place so soon as the epidemic subsided. The expenses of these hospital units would be covered by a special grant made to the Ministry for the purpose. Some of the units might be incorporated with the present large general hospitals, which would set aside a number of wards for the cases and allot them temporarily to a certain number of the staff and of the nurses for treatment. Some of the units might have their base in "special" hospitals, whose usual cases could for the time be pooled with others in "special" hospitals of the same kind. Transport arrangements could be systematically undertaken by the St. John Ambulance.

The efficiency and the success of such a method of public control of an epidemic would turn almost entirely upon the thoroughness with which the schemes were organized beforehand. The analogy between warfare and medicine is hackneyed, but it is very apt. Just as we were caught almost wholly unprepared by Germany when war broke out in August, 1914, so we were caught almost wholly unprepared when the epidemic of 1918 came upon us. Why not learn the lesson and start at once an organized system of defence and of offence against the next outbreak, be it influenza, or cerebro-spinal fever, or whatever it be? Mobility was shown during the war to be the most valuable feature that an army could possess—the

power of rapid concentration upon an objective. This is so in preventive medicine; I believe it to be so in curative medicine also—promptness in collecting all available therapeutic means and bringing them quickly into action. But in order to get this mobility in times of stress in public health the whole territorial scheme, as it were, must be already in potential, and available for calling up at the shortest notice.

I suggest that one or two, or more if needs be, of these establishments that I have outlined should remain in commission between the epidemics, so as to be available for special study and treatment of sporadic cases. They could be staffed by men who—recently demobilized but perhaps looking for suitable work under the Ministry—have had recent and quite exceptional experience in the influenza epidemic. In the matter of research we hear that the highly expert men working during the war and immediately following it under the auspices of the Medical Research Committee are being disbanded. This cannot be for lack of subjects requiring research; is it for purposes of economy? Is it credible that the nation desires the Government to save a few thousands of pounds in this direction?

Efficient isolation of the infected patient is not the only benefit that would accrue from such a scheme of hospitalization. Segregation of the cases might also be attempted, either on clinical or bacteriological lines, or on both. In a large hospital of several wards an effort along this line might lead to results quite unanticipated. A little was attempted in this way by the American Medical Service in France during the war.⁴ Our enterprising allies separated groups of cases according to the dominant micro-organism found in the sputa on admission; this can quite often be done rapidly by examination of stained films. "Pfeiffer cases" might be put into one ward, "pneumococcus cases" into another, and "streptococcus cases" into a third. It will readily be seen what large possibilities there are in work like this, but also how impracticable it is to attempt it unless efficient hospital methods are organized before an epidemic arrives.

Evidence has recently been brought forward suggesting that a practical method of control in the future may depend upon rendering the room atmosphere bactericidal by certain fumes, such as NO_2 and SO_2 gases.⁶ These gases appear to be inimical to the influenza virus, or to the bacteria which invade the mucosa of the influenza patient and lead to secondary infections, adding greatly to the mortality of the disease. By the employment of gases in this way, rather than steam or chemicalized aqueous vapour, a much greater number of patients could be treated together. But such treatment would, again, demand proper methods of hospitalization.

Lastly, consider the great value of such a scheme of isolation and segregation hospitals in the scientific trial of vaccines or other form of immune therapy. At present we have a huge mass of individual experiences to guide us, or rather to confuse us, and as yet scarcely any scientific data. This is, of course, largely due to the handicaps under which observers were working during the last epidemic. Until the claims of various enthusiastic immunizers are subjected to rigid controls we cannot even express a considered judgement on the subject of inoculation treatment of influenza. Impressions we may have, and there are always common-sense and general principles to guide us through the babel of advice, but a sound position on the matter cannot be established until the work is done with proper observation and control by unprejudiced men.

It must strike the intelligent part of the public as a glaring confession of our ignorance on the matter that some of us are wildly enthusiastic, some are coldly temperate, and some of us entirely negligent, when the question of inoculation treatment is mooted. The very formulæ recommended differ enormously, both in the nature of the ingredients, in their proportionate composition, and in the dosage advocated. Indeed, these things are even more variable in the formulæ proposed for treatment than they are in the formulæ proposed for prophylaxis. The matter is not rendered more simple, but a great deal less so, by the enterprise of the wholesale chemists, from whom no more pure science must be expected than is necessary to convince the practitioner that the remedy so alluringly offered is not a quack one.

It may very well be that both the success and the failure of vaccines in the treatment of influenza are due to the great differences known to exist in the infecting flora in different cases. The ideal vaccine—if vaccine be the type of specific remedy we shall ultimately rely upon—must of necessity be autogenous in these cases of mixed infection; but an autogenous vaccine for each patient is quite impracticable during an epidemic of a fulminating disease. "Group" vaccines would, however, be quite practicable, but to use them properly would require segregation of the cases along the lines already suggested, in fact would demand, once more, an adequate scheme of hospitalization.

Some other suggestions for control of an epidemic may be briefly mentioned, such as the closing of places of public amusement and of worship, the disinfection of railway carriages and other public vehicles, and the wearing of masks. In these things all the advantage does not lie entirely on the side of the precaution. The more interruption that is attempted in the normal routine of public life, the more fear is engendered, and to engender fear is to breed panic. Forbidding public amusements, as has been pointed out, may drive a good many people into worse atmospheres in their own homes. Moreover, there is a limit to what is economically practicable in these things.

I come lastly to the question of control of an epidemic as it is affected by treatment of the individual case, and my remarks will apply equally to the sporadic as to the epidemic case. The check to an epidemic does not depend only upon hospitalization of infected patients; it depends also upon efficient management of the individual case. Even with a number of hospital units, such as I have outlined, quickly established and thoroughly run, there must needs be during an epidemic many thousands of cases treated in their own homes. The existence, too, of large numbers of mild cases of short duration puts a very definite limit upon institutional treatment. I have laid it down as an axiom elsewhere that every case of influenza treated promptly, and treated thoroughly, is a contribution to preventive medicine. In the homes of the well-to-do there can be no excuse for the neglect of measures of known value in treatment, and especially for ample ventilation. And yet how frequently did we see the patient in a stuffy little room, the bed placed hard against a wall, much of the available air space occupied by furniture and bric-à-brac, other and much larger rooms being left unoccupied. And even in the houses of the poor we can do much by explaining the fundamental principles of aëration of the sick-room, the control of body heat, and the choice of food. When I once wrote about the special bearing of these principles upon the treatment of influenza patients⁶ I was told that what was possible in large houses was not possible in small ones, and that in many instances the overworked doctor had time only to call for a few minutes, give a word of encouragement to the patient, and leave a prescription or some medicine. To which I would reply that if the work is so pressing that something has to be omitted, I should omit the medicine and open the window. The word of cheer I should on no account omit—it can be put in whilst the window is being opened—but I should remove the superfluous blankets and rugs under which the patient is stewing, explaining as I did so the why and wherefore to the anxious relative, who is often very willing to help if only she knows how.

In the treatment of the actual case I regard the most important thing by far to be a free current of fresh air. It has not only the most important therapeutic value for the patient, it is also of great value as a preventive against spread of the infection. Winds appear to "break up" an epidemic wave; a current of fresh air, it seems quite certain, is our most potent means of defence in the case of the individual patient. I believe that no small factor in the spread of the recent epidemic were the light restrictions in many areas, including London, for these entailed the closing of windows or, if not this, the use of heavy blinds and curtains which rendered open windows ineffective.

Of the various drugs recommended by the public and the press as preventives in time of epidemics there is little to say, except, perhaps, that the taking of them has a certain psychic value. I do not think either quinine or cinnamon internally, or eucalyptus as a vapour, maintained, during the more severe trials of 1918 and 1919,

the prestige gained for them in 1889. Of the nasal douche and gargle advocated in the Local Government Board memorandum I cannot speak more confidently than of drugs and lozenges. The trouble about all these local measures is that the very people who are most liable to infection are much too busy and too preoccupied to carry out a mucous membrane drill with any regularity.

CONCLUSION.

In conclusion, we must, I fear, confess to a very unsatisfactory position at present in regard to preventive measures in the treatment of influenza. But to know how little we know is an essential step in progress. The great need is organized research and organized hospitalization, and now is the time for these things to be carried out. Let us not cease to urge upon those responsible for the public health the importance of the problem and the great uncertainty of our present knowledge, reminding them that economy here is of the falsest, and that the country possesses no asset to be compared in value with the health of its citizens.

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NORMAL AND MORBID CONDITIONS OF THE TESTES FROM BIRTH TO OLD AGE IN ONE HUNDRED ASYLUM AND HOSPITAL CASES.

BY

Sir FREDERICK W. MOTT, K.B.E., M.D., LL.D.,
F.R.S., F.R.C.P.,

DIRECTOR OF THE PATHOLOGICAL LABORATORY OF THE
LONDON COUNTY COUNCIL ASYLUMS.

(Continued from p. 659.)

CORRELATION OF BIOCHEMICAL AND MORPHOLOGICAL CONDITIONS OF SPERMATOGENESIS.

It has been shown that sections of the testis of a newborn child exhibit lipid granules in the interstitial cells, also lipochrome granules similar in appearance to lutein. Fine lipid granules are also seen in and between the embryonic epithelial cells of the seminiferous tubules. Sections of the testis of a four months infant show that the seminiferous tubes are about twice the size of those at birth; no lipid granules are seen in the interstitial tissue. The appearances of sections of the testis of a boy aged 11 show almost similar appearances to those at four months; the tubes are not much larger. A few of the tubules show cells with mitotic figures and cells of Sertoli can be seen, but they contain no lipid granules.

Not until puberty and active spermatogenesis has commenced are lipid granules found in the interstitial tissue. Usually large droplets of ruby-red-stained fat are seen aggregated together in this tissue. Fine orange-stained granules can be seen in abundance in the interstitial cells of Leydig, in the spermatogonia, and especially filling the cells of Sertoli. The large droplets are probably lipid, with a greater proportion of unsaturated fatty acid.

The fact that the lipid ceased to appear in the interstitial cells as soon as, and as long as, spermatogenic growth ceased and reappeared with active spermatogenic proliferation, may be regarded as very suggestive evidence of the phosphorized lipid being connected with nuclear proliferation.

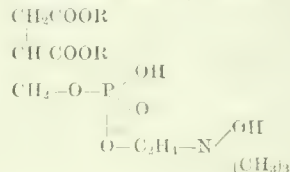
This conclusion, moreover, is supported by the fact that in advanced regressive atrophy the fine orange-stained lipid granules have almost entirely disappeared from the interstitial tissue.

The cells of Sertoli may in some cases of advanced atrophy still contain lipid. Only large ruby-red droplets of varying size are usually seen in the very atrophied tubules, which may be explained by a fatty degeneration of the cells.

THE CORRELATION OF BIOCHEMICAL PROCESSES WITH THE HISTOLOGICAL APPEARANCES.

1. In films of seminal fluid from the vesiculæ seminales and sections of the testis stained with a basic acid dye, such as haematoxylin and eosin, Giemsa or Leishman stains, the following microchemical reactions are observed. The head of the normal spermatozoon, consisting of nucleinate, is stained blue by the basic dye. The tail, except the axial thread, stains pink—that is, the lipid which forms the main constituent of the tail is stained pink.

2. In frozen sections of formalin-hardened testes stained with scarlet dye and haematoxylin, and mounted in Farrant's solution to show the distribution of the lipid granules, the following appearances can be observed. The spermatids in the process of development into spermatozoa are stained posteriorly by the scarlet dye and anteriorly by the basic dye. The fine orange lipid granules are seen in the spermatogonia, spermatocytes, and especially in the cells of Sertoli. The lance-shaped heads of the spermatozoa stained blue are seen diving into the cells of Sertoli, where it may be presumed they behave like living organisms and feed upon the store of lipid in these "nurse" cells. In situations where sheaves of spermatozoa have attained further development and projected their tails into the lumen of the tube prior to escape as free organisms there is a paucity of fine orange granules observable in the Sertoli cells. Chemical investigations by Miescher and Kossel have shown that the tails consist almost entirely of lecithin and cholesterol with a small amount of protein. Lecithin represented by the formula—



may be looked upon as glycerophosphoric acid combined with choline, a base with the constitution of a tertiary amine, and with two molecules of fatty acids (Koch, 1902).

From the following considerations it appears probable that the phosphorus of the glycerophosphoric acid enters into the formation of the nuclein, a fatty acid being formed which combines with the lecithin continually taken up from the blood and lymph. The presence of the unsaturated fatty acid with the lecithin favours the oxidation processes necessary for the active metabolic processes connected with the cell proliferation (Thunberg, 1909, 1913; Warburg, 1913; and Warburg Myerhof, 1913).

The "iodine value" indicating the degree of desaturation of fatty acids of lecithins obtained from various organs shows a high figure for lecithin from testicles—117—as compared with 72 for lecithin from ox heart, 81 from liver, and 69 from thyroid (Cruickshank, 1914).

Miescher's experiments show that the tails of the spermatozoa consist largely of a phosphorized fat and some cholesterol, therefore I examined frozen sections of the testicles for cholesterol by Liebermann's test.

The sections were taken out of water, floated on to a slide, a covering glass placed over the section and glacial acetic acid was attracted under the covering glass by the application of filter paper to the edge; a drop of sulphuric acid was next drawn under the covering glass.

The granules in the interstitial substance and in the circumference of the tubules became pink, and finally turned to green when examined with a magnification of 100. When the magnification was increased to 500 or 600 the fine granules in the spermatogenic cells, especially the Sertoli cells, were seen to be stained green, also the spermatids and heads of the spermatozoa, which leads me to believe that these active developing cellular organisms have a thin covering membrane containing cholesterol. Seeing that cholesterol is insoluble in cold alcohol, and yet this reagent dissolves out nearly all the substances stainable by the scarlet dye, it follows that the cholesterol, although it has exactly the same distribution as the lipid which is stained by this dye, must only represent a fraction of the lipid in which it is in combination.

We know that cholesterol with lecithin enters into the formation of cell membranes. There is good reason, therefore, to suppose that the abundance of lipid found in the

cells of Sertoli during active spermatogenesis may be utilized for forming the tails and covering membrane of the head of the spermatozoa, but the question arises, Is this lipid substance a phosphorized lipid and can its phosphorus be utilized in the manufacture of nucleic acid, the principal constituent of the heads? Wherever there is active cell proliferation there is abundance of peroxidase granules—that is, peroxidase ferments may be contained in these fine lipid granules found especially in the syncytial cells.

THE BIOCHEMISTRY OF THE SEXUAL ORGANS.

A full account of our knowledge of the biochemistry of the sexual organs is given in the admirable work of Marshall, *The Physiology of the Reproductive Organs*, and I shall only briefly summarize the subject in so far as it helps in the arguments relating to the results of my own researches upon spermatogenesis in health and disease.

"According to Slowtsoff, human semen consists roughly of 90 per cent. of water and 10 per cent. solids, which upon incineration yield 1 per cent. of ash." The solids contain 2.3 per cent. proteins. "In the ash K, Na, Ca, Mg, P, Fe, and S have been found. The quantitative analysis of the ash reveals a remarkably large amount of calcium and phosphoric acid—namely, about 20 per cent. Ca and 30 per cent. P_2O_5 ."

The chemistry of spermatogenesis was first investigated by Miescher, who correlated histological examination of the milts of Rhine salmon with chemical analysis. His histological observations enabled him to separate in bulk the portion of the milt containing the heads from that of the tails. He showed that the chemical composition of the former differed essentially from the latter. Miescher found that the heads consisted chemically of two substances—a highly nitrogenized substance which he termed "salmin," and a highly phosphorized substance, nucleic acid. The two are in chemical combination and form a nucleinate.

Kossel continued the researches of Miescher, and showed that the heads of the spermatozoa of other species of fish consisted of a combination of these two substances—namely, a protamine which is specific for each fish and nucleic acid which is common to all vertebrates. It was also shown by these investigators that the tails of the spermatozoa consisted of protein, a large amount of phosphorized lipid, and cholesterol in smaller amount.

During the breeding season the salmon takes no food, but feeds on its muscles. The protamine comes from the muscle. It was shown that the blood of the fish during the breeding season contained a large amount of phosphorized lipid, which therefore, in all probability, is utilized in spermatogenesis. This lipid must have come from the muscle or from metabolic processes incidental to the wasting of the muscles.

The researches of Loeb show that the iron of the nucleus of a cell acts as a catalyser, in the presence of oxidase, converting molecular into atomic oxygen—not only may complex substances be split up into simpler substances, but simple substances may be synthetized into complex substances thereby.

The first step in all proliferation is the taking up of the raw material for growth by the living cell; it is brought to the gland by the blood and lymph channels.

Our previous remarks show that certain elements are especially required—namely, Ca, N, P, Fe. In all active proliferating cells there is oxidase ferment in the form of fine granules, and these, under the influence of the iron catalase in the nucleus, are able to convert the molecular oxygen into atomic oxygen, and the chemical processes which are set in action enable the cell, including its nucleus, to build up substances like unto itself from the raw material brought by the blood and lymph. The first morphological change is visible in the chromatin of the nucleus, karyokinetic figures appear heralding the division of the nucleus and the cell. It is highly probable either that the oxidase granules are lipid substances with a certain amount of unsaturated fatty acid, or they have a lipid film on the surface, the phosphorus having an affinity for the oxygen with which it is in unstable combination, consequently O_2 is readily converted into free atomic oxygen, O , by the catalyser iron of the nucleus.

Some experiments of Marshall carried out in 1903 suggest that these phosphorized fats may act as oxygen

carriers, and that they may thus fulfil an important function in all respiration.

That phosphorized fats are in all probability the source of nucleic acid is supported by the following facts. Neither nucleo-protein nor pentoses are present in the fresh egg, and purin bases are only present in very small amounts. During development of the egg these substances rapidly increase in amount, indicating a synthesis of nucleo-proteins from the reserve material of the egg—namely, proteins and phosphorized fats.

Wolfgang Ostwald has determined the amounts of oxidizing ferments present in the testes of toads, frogs, and newts. The watery extracts of these organs had the power of decomposing hydrogen peroxide with the formation of water and oxygen, and of oxidizing guaiaconic acid to guaiacum blue, so that a blue colour appeared when these extracts were added to an emulsion of guaiac resin. These reactions indicate the presence of a catalase and of a peroxidase in the extracts of the sexual glands. Such ferments are present in many, if not all, organs and tissue fluids, but a special significance is attributed by Ostwald to their presence in the ova and spermatozoa.

MICROCHEMICAL TESTS REGARDING THE NATURE OF THESE LIPID GRANULES.

A phosphorized lipid—for example, lecithin—is stained an orange colour, fat or a fatty acid a deep ruby-red, by scarlet. Sections of the medulla oblongata from three cases of death by shock caused by gunshot wounds with compound comminuted fractures of the femur, with fat embolism, showed this remarkably well.

Degenerated nervous tissue, in which there is free fatty acid the result of decomposition of the phosphorized fat (myelin), is stained black by Marchi fluid (1 per cent. osmic acid in 5 per cent. potassium bichromate solution), whereas the myelin of normal nerve is stained an ash-grey. Both these microchemical reactions have been employed in this investigation. I have found that in sections of normal testicle there is invariably within the spermatogonia, cells of Sertoli, and to a much less degree the spermatocytes, an accumulation of fine granules which are stained orange or ash-grey according to the staining reaction employed. Under a low power these granules form a ring within the basement membrane of the tubes (see Figs. VI and VIII), but the interstitial staining by these methods varies very considerably as to the amount of fatty acid and phosphorized fat present in testes where active spermatogenesis is taking place. We may ask the question, Is this variability in the amount of fatty acid present in the interstitial tissue due to a decomposition of the phosphorized fat in the formation of the nucleic acid? But wherever we have this fatty reaction the cholesterol reaction is also obtained, so that it is not a simple fatty acid but a cholesterol combination. The fine orange granules of phosphorized lipid also give this cholesterol reaction; we must therefore suppose that this substance is present in the granules found in the spermatocytic cells. But cholesterol is present in the tails of the spermatozoa, although in much smaller amount than lecithin; moreover, these two substances form the periplasm constituting the osmotic membrane of the spermatocytes, spermatids, and spermatozoa.

Now the oxidase reaction (in the few cases in which I have employed this test) corresponds in its distribution, both in the interstitial tissue and in the seminiferous tubes, to the scarlet, osmic, and cholesterol reactions—a fact which seems definitely to show a functional correlation between lipid and oxidases. The following experiment supports the conclusion that these lipid granules are connected with the oxidation processes.

Small portions of the testis of a freshly killed guinea-pig were placed in a solution of vital methylene blue. These fine granules took up the dye. The tissue was placed in saline solution and covered with a covering glass which was surrounded with vaseline. The preparation was put into the warm chamber. After some hours all the blue colour had disappeared. Upon lifting up the covering glass and admitting the air all the coloured granules reappeared. A clear proof that these granules use up and take up oxygen.

It is an interesting fact that the testes of persons dying from the most varied forms of microbial infection in which toxins must have circulated in the blood and lymph for a considerable time nevertheless show active spermatogenesis. The interstitial tissue and the tubuli seminiferi contain abundant lipid in the same situations as in cases of sudden death by injury.

► Cortex Adrenalis and the Reproductive Function.

There is evidence to show that one of the functions of the adrenal cortex, the cells of which are filled with lipid substance, is to provide lipid for the building up of the myelin of the developing nervous system. The evidence in favour of this is as follows:

1. A correspondence in size of the adrenal cortex and the brain in the animal series.

2. The great diminution in size of the adrenals in anencephalous monsters.

But it has other functions—namely, the storage of lipid—which, as occasion arises, can pass into the blood and keep constant the supply of lipid to the reproductive organs, where it constitutes the raw material for formative nuclear activity. This functional correspondence of the adrenal cortex and sexual glands is indicated by certain pathological facts—namely:

1. Adenoma of the suprarenal cortex has been found associated with marked sexual precocity.

2. Among my cases an active spermatogenesis in a man aged 69, who died after many years' residence in the asylum suffering with dementia of arrested general paralysis, was associated with a large adrenal cortex.

3. In four male cases of well-marked dementia praecox, with regressive atrophy of the testis, the adrenal cortex was narrow and the cells contained much less lipid than in other cases of mental disease dying in the asylums. I have only paid attention to this matter lately, but it is being followed up to see if there is a correlation.

4. The cortex adrenalis in the teleostei and elasmobranch fishes is a separate gland. The medullary substance, with its chromaffin, is a part of the sympathetic nervous system.

5. Rats fed upon suprarenal gland showed hypertrophy of the testes; other organs did not show hypertrophy (Swale Vincent).

6. The cortex adrenalis is developed close to, or forms part of, the genital ridge, and in one case of dementia praecox, where there was only one testicle, the adrenal gland of one side weighed less than one-half that of the side in which the testis was present, and this difference in weight was mainly due to a diminished cortex.

I have observed in a large number of cases where the patient has died from a disease in which there has been microbial infection and consequent toxæmia a marked diminution of the amount of stainable lipid in the adrenal cortex, and I agree with Elliot that this adrenal lipid probably passes into the circulation to form antitoxins. Now, it is a remarkable fact that however much the lipid may have diminished, on this account, in the adrenal cortex, it does not seem to have diminished in the testis. Possibly this may account for the fact that, in all manner of chronic microbial infections with toxæmia, active spermatogenesis may nevertheless be seen in the seminiferous tubules. This supports the premise that these lipoids form a protective barrier by virtue of the free atomic oxygen liberated upon their surface; thus affording a special provision of nature to protect the germ cells from injury, as well as providing at the same time the oxygen and raw materials necessary for the most fundamentally vital cell activity in the body.

The Oxidase Reaction Applied to the Cortex Adrenalis.—According to Marinresco, the cortex adrenalis does not give the oxidase reaction because the contents of the cells stain uniformly and not as granules, but some cells from which some of the lipid has escaped do show granules of lipid and these stain in a similar manner to the granules in the testicles.

(To be continued.)

SURGICAL TREATMENT OF FACIAL PARALYSIS.

BY

GEORGE FENWICK, F.R.C.S.,

MAJOR, N.Z.M.C.,

AURAL AND OPHTHALMIC SURGEON, NO. 2 NEW ZEALAND GENERAL HOSPITAL.

EVERY large military hospital has had experience of traumatic facial paralysis, where restoration of function by nerve repair or nerve grafting has not been possible. In cases of comminution of the petrous bone end-to-end repair cannot be effected, although grafting or anastomosis may still remain practicable; in lacerated parotid wounds the main trunk has already broken up into the parotid plexus, and repair of the diverging branches does not come into the realm of practical surgery.

The deformity is a very terrible one, and any treatment that offers hope of cosmetic improvement should be welcome to surgeons.

Early in 1917 I attempted to do something for these patients by grafts from neighbouring muscles, and in successive cases to employ the method, modifying the procedure by the result of experience.

I describe the operation in the form I finally adopted (Fig. 1):

Preliminary to anaesthesia, the non-paralysed side of the face is inspected, and the position of the lower half of the naso-labial furrow marked in; a second vertical marking is made almost in the centre of the cheek in the position of the dimple that becomes evident when laughing. A third marking is made, beginning below the external canthus and taking the direction of one of the lines of the crow's foot. The side of the head is shaved.

An incision is made through the skin in the hair line from

the zygoma to the upper limit of the temporal fossa, directed slightly backwards so as to be parallel to the underlying fibres of the temporal muscle. The skin is then undermined forwards and backwards to expose the temporal fascia; two parallel incisions are then made, again from the zygoma to the limit of the temporal fossa through the fascia and muscle down to the bone; these incisions should run in the direction of the muscular fibres and should include a strip of muscle as thick as a man's thumb; it is important for the preservation of the nerve supply and for the cosmetic result that fully this bulk of muscle should be used. A smaller slip anterior to this is similarly isolated, and both are detached from the underlying bone.

An incision is now made under the eyelid in the marking representing one of the lines of the crow's foot, the skin is undermined, the anterior smaller slip of muscle drawn through,

made taut, and sutured to the fibres of the orbicularis palpebrarum with catgut (Fig. 1, T, and Fig. 3, T₁).

Incisions are made in the line of the cheek furrow and the lower half of the naso-labial groove, and the skin tunnelled to make a continuous passage from the temporal wound to the corner of the mouth. The large slip of muscle is then drawn down over the zygoma through the channel, sutured with

catgut to the superficial fascia exposed in the cheek wound, and to the muscular fibres of the orbicularis oris below and slightly mesial to the corner of the mouth (Fig. 3, T₂).

The facial incisions are sutured with horsehair: the cut margins of the temporal muscle are brought together as far as possible with catgut (it is extremely difficult to get apposition), and the temporal wound closed with silkworm gut.

Faradism and massage should be employed early, and the patient should daily exercise his facial expression before a glass. The grafted straps of muscle will continue to function.

In the first operation of this kind which I attempted I grafted a slip of the temporal muscle into the orbicularis palpebrarum and a slip of the masseter into the orbicularis oris (Fig. 1, M); Stenson's duct was guarded by a probe inserted and tied to a tooth. Considerable difficulty was

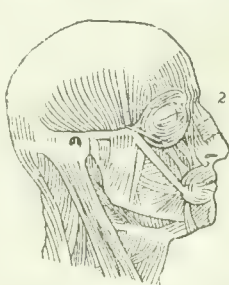


FIG. 1.—2. Denuded area in temporal fossa. T, Slip of temporal muscle inserted into orbicularis palpebrarum. M, Slip of masseter inserted into orbicularis oris.

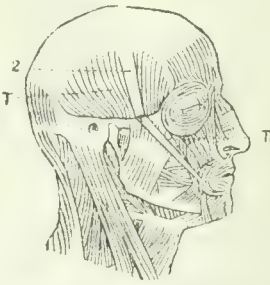


FIG. 2.—2. Denuded area in temporal fossa. T, Temporal muscle. T₁, Slip of temporal muscle inserted into orbicularis oris.

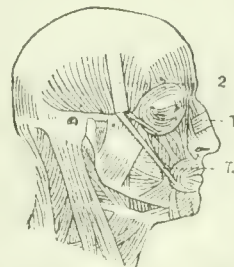


FIG. 3.—2. Denuded area in temporal fossa. T₁, Slip of temporal muscle inserted into orbicularis palpebrarum. T₂, Slip of temporal muscle inserted into orbicularis oris.

experienced in getting the slip from the masseter, and there are no compensating advantages. I have performed the temporal muscle graft without making use of a cheek incision, but I prefer the method described, and the additional scar, lying as it does in a natural skin fold, is almost imperceptible.

The cavity left in the temporal fossa after swinging down the slip is of considerable dimensions, and to obliterate it by approximation of the cut edges of the muscle is almost impossible. I intend in the next case to implant gluteal fat.

I have had good results before in paralytic ectropion by means of the ordinary Kuhnt-Dimmer operation; I think, however, that the sling of living muscle is more likely to ensure permanent improvement than the mere shortening of the lower lid.

I have not attempted to do anything for the expressionless brow; the patients I had were instructed to refrain from raising their eyebrows and frowning, and were very successful in abandoning this expression of emotion; in a deeply wrinkled forehead where the facial expression could not be adequately controlled I should feel inclined to excise strips of skin and fascia in the line of the frontal furrows. The immediate cosmetic result of the operation is good in repose. The drooping corner of the mouth is slung up into a natural appearance by the strap of inextensible fascia and living muscle; and the hollowness of the cheek is obliterated by the bulk of the graft. It is not to be hoped that the implantation of a graft from a mandibular muscle will restore the infinite variety of facial expression commanded by the complex sheet of muscle it replaces, but an appearance of tone and life is conferred that gratifies both patient and surgeon; and by practice before a glass the patients learn in some degree to associate the contraction of the temporal slips of muscle with that of the zygomatics and the risorius of the unaffected side.

Two years ago a writer in the *Annals of Surgery* contended that the neuro-muscular spindles of a graft multiplied and extended into the fibres of the paralysed muscle, and illustrated his article by microscopic sections that seemed to prove his point. I cannot feel optimistic about the likelihood of this occurrence; but if any such process took place the cosmetic gain would be further enhanced.

Much has been learned in military surgery that is destined to be of value in civil life; cases of facial palsy will be always with us, and I believe that where nerve repair is impossible, or has failed, the operation I have described will be the recognized method of treatment. The diagrams explain themselves.

OBSTETRICS: PAST, PRESENT AND FUTURE.*

BY

ALEXANDER STOOKES, F.R.C.S. EDIN.,

HONORARY SURGEON TO THE LIVERPOOL MATERNITY HOSPITAL AND TO THE LIVERPOOL SAMARITAN HOSPITAL FOR WOMEN.

In this paper on Obstetrics, the Cinderella of the Medical Faculty, I wish to present to the society the changes which have taken place, and more especially those which are now going on—changes not so much in technical points which are more suitable for presentation at a meeting of specialists, but changes affecting the community and our profession as a whole. Those of us who were concerned with the discussions and committee meetings before the National Insurance Act was passed will remember how difficult it was to get at what the medical profession wished or at any plan upon which we could agree. Since the Act came into force I have never met any one who was satisfied with its working. Even men with a panel of 5,000 are not pleased.

At present even greater changes are looming ahead, and in obstetrics have already taken place without the bulk of the profession realizing how we are drifting. In our archives we have a most interesting record of obstetric work done in Liverpool. Henry Park was a pupil of Percival Pott at St. Bartholomew's, and studied in Rouen; he was surgeon to the infirmary, a partner with Alanson, and was the inventor of the operation for excision of

joints. His midwifery record, which we possess, extends from 1769 to 1830, and enumerates 3,900 cases extending over fifty-one years. The first 1,000 cases took fourteen years, the second thirteen, and the third twelve years. It was not until he had done 3,300 that he slackened in this work, and the last 100 cases extend over eight years. The record says nothing of mortality, but singularly few abnormal cases are noted. There were only two forceps cases, one a brow presentation; the difficulty in the other case is not recorded. There were five crochets or craniotomy cases, four cases of placenta praevia, and only two cases of convulsions. Evidently child-bearing in those days in Liverpool was more simple than in these times.

A later record, of even more interest from the obstetric point of view, is the very detailed account left by Francis Ramsbotham of the Royal Maternity Charity from 1820 to 1850. From 1828 to 1850 in 48,996 deliveries there were 220 deaths (4.5 per 1,000), 162 were puerperal deaths, 58 non-puerperal; 66 of the former were from haemorrhage. There were only 43 cases of eclampsia (about 1 per 1,000); of these 27 were before delivery with one death, 16 after delivery with 3 deaths. Stillbirths came to 2,723, equal to 5.4 per cent.

These two records cannot be considered as typical of obstetric practice of the time, but show what could be done. Dr. Matthews Duncan, writing in 1866, took 31,277 cases occurring in the private practices of the best known obstetricians and found there were 272 deaths; he concludes that 8.2 per 1,000 might be considered the average mortality of childbirth. It was well known that hospital practice gave a much higher mortality in most instances. Duncan came to the conclusion from investigation of the returns of well managed hospitals, such as the Dublin Rotunda, that the mortality was about the same as in private cases. Florence Nightingale in 1871 said that childbirth in a hospital in London was four times more dangerous than in the towns of England, where the mortality was 5 per 1,000 births.

Death Rates in Hospitals in London, 1865-1875.

British Lying-in	...	...	19.4 per 1,000
City of London	...	...	14.3 " "
Queen Charlotte's	...	...	22.3 " "

Obstetrics has always been, as I said, the Cinderella of the Medical Faculty. It was considered a branch of the profession hardly respectable. The College of Physicians precluded practitioners of midwifery from their Fellowship; the College of Surgeons would not allow such a one to sit on its council until 1828. It was only in 1886 that an amendment of the Medical Acts required all registered practitioners to qualify in obstetrics as well as in medicine and surgery.

TABLE I.—Mortality of Mothers per 1,000 Births Registered (England and Wales).

Decennium.	All Causes.	Sepsis.	Accidents of Childbirth.
1851-1860	4.7	1.5	3.2
1861-1870	4.7	1.70	3.00
1871-1880	4.72	2.18	2.54
1881-1890	4.73	2.63	2.05
1891-1900	5.07	2.36	2.75
1901-1910	4.01	1.75	2.25
1911-1917	4.02	1.4	2.19

When we turn to the Registrar-General's statistics for the past fifty years we find there is little if any less risk for a woman in childbirth to-day than there was in 1851.

The fall in mortality from causes other than sepsis has extended through five decades, whereas that from sepsis dates only from 1881-1890. Over the whole period the fall from non-septic causes is greater than from sepsis.

In the decade 1851-1860 the mortality from all causes was 4.7 per 1,000 births—1.5 from sepsis, 3.2 from accidents; if we take 1911-1917 the total mortality is 1.4 from sepsis, 2.62 from accidents, a total of 4.02 per 1,000.

No one event has produced so much effect in midwifery as the passing of the Midwives Act, 1902, whereby it became compulsory for any woman who practises as a midwife habitually and for gain to be on the midwives'

* A paper read at the Liverpool Medical Institution, November 21st, 1919.

register. The terms of the licence to practise are much more stringent than those for medical practice; any one can practise medicine or surgery without being registered, and the case for dentistry is worse. The Midwives Act has been in force for nearly fifteen years, and has already produced far-reaching effects, and in the near future will produce more. In centres such as Liverpool the practice of midwifery is passing into the hands of midwives almost entirely. Dr. Hope, the medical officer of health, in his report for 1918, states that 83 per cent. of the births in Liverpool are attended by midwives and the Maternity Hospital, so that only 1,002 births, or 5.84 per cent. of the whole, were notified by medical men; the midwives' cases had a death rate from puerperal sepsis less by far than the rate for the country and much less than the Liverpool cases attended by medical men. Out of 17,133 births in Liverpool 28 cases of sepsis were notified and 17 deaths were registered; among the 28 cases notified 16 deaths took place—9 deaths in midwives' cases, a mortality of 0.63 per 1,000 births attended, and either 7 or 8 deaths in the 17 per cent. of cases attended by other than midwives, a death rate from sepsis of 2.4 per 1,000 births. It would be of much interest if Dr. Hope published the same details of doctors' cases as of midwives'. As the report reads at present it looks as if the doctors had four times as much sepsis in the women they attend as midwives. When speaking of midwives' cases Dr. Hope means cases where a midwife attended in the first instance, even if a doctor is called in after. It is not only in Liverpool that the advantage rests with midwives. In a paper read before the American Association of Obstetricians and Gynecologists at Newark, N.J., in 1917, the figures for midwives were much better than for the rest of the city, and the same explanation was given as I suggested in 1912—namely, the prevalence of operative interference in cases attended by doctors. Dr. Arnold Lea, in his monograph on puerperal sepsis, said:

There can be little doubt that the introduction of chloroform has been accompanied by a distinct increase in puerperal mortality. Before this time operations were undertaken rarely and with reluctance, but with the general introduction of anaesthesia they were performed with increasing frequency, and a distinct increase in mortality can be traced to this fact. Statistics show that in at least 40 per cent. of fatal cases of puerperal infection, some operative procedure has been carried out.

Forceps delivery, too often with an undilated cervix, or in cases of inertia, to save time or please the patient, is, in my experience, most frequently the cause of sepsis; manual removal of the placenta also is often a cause.

Whatever the explanation of the facts may be, it remains that, whereas previous to the enforcement of the Act the sepsis death rate had not much diminished, since the enforcement of the Act there has been a marked fall in the puerperal death rate, especially from sepsis, and most markedly in such places as Liverpool and Manchester, where there are many midwives well trained and supervised. The puerperal mortality in Liverpool has for years been below that of England and Wales and much below that of Lancashire.

Authorities seem to be conscious of the fact that all is not as it should be, and are making inquiries as to the training that medical students are getting in obstetrics and gynaecology. The General Medical Council in 1905 and 1907, and more recently, for London only, a committee appointed by the Royal Society of Medicine have been investigating the matter. The recommendations of the committee are not less than revolutionary, but, I fear, impossible. Every teaching hospital is to have accommodation for far more women than at present, new hospitals are to be built, and the medical student is to reside for four months in such a hospital, giving the whole of that time to the subjects of obstetrics, gynaecology, and infant welfare. Further, the clinical instruction is to be given by the senior officers on the staff, who, for periods of five to seven years, are to live on the premises but to carry on consulting practice. One does not see where the student is going to find the time. Every teacher in his curriculum claims that the student should devote more—much more—time to that teacher's particular subject. My experience with house-surgeons tells me that four months is none too much time to enable even a qualified man to become a reliable practical obstetrician and gynaecologist. The midwife's training is superior to the medical student's in that for

six months she lives in an obstetrical atmosphere and does nothing but midwifery; the weak point about her is in the class from which she is drawn, and her lack of general education. She will not improve until she can make a decent living wage by her practice; at present, with the small fees she obtains, usually 10s. 6d. or 15s., and the numbers of cases she can efficiently look after—say 150, the calling is not likely to attract a better class woman.

For the medical student there are many difficulties in the way of adequate clinical instruction, the lack of beds, of teachers, and, not least, the dislike all women have to being demonstrated, especially during parturition. When I think of the large number of medical men who never intend to practise midwifery, and the difficulties of adequate clinical instruction, I wonder if it is worth while to oblige all to qualify in obstetrics. The tendency, I am sure, is to hand over midwifery to midwives, with adequate hospital accommodation and adequate staffs of obstetricians and gynaecologists, men and women who are specializing in the subject. The days of the general practitioner as an obstetrician are, to my mind, numbered. In the past a young man starting in general practice, the London report points out, found his work chiefly to be the care of the minor ailments of women and children and midwifery—the very subjects to which he has paid least attention; he probably knew the most recent methods of doing a gastro-enterostomy, and might be a keen bacteriologist, but he felt rather astray when baby had colic or the woman could not pass water in the fourth month of pregnancy.

While ordinary normal midwifery is passing into the hands of the midwife, great changes have been taking place in the purely surgical or scientific aspect of practice. I can best put that by giving a very short account of the Liverpool Maternity Hospital and its work in the past and at the present. The present hospital in Brownlow Hill was built in 1884 and opened for patients in 1885; Drs. Armstrong, Wood, and Briggs were then appointed honorary medical officers. The charity or out-door department had originated in 1796 as a help to the wives of soldiers in the Peninsular war. I need not do more than allude to the amalgamation of the charity and lying-in hospital in 1870, and the unfortunate career and closure of the building in Myrtle Street in 1880, when the gynaecological part split off and became the Women's Hospital in Shaw Street.

TABLE II.—The Liverpool Maternity Hospital, 1885-1918.

	1885-1894.	1895-1901.	1905-1914.	1915-1918.
Admissions (average) per ann.	147	201	528	683
Labours (average) per ann.	147	201	483	572
Abnormalities (per cent.)	9.3	14.4	30.9	37.0
Deaths (total)	17 11.5 per 1,000	45-22 per 1,000	100-18 per 1,000	51-21.1 per 1,000
Caesarean sections	1	10; 2 D.	144; 8 D.	112; 4 D.
Forceps	68	129	245	171
Version	11	18	137	117
Induction of premature labour	10	37	108	85
Eclampsia	7; 2 D.	58; 17 D.	99; 18 D.	65; 19 D.

Table II presents a sketch of the main features of the work. In the first ten years, 1885-1894, there were 1,471 labours in hospital with 17 deaths (11.5 per 1,000); there was an average abnormality of 11 per cent. It was in 1894 that the first Caesarean section was performed by Dr. Briggs. The operative work otherwise was limited to an average of 6 forceps cases per annum with an occasional version and induction of premature labour. In the next ten years, 1895-1904, the average admissions came to 201 (14 per cent. abnormal) and a death rate of 22 per 1,000. There were about double the number of operative cases, including 10 Caesarean sections. In the third ten years, 1905-14, the average rate of admission was 528 (over 30 per cent. of abnormality). The death rate was 18 per 1,000, and the operative work five times as much as in the previous ten years—144 Caesarean sections, 245 forceps cases, 137 versions, 108 inductions, and 99 cases of eclampsia. Since

1914 the work has continued to increase, the average of admissions has been 680 a year, and admission has had to be refused almost daily for lack of beds. There has been an average abnormality of 37 per cent. The death rate has been 21 per 1,000, and the operative work is about double the amount of the previous ten years, and goes on increasing. A very large proportion of the cases of eclampsia that occur in Liverpool are treated in our hospital; in 1917 there were in Liverpool 6 deaths, 5 in hospital; in 1916 9 deaths, 6 in hospital; in 1915 7 deaths, 3 in hospital. I would draw attention to the figures connected with eclampsia in the first twenty years—42 per cent. were fatal. In the last fourteen years 22 per cent. died.

I think no one can avoid concluding that there is a rapidly increasing call for hospital treatment. Sepsis in cases dealt with entirely in hospital has almost disappeared. There can be no doubt that we are now saving many lives both of mothers and children by the increased possibilities of abdominal surgery; every year Caesarean section is increasingly resorted to, and its field extends. At the beginning of the period I review it was limited to cases which could not possibly be delivered any other way, and for some time only extreme deformity was considered to justify the operation. We have done it successfully for rupture of the uterus, for concealed accidental haemorrhage, for placenta praevia, and it has been done for eclampsia and for cases in which renal disease has caused oedema and threatened eclampsia. Our fatal cases have been mostly those in which attempts had previously been made to deliver, or in almost hopeless cases of ruptured uterus.

Another, and perhaps the greatest, advance in the past few years has been the systematic measuring, especially of primiparae, at the hospital and at the pre-maternity centres; many cases are found with unsuspected pelvic deformity of the minor degree in which a judicious induction about three weeks before full time results usually in a comparatively easy confinement and a live child. High forceps cases become less and less frequent.

What may we look for in the future? Is midwifery to leave the general practitioner altogether? I think most of them look upon midwifery as a nuisance, and in the advertising columns of the medical papers "no midwifery or very few" seems to enhance the chance of a sale. I think few in Liverpool will collect 3,900 cases like Dr. Park.

Is midwifery and infant welfare to become a branch of the public health service? The supervising authority is already in charge of 83 per cent. of the births in Liverpool. No specialist in obstetrics could make a living out of it alone, for the bulk of the operative work is among those who expect the State to provide, and those who can pay are limiting their families, so the two specialities must, for economic as well as other good reasons, be practised together.

From another point of view, the more one sees of confinements the less one likes the makeshift arrangements that are usually considered sufficient in private practice. There is no doubt that the training of the midwife has lessened the mortality from sepsis, but I should like to see all women attended under hospital conditions, and all labours conducted with all the care and preparation that are given to any serious operation in surgery. There can be no greater loss to the State than by carelessness in midwifery; no loss is so sad as the death of a young mother. Further, even short of death, the injuries and incapacities inflicted on women in childbirth and on the children themselves are a matter of most urgent consideration.

CONCLUSIONS.

1. The results of obstetric practice remain unsatisfactory; the death rate from childbirth, largely preventable, remains too high; too many injuries follow, too many children are lost and injured.
2. More adequate hospital accommodation is required.
3. Midwifery is passing into the hands of midwives and specialists.
4. Adequate and complete training in midwifery for all medical students is impossible even with increased hospital beds, and is not necessary for all, as many will never practise obstetrics. As to this last clause I hold no very fixed convictions.

EXPERIMENTS ON THE DESTRUCTION OF LICE AND NITS.

I.

THE SURVIVAL PERIOD OF LICE AND NITS (*Pediculus humanus*) WHEN SUBMERGED IN TAP WATER AND WATER CONTAINING 1 PER CENT. OF SALT AT VARIOUS TEMPERATURES.

BY

A. BACOT, F.E.S., AND GEORGE TALBOT, F.E.S.
Entomologist, Lister Institute
of Preventive Medicine.

THE series of experiments with which this paper deals were carried out in order to test the correctness of a claim made by an official of the London County Council that an effective method of dealing with verminous sheets was to soak them for twenty-four hours in water containing salt in the proportion of 1 lb. to 10 or 12 gallons of water; the temperature of the water was not stated.

METHOD.

The method adopted was to immerse nits on slips of army shirt flannel and active lice on similar material in tubes containing tap water or 1 per cent. salt solution kept at various temperatures. The number of nits available for the trials, owing to other calls, was somewhat restricted, and in consequence of the females crowding their eggs into small clusters, the numbers used for the different tests varied from 36 to 120, with an average of 72. In the case of eggs immersed at 30° F. and 46° F. the batches were divided, one-half being removed for incubation after 50 hours and the remainder at the end of a week. The number of active lice in each trial was 20 to 25. The plan adopted was to remove a few at a time, dry them on filter paper, and place in card boxes kept at 82° F. The period needed for revival of the apparently drowned lice was generally not more than an hour, but in several instances revivals took place after 3 hours, and in two cases after 5 hours (at 60° to 63° F.).

Active Lice.

At 91° F. no mortality resulted from four hours' immersion; after 7 hours 4 out of 5 removed from the salt solution recovered, but only one out of the same number taken from the tap water. None survived 24 hours in either tap or salt water. At 82° F. all were killed within 31 hours. At 60° to 63° F. all of the lice removed after 19 hours from both tap and salt water recovered; single lice removed after 46 hours revived, but all the remainder (over 50 per cent.) were dead when removed after 47 hours. At 46° F. no mortality occurred among samples of 6 lice removed from both salt and tap water after 19 hours, nor among further samples of 5 taken out after 47 hours, but after 67 hours 1 out of 3 had been killed by immersion in tap water, though all of a similar sample from the salt water revived. Samples removed after 96 hours from both tubes were dead, as were also the remainder taken out after 168 hours. At 30° F. 4 out of 7 revived when taken out of salt water after 67 hours, and 2 out of 3 removed from the tap water; of the remainder, after 168 hours' immersion, 1 out of 18 survived the effects of salt water, but all of the 17 in tap water were killed.

Nits.

Four per cent. hatched after 22 hours in salt water at 91° F., but none in tap water. At 82° F. 45 per cent. survived 26 hours in salt water and 53 per cent. in tap water. At 60° to 63° F. 68 per cent. hatched after 45 hours in salt water and 42 per cent. after a similar period in tap water. The figures at 46° F. were, in salt water 73 per cent. after 50 hours and 5 per cent. after 168 hours, while in tap water at this temperature 72 per cent. hatched after 50 hours but none after 168. At 30° F. 76 per cent. survived 50 hours in salt water, but all were dead after 168 hours; in tap water at 30° F. only 58 per cent. hatched after 50 hours, but 18 per cent. survived 168 hours' immersion.

It will be noted that for both lice and nits the survival period increased with the decrease of temperature, presumably owing to the slowing down of physiological action due to cold rendering their need for oxygen less acute. The nits showed a much longer survival period than the active lice. As regards the practical point at issue, no apparent advantage is gained by the addition of salt, plain tap water giving results just as good, and in some cases better. Temperature, however, proved to be a very important factor. It is quite within the bounds of possibility that the practice of immersing sheets in salt water gave successful results during hot summer weather, active lice being destroyed, and nits, if present, failing to hatch owing to the want of the continued heat necessary for their incubation; but the evidence obtained shows that no reliance can be placed on the simple soaking of verminous textiles in water even for so long a period as 24 hours unless the temperature of the water is above 90° F.

II.

EXPERIMENTS CONCERNING THE DESTRUCTION OF ACTIVE LICE (*Pediculus humanus*) BY SOLUTIONS OF CRESOL SOAP EMULSION AND LYSOL, AND OF LICE AND NITS WITH KEROSENE, WITH A VIEW TO THE USE OF THESE REMEDIES FOR THE TREATMENT OF VERMINOUS HEADS.

BY

A. BACOT, F.E.S., AND CAPTAIN L. LLOYD, R.A.M.C.(T.).

In a previous paper dealing with the destruction of the nits of *Pediculus humanus*¹ our object was to ascertain the value of cresol soap emulsion and lysol as an aid to military officers in charge of baths and washhouses in ridding garments of lice and nits. The present paper is published rather with a view to assist civil authorities by indicating what reliance may be placed upon these and other means for the treatment of verminous heads, together with the modifications of the methods of application necessary to ensure the greatest efficiency.

It was assumed in our previous work that active lice would be less likely to survive the combined processes of washing and immersion in dilute lysol and cresol than their nits, and if the period of starvation that this process and laundering together involve be allowed for, our assumption was probably correct. When, however, we tested these means of louse destruction for verminous heads, which after a thorough sponging with cold dilute lysol were rinsed with water till they were free from the disinfectant, we found that lice proved more resistant to the treatment than nits, and suffered but little from it. This induced us to begin again experiments *in vitro* in order to discover the potency of the various factors which might play their parts in affecting the toxic action of the solutions. The effects of varying the time of immersion, the temperature and strength of the solution, as well as the method of experiment, were studied. Lysol solutions alone were used in the earlier experiments.

The first method of experiment adopted was to drop active lice free into the solutions, and at the end of the immersion to place them on filter paper to drain in an incubator at a temperature of 80° F. The result was judged at the end of twenty-four hours after their removal from the solutions.

First Series of Experiments.

In the first series the effect of varying the strength of the solution and the time of immersion was tested, the temperature of the solution being roughly constant at 65° to 68° F. Immersion in solutions of 0.5 per cent., 1 per cent., and 2 per cent. strength for 30 minutes showed a mortality of 1 out of 15 in the 2 per cent. solution only. This was apparently, however, a chance result, as none were killed in the 2 per cent. solution after a 40 minutes' immersion, though 2 out of 10 died as a result of 60 minutes' exposure to the same conditions.

A 3 per cent. solution killed 1 out of 5 after 30 minutes, and also gave the same result after 60 minutes. At 4 per cent. 2 out of 5 were killed after 30 minutes, and none out of 5 at 60 minutes. A 5 per cent. solution killed 3 out of 5 in 30, and only 1 out of 5 in 60 minutes. With a 7.5 per cent. solution 3 out of 5 died from the effects of 30 minutes', and 5 out of 5 from the effects of a 60 minutes' immersion. A 10 per cent. solution killed 4 out of 5 in 30 minutes and 4 out of 5 in 60 minutes.

It will be seen from these figures that the results were erratic, 60 minutes' immersion in 4 per cent. and 5 per cent. solutions being less effective than 30 minutes, while some lice survived the apparently drastic treatment of 30 minutes' immersion in 7.5 per cent. and 10 per cent. solutions of lysol.

Second Series of Experiments.

In the second series the effect of varying the temperature of the solution and keeping constant the strength of the solution at 2 per cent. and the time of immersion at 30 minutes was tried, the treatment of the lice after removal from the fluid remaining the same. In the first three tests at 65° F., 74° to 79° F., and 79° to 86° F., none were killed. Of the batch immersed at 84° F., rising to 93° F., 40 per cent. were killed. Of the next three batches, immersed respectively at 97° F., 86° F., rising to 99° F., and at 99° F., 60 per cent. were killed; while the mortality in the remaining five tests, the lice being immersed respectively at 100° F., 99° F., rising to 102° F., 102° F., 95° F., rising to 104° F., and 104° F., was 100 per cent.

In this case the results showed a steadily increasing toxicity as the temperature increased from 86° F. to body heat. At 100° F. and upwards the mortality was constantly 100 per cent. Such brief immersions in water at 104° F. have no ill effects upon lice.

From the foregoing facts it seems clear that if lice are immersed in fluids at temperatures somewhat below that which they experience on man they are able, within limits, to resist their penetration. If, however, garments infested with lice are immersed in a 2 per cent. solution of

lysol at 100° to 104° F. for 30 minutes they are rendered safe whatever the subsequent treatment may be, since the lethal point for both lice and their nits has been passed during the immersion. From these two series of experiments the conclusion drawn is that the raising of the temperature gives a more certain result than increasing the strength of the solutions in question or the period of immersion.

The aim of a third and fourth series of trials was to test the effect of lysol or cresol when allowed to remain in the fabric on active lice that had presumably survived the period of immersion but were not removed from the impregnated garments.

Third and Fourth Series of Experiments.

The method adopted was to put slips of army shirt flannel on which a number of active lice were placed into solutions of varying strength and temperature for 5, 20, or 60 minutes; then to allow the excess fluid to drain off by laying them on filter paper, after which the slips were put into card boxes and kept at 65° F. for 20 to 24 hours; the general scheme of the experiments being to use such conditions as would probably apply if verminous garments, after dipping, were allowed to dry without further washing or rinsing. The fluids used were 1½ per cent. and 2 per cent. dilutions of lysol and liquor cresoli saponatus fortis, each series of trials being repeated at 32° F., 59° F., 69° F., 82° F., and 97° F. respectively. The results of this lengthy series, amounting in all to 60 separate experiments, show that 20 minutes in 2 per cent. solutions of either cresol soap or lysol at 68° F. or over, and 60 minutes in 1½ per cent. solutions at 32° F. and upwards, will kill all the active lice under these conditions.

It appears, therefore, that if it is not possible to use heated solutions, the complete disinfection of garments or bedding may still be achieved with cold solutions, provided that their strength is not less than 1½ per cent. with an immersion period of one hour, and that the solution remaining in the fabric after dipping be allowed to dry in.

The Destruction of Lice and Nits in Hair.

That the conclusions respecting the use of heated solutions of cresol soap or lysol do not apply equally to the destruction of lice in hair is shown by the following experiment:

Two muslin bags, each containing 20 active lice, were bound close to the scalp of a man with a heavy crop of hair, and two cotton threads covered with nits were similarly fastened amongst his hair. The hair was then continuously sponged for 30 minutes with a 2 per cent. solution of lysol, which had at the commencement a temperature of 104° F., falling to 91° F. at the end of the operation. The head was then washed with water, the lice were removed and placed in an incubator, while the nits were incubated on the body. Two of the lice, one male and one female, survived, but none of the treated nits hatched. A control series of eggs of the same parentage hatched normally.

A certainly effective result cannot therefore be obtained for head infestation by sponging the head with 2 per cent. lysol, either warm or cold, if the sponging is followed by an immediate rinsing of the hair.

The crucial point seems to be indicated by the following experiment:

A piece of flannel, containing 40 adult lice, was immersed in a 2 per cent. lysol solution at a temperature of 68° F. for 30 minutes; 20 of the lice were then removed from the flannel, drained, and placed in an incubator. Of these, 90 per cent. recovered. The flannel, without rinsing and with the remaining 20 lice upon it, was also incubated, and none of the lice recovered.

An obvious explanation of these results is that the lice are not passive but active factors in the process, possibly protecting themselves against the entrance of fluids into the system by closing their spiracles. If the period of immersion is short, lasting for a few minutes only, no penetration occurs, but when it is prolonged, or if the temperature is sufficiently high to allow of the insects' metabolism being maintained at its normal speed, the need for oxygen leads to attempted breathing, and the fluid finds entrance through the tracheal passages, killing in a longer or shorter time, according to its toxicity.

Such an explanation would also account for the irregularities of the results shown in Series 3 and 4 when experimenting under cool conditions. The results, as noted above, obtained by Bacot and Talbot, working with lice immersed in tap water at various temperatures, are confirmatory in that they bring out clearly the lengthening survival period due to cooler conditions, presumably due to

the slowing down of physiological action; while the evidence obtained by the authors in sterilizing lice outwardly by immersion in lysol solution in connexion with trench fever resarch also points in the same direction.

In order to obtain further evidence on this question, which is of great importance from the point of view of the treatment of verminous heads, the following experiment was made:

EXPERIMENT V.—Effect of Immersion in Kerosene.

Kerosene as supplied at retail shops was used at a temperature of 20°C. (68° F.), the period of immersion being 5 minutes. Most of the lice made active movements while immersed, and one or two made slight movements immediately after removal.

METHOD.

Active Lice.

Active lice were placed on slips of flannel shirt material on which nits had been laid by a number of females during a period of one week.

First Batch (16 adults, 6 nymphs, 3 larvae).—After immersion the slip of flannel was laid for 10 minutes on filter paper to drain, then put into a cardboard box and kept in incubator at 80° F. No recovery.

Second Batch (10 adults, 6 nymphs, 9 larvae).—After immersion the lice were removed to filter paper, dried off and placed on a fresh slip of flannel in a cardboard box and kept in incubator at 80° F. When examined 18 hours later 6 were living 2 feeble and 4 nearly dead, 19 dead. The survivors died within 48 hours of recovering full activity.

Third Batch (7 adults, 5 nymphs, 9 larvae).—After immersion the lice were placed in a dry water at 82° F. then transferred to clean water at the same temperature and drained off on filter paper, transferred to a fresh slip of flannel in a cardboard box and kept in incubator at 80° F. On examination 18 hours later 2 (nymphs) were active 2 were feeble, 3 very feeble, and 9 dead. The survivors died within 48 hours, but as no attempt at feeding was made it cannot be concluded that the nymphs which recovered their activity died from the after-effects of their immersion, though this is probable.

Nits.

These received similar treatment to the active lice, save that in the case of the second batch a number of the eggs were removed from the flannel to which they were attached, and incubated apart from the remainder, which were left attached to it. The results were as follows:

First Batch (170 nits).—None hatched.

Second Batch (191 nits).—11 nits were removed from the flannel; of these 82 hatched; 90 nits were left on the flannel, which was drained of oil so far as possible by gentle pressure between filter paper; only 2 hatched.

Third Batch (182 nits).—At least 3 of these eggs developed, but the young lice died during the process of emergence from the egg. None of the remainder hatched.

Conclusions.

That fatality to active lice following immersion in kerosene is due rather to the oil on the surface of the insect or the object to which it clings obtaining entrance to its body after removal from the fluid than during the short period of immersion.

As regards nits, penetration by kerosene is too slow for its entrance into the egg to occur within the few minutes of immersion, but subsequent to their removal the fluid or its vapour inhibits development. In the case of Batch 3, the subsequent washing produced some modification in the egg or its membranes, which prevents normal hatching on the part of the young louse.

In view of this experiment it seems clear that the explanation as set forth above in regard to the closing of the spiracles against the entrance of fluids must be correct, and that provided the insects are not rendered too sluggish to react owing to cold or prevented by their need for oxygen, they can resist the entrance of fluids into their bodies. Probably the action is not volitional, but a necessary reflex (similar to winking) evolved to guard against the dangers arising owing to sudden submersion in sweat.

In the case of nits, where the question of penetration seems likely to be largely a matter of surface tension due to the nature and temperature of the fluid, possibly conditioned by the stage of development which the eggs have attained, it seems possible that eggs that are wetted by the fluid but not entirely immersed, may be more readily penetrated than those completely immersed, while the possibility must be considered of death resulting from the vapour rather than the fluid itself finding entrance into the egg.

REFERENCE.

¹Bacot and Lloyd; Destruction of Nits of the Clothes Louse by Solutions of Cresol Soap Emulsion and Lysol, BRITISH MEDICAL JOURNAL, April 27th, 1918.

A Bulletin of the Air Medical Service will shortly be issued by the United States. It will be under the authority of the Director of the Air Service, and will make public the results of studies and experiments made by medical research laboratories.

RADIUM IN THE TREATMENT OF TUBERCULOUS ADENITIS.

BY

ECHLIN S. MOLYNEUX, M.R.C.S.,

HONORARY SURGEON TO THE WARNEFORD HOSPITAL, LEAMINGTON;
LATE SURGICAL SPECIALIST, B.E.F.

THE therapeutic properties of radium have always been a fascinating subject, both to the medical profession and the laity, and the medical profession have by no means, I think, reached the limits of the subject yet.

During 1913-14 I thought I would see what could be done for tuberculous glands by radium. As a result I am convinced that the day of radical operation will soon be past, that it will no longer be necessary to send children thus affected for prolonged periods to the seaside, and that the unsightly scars which disfigure the necks of so many girls can now be avoided. Radium is, if properly used, a safe, and as far as I can see a certain, cure, whether for an early or an advanced case of tuberculous glands. Within the period named I treated between twenty and thirty cases of every grade with radium. In every case the swellings and even old sinuses faded away. Unless there were already sinuses present, no scars were left. The skin was in some a little red for a few weeks from the action of the radium, but this always disappeared.

In no case was any ulceration caused. It is unnecessary to describe all the initial experiments and the doses used. As a result I find as follows:

Fifteen milligrams of radium bromide, spread out on a flat circular applicator $1\frac{1}{2}$ in. in diameter, and mixed with a special varnish to keep it even and prevent loss, is sufficient for this kind of treatment. The applicator has a screen of silver 1 mm. thick, and a piece of thin gutta-percha tissue tied over the whole to prevent soiling of the radium. The applicator is strapped on over the tuberculous glands. I have found ten hours a suitable time for each application of the above strength—that is, 150 milligram hours. The applicator is applied when the patient goes to bed and taken off in the morning. A different gland or group of glands can be attacked at each sitting till all have been covered, and the course then started again.

The patients usually have had two applications a week. Nothing was noticed for from a week to ten days, but from that time a gradual shrinkage of the glands was observed till nothing could be felt except a few fibrous nodules. I continue the treatment till all signs of trouble have disappeared. In very bad cases I usually gave in addition a few applications three months later, but doubt whether this is really necessary if the first treatment is properly carried out.

Since my demobilization from the R.A.M.C. I have had an opportunity of inspecting many of the patients I treated in 1913-14. In none of them can I find a trace of any further trouble, nor have I heard of any I have not actually seen having any signs of recurrence. Evidently, therefore, the cure is usually a lasting one. Should a case recur, I have no doubt that a further course of treatment would restore the patient to health again.

I will briefly quote three typical cases to illustrate the different degrees of the disease treated.

CASE I.

A boy aged 4. Early tuberculous glands of the left tonsillar and carotid region; no obvious signs of softening.

He had five applications of 15 mg. of radium, ten hours each application, at intervals of seven days. At the end of this time all signs of the disease had disappeared.

CASE II.

A woman, aged about 30, had had a swelling on the right side of the neck for a year. It had been treated by iodex, tonics, change of air, and all the usual remedies. When I first saw her the mass of glands was nearly the size of an orange, and there were marked signs of caseation; I was, in fact, afraid lest they would break down and suppurate through the skin before the action of the radium could have much effect. Her general health had suffered considerably.

I treated her twice a week with 15 mg. of radium, ten hours each time for ten sittings. There was an interval of a month, while she was paying a visit, in the middle of the treatment. At the end of that time the neck was perfectly normal. Fortunately the radium began its work before surface suppuration had occurred. I saw her three months later, and she was

thoroughly restored to health and there were no signs of there ever having been any trouble in the neck. To take no risks I gave her three more similar applications.

CASE III.

A boy, aged 4, one of a large family, nearly all of whom had suffered from tuberculosis; several had died. His mother and one or two uncles and aunts had died of phthisis. When I first saw him he had extensive tuberculous adenitis on both sides of the neck. The glands had suppurated, and sinuses secondarily infected were present.

I gave him ten applications of from eight to twelve hours each, twice a week. On several of these occasions, after four hours the applicator was moved to cover another group of glands, and so on. The same strength, 15 mg., of radium was employed. At the end of this treatment all the sinuses had healed, and the masses of glands had shrunk till only a few fibrous nodules could be felt. The boy had also improved much in health, and when I saw him a few months later one would hardly recognize him.

Carious teeth or unhealthy tonsils and adenoids, if present, must be dealt with at the beginning of the treatment, as it would be folly to cure the existing glands and leave a future source of infection behind.

FATAL CEREBRAL HAEMORRHAGE AT 34.

BY

ALLAN B. FEARNLEY, M.D.,

POTTERS BAR, MIDDLESEX.

THE following report may be of interest owing to the difficulties of diagnosis the case presented and to the comparative rarity, as far as I am aware, of the condition:

A single woman, aged 34, of healthy parentage, whose previous health had been good, and who had had no serious illnesses, was in her usual health till September 8th.

On that day, while straining to reach up to a high shelf, she had a sudden sensation "as though someone had struck her on the back of the head," followed by a "fainting attack" (though she did not lose consciousness) and severe occipital headache, which prevented her sleeping that night.

On September 9th she came to my surgery complaining of occipital headache. The temperature and pulse were normal; she was given aspirin and told to report again in the morning. She then said that she had had a good night and that the headache had practically disappeared. She was given a tonic and told to report again if necessary. The "attack" was attributed to the sun, the weather being very hot at the time.

She remained quite well except for slight occasional stiffness of the neck until the afternoon of September 14th, when she had a sudden seizure; without any warning she fell suddenly unconscious. I saw her ten minutes after the onset of the attack. She was then deeply unconscious, the conjunctival reflex was absent, and the complexion ashen grey; there was very marked Cheyne-Stokes respiration and very feeble pulse (100). The reflexes were variable during the attack, which at first was characterized by slight spasmodic contractions of the arms and chewing movements of the jaws, alternating with periods of complete relaxation. There was no definite paralysis of any part. After about an hour she was suddenly seized with violent convulsions with most extreme opisthotonos, which lasted on and off nearly another hour, when she vomited and began to come round. She passed water and sweated during the fit.

On partial return to consciousness she screamed out with agonizing pains in the occipital region, rolling her head backwards and forwards apparently in extreme distress. There was no retraction. Kernig's sign was doubtful, as were the plantar reflexes. The knee jerks were equal and variable.

She was given morphine gr. $\frac{1}{4}$, which eased the pain, though she had no sleep; she vomited frequently during the night.

On September 15th she was completely conscious and mentally clear. She complained of very severe occipital headache and vomited occasionally. The temperature was 98°, and the pulse 100; systolic pressure 150. The skin was moist. She was passing water freely. Urine, specific gravity 1025, acid, very faint cloud of albumin; partially reduced Fehling's solution; microscopically a few blood casts and red cells. Ophthalmoscopic examination showed clear discs and the fundus normal on both sides. During the day the vomiting ceased and the headache improved.

On September 16th the headache was more severe and there was definite retraction and well marked Kernig sign. The temperature began to rise (99.2°); the pulse fell from 100 to 60. Lumbar puncture was performed in the afternoon. The fluid was under great pressure, spurring out on withdrawing the trocar; about 1 c.cm. was withdrawn. The bacteriological examination was difficult, as the specimen was contaminated with blood. The report stated that the fluid was sterile and polymorph leucocytosis absent.

From September 16th to 25th there was steady improvement, the chief difficulties being the headache (which gradually

became frontal as well as occipital, though less severe) and a persistent insomnia. The albuminuria disappeared after the first forty-eight hours. The glycosuria became more pronounced, but was less than 1 per cent.; there was no acetonaemia. A most marked feature, considering the severity of the symptoms, was the general good spirits of the patient in spite of the headache, and the mental clearness. There was no further vomiting; the optic discs remained clear.

On September 25th, after a good night, and while appearing better than usual, she had a seizure similar to that of the 14th, which was fatal in about two minutes.

Post-mortem Examination.—Brain: There was a large clot of blood between the dura and the brain; the bleeding point was apparently in the frontal region, in the neighbourhood of the crest of the ethmoid. The clot extended between the frontal lobes and on the outer surface of the right frontal lobe as far back as the motor area. In places the brain substance was torn. There was no evidence of disease of bone nor any sign of cerebral tumour or abscess. There was no evidence of any inflammatory condition at the base or elsewhere. The other organs were healthy.

Presumably the first seizure was caused by a minute haemorrhage, which was not discovered *post mortem*. The haemorrhage seen at the *post-mortem* examination was presumably the one which caused the fatal seizure.

The interesting features from the point of view of diagnosis were: The basal symptoms accompanied by evident raised pressure in the spinal canal, the marked mental clearness all through, and the absence of vomiting and optic neuritis.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

CAESAREAN SECTION FOR PLACENTA PRAEVI WITH CONCEALED HAEMORRHAGE.

ALTHOUGH the case reported below had a fatal termination, most probably from pulmonary apoplexy, I consider the treatment by Caesarean section was correct and satisfactory. I cannot remember reading of a case of placenta praevia with concealed haemorrhage so profuse as to fill the uterus, distending it and causing tonic contraction; and, although some authorities on the subject agree that Caesarean section is correct in certain cases of placenta praevia, I have not yet seen the operation recorded in any such cases.

On November 6th, at 5 p.m., I was called to a woman aged 39, primipara, eight months pregnant. She was in agonizing pain, and on examination of the abdomen the uterus was very distended, and in a state of tonic contraction, so that nothing but the shape of it could be made out. Examining per vagina, I found the os dilated to the size of half a crown, rigid, and a soft mass presenting with no landmarks; the vagina was very narrow and rigid. The pulse was about 120, and the patient very restless; on inquiry I found she had been in this condition since 2 o'clock. I came to the conclusion that she must be delivered as soon as possible; I therefore decided to call in Dr. W. S. McDougall to see if he agreed as to removal to hospital and Caesarean section. During the interval before he arrived the presenting part gave way, and a large haemorrhage occurred, blanching the patient. On arrival Dr. McDougall made an examination and found the placenta at the os, and nothing else presenting; the patient was bleeding. He agreed with me, and the patient was removed to the Carshalton, Beddington, and Wallington District Hospital.

At 9.30 p.m. the patient was put on the table; Dr. McDougall gave the anaesthetic, and Dr. W. H. Passmore assisted me. Operating by the abdominal route, I opened the uterus with a median longitudinal incision, and found the uterus full of clots. I extracted the child already dead, and cleared the uterus, and sewed up with five or six catgut sutures through-and-through, missing the mucosa. Having completed the toilet of the peritoneum, the uterus was returned, and the abdomen closed with three layers of sutures; during the later stages of the operation ergotamine and pituitary extract were injected. The operation was completed in fifteen and a half minutes, a pint of saline was given on the table, and later she was given a continuous saline.

The next morning the patient's condition was satisfactory, except that she vomited when she took feeds, chiefly of Valentine's juice. On November 8th the abdomen was much distended, and the vomit becoming offensive and enemas giving very little relief, it was apparent that the bowel was paralysed. Towards evening I made an opening in the ileum, which relieved the situation; the sickness stopped, the distension disappeared, and in twenty-four hours the bowels acted in the ordinary way. On November 9th the condition was good, the patient taking some food. Next day the condition was still

good, but towards evening the patient became flushed, with temperature 101.8°, but she passed a good night. On November 11th, she was restless during the afternoon; at 7.30 p.m. she had a good action of the bowels after an enema; her temperature rose to 104°, but she slept till 11.30 p.m., when the temperature dropped to 102°. At this time the patient asked for a bedpan, and whilst using it was seized with a bad attack of dyspnoea; oxygen was given, but she gradually sank and died at 12.10 a.m.

Referring to the discussion on the incision for Caesarean section reported in the *BRITISH MEDICAL JOURNAL* of November 15th, I have always made the longitudinal incision towards the upper part of the uterus in the nine cases of Caesarean section I have performed, and have sown up, as advocated by Dr. Clifford (Manchester), with very good results.

ARTHUR Z. C. CRESSY,
Honorary Surgeon, Carshalton, Redington, and
Wainington District Hospital.

Reports of Societies.

DEFICIENCY DISEASES.

At a meeting of the Section of Therapeutics and Pharmacology of the Royal Society of Medicine, held on November 18th, Sir W. HALE WHITE, Vice-President, being in the chair, Professor F. G. HOPKINS, F.R.S., opened a discussion on the treatment and management of diseases due to a deficiency of the accessory factors in diet.

He said that the vitamin hypothesis was now passing through a phase during which it would meet with sound and considered criticism. Many experiments and observations were necessary. The small concentration of vitamins in the substances which contained them was no doubt one reason why they had so long been ignored. Another reason was that experimenters in feeding, thinking only of carbohydrates, proteins and fats, never administered these substances pure, so that the pathologist and the experimental investigator were not working along the same lines. It was curious that the factor concerned in the etiology of scurvy was not recognized earlier. Scurvy constituted a remarkably clear example of deficiency disease, yet this had recently been denied by so prominent an authority as McCollum, who had ascribed it to intestinal stasis. The quantitative work at the Lister Institute and experiments with the monkey made the position clear. Thanks to the quantitative experiments we could now classify and indicate the relative potency of the antiscorbutics. There were still certain difficulties in applying the vitamin hypothesis to infantile scurvy. Milk was by no means rich in the antiscorbutic factor, and this factor was easily destroyed. It might therefore be asked why scurvy was not much more common in infants. Many physicians said that though they used pasteurized milk, they had not found it necessary to add antiscorbutics. As an explanation it was just conceivable that the infant started with an excess of the antiscorbutic element. With regard to beri-beri, several officers of the Japanese military services had expressed doubt whether anti beri-beri vitamin was the sole deterrent. They stated that they had not seen the same improvement after correction of the army diet as had occurred when that of the navy was altered some years ago. In the case of rickets the facts were less well established, but if they proved to be true were of great national importance. He had seen a good deal of Dr. Mellaub's work from personal observation, and was convinced that the influence of the vitamin associated with fats was an all-important factor. That there were contributing factors was quite certain, but these were of minor importance. In exceptional cases the disease might occur without dietetic deficiency. The functioning of some of the vitamins seemed in some way to be concerned with stimulation of the glands of internal secretion. The response of an animal was a more complicated process than a direct action to any one factor. The quantitative demand might depend on the rate of metabolism. Such considerations must be taken into account before it could be held that exceptional cases disproved the hypothesis. There was more evidence in favour of it than of any other view. Referring to the theory of acidosis advanced by Eric Pritchard, he said

that it seemed to be based on a misconception of the equilibrium of acids and bases in the blood, and was contrary to the tenets of modern biochemistry. There was another condition associated with the absence of the fat-soluble vitamin—namely, one of the eye, which, beginning as a slight conjunctivitis, often led to destruction of the eyeball. In certain experiments every rat fed only on vegetable fats suffered from this condition. Infection had naturally been suspected, but animals might be mixed together, and only those fed on food lacking in the vitamin developed the symptom, and none of the others. It cleared up with extraordinary rapidity if butter or cod-liver oil were administered. Very rare in this country, it was very common in Denmark, especially when the butter supply was being sent out of the country during the war. Apparently the deficiency needed to be very complete. In pellagra the deficiency seemed to be not one of vitamins, but of some other variety of food. In experiments which he had made some years ago animals given a diet deficient in tryptophane developed a remarkable group of symptoms which, on later consideration, he thought might be those of pellagra. Although he had often tried, he had never been able to repeat this experiment.

Professor F. D. BOYD said that as Consulting Physician to the Egyptian Forces he had had to report on an outbreak of pellagra among Turkish prisoners of war. He and his collaborators had come to the conclusion that the view that pellagra was a deficiency disease was correct. Inquiry into the sanitation showed that it was good. Analysis of the water gave a negative result. Hydrochloric acid was absent from the stomach; this, of course, led to deficient pancreatic secretion, to imperfect digestion and decomposition of food, and also to loss of food elements by diarrhoea. No specific micro-organisms could be found. The blood of fifty patients was examined and not only were no organisms found, but there was also an absence of the mononuclear excess, so constant in protozoal diseases. There was no fever. The cerebro-spinal fluid, urine, and stools also failed to yield any specific organism. The stools of 220 were examined. They were very fetid and contained flagellates and ascarides, but no specific micro-organism. Examination of healthy Turkish prisoners showed that they were in a pre-pellagrous state. It was now recognized that protein was only useful to the body when it contained certain amino-acids. He then exhibited tables and charts which showed that the incidence of beri-beri had no relation to the calorie value of fat or proteins ingested, but depended upon the biological value of the proteins. The association of pellagra with maize could be explained by the low biological value of the protein it contained. It might be asked why there was a seasonal incidence in pellagra, for it occurred chiefly in the spring. It must be remembered that peasants were particularly prone to the disease, and these would have gone through a hard winter, and might therefore be in a pre-pellagrous condition at the end of it. The men who were put upon extra protein gained more weight than those given extra fat or the ordinary ration. They also improved if the absent hydrochloric acid were supplied.

Dr. W. H. WILLECOX spoke of the incidence of scurvy and beri-beri as it affected the troops in Mesopotamia. A paper by him on the subject will be published shortly.

Dr. MACKENZIE WALLACE spoke of a substitute for nutrose, made from monkey nuts, which he had prepared for the treatment of beri-beri. It was superior to nutrose and cost only 2d. a pound, as compared to 9s. a pound. A biscuit had been made from the flour. It was very rich in protein and sufficiently palatable to be well received on the whole by the British soldier. Experiments with pigeons had shown it to be very protective against beri-beri, and it also proved efficacious in an epidemic of beri-beri in a criminal settlement.

Dr. H. E. ROSE said that in the treatment of deficiency diseases it was not only necessary to make good the deficiency, but also to see that the deficient substance was properly absorbed. The low biological value of maize might explain its association with beri-beri. Possibly tryptophane was the amino-acid which was missing from maize. The majority of pellagra patients had indianaemia, which meant that there was a further loss of a certain amount of tryptophane. Pellagrous people, *post mortem*, were wasted and the intestine was translucent, and clearly in a condition not

normal for absorption. This must be taken into account in the treatment. For the proper absorption of the substance which was previously lacking administration of hydrochloric acid, predigestion of food, and the treatment of such conditions as dysentery were clearly indicated. The symptoms of pellagra could be explained by defect of the sympathetic nervous system. He had found degeneration of sympathetic ganglion cells. This suggested that in the treatment the sympathetic nervous system should be spared as much as possible, such as by the avoidance of sweating.

MISS MARGARET HUME spoke of the comparative value of vitamin-containing foods. Marmite retained the properties of yeast, and one gram added to the experimental ration daily prevented polynucleitis. It had been found that in the bran of cereals it was particularly the germ which had the greatest potency; 1.5 gram of wheat germ similarly prevented polynucleitis. Next in order came egg yolk and dried peas, beans, etc., but the first two were at least three or four times more powerful, and therefore more suitable. To obtain an antiscorbutic which was suitable for the use of the troops it was necessary to find one so rich that after the lapse of time some potency might remain, or one in such a form that the vitamin could be resuscitated. At first lime juice was thought to supply this need, but it was found that lemon juice was not only four times as potent, but retained its value, which lime juice did not. The accepted statement that the introduction of lime juice had abolished scurvy from the British navy seemed to require an explanation, and a search of the Admiralty records had shown that the term "lime" had been used indifferently at first for limes and lemons, and as a matter of fact lemons for the Mediterranean were first used. A change was made later to lime juice, but by that time steam had been introduced. Germinating pulses had been used in the Archangel area, she believed quite satisfactorily, but they were not suitable for men already sick, as they were indigestible. She thought that the disparity to which Professor Hopkins had referred with regard to the infrequency of scurvy in infants when fed on heated milk might be due to the fact that little antiscorbutic factor was necessary for infants, and the expression of its lack might be greatly delayed, though changes might be produced which remained although the disease known as scurvy never developed.

DR. MARION DELF spoke of the effects of temperature on accessory food factors. The anti-beri-beri vitamin was stable after heating for two hours at 100° C. The evidence of the effect of temperature on the fat-soluble growth factor was very conflicting. With regard to antiscorbutic factors, that of orange juice was most stable, and the stability of swede juice was very high.

DR. A. HARDEN said that orange juice evaporated to dryness retained its protective power for two years; at most it was not reduced by more than one-third of its original potency.

DR. S. S. ZILVA said that after removal of citric acid and solid matter from lemon juice the residue showed no diminution of antiscorbutic value. This had been shown by experiment on monkeys and in the treatment of children affected by infantile scurvy. The advantage of removing these constituents of the juice was that more of the antiscorbutic element could be given without producing alimentary disturbances. The procedure was simple, and could even be done at home by the addition of precipitated chalk. Examination of the teeth of guinea-pigs suffering from scurvy showed marked histological changes. This suggested that lack of the essential vitamins might produce such changes in human beings, and yet no classical scurvy.

INTRATRACHEAL ETHER.

At a meeting of the Section of Anaesthetics of the Royal Society of Medicine, held on November 7th, with Dr. LI. POWELL, President, in the chair, Dr. F. E. SHIPWAY read a paper on intratracheal insufflation of ether in operations which involve bleeding into the air passages. After dealing briefly with the history of the method, the author showed how cases due to war injury had greatly extended its use. His own experience depended on 930 cases, of

which 417 were operations on face, mouth, and pharynx. These he arranged in three groups.

1. Gunshot wounds of face, mouth, and pharynx (142 cases).
2. Non-malignant disease of mouth and pharynx (89 cases).
3. Malignant disease (176 cases).

In Group 1 there was uniformity of age and general physical condition. The average length of anaesthesia was greater than in the other groups. Many of the operations lasted over an hour and a half, 20 lasted two or more hours, the longest being three hours and seven minutes. There were 6 patients under 12 years of age.

One case was that of a fisherman weighing 18 st., subject to urgent dyspnoea through nasal obstruction from masses of polyp. The palate had to be held up by the surgeon's finger and the tongue held out in order to secure an airway during induction of anaesthesia. Then the epiglottis was cocaineized and the catheter passed.

Two patients in Group 3 were 80 years of age; the youngest was a girl under 12, who underwent removal of the upper jaw. In two of these cases tracheotomy was performed and the catheter placed in the tube. Dr. Shipway described the difficulties that may be met with in passing the catheter in patients of Group 1, difficulties due to scarring and deformity of mouth, jaws, and tongue, and showed how such difficulty could often be overcome by using the upright or semi-recumbent posture and by flexing the head. He approved cocaineization of the pharynx and the epiglottis for all administrators who had not yet attained skill in passing the catheter. The advisability of giving preliminary narcotics was discussed. In the young, Dr. Shipway disapproved of it. In adults generally, he preferred morphine $\frac{1}{2}$ gr. with atropine, but never scopolamine. The morphine reduced struggling and thus saved an expenditure of energy, which might play a leading part in collapse or failure to recover. Moreover, with the use of morphine the anaesthetist could maintain by intratracheal insufflation a uniformly light degree of narcosis with perfect quiet on the patient's part.

The anaesthetic could be blown out before the end of operation and the patient returned to bed with full control of his reflexes. The danger of pushing infective material into the lungs or of implanting cancer cells low down in the air passages by the passage of the catheter had not been illustrated in a single case of the series. The claim that intratracheal ether abolished the risk of aspiration or septic pneumonia had been made good by these cases, for it occurred in none. Dr. Shipway alluded to the practice of interrupting the air stream at intervals, and stated that with a moderate pressure, such as existed when the safety valve blew off at 20 or 25 mm. Hg, it was rarely necessary. Such interruptions accompanied by compression of the chest had, however, been found necessary when the apparatus was used for performance of artificial respiration. There were six cases of acute bronchitis, mostly among the emphysematous and chronic bronchitic. Shock was reduced to a minimum by this method of anaesthesia; all the needs of respiration were met and intermittent asphyxia eliminated. Dr. Shipway compared the merits of insufflation with those of delivering the anaesthetic through a laryngotomy or tracheotomy opening, and showed how in many of the war injury cases the latter method was impossible or undesirable. He had abandoned insufflation for exophthalmic goitre cases except in the presence of obstruction.

A discussion followed, in which Mr. BURGHARD expressed his high opinion of the method, and the President, Dr. LOW, Mr. ROOD, Dr. C. H. MOTT, Dr. MCCARDIE, Mr. F. W. LONGHURST, and Mr. HUGH PHILLIPS took part. Afterwards Mr. GEOFFREY MARSHALL, Dr. MCCARDIE, and Dr. SHIPWAY showed nitrous-oxide-ether apparatus which was commented upon by the President, Mr. H. E. G. BOYLE, and Mr. PHILLIPS.

EUGENICS AND PUBLIC HEALTH.

At a meeting of the Society of Medical Officers of Health, held on November 21st, Professor H. R. KENWOOD presiding, Dr. W. J. HOWARTH, C.B.E., medical officer of health for the City of London, read a paper on eugenics in relation to public health.

He argued that medical officers of health were practical eugenicists, since their work was concerned with the prevention of human suffering, the promotion of human happiness, and the prolongation of human life. Sir George

Newman, in his recent memorandum, placed the subject of eugenics and the principles of sound breeding among the ten principal elements which must form part of a public health policy, and this made it desirable that medical officers of health should consider in what way they could promote progress. It was accepted that innate qualities were of prime importance in matters relating to racial improvement, and the part played by inborn defects in contributing to illness, suffering, and mortality was only now being fully appreciated. Probably more had been done to emphasize this relationship by Professor Karl Pearson than anyone else. In the present state of knowledge the character of any child born could not be predicted, although we might possess a full account of its ancestry. It could, however, be stated with certainty that a child would more probably possess desirable traits if both parents possessed those traits than one in whose parents they were absent or defective. Major Darwin's researches on the part played by economics were referred to, and Dr. Howarth suggested that, although the differential birth rate might, in a comparatively short time, produce marked changes in the constitution of the population, the influence of a differential death rate had to be considered. The fewness of births in the classes successful in life, and the disproportionate number of births born to those in the lower social grade, was not a matter to be ignored if material success in life, or absolute failure, were due to the possession or lack of desirable innate qualities.

The most important possession of human beings was that of intellectual vigour and development, and deficiency in this was without doubt hereditary. The defective class included mental deficiency (so-called), insane persons, epileptics, habitual tramps, those with defective parental instincts, habitual criminals, and the like. It was essential that some means should be found for decreasing the production of the unfit as well as an increase in the number of the fit. In promoting human progress it was of the greatest importance that the value of environment should be properly assessed. Without satisfactory environment the best qualities might fail to be developed. It was impossible, at an early period of life, to differentiate the fit from the unfit, and no social grade possessed a monopoly of brains; from which it followed that no endeavour should be spared to give everyone a chance. In addition, environmental improvements were required by the worthy on the grounds of self-preservation, if the risks from defective character, combined with defective surroundings, were to be avoided by them. In the distribution of doles, direct aid, and other forms of help, it would appear that such gifts should only be given to persons of satisfactory ancestry, but the science was not sufficiently definite, nor was public opinion sufficiently advanced to justify any such proposal being made operative, even should it be desirable. Any measure providing direct help ought to be studied by medical officers of health with a view to ensuring that the worthy profited, and that the unworthy were at least not encouraged in their unworthiness. Education of the more desirable elements of the population appeared to present the best chance of promoting present progress. Attempted education of the less desirable was doomed to disappointment. Education might result in more permanent benefits than violent or radical changes in the marriage laws.

With the object of increasing the birth rate among the middle classes, direct State aid, either through the income tax or by restrictions on hereditary transmission of wealth or otherwise, might be beneficial; but these were questions for the statesman rather than the medical officer of health. Although sterilization of unfit persons would not be accepted in this country, a greater measure of legal control seemed desirable, but such matters should not be ahead of scientific knowledge lest there should be a setback. The diagnosis of mental deficiency needed to be placed on a sound scientific basis with the object of ensuring uniformity of decision and action. Dr. Howarth pointed out, in conclusion, that medical officers of health possessed a greater opportunity than any other workers for collecting valuable information on practically every social problem. This opportunity should be seized, but it should be directed by a Government department under the charge of an expert rather than that each medical officer should collect his information as seemed most desirable to him, and, as a consequence, expose himself to the risk of

framing conclusions based on insufficient information. An expert would not only secure uniformity by defining the methods of observation and record, but by central analysis of all results he would ensure that the facts recorded were assessed at their true value, and he would be better able to consider the influence and effect of associated problems.

Major LEONARD DARWIN, speaking of racial poisons, was inclined to doubt whether alcohol or syphilis ultimately affected the racial qualities of future generations; he thought there was ample ground for fighting these things without bringing in the question of racial poisons. On the question of sterilization of the unfit, he said that he was very familiar with and sensitive to the arguments which could be urged against it, in particular the almost unsurmountable prejudice of the public; nevertheless, it would be in many cases by far the most humane thing to do. He wished that a medical man would devote himself to experimental work on methods of sterilization, and would endeavour to discover whether x rays did not offer the most effective and least difficult procedure. He warmly supported the plea which Dr. Howarth had made for a statistical department in the Ministry of Health to deal with social questions, and also urged that the influence of hereditary and environmental factors should be more carefully studied in the medical schools.

Dr. C. W. SALEEBY urged the establishment of a permanent anthropometric department under Government auspices; indeed, he regarded such a department as a fundamental piece of structure in the Ministry of Health. He referred to some recent work carried out at the Johns Hopkins Hospital in the United States in which, out of a very large number of stillbirths, it was found that a considerable proportion—something like a quarter—were not to be explained by any known factor, syphilis and other conditions having been excluded. This suggested to his mind that there was still a great deal to learn about ante-natal conditions, in particular the dietetics of the mother.

CLINICAL DEMONSTRATION.

At a meeting of the Midland Medical Society held on November 12th at Birmingham, with Mr. ARTHUR LOXTON in the chair, a number of interesting cases were shown.

Intensive Iodine Treatment in Skin Tuberculosis.

Mr. RUSSELL GREEN showed two cases of tuberculosis of the skin illustrating the use of intensive iodine treatment. The patients were young adults who had recovered from multiple cutaneous tuberculous lesions after a prolonged course of vaccine and tuberculin therapy, combined with local treatment in the shape of x rays, radium, ionization, etc. After complete local recovery these patients developed crateriform ulcers, in one case on the calf and in the other case over the malleoli.

That the cases were tuberculous and not tertiary syphilitic was evidenced by:

(1) History: Case (a) father died of phthisis. Case (b) "Tuberculous" panophthalmitis when a child; removal of eye. (2) Associated tuberculous lesions, scrofuloderma, lupus vulgaris, Bazin's disease. (3) Laboratory findings: Wassermann reaction negative at the commencement of treatment, and remaining negative to repeated tests. Opsonic index to tubercle bacillus 0.6 and 0.65 in the two cases respectively.

The crateriform ulcers were resistant to all forms of local treatment until the patients were given a course of intensive iodine, when they yielded to the local treatment to which they were previously non-responsive. The speaker outlined the intensive iodine treatment as described by Curle of Glasgow:

The patient is given 25 grains of potassium iodide at 7.30 a.m.; this is followed two, four, and six hours afterwards by 1 oz. of chlorine water. The chlorine water is made in the usual way. Two drachms of powdered potassium chlorate is put into a 40 oz. bottle and 1 drachm of strong hydrochloric acid is added; the bottle is tightly corked, and chlorine allowed to generate; water is slowly added to 40 oz. One ounce of this is given in a tumbler of lemonade, which method of administration goes a long way towards disguising its unpleasantness.

Mr. Russell Green explained the theory of the action of this remedy thus:

When a small dose of potassium iodide is administered it is decomposed by the blood into free iodine and a salt of potassium is formed. This power of decomposing potassium iodide is strictly limited, so that if a further dose of iodide be added it is

not decomposed, but renders the blood plasma capable of holding the free iodine in solution. The intensive iodine treatment aims at increasing the decomposition of iodide, whilst at the same time providing excess of potassium iodide to ensure its complete solution, so that the tissues are bathed in a fluid containing a large amount of free iodine. When free iodine is present and is not held in solution it tends to be excreted by the mucous membranes of the respiratory passages, giving rise to "iodism."

Cavernous Sinus Thrombosis.

Dr. EMANUEL reported a case of thrombosis of cavernous sinus in a boy aged 13, who was previously strong and healthy, with proptosis of seven weeks' duration and nearly complete fixation of both eyes. It had commenced with swelling of the left upper eyelid, followed a few days later by swelling of the right. He was able to remain at school for a fortnight, and came into hospital five weeks after the onset.

On admission the patient was drowsy, both eyes were proptosed and fixed, with axes slightly divergent. The eyelids were oedematous and the conjunctivae congested. Vision was much impaired—right $\frac{2}{20}$, left $\frac{1}{20}$. All the external ocular muscles were paralysed, but the upper eyelids could be moved, and both pupils reacted to light directly and consensually. There was no optic neuritis, but engorgement of the retinal veins. The conjunctival reflexes were active. A week previously headache, giddiness, and vomiting of a cerebral type were noted.

The drowsiness, proptosis, and congestion increased for a few days after admission, and then began to subside. Vision had become normal, and the movements of the eyes were being re-established. There was every reason to anticipate complete recovery. No cause for the condition had been found.

Foreign Bodies.

Mr. CHRISTOPHER MARTIN showed a specimen of a concretion formed around a pin in the appendix which had ulcerated through into the bladder.

Mrs. E. A., aged 27, was first seen in June, 1918. For three weeks she had had fever, intermittent pain in the right iliac fossa, and symptoms of cystitis. On examination, there was a hard fixed mass in the right iliac fossa about the size of half a lemon. The urine was thick and offensive, and contained pus and *B. coli*. The abdomen was opened on June 22nd, and, after separating the adhesions, an abscess was found involving the appendix and the right side of the bladder. In the tip of the appendix was a concretion containing a pin. The point of the pin was projecting into the bladder, and the head of the pin was still in the appendix. The appendix, together with the concretion, was removed, the opening in the bladder sutured, and the abscess cavity drained. The bladder was drained with a self-retaining catheter. There was some urinary discharge through the wound for some days, but this finally ceased. The wound closed, and the patient went home on July 26th.

The concretion, when removed, was a pear-shaped mass about 1½ inches long and ½ inch broad. The point of a pin could be seen projecting from the narrow end of the mass. A radiograph showed the head of the pin embedded in the thickened end of the concretion. The pin had evidently been swallowed, passed into the appendix, and a concretion formed around it which gave rise to acute appendicitis. An abscess outside the appendix formed, which burst into the bladder. Had an operation not been performed, in all probability the whole of the concretion with the pin would have worked its way into the bladder and formed a urinary calculus.

Mr. BECKWITH WHITEHOUSE showed a specimen, consisting of half a bone knitting needle, removed from a married woman who had introduced it through the uterine cavity for the purpose of procuring an abortion. The patient's history was as follows:

The catamenia, previously regular, ceased in August, 1918. Thinking that pregnancy had occurred, she introduced a bone needle into the uterus on October 26th. Upon withdrawing the instrument it was noticed that half had been retained. Considerable pain occurred, and she consulted her medical attendant, who explored the uterus at once, removed a two months' pregnancy, but failed to find any foreign body. No immediate complication occurred and the patient made a sound recovery. The catamenia were resumed five weeks after the curetting. At the end of December, 1918, the patient noted abdominal pain, especially on bending, and she was referred by her medical attendant for further examination. A radiograph revealed the shadow of an elongated foreign body lying within the abdominal cavity. Laparotomy was performed on January 18th, 1919, and the missing half of the needle removed from the peritoneum. The foreign body was completely enveloped by omentum, but no wound of the viscera was noted. A scar was present at the fundus of the uterus, marking the point of entry of perforation. The patient made an uneventful recovery.

Mr. SEYMOUR BARLING showed a case of diaphragmatic hernia following an abdomino-thoracic gunshot wound which was cured by operation.

CINEPLASTIC AMPUTATIONS.

THE annual meeting of the British Orthopaedic Association was held in the rooms of the Medical Society of London on November 14th, under the presidency of Mr. E. MUIRHEAD LITTLE. After the delivery of the presidential address a discussion was held on cineplastic amputations.

THE PRESIDENT, in his opening remarks, said former methods of producing movements in artificial hands and fingers depended upon efforts made by the upper arms and shoulders; an elaborate example of this was seen in the Carnes's arm. Dr. Vanghetti performed many operations on fowls, and during the last twenty years his writings had stimulated surgeons to put his principles into practice. Mr. Little referred gratefully to Professor Putti's lecture published in this country last year.¹ The various kinds of motors could be divided into the club and the loop. In the former class were the motors which were meant to be connected with the prosthesis by their peripheries, and in the loop class were those connected by their inner and more central surfaces. He described a number of devices, remarking that in his somewhat limited experience the club motor with osseous nodule in the end gave the greatest promise of usefulness; it was better fitted to stand the pressure of the attachment than was the tunnel, and it could be better planned to stand a large range of movement. The following he regarded as the desiderata in a plastic motor:

Sufficient muscular power, well nourished and innervated skin covering, ample range of movement, sufficient length and thickness, appropriate surface for counter-pressure covered with well nourished and resistant skin.

The last named was important, otherwise the patient's efforts might expend themselves in simply pulling the socket of the prosthesis further on to the stump. The range of movement in the upper extremity should be at least one inch. In the case of two motors being employed for two movements the range should be nearly the same in both. He thought it easier to get a good range of movement with the club than with a tunnel, for the distal side of a tunnel, especially if it was in a tendon, was apt to be bound down. The amputation sites suitable for cinematization were, first, those so close to a joint that the segment below the articulation was of no use for working a socket. Secondly, stumps which were too long, after amputating through joints, could well afford to lose an inch or two to make plastic motors.

Major ALWYN SMITH dwelt on the great importance of keeping industrial efficiency in mind when planning an operative procedure. He gave an account of the history of his efforts in South Wales and the methods he had so far adopted.

Major M. FITZMAURICE-KELLY said one had to be guided in every case by the particular material at disposal. His experience had been that, whenever it could be got, a "clava" type of motor was by far the best. Club motors, he considered, had the best chance of surviving, for there was a concentration of the whole power of the muscle at one point. He did not think prosthesis could be expected to happen until the forces were surgically produced for the instrument maker to apply. Orthopaedic surgeons must solve the surgical problem, and leave the mechanical problems to the engineers.

Mr. A. S. B. BANKART related two failures he had had through operating on too small a scale, and he was anxious that others should benefit from his experience. Large flaps must be used, and considerable masses of bone taken away in planning a properly formed motor.

Captain MAXWELL (Chief Arm Instructor, Ministry of Pensions), though not a surgeon, spoke of his experiences and hopes as one who had lost an arm many years ago, and as an officer with a wide experience at casualty clearing stations in the war. In the early days of the war many men were fitted with the artificial arm as soon as it was ready and at once turned into the world to do their best to earn their living again, without having been given any instruction as to its use or limitations. He advocated close consultation between surgeon and limb-maker, with the view of effecting such small improvements as seemed practicable.

Mr. ROWLEY BRISTOW said the great lesson brought back by those who visited Italy was the need for these cases to be segregated in orthopaedic centres or hospitals, where they were always in touch with the special surgical and mechanical opportunities. There was not yet room for self-satisfied feelings on this matter.

¹ BRITISH MEDICAL JOURNAL, June 8th, 1918, p. 635.

Habitual Shoulder Dislocation.

Mr. R. OLLENSHAW opened a discussion on habitual dislocation of the shoulder-joint. All the four cases on which his paper was based had had conservative treatment before he saw them, but none had been operated upon; one was an epileptic. The operative treatment resolved itself into three methods:

(1) Pleating the capsule; (2) excision of a portion of the antero-inferior aspect of the capsule and narrowing it by overlapping the edges; (3) the deltoid flap operation.

He considered the muscle flap operation as the best of these, because it provided a good sling bracing the head and neck of the humerus, and a muscular sling which contracted actively when the rest of the deltoid was in action. He described the processes of the operation and discussed the pathology of the condition. He had not had any recurrence in his four cases, but he intended to make a report on them at some future date.

Captain DUNN said he had carried out different operations for recurring dislocations of the shoulder, and often after excision of a portion of the capsule the dislocation recurred. In one very obstinate case a Claremont was done without recurrence. In one case sepsis supervened, but the after-result was good.

Amputations in the Foot.

Mr. S. T. IRWIN, in a contribution on amputations of the foot, divided the subject into the following heads:

1. Amputations of the toes.
2. Amputations in the foot proper, with special reference to Lisfranc's and Chopart's amputations.
3. Amputations in the vicinity of the ankle, with special reference to Syme's amputation.
4. Capacity for work after these amputations.

Where relief could be obtained with retention of the toe, as in hammer-toe, by excision of the joint, it was better surgery to retain the toe. Wherever possible the great toe in particular should be conserved. No amputations in the lower limb gave more disappointing functional results than did partial amputations of the foot, though the first effects seemed good. Hence he regarded the operation as suitable only as a primary amputation where conservatism was of the first importance. The main objection in all partial amputations of the foot was that the anterior pillar or the antero-posterior arch was shortened. The first effect of this was that the weight of the body, acting through the centre of the ankle-joint, and the support acting downwards through the posterior pillar of the arch, produced a complete rotation round a transverse horizontal axis lying behind the ankle-joint. Hence the heel moved upwards, producing a potential equinus. In the amputations preserving the insertions of tibials or peronei the deformity was not a true equinus. Several authorities had shown that the more the anterior limb of the antero-posterior arch was shortened the worse was the result, the greatest disablement following amputation through Chopart's joint. Also, in these amputations the scar, at first placed anteriorly, came progressively lower, until it lay on the ground. Elaborate fittings had been brought forward in France and Germany for restoring some elasticity to the gait, but those he had seen were unsuccessful.

Deformities and disabilities secondary to amputations in the foot could be combated to some extent by division of the tendo Achillis, by suture of the extensor tendons to the plantar fascia, and by producing ankylosis of the ankle-joint; but none of these measures gave satisfactory results, and the best course was to reamputate and convert a partial into a complete amputation of the foot. Chopart's and Lisfranc's operations should not now, he considered, be performed. Of the operations through the ankle-joint, James Syme's he regarded as by far the best; there were a number of objections to Pirogoff's amputation.

With regard to the results of amputation in the foot from the view-point of function, he exhibited a graph to indicate how this varied after amputations in the lower limb.

In a general way there was a fall in capacity for work as the stump became shorter, but there were secondary irregularities of great importance which should influence the choice of operation for a particular case. The chief variants were (1) the value of the ideal amputation at the given level, (2) the type of prosthesis appropriate to the amputations. Comfortable progression and capacity for work were diminished by amputation of the great toe; loss of other toes did not generally produce disability, though if possible they should be retained. After a Lisfranc there was a marked drop in the capacity curve, due to the shortening of the anterior portion of the arch and its consequent flattening; while the secondary changes were of even greater importance, due to the muscular action in trying to

prevent deformity. There was a still further drop in the curve with Chopart's amputation. After a Syme amputation, however, there was an abrupt rise in the capacity curve, for it left a stump nearly perfect.

The PRESIDENT congratulated the author on the thoroughness with which he had dealt with the subject. The results of these later investigations bore out the recommendations of the surgeons at Roehampton, on which the memorandum issued by the War Office in April, 1916, was based. Those surgeons concluded that if one could not amputate in front of the anterior metatarsals, it was of no use to do anything in front of a Syme. He did not regard loss of toes as such a serious disability as Mr. Irwin did. Generally a Chopart was bad, but the great difficulty was in regard to an appliance. The more cases one saw, however, the less one was inclined to dogmatize. He had seen many unsatisfactory Syme's in military surgery, and a number of them had had to be amputated at the middle of the leg. The Syme was not popular with any apparatus, as there was much perspiration, and the leather rotted and the steel oxidized. His own seat of election would be the middle of the leg, that is, higher than Mr. Irwin chose.

Major ALWYN SMITH agreed with the President as to the degree of disablement caused by loss of toes. He had reamputated fifteen inefficient Syme's. His selection of site would be ten inches from the tip of the tibia to the stump; there was no cyanosis, and a standard artificial leg could be used.

Mr. AITKEN said that in many cases he had been able to avoid amputation by putting the foot on a hollow bar behind the tender end, in cases of trench feet. Mr. P. J. VERRALL advocated the Lisfranc, or operation in front, if it were followed by provision of a support for the arch for spastic inversion of the foot.

Birth Paralysis.

Mr. H. A. T. FAIRBANK, D.S.O., in a communication on birth paralysis, discussed theories of causation, and said the traction theory best explained the condition in most of the cases, and that the subluxation of the shoulder-joint developed gradually as a direct result of the paralysis. The pathological lesion varied from a slight tear in the perineural sheath to complete rupture of the nerve trunk. In some cases the lesion was quite close to the spinal cord, or the cord itself might be injured by the uprooting of the nerves. Three clinical types were recognized—the upper arm, the lower arm, the whole arm, the first being by far the commonest. In treating the palsy, he always put the arm up with right-angle abduction and full external rotation of the shoulder, flexion of the elbow to a right angle, full supination, and, if necessary, dorsiflexion of the wrist. He used a splint made of tin, and twice daily the arm was taken down for massage and manipulations. The paper discussed the length of time after which operation should be attempted and the procedures to be followed.

Mr. HARRY PLATT (Manchester) dealt particularly with the type of lesion. Up to 1913 the conception of birth paralysis as a supraclavicular injury held undisputed sway. Since that date investigations of American and Continental authors had thrown some doubt on the correctness of this theory. At the present time, he said, there were two schools. The first considered that all cases of birth palsy were due to a supraclavicular lesion of the plexus, while the second school thought there was a primary injury of the shoulder-joint capsule, with secondary involvement of branches of the brachial plexus in close relation to the joint. Spontaneous recovery occurred in the vast majority of these cases, only a few needing exploration of the plexus. Posterior subluxation of the joint dominated the clinical picture of birth paralysis. Out of 23 cases he had had, there was spontaneous recovery in 20. He advocated conservative treatment in all cases for at least twelve months, the arm being fixed in the standard posture, with relaxation of the affected muscles. Exploration of the plexus should be reserved for cases showing no recovery after this period had elapsed and presenting the definite muscle atrophy characteristic of a complete nerve lesion. The posterior subluxation of the joint could be avoided in all cases if the standard position of splinting were adopted.

Mr. ROWLEY BRISTOW believed in delaying operation until the very last—for at least a year or eighteen months. He had found the electrical reactions of but little service to him in these cases.

Mr. R. C. ELMSLIE spoke of the need for orthopaedic surgeons to make up their minds on this subject. The nerve theory seemed to him to fall in very well with clinical observations. The cases of birth palsy seen in early infancy fell, clinically, into three groups: Those

which recovered very quickly—in many cases without treatment; those recovering more slowly—from three to twelve months; and those which either did not recover at all, or else only partially. He believed the last named scarcely existed, they were so very few. Those three groups accorded well with three presumed pathological conditions: (1) That in which there was injury to the nerve not involving rupture of axis cylinder; (2) that in which the nerve injury involved axis cylinder rupture; (3) a condition of injury of axis cylinders with degeneration of their ends. Cases of subluxation of the shoulder he regarded as nerve lesions, with a tendency to recover more or less rapidly, the slowly recovering cases ending in contracture. In these cases he always put the arm in the standard position. He thought highly of Mr. Fairbank's operation.

Mr. GIRDLESTONE advocated complete exposure of the brachial plexus with division of the clavicle, placing thus the whole plexus under observation; it also resulted in more mobility of the ends. Mr. AITKEN agreed with the principles laid down by Mr. Elmslie as to treatment, but he had never yet performed the open operation for subluxation or extreme internal rotation. Mr. FAIRBANK and Mr. PLATT replied.

Mr. W. H. TRETOWAN gave a short demonstration on the use of silk to replace crucial ligaments; he considered the method promised well for arthroplasty in the knee. In the cases shown there was no antero-posterior displacement.

WAR EXPERIENCES.

THE first sessional meeting of the East York Division of the British Medical Association was held at the Royal Infirmary, Hull, on October 3rd, when Dr. TURTON was in the chair. The subject for the evening was war experiences.

The CHAIRMAN in his opening speech restricted himself to his medical experiences while in command of a stationary hospital in the Salonica command. Attention was first called to the difference in the class of case dealt with in Macedonia compared with the Western front. Of 15,000 patients admitted to his hospital during a period of under two years, no fewer than 10,000 were cases of malaria; 1,200 suffered from diarrhoea and dysentery, whilst only 177 were wounded. The number of cases of venereal disease was very small, as there were no facilities for infection. No cases of trench fever or trench feet were seen. Ten cases of the enterica group were admitted to hospital, and 45 cases of relapsing fever came under treatment. Notice was directed to the immediate effect of intravenous injections of galyol or salvarsan in this disease; single small doses of the drug—even 0.15 gram of galyol—were sufficient to effect a cure, with disappearance of the spirilla and freedom from relapse.

Malaria.

Dr. TURTON did not consider that the malaria was of a fatal type, in view of the fact that only six deaths from malaria took place in his hospital. The two different types of the disease were discussed, and it was pointed out that whilst the worst cerebral and hyperpyrexial cases were infections with the malignant or subtertian type, the greater number of persistently recurring cases were due to the benign tertian organism. The acute fulminating cases of the cerebral type were described, and in these, as well as in all the severer infections, the speaker admitted he was an advocate of immediate intravenous injections of the bihydrochloride of quinine rather than intramuscular injections or administration by the mouth. Hints were given to the members who might have to treat cases of malaria in returned soldiers, and the importance of large doses of quinine was insisted on. Arsenic was recommended in the more chronic cases. The speaker expressed himself strongly against the use of prophylactic doses of quinine, and expressed his opinion that antimalarial measures—such as the drainage of large areas and paraffin spraying—could only be worth doing if persisted in for many years and on a very wide area.

The different organisms of dysentery were discussed and the type of disease they produced. The work of a typical diarrhoea and dysentery compound was explained, and the use of antidyentery serum in acute and severe cases intravenously was advocated. The members were given useful hints on the treatment of the chronic cases of dysentery found in soldiers returning from the Eastern fronts.

Dr. EDWARD MARTIN spoke of slight cases of malaria and how far it was safe to let the patient back to work. It was very important to put him to bed and attend to the

bowels until subnormal temperature showed no tertian elevations. There was no use in giving quinine until the bowels were got into good working order. Quinine in solution was far superior to powders and tablets. Oil might be thrown on the streams to destroy the mosquitoes.

Dr. O. L. APPLETON described his experiences at an advanced dressing station during action. Every case was put on the operating table, vessels were tied, and wounds were dressed; then, after being given food and injection of morphine, the patient was sent to the main dressing station, five miles away.

Dr. GILLESPIE spoke of the usual work of a regimental M.O. attached to an ammunition column. The most important thing here was looking after the sanitation. Every regimental M.O. carried a simple apparatus whereby he could test a stream for organic pollution, and also for simple metallic poisons. It was a weird sight to see men coming back suffering from mustard gas poisoning; he considered that a man who had once been seriously gassed must be permanently damaged.

Dr. THOMPSON bore out what Dr. Gillespie had said with regard to gas poisoning. The patients were much cyanosed and simply lay on the stretcher and poured out primrose-coloured mucus from the mouth and nostrils. Oxygen was administered.

Dr. GERALD DAVY spoke on the effects of heat in Mesopotamia, cases passing from the mild effects of heat into a more serious condition, and sometimes culminating in fatal heat-stroke. He considered that it was unjustifiable to say that all heat-strokes were due to malarial poison.

Dr. R. W. JONES discussed the classification of the psychoneuroses by both the modern English and the Freudian schools.

Rebuelus.

THE FEEDING OF NATIONS.

MESSRS. LONGMANS have now issued in a handy volume¹ Professor STARLING's Oliver-Sharpey Lectures on the feeding of nations. Since at the time of their delivery we published a summary of the lectures and also commented upon the principal topics, we need not again allude to matters of merely historical importance. But as Professor Starling raised issues of much more than historical interest, we shall not refrain from discussion because of the risk of repeating what has been said before.

Broadly speaking, the moral of Professor Starling's discourses was that a national food policy depends upon a scientific appraisal of (1) the quantity and quality of food required by the citizens of a nation, (2) an evaluation of the food actually available, (3) the determination of a physiologically economical method of making good gross deficiencies, (4) a plan of securing the detailed apportionment of the gross supply. In actual practice it was found that great calamities followed errors under the third and fourth headings. Both France and the Central Empires committed the mistake of not preserving an unrationed source of generally available energy—namely, bread—while the political considerations which led Germany, in disregard of the third condition, to waste energy by maintaining the head of live-stock, precipitated her ruin; had the war lasted longer, similar, if less grave, errors would have given rise to much inconvenience here.

At the present time the problem of food supply is not merely national but international, and the question is whether this larger problem is to be approached on scientific lines or to be obscured by a mist of sentimental rhetoric. In the appeals made to the public respecting the plight of the Central Empires much is said of the sufferings of women and children; we are told that it is offensive not only to Christian sentiment but to traditional British chivalry that our now helpless enemies should suffer for the crimes of their proscribed rulers. This doctrine is so strenuously enforced that some orators really seem to have persuaded themselves that the laches of the allied Governments is responsible for all the misery now being endured. In a mere wrangle the victory of those who do not accept this doctrine is easy, for they have merely to ask whose was the original fault that there is a world famine, who destroyed millions of tons of food, and finally to demand that no British, French, or Italian baby shall go short or perhaps perish that an enemy may be fed.

¹ *The Feeding of Nations*. By Ernest H. Starling, M.D., F.R.S. London: Longmans, 1919. (Pp. 146. 5s.)

Professor Starling pointed out in his lectures the effects upon the German population of food restrictions, and more recently he has supplemented the evidence there adduced. Physiologically the problem is perfectly simple. When the average supply of energy and of the other essentials of a diet falls below a certain minimum and is maintained below that minimum for a considerable period, consequences, both physiological and psychological, ensue which are incompatible with the maintenance of a civilized state. Whether that point has been reached in Germany is a question of fact. It is open to those who dissent from Professor Starling's conclusions on the issue of fact to carry out similar but more extensive investigations for themselves, but such investigations must be carried out on physiological lines and not delayed; there must be an end of the strophes and antistrophes of rhetoric. Were it capable of exact demonstration that to maintain social order and a normal economic life in Germany would necessarily involve, not merely privation, but actual death to numbers of our own countrymen by diversion of food-stuffs, the desirability of such a course, not for altruistic but purely selfish reasons, would have to be judged on arithmetical grounds. The question would be one of mere political arithmetic. On the one side we should weigh the immediate loss, on the other the blood and treasure swallowed up by an extension nearer home of conditions even faintly resembling those now dominant in Russia.

It is not our business to adjudicate on these matters, but it is our duty to point out that both the favourable and hostile criticism which Professor Starling's views have experienced has been almost wholly sentimental and rhetorical. Since the publication of his White Paper there have been floods of talk, but we have met with no scientific pronouncement either refuting Professor Starling's conclusions on the basis of a wider assemblage of facts or, in the alternative, explaining what steps have been taken to render less imminent the dangers to which he directed attention. We cannot accept as a satisfactory substitute the dispatch to Rome of a British Delegation no member of which is either a physiologist or a medical man.

TROPICAL MEDICINE.

THE main feature of the third edition of the well known work, *Manual of Tropical Medicine*,² by CASTELLANI and CHALMERS is its increase in size—2436 pages as compared with the 1747 of the second edition. This makes the book somewhat heavy to handle, and, as it is difficult to see how in future editions the matter can be cut down or condensed, the advisability of dividing it into two volumes might be considered by the authors and publishers.

To show the popularity which the *Manual* has attained it is only necessary to quote from the preface to the present edition that "the second edition of this manual went out of print some years ago." This made it incumbent upon the authors to bring out a new edition; it has involved the rewriting of large parts and the incorporation of subjects not previously treated. The illustrations have also been largely increased. Of notable omissions—made to keep down the size of the book—may be mentioned the list of figures and the index of authors' names.

The rules of the International Committee have been followed in the nomenclature of parasites. We note the substitution of the name "Loeschia" for "Entamoeba" in the section dealing with the amoebae in the protozoological part of the book, and it is possible that this and the retention of the so-called flagellate amoebae, *Craigia hominis*, etc., in the classification will be criticized by protozoologists. Dobell, Wenyon, and other English protozoologists do not believe that the latter is a good genus, and certainly till more proof of its existence is forthcoming it would be well to mark it as doubtful. The name *Vahlkampfia nana* does not harmonize with that proposed by Dobell, *Endotimaz nana*; this is due probably to the fact that the authors had not had the chance of studying this authority's work before going to press. We are glad to see that in the description of the Treponemata the so-called life-history of the *T. pallidum* is omitted.

This was purely hypothetical at its best, and was not recognized by many competent protozoologists. Another new departure—one which may give rise to much discussion and complications—is the new classification of the trypanosomes. Their classification has always been difficult, and the new nomenclature recently adopted by Dr. Chalmers will, we fear, not make it easier, and there may be considerable diversity of opinion about the advisability of adopting it.

Passing from the zoological side of the book to the clinical, we find much that is interesting and instructive. The new war diseases are discussed in a chapter entitled the "War Zone Fevers"—a happy term. Trench fever is suitably dealt with; to infectious jaundice the new name "icterus castrensis gravis" is applied, while camp jaundice is termed "icterus castrensis levis." The following chapter, "The Diagnosis of a Tropical Fever," well merits close study; it should help the beginner very greatly and put him on the lines he ought to follow. Space will not permit of further remarks on special parts of the book. It is enough to say that the high standard of the previous editions is kept up, and that the *Manual* will continue to serve in its dual capacity both as a book of reference and as a textbook for the student and practitioner in tropical medicine. An enormous amount of information on every tropical subject is contained within its pages, and the authors must be heartily congratulated upon their most recent effort. We predict that the day when another edition will be required is not far off.

A PRACTICAL DICTIONARY OF TREATMENT.

SEVEN years ago we recorded the appearance of the fifth edition of WHITLA'S *Dictionary of Treatment*,³ which had then been largely rewritten. The experience gained during the last five years fully justified Sir William Whitla in issuing a sixth edition at the present time, embodying the many new thoughts and suggestions that have been founded upon the observations of countless physicians and surgeons in every branch of military and civil service during the war.

The author has had some assistance from specialists with respect to articles on surgical, gynaecological, and ophthalmological treatment, but in other respects the whole work bears the impress of personal knowledge and experience.

Tested in every possible way, the new edition is found to supply the most recent information obtainable with regard to treatment in general. With the help of a very full index and the abundant cross references provided, no time need be lost in the search for information on special points. In all cases where no treatment can be of much use, no unnecessary space is taken up in recording the fact, but very full and sufficient accounts are given where good results have been obtained by varying methods. The views of many foreign therapists are duly recorded, some of them advising elaborate forms of treatment, requiring the exercise of much patience and unlimited confidence, but simple methods are preferred as a rule, and many time-honoured remedies still hold their own.

The publicity which has of late years been accorded to the treatment of venereal diseases gives additional value to the expert advice contained under the headings of gonorrhoea and syphilis. It is noted that in both instances there is no general agreement as to details of administration. Many methods have been tried, with varying success, to neutralize the activity of the gonococcus and the spirochaete *in situ*, and to subdue the virulence of the subsequent inflammation. The rough-and-ready astringent injections which in times past have too often served to extend rather than to check the mischief, have given place to more cautious proceedings, which are duly described in detail.

The call of his parliamentary duties does not appear to have interfered in any way with the author's careful revision of the work. Typographical errors are few and far between, and in every respect the latest edition of Whitla's *Dictionary* is worthy of a place on every medical bookshelf.

² *Manual of Tropical Medicine*. By Aldo Castellani, C.M.G., M.D., M.R.C.P., and Albert J. Chalmers, M.D., L.R.C.S., D.P.H. Third edition. London: Baillière, Tindall and Cox, 1919. (Demy 8vo, pp. x+2436; 909 figures, 16 coloured plates. 45s. net.)

³ *A Dictionary of Treatment. Including Medical and Surgical Therapeutics*. By Sir William Whitla, M.A., M.D., LL.D., M.P. Sixth edition, 32nd thousand. London: Baillière, Tindall, and Cox. (Demy 8vo, pp. viii+1083. 25s. net.)

NOTES ON BOOKS.

IN reviewing the first edition of Dr. WEBB-JOHNSON's book on *Painless Childbirth*⁴ it was stated that it seemed addressed more to the Eastern market, and the notices appended to this new edition show that it has met with appreciation there. The additions render it, however, a source from which anyone may gather the general character of the debate that has taken place on the subject, and the details of the various methods of dosage are also given. The author himself describes a method of fixed doses. It may be of interest to note that a fully successful result has been achieved with hyosine alone. Little that has been published seems to have escaped Dr. Webb-Johnson, except the notes in the *BRITISH MEDICAL JOURNAL*, 1915, vol. 1, pp. 939, 1053, recording the fact that the method described by Ribemont-Dessaignes had on further investigation proved to be the administration of morphine in large doses.

The second edition of *An Atlas of Dental Extractions*,⁵ by Mr. C. EDWARD WALLIS, should prove of value to general practitioners called to perform emergency dental operations. In haemorrhage after extraction the process of plugging the sockets is often painful; pressure applied by closure of the mandible on a large pad of lint or wool is more often than not sufficient to arrest the bleeding. Also in relation to pain after extraction, especially in septic sockets and foul mouths, it is wise to make a routine practice of daily syringing the socket rather than wait two or three days for the pain to arise and then start syringing.

Captain BAIRD has compiled an *Ex-Officer's Handbook*⁶ for the use of ex-officers, widows, dependants, and nurses. The object of the pamphlet is to act as a finger-post to the various sources—official, semi-official, and voluntary—from which benefits may be obtained. The official rules and regulations can be found in the publications referred to under each heading. This little handbook should be most useful. The information as to voluntary organizations might perhaps have been given in rather greater detail, and the arrangement of the paragraphs might well have been alphabetical, but as the whole pamphlet is so brief this latter drawback is not serious. Under "disability retired pay" a definition of "undue delay" might be useful in the revised edition of a more comprehensive kind, which, we understand, is in course of preparation. The need of such a compilation becomes evident when we read that on the books of the Ministry of Pensions there are 33,000 officers, 9,600 widows, 900 nurses, 9,100 children of officers, and 5,600 other dependants. There is little doubt that many of these are not drawing their full awards. Again, on the books of the Ministry of Labour there are said to be 20,000 ex-officers and other ranks of similar educational qualifications seeking employment.

That difficult subject, the education of boys and girls in matters of sex, is set forth in a mixture of fact, folk-lore, and allegory by Mr. GOULD in *Health and Honour*.⁷ The book is well written, and may serve its purpose.

⁴ *Painless Childbirth and Twilight Sleep*. By Cecil Webb-Johnson, M.B., Ch.B. Second edition. Calcutta and London: Butterworth and Co. 1919. (Demy 8vo, pp. xviii + 169. Rs. 4 net.)

⁵ *An Atlas of Dental Extractions*. With Notes on the Causes and Relief of Dental Pain. By C. Edward Wallis, M.R.C.S., L.R.C.P., L.D.S. Second edition. London: J. and A. Churchill. 1919. (Roy. 8vo, pp. 26; 11 plates. 5s. net.)

⁶ *Ex-Officer's Handbook for the General Guidance of Ex-Officers, Widows, Dependants, and Nurses*. Compiled by Captain H. H. Baird, D.S.O. London: The Imperial Ex-Service Association. Price 3d.

⁷ *Health and Honour*. Sex Light for Younger Readers. By Frederick J. Gould. London: Watts and Co. 1919. (Cr. 8vo, pp. 72. 1s. 6d. net.)

APPLIANCES AND PREPARATIONS.

A Mastoid Retractor.

MR. B. SEYMOUR JONES, F.R.C.S., Honorary Surgeon, Birmingham Ear and Throat Hospital, writes: I have devised a pattern of self-retaining mastoid retractor which possesses the advantage that it exerts a constant tension; this tends to prevent it from slipping out. In the event of it so doing during operative manipulations it can easily be replaced by pressing the arms together. The spring at the top is detachable, and can be renewed on application to the makers, Messrs. Mayer and Phelps.



CHARING CROSS HOSPITAL MEDICAL SCHOOL.

THE annual prize distribution at Charing Cross Hospital Medical School was held on November 19th with Lord DEWAR in the chair. The report for the academic year was read by the Dean, Dr. W. J. FENTON, and an address was given by Sir AUCKLAND GEDDES, K.C.B., M.D., President of the Board of Trade.

Address by Sir Auckland Geddes.

He said that those who, like himself, had taken part in the National Service organization enjoyed exceptional opportunities of getting to know the mental habits of the medical profession. One lesson they learnt was that the medical profession was extraordinarily unequal, not only in its technical knowledge, but in its public spirit. It achieved a glorious record in the war, but he did not think it was realized that that fine record was won for the profession as a whole by a minority of its members, because there were a number of people now sharing in the glory who had done absolutely nothing to help. In all professions there was a certain sprinkling of self-centred persons, but it had seemed to his colleagues and himself (who perhaps were able to appreciate more fully than others the lesson there was to be learnt) that the medical profession possessed a much larger share of such individuals than it ought to have had. While not wishing in any way in anything he said to reduce the real glory the profession had won, it was well at a time like this to face the facts. Speaking as one who had taught at a good many medical schools, he knew how limited the whole outlook was. In some schools the teaching was scarcely more than technical instruction with very little of education about it. There was a vast difference between the two things. This state of the educational side for twenty years before the war had, in his view, led to some of the rather deplorable exhibitions during the war; that was why so many men failed to rise to the height of the occasion when a great occasion came to them. It was, however, a thing which could now be put right. In the medical classrooms a sharpening and development of the power of the student's mind was going on, altogether apart from the mere stuffing of it with information. The students themselves had the power to turn the instruction given to them into matter for their mental education. The teachers could only act as fingerposts to indicate that there was a path in this or that direction to be explored; the determination to explore and the exploration itself must come from the students. Every student and practitioner should go through life aspiring to do something to make the whole body of the profession equal to the reputation gained for it by the best men in it. If they did that they would serve their day and generation well.

The Annual Dinner.

On the same evening the annual dinner of past and present students of Charing Cross Hospital was held in the Adelaide Hall, at Gatti's Restaurant, under the chairmanship of Dr. WILLIAM HUNTER, C.B. The chairman, in proposing the Hospital and Medical School, spoke of their foundation a hundred years ago by the far-sighted philanthropist, Benjamin Golding. The toast was responded to by Dr. FENTON, who referred to the reorganization of the pathological department for teaching and research, and to the complete success with which the doors of the hospital and school had been opened freely to women students on an equal footing with men. The health of the guests was proposed by Mr. JOHN H. MORGAN, C.V.O., and responded to by Sir HAYWARD WHITEHEAD, K.C.B., Professor W. D. HALLIBURTON, F.R.S., and Sir WALTER FLETCHER, F.R.S.; and the chairman's health was proposed in appreciative terms by Lord DEWAR.

THE trustees of the Western Reserve University, Cleveland, Ohio, have voted an increase of 20 per cent. in the salaries of the entire full-time teaching staff of the medical school. The trustees of Vassar College for Women, Poughkeepsie, New York, have raised the salaries, the increase ranging from 50 per cent. in the lowest grade to 12½ per cent. for full professors. The salaries of the teaching staff of the University of Mississippi have been uniformly raised by about 50 per cent.

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SATURDAY, NOVEMBER 29TH, 1919.

THE MEDICAL RESEARCH COMMITTEE AND THE UNIVERSITIES.

THE Medical Research Committee will always be memorable because its formation was the first occasion on which the State recognized that scientific research was of importance for the national health. That flash of intelligence was inspired by Mr. Lloyd George; and what with the Ministry of Health, and the Committee for Scientific and Industrial Research, and one thing and another which that gentleman is foisting upon us, if the State is not extremely careful it will find itself acting like an intelligent person, instead of like a miserly idiot as has been its fixed habit hitherto.

The work put out by the Committee during the war has been remarkable. It turned at once to every subject as it came up: cerebro-spinal fever, gas gangrene, asphyxiating gases, flying conditions, are only some of the main problems which it has attacked. It helped medical men in France, not only by the supply of instruments of precision, but also by producing a great improvement in note-taking and recording in the R.A.M.C., and by becoming the channel through which some important papers were given to the world. It has likewise taken charge of the statistical work of the Corps. The members of its permanent staff have meanwhile been steadily pursuing researches—bacteriological, chemical, physiological, and clinical. Its mere results have been of the greatest value, or—to put it in such a way that an M.P. can understand it—it has paid for its keep over and over again.

But it is probable that the most important thing about a man or a body is not what he or it does, but in what spirit he or it does it, and there is a great deal to be said in favour of making people think rightly, even at the risk of a little torture or burning now and then, and not being too fussy over their mere actions; even a common judge pays attention to motives. This line of thought is most of all important when a body has the power of becoming such a rock of offence that the greatest services that it might perform for humanity would not quench the loathing felt for it by its fellow workers in the same great cause. Such a course was open to the Committee; such a bait was almost held to its nose by the terms of its constitution. It is to its lasting credit that while it has set many tasks before itself, its chief and highest aim has always been to make itself felt not more by the work done in its own laboratories than by the help, the encouragement, the spirit of fellowship in a great service which it has freely given to young scientific men in every university laboratory throughout the kingdom. There is not one of their laboratories but has some willing and eager young man—and not always so young neither—who is being financed wholly or in part by the Medical Research Committee.

What might have been? The Committee might have involved itself in its own virtue and confined its work to its own laboratories. It evidently very nearly

did make the fatal mistake of running a hospital of its own. It might, again, have taken up some special line of work, and become a collection of great but narrow minds absorbed in contemplating some small part of pathology; or it might have sworn by Paul or Apollo, and have helped only the cherished students of one of these philosophers, have been ruled by some dogma, or have cleaved to some one method.

What has been? It has, indeed, its own laboratories and its own staff, who work or will work in the Mount Vernon institution apart from this troublesome world, and very fine work they are doing. But it has made itself the channel through which a large part of £60,000 a year fertilizes discovery in its natural fields—the universities—and thereby has very great influence upon the teachers, the students, and the whole atmosphere of seats of learning. It has done this deliberately, and it professes its intention of continuing to do so. And, further, by this course of wise and enlightened liberality it has opened to itself a task in organizing and combining research which much needed to be undertaken. Without any pretence at interfering with the proper autonomy and individuality of scientific men, it has been able to interest them in subjects worthy of attention and, when the subject required it, to direct many minds upon aspects of the same problem. It has given a sense of combination and of common work which is of great benefit to pathology and pathologists. Lastly, it upholds to the utmost the claims of freedom in research. It is never weary of preaching that the direct attack upon a difficult problem is seldom the most fruitful, that discoveries come in the most unexpected way, and enter by doors that were never anticipated. It speaks with authority, and that authority is always used to insist that men with the capacity to do the work must be helped in whatever work they feel drawn to do. No calculation of immediate results, no direct effort to find a definite answer, is so likely to advance knowledge as the free and unfettered working of thoughtful and inventive minds.

The Committee bewails that its means have sunk with the value of money to half what they would have been. It is changing masters and it is asking for higher grants. There are a few horses, and scientific research is one of them, on which the nation can put its money with complete safety. We wish the Committee may find in the Privy Council a master even more liberal and even more enlightened than it has had in the past.

THE PREVENTION OF INFLUENZA.

IN the light of the fatality of the pandemic of 1918 and the recently reported recurrence of influenza the prophylaxis of the disease is naturally much discussed, and protective inoculation with vaccines is highly fashionable. It was therefore appropriate that Sir Thomas Horder should take the preventive treatment of influenza as the subject of his British Medical Association Lecture at Southampton on November 13th. From the full text published in this issue (p. 695) it will be seen that he considers that the most potent means of preventing the spread of the disease when once epidemic would be a proper system of hospitalization, and he outlines a scheme whereby several large hospital units would be established in different parts of the country for prompt mobilization when need arises. He goes on to suggest that not only should cases of influenza be thus segregated from the community, but that a selective isolation of the influenzal patients either on clinical or bacteriological grounds might be carried out on a principle which

was, so far as we are aware, first applied in the treatment of measles and whooping-cough in the Hospices des Enfants Assistés in Paris. The principle was tested in the prevention of the pulmonary complications of influenza by the American Medical Service in France. It consists in the separation of patients with pneumonia or with a streptococcus or one of the types of pneumococcus in their sputum, from the uncomplicated cases, among whom the incidence of pneumonia has been reduced to under 1 per cent. (Longcope).¹ Sir Thomas Horder suggests that the method could be used in general hospitals in the country, but he asks that a few of the segregation hospitals he proposes should remain in commission between the epidemics so as to be available for study and the treatment of sporadic cases. He looks to the Ministry of Health to inaugurate this scheme at once.

The segregation of patients when the disease has broken out is of course much inferior, at any rate in theory, to prevention of the entry of the infection into a country. Quarantine at the ports, to which Sir Thomas makes a passing allusion only, was adopted in Australia last year on a very extensive scale, and the results have recently been recorded and discussed by Dr. Cumpston, Commonwealth Director of Quarantine.² Early in October, 1918, it became obvious that the disease had progressed in its march round the world to such an extent as to endanger Australia, and the quarantine officers were directed to order into quarantine any vessel on which the disease had broken out during the voyage. A few days later a severe and virulent epidemic was reported in Cape Town, and it was then decided that all vessels, whether infected or not, from South Africa, New Zealand, and some of the Pacific islands should undergo quarantine detention for seven days for observation, and that vessels from other countries should be detained only if infected. In the case of vessels with the infection in an active state the contacts were inoculated with the Commonwealth pooled vaccine (*B. influenzae*, *Micrococcus catarrhalis*, pneumococcus, streptococcus, and a Gram-positive diplococcus (not the pneumococcus) isolated from all the cases examined); this, it was considered, had a beneficial result. The maritime quarantine regulations were continued until April, 1919. During October, November, and December, 1918, there was a very virulent epidemic in very many other countries, but influenza did not seriously invade Australia until January—that is, not until four weeks after the arrival of the last ship known to be infected. The escape of influenzal infection through the quarantine line of defence was thought improbable, and it is suggested that the influenza in Australia, which is described as relatively mild, was the product of a slow evolution of that prevalent in July and August. No other country adopted quarantine, and the figures contrasted are as follows: South Africa and New Zealand experienced epidemics that ran their course in eight weeks; they were responsible for a total mortality rate of 826 per 100,000 in South Africa (among Europeans alone), and 517 per 100,000 in New Zealand, whereas in Australia the outbreak was long drawn out, lasting more than four months, presenting some clinical differences and never rising in any state above a maximum weekly death rate of 33.5 per 100,000; in Victoria the weekly rate was as low as 18.7 per 100,000. There was never anything, it is said, in any way comparable to the severe form of the disease seen

in South Africa or New Zealand; at the same time a death rate of 33 per 100,000 a week, if continued for four or five months, would produce a total mortality as high as that recorded in New Zealand, though the weekly rate was little over half as high. From the experience gained from ship epidemics Dr. Cumpston concludes that the outbreaks cannot be stopped by inhalation, inoculation, or isolation of the sick, that exhaustion of susceptible material plays but a small part, and that the factor determining the course of the epidemic is the inherent nature and vigor of the infecting agency; he appears to suggest that the postponement and spacing out of the epidemic may have been in this way advantageous.

The effect of the quarantine measures enforced in Australia calls for careful investigation, but the difficulty in making a decision as to their value is considerable, owing to the eventual outbreak of influenza on an extensive scale. Their success for the first three months must be admitted, and would justify the hope that with the lessons learnt on this occasion the procedure might possibly, under suitable conditions, be more successful in a future emergency. It is a natural question whether this plan, with its drastic contingencies, could be applied to this country. Quarantine in the strict meaning of the term is not enforced at ports in Great Britain, even against those diseases—cholera, plague, and yellow fever—to which the port regulations for the control of ship-borne diseases apply. Under these regulations persons suffering from these diseases are isolated, and an attempt is made to keep track of "contacts." The system has been conspicuously successful so far, but its application to influenza would present enormous practical difficulties in a country with regular daily lines to many Continental ports, and with a disease often so mild and presenting symptoms so little characteristic as influenza.

There is a noteworthy contrast between the extensive use of prophylactic vaccines in practice and the cautious expression of bacteriological authority acutely conscious of the doubt as to the rival claims of a filter-passing micro-organism and of *B. influenzae*. For example, Dr. F. S. Lister,³ who obtained such remarkable results in prophylactic inoculation against pneumonia in the Rand miners, considers the question hardly worth while discussing until many fundamental points in connexion with the immunological possibilities of the *B. influenzae* are worked out. Various arguments are, however, advanced for their employment; it is urged that though the original infection may be unaffected, the risk of complications due to secondary invaders, such as pneumococci and streptococci and Pfeiffer's bacillus, if indeed it be a complicating and not the specific organism, is diminished; that catarrhs and other infections disposing to influenza are thus prevented; and (as Dr. W. J. Penfold, probably from his former association with Dr. E. C. Hort, suggests in the Australian report) that *B. influenzae* is the specific organism, but has a filter-passing stage. Penfold found that the use of the Commonwealth vaccine was associated with a decided fall in the case mortality, the ratio of deaths in the inoculated and non-inoculated groups being as 5 to 24. Although some part of this improvement is attributed to the earlier hospitalization of the inoculated, these results appear to be in favour of the hypothesis that inoculation protects against complications rather than against the incidence of the disease.

¹ W. R. Longcope. *Proc. Roy. Soc. Med.* 1919, xii, 66.

² Commonwealth of Australia, Quarantine Service, Service Publication No. 18. By J. H. L. Cumpston. M.D., D.P.H., Director of Quarantine. 1919. (Pp. 176.)

³ F. S. Lister: Publications of South African Institute for Medical Research, 1919, No. 12, p. 7.

PROFESSIONAL UNITY.

A CORRESPONDENT, grieved by the internecine conflicts in the profession, sends us some of his reflections in the following paragraphs: Some men are born to unity, some would achieve unity, and some must have unity thrust upon them. Those who are born to unity may live to enjoy it, and those who must have unity thrust upon them are gathered in the net of the thruster, but those who would achieve unity seem nowise able to agree on the manner after which it may be sought. One offers the bludgeon of the trade union, one shows the mass of a free democracy, and one tenders the fine point of a compound oligarchy of oligarchies; while some extol the former pair high on the right hand, and others praise the latter pair as high on the left. In one beset by doubts amid undoubters wonder may at times arise whether the manner is of this importance and whether the clamour of these rivals shows no trace of the huckster. Where all worship the same ideal there will be no disunion. Over the door of our shrine glows the blazon, "The Honour and Interest of the Medical Profession," but who shall show forth its image and how shall its dogma be formulated? The construction of creed has ever been a tool for the discomfiture of a heretic, and, victory won, the creed has been a millstone on the neck of the victor. Could we leave the vision of the ideal to the colour of each man's fancy, there would still remain the practical issue of "what must we do." The determination is surely a matter of business and not of speculation, and the method proper to such an inquiry will show which immediate purpose is shared by the greater number and can set the greater mass in movement in its pursuit. Notwithstanding its inherent defects the method of a democracy seems the most fitted to yield this result. If this be applied to the definition of the proximate objects of the largest group of the profession, some friendly barter might combine for their attainment the *Stosstruppen*, the massed army, and the guerilla. If all roads lead to Rome, travel how we may, Rome may be our rendezvous.

THE LEISURE OF THE PEOPLE.

A NATIONAL CONFERENCE on the leisure of the people was held in Manchester on November 17th to 20th, the arrangements being made by the Manchester and Salford Temperance Council, which is composed of thirty-four affiliated bodies of social workers. The idea underlying the conference was that as the hours of leisure of the people increase many suggestions as to the right use of leisure arise, so that the present is a good opportunity for social workers to confer. Representatives were invited from county councils, trade councils, and societies engaged in social work throughout the country. It is impossible here to give more than the barest summary of the numerous suggestions made. One idea was the provision of municipal winter gardens, including a café, reading-room, library, places for games, and even a repertory theatre. Another speaker was enthusiastic about the influence of music, not only in the home but in the workshop during the intervals of work. Village musical festivals were suggested, and the Government and municipalities were to be harried for financial support. Attention was given to the use of boys' clubs and the place that juveniles should fill in schemes for the better use of leisure. The subject of holidays was also discussed, and the ideal holiday was represented as one which led people away from the crowded holiday resorts to quiet places where a simple life could be lived in close contact with Nature. It was suggested that some of the now disused military camps might be reserved as holiday centres for boys and girls. Mr. G. Lansbury put in a plea for more leisure for housewives and better and more roomy houses. He expressed the feelings of many when he said that the people do not want their leisure time managed by others, but they do want more freedom and

opportunity. The Lord Mayor of Manchester gave statistics as to the enormous use that is made of the public parks and playing fields, which he said had amply repaid their cost. A representative of the Boy Scout movement urged that in addition to public parks the authorities should secure places in the wilder parts of Derbyshire and Cheshire which should be used as camping sites. At the close of the conference it was resolved to form a small committee to consider means whereby the exchange of ideas as to the best use of leisure could be continued and be at the service of all social workers. Throughout the conference it was recognized that there is a great social revolt against a return to pre-war conditions of life, and that there is a demand for a new and a brighter world, with more time spent in recreation and less in humdrum work. It may, perhaps, be doubted whether the enthusiasm of some of the speakers for their own particular ideas as to how leisure should be used did not overshadow the means by which productive work might be made, not humdrum and monotonous, but in itself a source of pleasure as well as of profit.

ACCESSORY FOOD FACTORS.

THE issue by the Medical Research Committee of a Report on the Present State of Knowledge concerning Accessory Food Factors (Vitamines),¹ compiled by a committee appointed jointly by it and the Lister Institute, is opportune. As is said in the introduction, some scepticism on the subject was natural, because until a short time ago it seemed very unlikely that substances playing a prominent part in nutrition could have eluded discovery until within the last ten years. Though there is at present no certain knowledge concerning the chemical nature of the accessory food factors, or vitamines, the facts available compel belief in their reality and importance. As their chemical nature is unknown, so also is their mode of action. It may be that, small though they are in amount, they are essential constituents of the cell; on the other hand, their mode of action, as perhaps seems more probable, may be dynamic and catalytic—that is to say, they are stimulants of action rather than structural units. The analogy of hormones may suggest itself, but vitamines differ not only in being present in, it would appear, much smaller proportions, but also in that they are not manufactured by the animal body, being derived by it from the vegetable kingdom, either directly or indirectly. One of the most remarkable facts observed by all experimenters in the case of birds and mammals suffering from what is spoken of as polyneuritis, evidenced by severe and extensive paralysis owing to deprivation of the water-soluble B vitamin, is the extraordinary rapidity with which the animal recovers when given the missing body. The report contains photographs of a young rat suffering from a deficiency of water-soluble B. There was no co-ordination of the movements of the hind quarters, and the animal was unable to use its hind legs. Twenty-four hours after a dose of yeast extract, containing the water-soluble B vitamin, had been given by the mouth, the animal was able to walk about with ease. Similar observations have been made on pigeons suffering from polyneuritis *gallinarum*. The first hint of the existence of vitamin was obtained in connexion with this water-soluble substance. It was furnished by Eijkman, who in 1897 was medical officer to a prison in Java, where beri-beri cases occurred. He noticed that the poultry of the establishment showed paralytic symptoms, strangely reminiscent of those of his patients, and died with extensive degeneration of the peripheral nerves. The fowls were largely fed upon the rice refuse of the prison, and this fact suggested to Eijkman that the disorder of the human inmates might also have a dietetic origin. Long before this—in fact,

¹ Medical Research Committee. Special Report Series, No. 14. H.M. Stationery Office. To be obtained through any bookseller. (Price 4s.)

nearly a century and a half earlier—it was recognized that scurvy was due to a defect not in the quantity but in the quality of the food, which was traced to the want of fresh vegetables. Modern research leads to the view that scurvy is due to the absence of an accessory factor found in nature associated with living tissues in which metabolic processes are still proceeding; for instance, it is present in raw cabbages, and in fresh lemon and orange juice, in large amount. It is present also in much smaller proportion in fresh meat and milk. When the active processes cease, or are greatly reduced, as in seeds, or when vegetable tissues are dried or heated, the antiscorbutic vitamine diminishes until it altogether disappears; in seeds it is created anew during germination. Extensive and careful experiments on the protective value of various foodstuffs against scurvy have been made at the Lister Institute; they confirm and extend previous observations. Next after the raw cabbage, and the fresh juice of the lemon and orange, come the juice of swede turnips, germinated seeds (lentils), and cooked cabbage. Dried vegetables and fruit are practically useless. The observations made with regard to rickets are very striking, and the facts were not foreshadowed save by the belief that rickets was in some way connected with an insufficient supply of fats, and by the remarkable effect produced by the systematic administration of cod-liver oil. It appears now that certain animal tissues containing fat possess an accessory factor, known as the fat-soluble A factor, the absence of which is followed by rickets. It is contained in largest quantity, among substances hitherto examined, in butter and cod-liver oil. It is present in considerable quantities in cream, animal fats, and in fish oil; also in the liver, kidneys, and the heart. It is absent from lard, and from vegetable oils, so that it is usually not present in margarine. It is contained in the germ of wheat, in linseed, soya beans, and haricot beans; also in cabbage, spinach, raw carrots, bananas, and nuts. A deficient amount of this accessory factor in the diet interferes with the calcification of the teeth, which in man goes on until the eighteenth year at least. The effect of the absence of one or more of the accessory food factors may be aggravated by a diet defective in quality in some other respects, or in quantity, and in the last chapter of the report, dealing with pellagra, Wilson's opinion that that disease is to be attributed principally, if not entirely, to a defective protein supply in the diet, appears to be accepted. In rickets, bad housing conditions and want of sunlight may aggravate a tendency primarily due to the absence of the fat-soluble factor, and the onset of scurvy may be hastened by prolonged over-exertion. Professor Gowland Hopkins has recently presented the main facts in his lecture on the practical importance of vitamins, published in the *JOURNAL* of April 26th, and an interesting discussion on the subject is reported this week (p. 707). Further, we hope shortly to publish a paper by Dr. W. H. Willcox on the incidence of scurvy and beri-beri among the troops in Mesopotamia. We may perhaps therefore leave the matter here for the present, only saying that to each of the six chapters of the report here noticed a valuable bibliography is appended.

WELFARE OF THE BLIND.

THE Minister of Health announces that an estimate has been laid before Parliament for a grant to be distributed in aid of certain services carried on for the benefit of the blind. The grant, if voted, will be available for aiding: (1) workshops for the blind, (2) home workers, (3) homes and hostels for the blind, (4) home teaching, (5) book production, (6) the work of the county associations; and (7) for miscellaneous purposes. It is stated that no financial help can be provided for the unemployable blind without fresh legislation, which is not at present practicable, but a promise has been made that proposals will be laid before Parliament as soon as possible. Most of the purposes for

which grants are or will be available present no novel features. The provision for the aiding of home teaching is good. At present there is a serious shortage of teachers. It is hoped that this service may be extended so that there should be one teacher for every fifty blind in an urban area and one for every thirty-eight in a rural area. This service would afford useful and remunerative work to the better educated blind. Paragraph 33 of the regulations governing grants for miscellaneous work carried on for the benefit of the blind is important: "In this connexion the Minister would particularly welcome any considered scheme for research work in new industries for the blind or for work in connexion with the prevention of blindness." This is a valuable regulation, and should stimulate work in the two directions indicated. It is hoped that ophthalmic surgeons will rise to the occasion, particularly by investigating the ways in which the numerous industrial accidents may be lessened.

CONCEALMENT OF TUBERCULOSIS.

WITH every succeeding year the organization of means for dealing with tuberculosis is being extended in the English counties and large boroughs. Much money is being laid out, and a fair proportion of success in the treatment of early cases is recorded in the annual reports rendered by tuberculosis officers, but one and all of them have the same tale to tell of increased mortality and no appreciable diminution in case incidence. In the report for 1918 issued by the Central Tuberculosis Officer for Lancashire abundant evidence is afforded of the thoroughness with which the work has been undertaken in that county. By mapping out the various districts, each with its full complement of medical, nursing, and visiting staffs, an effective means has been found for dealing with every known case of tuberculosis. No difficulties appear to have arisen with regard to domiciliary treatment by private practitioners. Extra nourishment both for insured and uninsured patients has been supplied, and defects of housing conditions and overcrowding have been regulated as far as possible. But still the disease goes on. The weak link in the chain, in Lancashire as elsewhere, is said to be that notification, which is regarded as the primary safeguard, is neglected. Infective cases are allowed to contaminate their surroundings for many weeks or months before the nature of their disease is revealed by the registration of the cause of death. It would appear that the percentage of un-notified cases is steadily increasing in Lancashire. Taken in conjunction with the fact that very many cases are only notified in the last stages of the disease, it follows that much of the labour and expense incurred in combating and checking the spread of tuberculosis is being thrown away. The Tuberculosis Order which came into force in 1913 in England and Wales provided (Article V) that every medical practitioner, with the exceptions noted below, must notify to the medical officer of health any case of tuberculosis so soon as he has made this diagnosis from evidence other than that derived solely from tuberculin tests. Notification must be made in respect of any case seen in an institution or otherwise. An institution includes a hospital, dispensary, or similar institution, and a lunatic asylum. But a medical practitioner is instructed not to notify a case of tuberculosis if he has reason to believe that the case has already been notified to the medical officer of health for the district within which the person resides. A special article (VI) provides that a school medical inspector shall notify to the medical officer of health once a week all cases of tuberculosis of which he has first become aware in the course of inspections made by him during that week. Further, Article VII provides that the medical officer of a Poor Law institution or a sanatorium shall each week notify to the medical officer of health all cases of tuberculosis admitted or discharged during the week. A medical

officer of health is required to keep a register of cases notified to him, and must make inquiries and take such steps as are necessary to investigate the source of infection, to prevent its spread, and to remove conditions favourable to infection. Fatal cases of consumption must in the vast majority of instances have been under some form of medical treatment for a longer or shorter period before death, so that the local authorities may justly complain when they only become aware of the cases through the registration of the cause of death. Failure to notify such cases can only be accounted for on one or two grounds: either the nature of the disease has not been recognized, or the "blind eye" has been applied in the supposed interest of the patient or his friends. It is, however, to be noticed that the proviso in the Order directing a medical practitioner not to notify a case when he has reasonable grounds for believing that it has already been notified must operate to defeat the object of the Order. If the patient or his friends assert that the case has already been notified, this would afford reasonable grounds for the medical practitioner to conclude that he was prohibited from notifying again. The Order requires the local medical officer of health to send weekly to the county medical officer of health a statement of every notification received in respect of a person residing within the district. The responsibility for tracing the removal of a patient appears therefore to rest on the county medical officer. The steady advance of tuberculosis is a public calamity, and if notification is to yield results of national use, it seems clear that not only should medical practitioners be punctilious in the discharge of the duty laid upon them by the State, but also that administrative measures should be improved.

RADIUM IN GLIOMA.

THE outlook in cases of glioma retinae is so bad that it is of importance to record any method of treatment which seems likely to be of service in preventing the growth developing or recurring after the eye has been excised. A case of glioma retinae apparently arrested by radium treatment, recently recorded by Dr. Mark J. Schoenberg¹ of New York, is worthy of notice. A female child, aged 2 years, came under Schoenberg's observation early in 1916 with what was clinically a typical glioma in the left eye, and with a suspicious-looking mass at the posterior pole of the right eye. The mother reported that the "shine" of the left pupil had been different from that of the right almost from birth. The left eye was excised, and the growth on examination proved to be a typical glioma of the retina. While the child was under the anaesthetic a careful note was made of the appearances in the right eye; the size of the mass was estimated, and it was found that it was surrounded by patches of choroidal atrophy with pigmented borders; in the mass itself were two small spots of gliomatous degeneration, and in the extreme periphery there was another smaller patch, which was not surrounded by any choroidal disturbance. Radium treatment was begun at once, and was repeated after five months and again after eighteen months. At the time of the final application some posterior cortical lens change was noted; an organized vitreous opacity veiled the retinal mass at the posterior pole; this mass then appeared to be almost flat, of dense white colour, and showed glistening patches of degeneration; the patch in the periphery had certainly not increased in size. In the discussion of this case, when it was shown before the ophthalmological section of the New York Academy of Medicine, one member reported that he had seen in a similar case improvement after radium treatment, but it had not been permanent; another member considered the fundus appearances suggestive of syphilis, but to this Schoenberg replied that the serological reactions of both

parents were negative; he stated also that the tuberculin tests of the child herself were negative. Knapp pointed out the importance of this case in view of the fact that glioma is bilateral in about 20 per cent. of cases, and that permission to remove the second eye is rarely obtained. Two points in this case should be noted: the first, that the length of time during which the mother had observed the amaurotic cat's-eye reflex in the first eye, from the first month to the end of the second year, was unusually long; glioma is a rapidly growing tumour, and had it been growing actively for two years it might have been expected to have perforated the eye before that time. The other point is that the choroidal changes observed around the mass in this case are uncommon, as, indeed, Schoenberg allows. The paper is important in that it reminds us of a method of treatment which should most certainly be tried in cases of bilateral glioma, where permission to remove both eyes is withheld, and in cases where glioma recurs in the orbit after removal of the eye. We imagine, however, that in the light of present knowledge most surgeons would press for permission to excise both eyes, and would resort to radium in the event of recurrence.

PROFESSOR HOWARD A. KELLY.

OF the four planets of the Johns Hopkins Hospital portrayed in J. S. Sargent's Academy picture, Sir William Osler, Professor W. H. Welch, Professor W. S. Halsted, and Professor Howard Kelly, only one, the professor of surgery, remains in his original orbit of 1889. Professor W. H. Welch, though still in Baltimore and occupied with the direction of an institute of health, was some time ago succeeded by W. G. MacCallum in the pathological chair he had held since 1884; and now Professor Howard A. Kelly has retired from the chair of gynaecology. "The old order changeth, yielding place to new," and very appropriately Dr. T. S. Cullen gives an attractive account of his old chief in the October issue of the *Johns Hopkins Hospital Bulletin*.¹ Born in 1858 in New Jersey, Dr. Kelly graduated at the University of Pennsylvania in 1882, and soon showed his operative skill at the Kensington Hospital, so that when the important post of associate professor of obstetrics at his old university fell vacant in 1888 Professor W. Osler declared that he was backing "a dark horse, a Kensington colt," and now, many years after, writes: "How extraordinarily successful he has been! Only those of us who know the work as it was realize how much the profession (and the public) owes to such men as Kelly." The Johns Hopkins Hospital called Dr. Kelly in 1889 at the early age of 31 years, and the next thirty years saw a most astonishing output of work in the most varied directions; Dr. Cullen says—and it is indeed high praise: "No one connected with the Johns Hopkins Hospital has written more or has added more to the knowledge of his department than has Dr. Kelly." His professional publications spread widely into general surgery; he was a pioneer in the use of cocaine anaesthesia, wrote on catheterization of the ureters both in the male and the female, on the use of radium, on the vermiform appendix, and on abdominal surgery. His gynaecological works are too well known to mention. A bibliography, compiled by Miss Minnie Blogg, contains 485 entries, and shows the catholicity of his interests. His volume on *Walter Reed and Yellow Fever* (1906) is a classic; his *Cyclopaedia of American Medical Biography*, containing the lives of about 1,100 eminent deceased physicians and surgeons from 1610 to 1910, appeared in 1912, and has for some years been under active revision. As a keen medical historian he is naturally a lover of books; but more than this (for it is not an invariable characteristic of a bibliophile) he has made the most generous presents of choice editions to the hospital library. Religious and philanthropic work has occupied no small share of his extremely active life,

¹ *Archives of Ophthalmology*, September, 1919.

¹ T. S. Cullen, *Johns Hopkins Hosp. Bull.*, Baltimore, 1919, xxx, 287-302.

during which he has usually taken two months' holiday in a simple camp in Canada studying flowers and mushrooms, taking canoe trips, and maintaining his record as a long distance swimmer. He now retires from the active management of the gynaecological department of the Johns Hopkins Hospital with the cordial good wishes of his colleagues, associates, pupils, and friends.

ARTIFICIAL DAYLIGHT.

A PRELIMINARY demonstration of a new method of producing "artificial daylight" was given at a meeting of the Illuminating Engineering Society on November 25th. The method makes use of a coloured (and curiously patterned) reflector for correcting the distribution of energy in the spectrum of a lamp. The original invention is due to Mr. George Sheringham the artist, who used an ordinary electric lamp with reflectors which had been treated by certain blue and green pigments in an empirical pattern. He found the quality of the light for painting greatly improved. The matter was then referred to the Optical Engineering Department of the Imperial College of Science and Technology, and Mr. L. C. Martin, a lecturer at the college, undertook some experimental work with a larger number of pigments, and designed a suitable reflector to produce a daylight effect from a tungsten filament half-watt lamp. The requisite distribution of colours was calculated on spectro-photometric measurements of opaque pigments made by means of Sir William Abney's colour-patch apparatus. Mr. Martin demonstrated his appliance at the meeting, and showed the difference between the corrected and the uncorrected light in the effect produced upon a number of coloured materials. Under ordinary artificial illuminants blue appears very low in luminosity compared with red, but with a lamp having the corrected reflector the two colours, blue and red, are not very far removed from one another in luminosity. There are many directions in which artificial daylight can be of commercial and industrial use; it will also be of service in the photography of coloured objects, and with modified units (which are promised) it should find medical applications.

At the meeting of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine on Thursday next, December 4th, at 8 p.m., a discussion on the recent report on the teaching of obstetrics and gynaecology in London (BRITISH MEDICAL JOURNAL, August 30th and September 13th) will be opened by Dr. T. W. Eden, chairman of the Teaching Committee. A criticism of the report will be read by Dr. Herbert Spencer. Copies of the report and criticism may be obtained on application to the Royal Society of Medicine.

Medical Notes in Parliament.

The Nurses Registration Bill.—The second reading debate on the Nurses Registration Bill, the provisions of which were explained in the BRITISH MEDICAL JOURNAL of November 22nd, p. 683, took place, as already stated, on November 18th. It was of a brief and friendly character. Dr. Addison, in the course of his statement, said that if the income of the proposed council should prove insufficient the Treasury would give favourable consideration to a proposal by him to ask Parliament for a grant. Major Hurst assumed that the nurses on the register would have the exclusive right to wear one certain type of uniform and badge, and regretted that the council would not have jurisdiction on questions as to conditions of employment. Captain Barnett, as the promoter of the Nurses Registration "No. 1" Bill, supported the second reading, and Mr. Lyle, who opposed that measure, also gave the bill a very warm welcome. Sir Watson Cheyne joined in the congratulations to Dr. Addison, but was disappointed that the bill was limited to England. There was a risk thus of having different standards of examinations in England, Scotland, and Ireland. Major Molson, as a medical man, also approved of the bill. Captain Elliott asked for an assurance from the Secretary for Scotland that a similar bill for Scotland was in a forward state of preparation, and this was given by Mr. Munro. Lieut.-Colonel Raw supported the bill in a single word of hearty appreciation. Dr. Farquharson also heartily congratulated Dr. Addison on the introduction of the

bill, but said that in his opinion he did not take a sufficiently comprehensive view of the situation as a whole. The Ministry of Health should bring itself into direct relationship with all groups of workers—nurses, chemists, dentists, and doctors. He thought that the Ministry itself ought to be the registering body. Section 3, in his opinion, would really give the new council judicial power, and he suggested that it would be simple, instead of referring the question whether a poor erring creature was to be taken off the register to a council composed of comers and goers, to refer it to a judicial body nominated by the Minister. Sir William Whitla, having expressed regret that no mention had been made of Ireland, Dr. Addison said he knew that the Irish Office had this matter under consideration, and there was reason to expect that there would be a similar proposal for Ireland. The reason for a separate bill for Scotland was that there were some differences in the procedures of the two countries. He thought, however, that with the arrangements made for the interchange of registers and the prospect that there would be a common register, the point raised by Sir Watson Cheyne had been met. The bill after second reading was referred to a Standing Committee.

The Sale of Patent Medicines.—Sir P. Magnus, on November 19th, asked the Prime Minister whether, having regard to the further demands on the country connected with public health, and the ill effect of the use and advertisement of certain patent medicines, the Government would take an early opportunity of introducing a bill dealing with some of the recommendations of the Select Committee on Patent Medicines, whose report was published in 1913. Dr. Addison said, in reply, that the subject was having his careful consideration, and he was hoping before long to be able to take some practical steps in regard to it. He was not in a position to state the nature of those steps, nor the date. He appreciated the importance of the subject, but must have regard also to numerous other matters of a more pressing nature.

London Insurance Committee: Medical Benefit Fund.—Colonel Burn, on November 20th, asked the Minister of Health the date upon which the London Insurance Committee were notified by him of the amount of the Medical Benefit Fund for the year ended December 31st, 1918; the date upon which the Committee might be expected to make a settlement with the practitioner for the year 1918; the explanation of the delay in making the settlement; and whether the Minister would arrange for the payment to practitioners of interest at the current bank rate on the amount of the overdue settlement. Dr. Addison replied: The London Insurance Committee were notified of the amount of the Medical Benefit Fund for 1918 on September 9th, 1919. The Committee hoped to complete the accounting arrangements and to issue the cheques for the balances due to practitioners on the final settlement within the next few days. The accounting operations have been delayed by a few weeks, as compared with previous years, because the same staff have been engaged in calculating and making payment of the current half-quarter instalments of the doctors' remuneration and of the instalments of their 1919 war bonus. No funds are available to the Insurance Committee for the purposes of a payment such as is suggested in the last part of the question. The London doctors received instalments amounting to 84 per cent. of their money during 1918, and shortly after the end of that year. Some considerable delay before the final settlement for the year can be effected is unavoidable under present arrangements, but a new system is being introduced to which the profession has agreed, from 1920 onwards, which will entirely obviate these long delays in making a final settlement.

The Maintenance of Hospitals.—Colonel Newman asked, on November 20th, whether the Government had any intention of converting the hospitals hitherto maintained by voluntary contribution into institutions partially or wholly assisted from public funds. Dr. Addison said that the steps suggested would not be within the power of the Ministry of Health, without legislation in respect of any hospitals not willing to accept such subsidies.

Public Supply of Anti-influenza Vaccine.—Dr. Addison, on November 20th, announced that the Ministry of Health were making arrangements for the preparation of a new supply of anti-influenza vaccine to be made available to medical officers of health for distribution to all practitioners in their areas who desired it. A circular and instructions would be issued, he hoped, in a few days.

Death Certification.—On an inquiry by Mr. Rowlands, Dr. Addison, on November 24th, circulated the following statement as to death certificates in the last five years:

	Total Deaths.	Uncertified Deaths.	Proportion.
1914 ...	516,742	6,279	1.22
1915 ...	562,253	7,684	1.37
1916 ...	508,217	7,528	1.48
1917 ...	498,922	7,552	1.51
1918 ...	611,661	8,244	1.37

All the cases included in the above figures as "uncertified" had, in fact, been made the subject of an inquest or had been considered by a coroner not to need one. Nevertheless he considered that the present law of death certification needed reform, and the matter was receiving attention with a view to legislation as early as possible.

Infectious Diseases in London.—In reply to Mr. Grundy, on November 20th, Dr. Addison said that the number of cases of scarlet fever notified in the County of London during September was 1,205, and during October 2,017; the number of cases admitted to the hospitals of the Metropolitan Asylums Board was 1,100 in September, and 1,502 in October. As regards diphtheria the number of cases notified in London in September was 775 and in October 1,074; the number admitted to hospitals of the Metropolitan Asylums Board was 750 in September and 925 in October. The difficulties experienced in finding accommodation had been virtually overcome, and there seemed no reason to think that any abnormal spread of infectious disease was taking place.

Physical Education for Children.—Mr. Fisher informed Captain Loseby, on November 20th, that special grants were paid by the Board of Education in aid of expenditure of local education authorities on the employment of competent persons to organize and supervise the physical training of children in public elementary schools. This applied not only to counties but to the areas of all authorities for elementary education, and fifty-one such authorities were now employing recognized organizing superintendents.

The Housing Proposals of the Government.—Dr. Addison, on November 21st, explained the additional proposals of the Government to accelerate the provision of housing accommodation by encouraging private enterprise through a subsidy of a sum not exceeding £150 for each approved house built within twelve months. The new scheme was not intended to supersede that already started by the Government but to supplement it. Luxury building was to be arrested and municipal investment in building was to be fostered. A conference of representatives of all persons interested in the building trade would be addressed by the Prime Minister. Dr. Addison, in the course of his speech, insisted that the slow progress made under the Government plan so far was largely due to the inaction of his predecessor in office (Lord Downham). As to the making of preparations Lord Downham has since warmly repudiated the charge and has given an account of the preliminary work done by him as President of the Local Government Board.

Temporary Officers R.A.M.C.—Sir Watson Cheyne, on November 19th, asked the Secretary for War if he were aware of the discontent among the temporary Royal Army Medical Corps officers, with the army in India, on account of the manner in which their contracts were being interpreted; that men who had signed contracts in 1917 to serve until the termination of the present emergency, or until their services were no longer required—whichever should happen first—were informed in February, 1919, that the period of the emergency during which officers might count service for gratuity would expire on August 3rd, 1919; that on August 4th, 1919, they were asked to sign a fresh contract, which they almost unanimously refused to do; that shortly afterwards another contract, with somewhat better terms of pay, was offered to them, and they were told that those who refused to sign would be retained in the service whether they liked it or not; that some men who refused to sign had since been sent home to England, and posted to hospitals here, instead of being demobilized and allowed to resume their private practices—in one at least the medical man being a volunteer and not a conscript; and whether he would reconsider this matter, especially in view of the uncertainty occasioned by the discontinuance of the gratuity and the offer of fresh contracts. Mr. Churchill replied in a written answer as follows: "I am not aware that any discontent exists amongst temporary Royal Army Medical Corps officers in India on account of the manner in which their contracts of service are being interpreted. Temporary officers of the Royal Army Medical Corps serving in India were offered a new contract at 800 rupees per mensem if they would undertake to serve in that country for another year. Those eligible for demobilization and who did not sign the new contract, but whose services could not immediately be spared, were granted 750 rupees per month, with effect from July 1st, 1919. The new rates of pay, although they did not include a gratuity, were better than those rates on which they had been serving up to July 1st. Royal Army Medical Corps officers in India, as elsewhere, who are serving on a contract for the duration of the present emergency, are liable to be retained until the statutory date for the end of the war, and they were doubtless so informed, but a certain number of these have been sent home on public or compassionate grounds, or because they were en route for the United Kingdom from Mesopotamia, but detained in India on account of the emergency in that country. Junior officers, if on a 'duration of the war' contract, sent to the United Kingdom, may be retained and posted to commandant home for duty, and their claims for release may not be considered as pressing as those of other officers whom they relieve."

Pension for Majors R.A.M.C.—Sir H. Nield asked, on November 19th, whether, under the Royal Warrant of September 13th, 1919, the pension of a major R.A.M.C., payable after twenty years' service, was reduced from £365 to £321, and that, in effect, such an officer would be worse off so far as regarded pension than the infantry officer who joined the army straight from school; and whether he would state what was the reason for this anomaly, seeing that the R.A.M.C. major had to go through an expensive technical course to qualify before entering the army, while the higher rate of pension was given to those whose

military education was largely furnished at the expense of the State. Mr. Forster replied that his attention had already been called to this point, and it was under his consideration.

Convalescent Centres for ex-Service Men.—On an inquiry by Mr. Hallas, Sir L. Worthington-Evans said, on November 20th, that the establishment of convalescent centres for the concurrent treatment and training of discharged disabled men had engaged his earnest attention for some time past. Labour and other difficulties had hindered progress, but a centre at Blackpool, to accommodate from 600 to 1,000 men, would be opened on November 25th, to be followed by others in different parts of the country. Another large centre at Epsom had been delayed for nearly six months owing to a wage difficulty, which had stopped all progress. In addition to these large institutions smaller centres had been established. So far the number of men undergoing concurrent treatment and training was negligible, but with the establishment of the larger centres it was hoped within the next few months to have full facilities for 2,500 cases. It was proposed in addition to increase the number of smaller centres. Figures of the cost to date were not at present available, as the Office of Works was still engaged in the necessary structural alteration of premises.

Psychotherapy (Treatment of ex-Service Men).—Mr. Macquisten, on November 20th, asked whether the Pensions Minister proposed to establish throughout the country clinics for the treatment, by means of psychotherapy, of functional nervous affections (including so-called "shell shock"); whether, if he intended to do so, he would issue instructions that all pensioners recommended to these clinics for treatment would be informed of the nature of psychotherapy, that it was a form of treatment in which more or less hypnotic suggestion was used; and whether, in the event of pensioners refusing to accept psychotherapeutic treatment, he would ensure that the pensioners in question should not be prejudiced by such refusal, but that all pensioners should have offered to them alternative treatment. Sir L. Worthington-Evans said the answer to the first part of the question was in the affirmative. He reminded the hon. member that psychotherapy was a comprehensive term, including many forms of treatment, of which hypnotic suggestion was the form less frequently used. If in any case hypnotism should be proposed as the most desirable form of treatment the man would be perfectly free to refuse it, and no penalty whatever would attach to his treatment.

The Employment of Disabled Men.—Mr. Wardle, on November 19th, in reply to Major Barker, stated that the number of municipal and other public bodies which had given undertakings to employ disabled men in terms of the national scheme was 172. Many other bodies had the matter still under consideration, and he trusted that in the near future the position would substantially improve.

Tuberculous ex-Service Men.—In answer to Lieut.-Colonel Raw, Sir Tudor Walters, for Dr. Addison, said on November 24th that immediately the recommendations of the Committee with regard to the treatment and training of tuberculous ex-service men were received, steps were taken to expedite their application. He had just received a further letter of consent from the Treasury in respect of the development of training facilities.

Women and Service Pensions.—In reply to Mr. Clement Edwards, on November 20th, Sir L. Worthington-Evans said that women discharged from the auxiliary corps attached to the Army, Navy, and Air Service were not pensionable by his department. They were, he understood, granted compensation in some cases under the Workmen's Compensation Acts, and in others under the Injuries in War Compensation Act. The grants were administered by the Service Department concerned that was, by the Admiralty, War Office, or Air Ministry. He had received representations on this subject from many quarters, but he had no satisfactory evidence that the legitimate claims of these women could not be met under the existing arrangements. He was in communication with the First Lord of the Admiralty and the War Secretary.

Public Vaccination.—Mr. Waterson asked Dr. Addison, on November 24th, whether, before introducing a bill to separate the medical administrative work of boards of guardians from their duties under the Poor Law, he would have an inquiry into the position of vaccination in England and Wales with a view to the abolition of compulsion. Dr. Addison replied that the question of public vaccination work and administration must be considered when the Poor Law machinery was dealt with; but he saw no reason for an "inquiry" such as was suggested.

Bedding and Clothing in Tuberculous Cases.—Sir H. Nield asked the Pensions Minister, on November 13th, whether he would reconsider the existing provisions dealing with the special bedding and clothing for tuberculous cases. Sir L. Worthington-Evans, in a written reply, stated he was aware that the regulations as to the supply of special bedding and clothing had given rise to some complaint, and he had the matter under consideration.

Becketts Park Hospital.—In answer to Colonel Ashley, on November 19th, Sir James Craig gave a definite assurance that the Becketts Park Hospital, Leeds, would not be closed down until there was no longer need for its maintenance.

England and Wales.

WEST LANCASHIRE VOLUNTARY AID DETACHMENTS.

AN interesting account of the West Lancashire Voluntary Aid Detachments, which were brought into existence on the establishment of the Territorial Force Association in 1908, has been published in the *Liverpool Courier*. Sir James Barr was appointed county director in that year and raised a series of detachments of male and female workers. When the war broke out every one of these detachments proved not only to be efficient, but furnished personnel for new detachments, so that during the war there were altogether 19 male and 44 female detachments in West Lancashire. The first task Sir James Barr had to undertake on the outbreak of war was the organization of the existing means of transport. The number of ambulances was rapidly increased; those owned by the public authorities were used, two private ambulances were lent, and the manager of the Liverpool Corporation Tramways made box stretchers, with which twenty-five tradesmen's motor vans were equipped; in addition, 200 private motor cars were placed at the disposal of the organization. Sir James Barr, we are told, himself met every ambulance train or hospital ship that arrived in Liverpool for three and a half years. Classes in first aid and home nursing were organized to the number; in one detachment, of 55, conducted chiefly by the detachment surgeons, Dr. James Watson and Dr. Ernest Nevins. After America entered the war the work of meeting the ships was greatly increased, as many as twenty transports being met in the course of a single week; during the influenza epidemic of August and September, 1918, the work was very heavy. Regular duties were discharged by various members of the detachments in eleven hospitals, and Sir Robert Jones has borne testimony to the valuable services rendered by orderlies in the operating room of the Alder Hey Special Surgical Hospital.

TRIBUTE TO A METROPOLITAN M.O.H.

Dr. G. P. Bate, who was appointed medical officer of health to the Parish of St. Matthew, Bethnal Green, in January, 1876, and has held the same office under the Borough Council of Bethnal Green since its formation, is about to retire. At a recent meeting of the Borough Council the mayor referred to Dr. Bate's long and honourable service, and proposed a resolution, which was unanimously adopted. It recorded the council's sincere appreciation of the skill and devotion with which Dr. Bate had consistently performed his public duties, and testified that his unselfish application of them had materially contributed to the marked improvement in the public health, and had conferred benefits of incalculable value on the inhabitants of Bethnal Green. In conclusion, the council heartily congratulated Dr. Bate upon a long, honourable, and successful career, in which sympathy, generosity, and kindness had ever been manifest, and assured him that the continuance of his activities in other spheres of professional work was accompanied by the goodwill and esteem of the council and of all sections of the community. It was resolved that a copy of the resolution, engrossed on vellum, should be presented to Dr. Bate.

LIVERPOOL MEDICAL INSTITUTION.

At the second ordinary meeting on November 20th, 1919, when Dr. A. Craigmile, Vice-President, was in the chair, Dr. J. C. Matthews read notes of a case of encephalitis lethargica developing pendular nystagmus during convalescence. The chief symptom was torpor; the temperature, bodily functions, and urine showed no deviation from the normal. The ocular disturbance was noted during convalescence, and the oscillations of the eyeballs were about five in one-third of a second before fixation occurred. There was no evidence of micro-organism infection, and lumbar puncture revealed no abnormality in the cerebrospinal fluid. Dr. Macalister read a note on the modern treatment of indigestion. At the outset he expressed the opinion that deficient metabolic activity was the primary cause and the stomach symptoms effects. Basing his observations on the rationing of food during the war, he came to the conclusion that spacing the intervals between meals and regulating the amount of protein, especially in cases of the gouty type, were more efficacious in removing

the symptoms of ingravescant discomfort from the ingestion of the first meal to the last than the employment of the usual drugs in relieving gastrodynia, pyrosis, and flatulence. Mr. R. W. Kelly described an ingenious operation on the fibula for "slipping peroneal tendons." By means of a wooden model he showed by making an artificial flange of the peroneal margin of the fibula, and through section and displacement backwards of a wedge of bone, the dislocation of the tendons was prevented. Dr. Stookes read a paper on the retrospect and prospect of obstetrics, which is published at page 701.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

The second meeting of the above society was held on November 13th at Newcastle-on-Tyne. In the afternoon a most interesting and instructive address on "Anaphylaxis in relation to disease in man" was given by Professor James Ritchie of Edinburgh, in the University of Durham College of Medicine. In the evening the annual dinner of the society was held in Tilley's Old Rooms, Blackett Street. The guests of the evening were Professor Ritchie of Edinburgh, Professor David Drummond and Mr. R. Orde of Newcastle. The president (Mr. J. D. Wardale) was in the chair. "Our guests" was proposed by Professor Stuart McDonald and responded to by Professor Ritchie. "The Northumberland and Durham Medical Society" was proposed by Mr. Orde and replied to by the President. The speeches all reached a very high standard. Both functions were well attended and extremely successful in every way.

Ireland.

ULSTER MEDICAL SOCIETY.

THE second meeting of the Ulster Medical Society was held in the Medical Institute, Belfast, on the evening of November 20th, when the President (Mr. Andrew Fullerton, C.B., C.M.G., F.R.C.S.), was in the chair. Sir James Mackenzie, M.D., F.R.S., was elected an honorary Fellow. Dr. R. L. Leatham read a paper on angina pectoris, and after brief references to the vasomotor type, and the precordial pain in advanced heart trouble, he directed attention chiefly to the type of precordial pain associated with coronary disease; there was, he said, a pre-anginal stage of dyspnoea, which it was important to recognize. He thought there was an acute and a chronic form; and in the latter prognosis was difficult; a high or a low blood pressure, neurasthenic temperament, and an onset without cause were unfavourable elements, whereas a medium blood pressure, an energetic and hardworking temperament, and the development of a mild mitral systolic, were favourable. Many cases lasted for years; and full notes were given of one in which the attacks were numbered by the hundred in 1916-17-18, but then gradually lessened, and ultimately disappeared. As regards treatment, the avoidance of effort, rest, diet, warmth, and amyl nitrite, whisky and morphine were the most reliable agents.

Dr. MacIlwaine then read a paper on clinical electrocardiography, and illustrated his remarks by numerous pulse tracings thrown on the screen. He had taken about 500 tracings, and of these 85 were examples of some of the six recognized arrhythmias.

The papers were discussed by Drs. Calwell, Leslie, Robb, Marshall, and Professor Sinclair and the President, who unanimously expressed their thanks and indebtedness to both readers for lucid and instructive exposition of difficult subjects.

SALARIES OF POOR LAW MEDICAL OFFICERS.

At a largely attended meeting of the medical practitioners of North Co. Down the following resolution was unanimously passed, and has since been approved by those who were unable to be present at the meeting:

That we, the medical practitioners of the northern half of the co. Down, demand that the veto of the Local Government Board on maximal salaries of £300 and upwards, passed by boards of guardians, be at once withdrawn; that the minimal remuneration for locumtenents of dispensary districts be £6 per week and for a workhouse £4; that we instruct our representative on the Irish Medical Committee to take steps to forward this resolution, and we pledge ourselves to support the Irish Medical Committee in any course it may recommend to give effect to the terms of our resolution.

IRISH PUBLIC HEALTH COUNCIL.

The fourth meeting of the Irish Public Health Council was held at the offices of the Minister of Health for Ireland on Wednesday, November 19th. Dr. E. Coey Bigger, the chairman, presided, and the following members were present: Mrs. McMordie, Right Hon. Sir Henry A. Robinson, P.C., K.C.B., Rev. P. Kerlin, C.O., Sir Joseph A. Glynn, Dr. W. J. Maguire, Mr. J. Ewing Johnston, M.B.E., M.B.C.V.S., Dr. Stephenson, Sir John W. Moore, Dr. R. J. Rowlette, Sir William Thompson, Dr. Alice Barry, Mrs. H. L. Dickie, and Mr. E. Bourke, C.B. Major G. Harris, D.S.O., secretary, and Dr. Hennessy were in attendance.

Nurses' Registration.

The Chairman drew attention to the Nurses Registration Bill for England, and stated that he had been in communication with the Minister of Health for Ireland and the English Ministry of Health on the subject of a similar bill for Ireland. He hoped that full reciprocity between England and Ireland and Scotland in the matter of registration would be secured, and mentioned that he had consulted the various nursing organizations in Ireland with regard to the Irish bill, and that they had agreed generally to his recommendations, which were that the Irish bill should be similar to the English bill, but that the Irish Council should be much smaller than the Council proposed for England.

Medical Service.

The formulation of an improved scheme of health administration for Ireland was then considered, and after prolonged preliminary discussion its further consideration was adjourned until the next meeting on December 9th, 1919.

Public Health Medical Treatment of Children, Ireland, Act.

The committee upon the regulations under the Public Health (Medical Treatment of Children) (Ireland) Act, at its meeting on November 20th, received representatives from school managers and teachers' associations, and considered the suggestions made by them in regard to the administration of the Act. The committee will meet again on December 10th.

Correspondence.

"NEW LAMPS FOR OLD" IN OBSTETRICS.

SIR,—Your leading article on this subject (November 22nd, p. 679) is both suggestive and timely, and starts a fascinating train of thought as to the effect of the war on obstetrics. Were I to offer any criticism it would be that your article concentrates overmuch on changes in tactics and does not give sufficient prominence to the strategy of the campaign as a whole.

Although obstetrics may not have received the same stimulus from the war as medicine and surgery, the war has produced a reflex response on obstetrics scarcely less marked than the effects of its direct stimulus on medicine and surgery. The change was in process before the war, but has been greatly quickened by it. The chief stimuli seem to be:

1. The progress and the success of preventive medicine throughout the war.
2. The examination of recruits and the attention drawn to lack of physique.
3. The necessity of population not only for war but for peace production.
4. The work of women in munition factories and the problems thus raised in regard to pregnancy, lactation, and pelvic disability in relation to industrial efficiency.

The pre-war and post-war changes have involved a revision of both the strategy and the tactics of obstetrics. The campaign as a whole must be regarded as starting from conception and covering pregnancy, labour, and lying-in, and continuing through the nursing and rearing of the rising generation. The principles dominating the new strategy are those of preventive medicine; to keep the pregnant woman in health of body and mind, to see her pregnancy to a safe termination; that she runs the minimum risk of disability, and is speedily and com-

pletely restored to efficiency, able to nurse and care for her child; and finally that her child is born uninjured, healthy, and given the all-important start towards developing into an Al physique.

This new strategy involves a change in tactics. We know little of the intrauterine period; though we are now devoting much attention to it, we have neglected it hitherto, and must await the developments that will come from increased knowledge and further experience. The greatest success in this field has been attained in the intelligence work, so that the number of unforeseen and unanticipated occurrences in labour have greatly diminished. Labour, though merely an episode in the campaign, is the cause of the greatest number of casualties, and it is here that improvement in our tactical methods is especially required. The causes of the high casualty rate are, as regards the mother: (1) Infection; (2) injury; (3) nervous wear and tear; and as regards the child the first two also apply. How must our tactics be modified to meet this high casualty rate?

1. In the first place clearly by strict adherence to the technique of surgical cleanliness. Mr. Bonney points out its success in hospital practice and its coincident lack of success in home-conducted labour, and makes out a strong case for labour being considered as a surgical operation and given the same surroundings and conditions. But there must be a change not only in the place of attack but also in the method, especially towards diminishing internal manipulations, for even in hospital practice the morbidity rate goes up with interference.

2. To avoid lacerations and their results, immediate and remote, the reign of force must be ended. The uterus does not act as it should in our ultra-sensitive community, so our new tactics should help the natural powers by lessening pain, emotional effects, and fatigue, thus lessening also the need for manipulative interference.

3. The avoidance of exhaustion during labour with adequate rest to mind and body during the puerperium and lactation will lessen nervous stress and strain. The management of the lying-in time and the importance of considering the psychological element in the patient is fully discussed in your article. To keep the woman in good physical condition during this period of rest, massage and physical exercises are brought in. Here the experience gained in the war of what can be done in the way of re-education and improving the tone of muscles has been valuable. Special exercises have been devised to improve the tone of the overstretched abdominal and perineal muscles and diminish the risk of abdominal and pelvic prolapse.

As regards the child, the conditions leading to infections of the cord and eyes are preventable, and investigations as to the cause of birth injuries, carried out by Eardley Holland and others, may lead to a great diminution in intranatal casualties.

The other great change in our methods is to rely more on Nature and to give up substitutes, whether the forceps for the maternal power, or artificial food in the place of mother's milk, the latter being of immense importance in the final stage of the campaign. But that is another story, as here obstetrics branches off into pediatrics.

The general practitioner is quickly acquiring the new tactical methods, but that some of the campaigners of the old school do not find it easy was shown by some letters in the JOURNAL following the publication of the report on the teaching of obstetrics. In one of them the old tactics of force and the forceps were still advocated, and the writer seemed to glory in his interference in 50 per cent. of the labours he attended. It will take time for the new lamps to replace the old, but such articles as the one you have just published will do excellent propaganda work and hasten the replacement.—I am, etc.,

London, W., Nov. 24th.

JOHN S. FAIRBAIRN.

TREATMENT AFTER TONSILLECTOMY.

SIR,—Once again in full detail the important question of operation for enlarged tonsils and adenoids is before us in the pages of the JOURNAL of October 4th. Mr. Bowen's complete account must be of interest to those who are engaged in this branch of surgery.

There are one or two points, however, that I should like to raise. He says: "I would go so far as to say that once the tonsils have been the seat of tonsillitis they should be

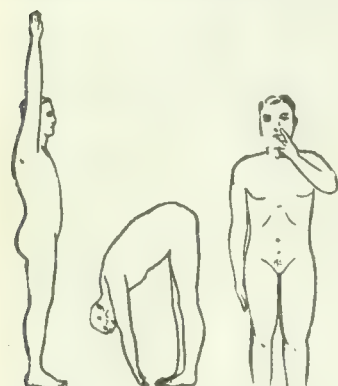
removed." If by this he means when the tonsils are enlarged, I venture to say that there is one class of person to which this dogmatic statement should not apply, and that is those who are engaged in the singing profession. Any treatment but operation should be carried out in such cases, as it is common knowledge that the removal of enlarged tonsils is likely to interfere with voice production, and so the professional singer is unable to carry on.

My second point is as to haemorrhage. I would always select the method of removal of tonsils by means of the cold snare in preference to a blunt or sharp guillotine in cases of enlarged fibrous tonsils, and the snare should be allowed to remain fast a few seconds to lessen any chance of excessive bleeding.

With regard to after-treatment, to my mind it is not sufficient to give verbal instructions to hospital patients with regard to exercises, and the following is a copy of instructions and figures adopted at the two hospitals to which I have the honour to be Throat, Nose, and Ear Surgeon.

Directions for Exercises for Children after Operations for Tonsils and Adenoids.

Position 1.—Stand with body and head erect, chin slightly drawn in, the chest expanded, eyes looking straight forward, knees well braced back, heels together, toes turned out, so that the feet together form about a right angle, the weight of the body on the fore part of the feet, with the lips tightly closed (the teeth not clenched however) so that the breathing may be entirely through the nose, both in inspiration and expiration. Gradually bend body forward till hands touch the feet as in



Position 1. Position 2. Position 3.

Position 2. at the same time emptying completely the chest.

Position 3.—Gradually rise from this position to position 1, filling up chest to fullest capacity with hands well raised up and behind head.

Position 4.—Place the left forefinger on the left nostril so as to occlude it, bring the right arm up and out, fully extended to level of the shoulder, at the same time taking a deep breath through the right nostril till chest is fully expanded, then bring arm back to former position emptying chest at the same time.

Position 5.—Repeat for opposite side.

General Directions.—(1) All exercises are to be done with as little clothing as possible. (2) Preferably out of doors. (3) At rate of about twelve to the minute. (4) Mouth always closed. (5) Twenty of each to begin with, two or three times a day, increased till fifty can be done with comfort. (6) These exercises should be persisted in for at least six months. (7) If there is snoring, or mouth is kept open at night, a chin strap should be worn.

This important part of the after-treatment is too often omitted, and I cannot find that it is generally adopted.—I am, etc.,

ARTHUR M. BARFORD,

Surgeon, Throat, Nose, and Ear Department Royal West Sussex Hospital, Chichester, and to Portsmouth and Southern Counties Eye and Ear Hospital.

SCHOOL MYOPIA.

SIR,—Your correspondent, Mr. W. Campbell M'Donnell, justly says that among the many causes of school myopia uncorrected hypermetropic astigmatism has a place, but he doubts whether clinical proof of the transition from hypermetropic to mixed astigmatism is possible. In the course of twenty years' service on the staff of an ophthalmic hospital where a proportion of the patients are school children, many of whom are brought up by their parents for re-examination several times during their school life, I have come across several instances of this—cases of hypermetropic astigmatism in which one meridian has become myopic, while in some instances the process has gone on until both meridians have become myopic in spite of the wearing of correcting glasses.

Several years ago I published in the BRITISH MEDICAL JOURNAL (July 28th, 1906) some statistics of London elementary school children pointing to the same conclusion.

Of 1,940 boys and girls of school age, all of whom had such defective vision that they required spectacles, the percentage with hypermetropic astigmatism in the younger children from 7 to 10 years old was 28.5, in those from 10 to 12 years old was only 22.6, and in the older children, from 12 to 14, was 20.1. In the case of mixed astigmatism the percentage in the first period was 24.8, and in the second practically the same, 24.9, while in the third period it had dropped to 20.4.

The explanation of these figures was seen in the percentages of myopia, including myopic astigmatism, for the different ages, which showed a continuous rise from 23.4 in the first period to 28.9 in the second, and 31.3 in the third. These were cases in which the errors of refraction had not at the time of examination been corrected.

It would be interesting to take similar statistics at the present time when the proportion of astigmatic children who wear correcting glasses is so very much larger than it was thirteen years ago. A comparison of the two sets of statistics might tend to show whether or not treatment by glasses has actually had any effect in preventing the development of myopia. Personally I am inclined to believe that it has.—I am, etc.,

London, W., Nov. 2nd.

A. HUGH THOMPSON.

LOCAL CLINICAL LABORATORIES.

SIR,—I think I ought to reply to the letter of Bacteriologist, though his unworthy gibe at my "commercial"ism at first prompted me to refrain. Does not Bacteriologist work for fees or salary?

The answer to the question in his third paragraph is that we—like himself—go out and do them at the bedside, or the patient is sent to the laboratory. Furthermore, a large part of my own day is spent in consultation with clinicians, either at the bedside or the laboratory. That, however, is not the point. In the vast majority of cases the specimen can be—and in practice is—collected by the practitioner in such a manner as to arrive at a central laboratory in a suitable condition for full examination. In our experience such "spoilt" specimens as Bacteriologist refers to, with which every laboratory is, of course, familiar, amount to less than 5 per cent., and even in these a satisfactory specimen can be obtained after a little correspondence in almost every case. Much assistance can be given by well-planned outfits and full directions. Does Bacteriologist not know that all the appliances he mentions can be incorporated in an outfit? Suitably modified, they are with us in daily use.

To my further point I adhere—namely, that it is an advantage to the patient to have his specimen examined by two or three men in consultation rather than by one, however much of a pathological Admirable Crichton he may be! Moreover, the value of those men's opinion is increased enormously by their daily association with the work that comes into a central laboratory, necessarily very much larger than in the case of the local laboratories which Bacteriologist prefers.

My own experience of bacteriologists is pretty extensive, but I can count those who possess enough expert knowledge of morbid histology to give a reliable opinion on, say, the criteria of a pre-cancerous state, on the fingers of both hands. Certainly, in Bacteriologist's scheme, there would not be enough of them to go round, and Heaven help the patient whose diagnosis had to be made simply by "section spotting"!—I am, etc.,

November 17th.

CLINICAL PATHOLOGIST.

HYPERPYREXIAL HEAT-STROKE.

SIR,—With reference to the letter of Captain Couldrey in your issue of August 2nd, may I suggest that a temperature not exceeding 105°, copious urine of extremely low specific gravity, and absence of all headache, cannot be held compatible with a diagnosis of hyperpyrexial heat-stroke?

In reply to Dr. Forman, I do not think that a possible sandfly infection could be excluded in the cases mentioned, as infected men were returning to camp where presumably sandflies existed. Details regarding the course of the disease would in these cases be very interesting, as the fact that they occurred mainly in men exposed to the mid-day sun suggests "sun traumatism," as described by Manson, as being possibly a more correct nomenclature to apply in this instance.—I am, etc.,

H. C. SINDERSON,
Captain R.A.M.C. (S.R.)

Baghdad, Sept. 30th.

SIR,—With reference to Dr. Hearne's letter (BRITISH MEDICAL JOURNAL, August 9th, p. 187), in order to exclude sandfly fever as an etiological factor in the production of this condition on board ship I think it is necessary to be in a position to exclude the possibility of the sandfly having been admitted on board among cargo and stores; the fly is known to be transported from place to place by ship, so that there is presented the interesting possibility of infection en route.—I am, etc.,

Baghdad, Oct. 15th.

H. C. SINDERSON,
Captain R.A.M.C.(S.R.).

CHRONIC PANCREATITIS.

SIR,—Chronic pancreatitis has been neglected, and it is pleasing to read the letter published in the JOURNAL of November 22nd (in reply to my article) by one who knows the subject, Dr. J. A. Cairns Forsyth. My article is in full agreement with his statement that "Of all the diagnostic aids . . . the chemical analysis of the faeces comes first." By that means are we most likely to arrive at diagnostic precision on the subject, and such methods as I have found useful, or even promising, I have included in my article.

Dr. Forsyth and I seem on the subject of pancreatitis to belong to different epochs. He advocates Cammidge's test. I did not include it in my article because, after some years of its employment, aided by Professor Carstairs Douglas and others, I came to the conclusion that neither qualitatively nor quantitatively has it any practical value. The same conclusion has been reached by many others.

Further, Dr. Forsyth speaks of the cases of pancreatitis secondary to gall stones as being "by far the most common" cases of pancreatitis. My recent experience convinces me that the cases secondary to gall stones are by far the least common cases of pancreatitis.—I am, etc.,

Glasgow, Nov. 24th.

JAS. H. NICOLL.

THE SAFETY OF ETHYL CHLORIDE.

SIR,—In your issue for November 8th is a letter from Mr. C. B. Dale of Birmingham. He states that he has never seen a death occurring under ethyl chloride nor read of one. Further, that he estimates this anaesthetic as being as safe as ether. While agreeing to the general statement that ethyl chloride in competent hands is a valuable anaesthetic in suitable cases, I think its literature, now very copious, proves it to possess well marked limitations and a death rate higher than that arising from ether. Drs. Luke and Stuart Ross in a recent book have collected 23 casualties under ethyl chloride, and they estimate the death rate at 1 in 8,000. Dr. McCardie has had a wide experience, and urges caution in its use. He gives 1 in 10,000 as the death rate, and the late Sir Frederic Hewitt arrived at similar figures. Peterka gives 1 in 8,414, Ware 1 in 11,207, Seitz and Konstanz 1 in 16,000 as the mortality. Although I have not seen a death under this anaesthetic I have in the course of a wide experience encountered several cases in which dangerous symptoms presented themselves. The conclusion is forced upon one that ethyl chloride, valuable as it is, should not be regarded as a very safe anaesthetic or as suitable for those without experience, nor should it be employed indiscriminately. I venture to think in order of safety nitrous oxide comes first, then ether, then ethyl chloride, and, last, chloroform.—I am, etc.,

London, W., Nov. 23rd.

DUDLEY W. BUXTON.

SOCIETY FOR THE PREVENTION OF VENEREAL DISEASE.

SIR,—In view of the ravages and sufferings inflicted upon innocent persons, often women and children, by venereal diseases, and also of the fact that such diseases are very easily prevented, this society appeals to the public for donations in support of its policy of ensuring the adoption of preventive measures in the only way which offers any real hope of efficiently combating this terrible scourge.

Immediate self-disinfection, requiring no special skill or training, applied at the earliest possible moment, is the method advocated by this society, and for this purpose the necessary disinfectants must be available.

The aims of this society are to acquaint the general public with these means and to issue instructions for their

proper use. The public are invited to become members of the society, for which the annual subscription is £1 ls., and, whether they become members or not, all who are interested are invited to send a stamped addressed envelope, when our leaflet giving the necessary instructions will be sent in return free of charge. Members of public bodies and representatives of works and clubs can obtain a supply for distribution on making application.

Inquiries, donations, and subscriptions should be sent to the Honorary Secretary, Society for the Prevention of Venereal Disease, 143, Harley Street, London, W.1.—We are, etc.,

(Signed)

President: WILLOUGHBY DE BROKE.

Vice-Presidents:

RUDYARD KIPLING.

HUGH ELLIOT.

E. RAY LANKESTER, K.C.B., F.R.S.

LEONARD HILL, M.B., F.R.S.

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HUMPHRY ROLLESTON, K.C.B., M.D.

HUGH WANSEY BAYLY, M.C., M.R.C.S.,

Honorary Secretary.

November 19th.

PREVENTION AND TREATMENT OF VENEREAL DISEASE.

SIR,—In view of the attention which has been drawn to the subject of the prevention and treatment of venereal disease it may be of interest to your readers to see a copy of the memorandum which was unanimously adopted at the quarterly meeting of the National Council at the Central Hall, Westminster, on November 10th. The Council affirmed their view that the passage of this memorandum did not involve any change of policy and they are as firmly opposed as ever to any general distribution of prophylactic packets to the members of the civil community.

1. The prevention of venereal diseases is a large socio-medical problem. In the direct line of attack, ample facilities for treatment, and instruction of the public—both social and hygienic—occupy the first place. Concerning the further question of personal disinfection, after risk taken, our attitude is as follows:

2. It is no part of our policy to conceal the truth and we have always acknowledged the value of cleansing and disinfecting materials, applied early and thoroughly in diminishing the risk of disease.

3. Abstention from exposure to infection is the only certain safeguard against the ordinary risk of disease; continence is to be encouraged by every means and on every ground, both social and hygienic.

4. No person who has indulged in promiscuous intercourse can be sure that he is not infected, and every such person is, therefore, bound in duty to him- (or her-) self and to society to seek means of cleansing at the earliest moment.

5. For this purpose a thorough local application of soap and water is of great value, followed (if possible) by the use of such disinfectants as may be recommended by a medical practitioner.

6. While such applications, if properly used, do sensibly reduce risk of disease, if applied within four hours after exposure, they afford no certain security. They do not in the slightest degree prevent the contraction of syphilis on other parts of the body (for example, lips, face, or hands) than those disinfected. These applications are not suitable for treatment of the disease when once contracted.

7. The case of women must not be ignored. Satisfactory self-disinfection by them is practically impossible, and skilful medical attention at the earliest possible moment is absolutely necessary.

8. No one should be urged to arm himself in advance with a prophylactic packet.

9. It must be insisted on that the question of chemical disinfection is only one aspect of the problem of combating venereal disease.

—I am, etc.,

DOUGLAS WHITE,

Honorary Secretary, The National Council for Combating Venereal Diseases.

November 19th.

THE GENERAL MEDICAL COUNCIL ELECTION (ENGLAND AND WALES).

SIR,—We desire to thank the registered practitioners of England and Wales for their support in the election of direct representatives on the General Medical Council. It will be our duty and pleasure to take a full share in the work of the Council. In the general interest, that of the practitioner no less than that of the public, we shall watch carefully the conditions under which medical service to the community is given, and we shall help to direct the training of the student so that it may conform to the needs of social and scientific progress.—We are, etc.,

November 25th.

R. A. BOLAM.
J. A. MACDONALD.
E. B. TURNER.
T. JENNER VERRALL.

ANOTHER COMPLAINT OF THE SPECIAL RESERVE.

SIR,—The Director-General, A.M.S., in his address published in the JOURNAL of October 11th, paints a glowing picture of life in the regular R.A.M.C. after the war. He has not overpainted his picture, for when the army has been combed out, when the sick and wounded have been pensioned off and the auxiliary medical officers have retired into civil life to look after them, the regular officer will lead a sheltered existence and be able to devote his time, if he be so inclined, to the pursuit of knowledge, encouraged by every facility and the certainty of an increasing income and pension.

There is one thing, however, which the Director-General forgot to mention. There will be no Special Reserve of Officers to fall back upon in times of stress; at least, not until a generation arises which "knew not Joseph."

Possibly it is the intention of the authorities to let this Cinderella of the Service die out, for nothing has ever been done to remedy the injustice which has embittered us for the last five years. It has been the subject of many letters in the JOURNAL, among them a very able one from Dr. Gordon Ward in the issue of May 31st, 1919. Dr. Ward pointed out that he was about £300 out of pocket by being so foolish as to train for an emergency. This was in May, and for those of us who are still serving the loss is even greater.

All we ask for is equality. Presumably our work is of value equal to that of the temporary officer, and in some cases, at any rate, to that of the regular officer. It is said that we get the same pay and allowances as the regular—but we do not. The pay of the regular is pensionable, and ours is not.

When the new Warrant for Pay was issued we expected to find that we had been put on equal terms with the temporary officer. Comparing the two rates, we find that a captain T.O. now gets £650 a year (with rations or ration allowance, in addition) whereas a captain S.R. now gets £622 a year, rations included, on the top of which he loses his allowance if he is unlucky enough to fall sick or get leave.

I had the misfortune to be wounded, and spent three months in hospital. In the same building there was a temporary officer suffering from "myalgia." He was my junior, and had less than half my service; yet for the two months he was in hospital he drew 8s. 6d. a day more than I did.

We listened to the emissary from the War Office and joined the Special Reserve with our eyes open, believing it to be the right thing to do. We mobilized at short notice at the beginning of the war, and have borne the mutual trials and mutual work. We do not claim to be a set apart, but we do claim that equal service demands equal rates of pay.—I am, etc.,

October 13th.

SPECIAL RESERVE.

PORTRAITS OF ANDREAS VESALIUS.

SIR,—Being engaged upon a work on the iconography of Andreas Vesalius, I should be grateful if you will allow me to appeal to those of your readers with whom I have not already corresponded on the subject, and who own or know of any such portraits, painted or sculptured, to have the kindness to communicate with me.

It is believed that certain of the portraits which at

present are regarded as untraceable are to be found in institutions—in universities, medical schools and the like, or in semi-public or private galleries.

I may add that the book, which is to contain all the accessible portraits of the Father of Modern Anatomy, will be worthily produced under the authority and with the support of the *Annals of Medical History*.—I am, etc.,

The Athenaeum, Pall Mall, S.W.1.
November 25th.

M. H. SPIELMANN.

PARLIAMENTARY VACANCY IN ST. ALBANS DIVISION.

SIR,—May we through your columns invite the attention of all medical practitioners in the St. Albans area to the candidature for Parliament of Lieut.-Colonel F. E. Fremantle? The desirability of increasing the number of medical men in the House of Commons is admitted by all, and there can be no doubt that the return of Colonel Fremantle will be of the utmost value in the representation of medical interests.

The ways in which medical practitioners can assist in the election are by lending their cars, certainly on the polling day, and, whenever possible, before the election; by showing their patients that it is to their interest to return a doctor to Parliament; by taking care to vote for the candidate; and by speaking in his support whenever it can be arranged.

We hope that every medical practitioner in the St. Albans constituency who can help in any of these ways will place himself in communication with Colonel Fremantle's agent, Mr. A. E. Cockerell, 17, St. Peter's Street, St. Albans.—We are, etc.,

CHARLES BUTTAR,
Honorary Secretary.
N. HOWARD MUMFERY,
General Secretary.

British Federation of Medical and Allied Societies,
5, Vere Street, Cavendish Square, London, W.1.
November 24th.

LIFE OF SIR LAUDER BRUNTON.

SIR,—In response to requests I propose to publish shortly a memoir of the late Sir Lauder Brunton. All profits from the sale of this book will be given to the sustentation fund of St. Bartholomew's Hospital. I should be very grateful for any communications from old friends of his, or for any letters of interest written by him. These would be carefully preserved and returned.—I am, etc.,

7, Poole Road, Bournemouth.
Nov. 25th.

THOMAS BODLEY SCOTT.

Medico-Legal.

LIABILITY UNDER THE LUNACY ACT.

ATTENTION is called by a recent case in the High Court to the position of magistrates, medical practitioners, and others who may be called upon to exercise the duties imposed upon them under the Lunacy Act, 1890, with regard to the reception of lunatics.

A reception order under the Act can, of course, be made in a number of ways, but the order itself is invariably made by a magistrate or other judicial authority, who must act only upon the certificate of a medical practitioner. In the case of a summary reception order the certificate of two medical practitioners is required. In addition to the medical certificate a magistrate or other judicial authority must, in the case of a lunatic found wandering at large, himself examine the alleged lunatic and make such inquiries as he thinks advisable in order to satisfy himself that the alleged lunatic is in fact a lunatic, and a proper person to be detained as such.

It may, perhaps, be noticed with regard to this duty of the magistrate that there is no obligation upon him to examine the alleged lunatic in the presence of the certifying medical practitioner, nor need the examination be held with the knowledge of the alleged lunatic so that he should have an opportunity of explaining, if he can, what would otherwise appear to be signs of insanity. The examination need be only such as is reasonably sufficient to enable the magistrate to form a bona fide judgement as to the man's mental condition. The same observation applies to the examination by the certifying medical practitioner.

In order to afford some measure of protection to those who are called upon to carry out its provisions Section 330 of the Act provides:

A person . . . who presents a petition for any such order [that is, reception order] or signs or carries out or does any act with a view to sign or carry out an order purporting to be a reception order, or any report or certificate purporting to be a report or certificate under this Act, or does anything in pursuance of this Act, shall not be liable to any civil or criminal proceedings whether on the ground of want of jurisdiction or on any other ground if such person has acted in good faith and with reasonable care.

This special protection therefore places all these persons in a position analogous to that of a man who brings another before a magistrate upon a criminal charge, such a person being liable in law to an action for damages at the instance of the defendant to the criminal proceedings provided it can be shown that the latter were undertaken maliciously and without any reasonable and probable cause.

As far as can be traced two actions only have been brought since the passing of the Act in which the effect of this protection has been reviewed.

I.

The first was a case of *Shackleton v. Swift*, which was decided in 1913. There the plaintiff had been received as an alleged lunatic into a workhouse, of which the defendant was master, under an order of a relieving officer made under Section 20 of the Act. Under that order the plaintiff was required to be detained for a period of three days. During that time the plaintiff was visited by a magistrate who examined but made no order with regard to him. Subsequently, the medical officer of the workhouse, acting irregularly under Section 24 of the Act, gave a medical certificate that the plaintiff should be detained for a period of fourteen days, and under this order the plaintiff was, in fact, detained for six days, after which she was discharged.

In an action for damages being brought against the master of the workhouse it was held that the Act gave special protection to officers and others acting under its powers in cases where, although they might have misconstrued the Act and have done things which they had no jurisdiction to do, they had acted in good faith and in a reasonable manner, and that upon the particular facts of the case there was no evidence that the master had acted otherwise.

II.

In the recent case of *Everett v. Griffiths*, which was tried before the Lord Chief Justice a week ago, the plaintiff had been an inmate of the Islington Workhouse. He was placed in the observation ward and four days later was certified by Mr. Anklesaria, the medical officer of the workhouse.

An inquiry was held on the following day which was presided over by the defendant Griffiths, who was the chairman of the Board of Guardians. Witnesses were called at the inquiry and, in the result, Mr. Griffiths signed an order for the plaintiff's reception upon which the latter was taken to Colney Hatch where he was detained from March 27th to April 9th, both of this year.

The plaintiff then brought his action claiming damages against Mr. Griffiths and Mr. Anklesaria. At the conclusion of the plaintiff's evidence counsel for the defendants submitted that there was no evidence to go to the jury that the defendants had acted without good faith or without reasonable care and, further, that as regards Mr. Anklesaria no action could lie against him at all. The judge, however, considered it desirable not to withdraw the case, upon which, however, the jury were unable to agree.

Thereupon the judge considered the point of law which had been raised. As regards Mr. Griffiths, he pointed out that in signing the reception order he was exercising a judicial function for which, independently of the special protection given by the Act, he was protected by the ordinary principle of law. With regard to Mr. Anklesaria, the judge pointed out that he was called in to assist a justice of the peace by giving a certificate as to the plaintiff's mental condition. The restraint which was imposed upon the plaintiff was the result of the magistrate's order, and not of the doctor's certificate, and he therefore gave judgement in favour of both defendants.

This case is one of importance from the point of view of medical practitioners. The decision was based on well known legal principles, and would appear to authorize the following two propositions:

1. Where a certificate is given as to an alleged lunatic, and a reception order is subsequently made by a magistrate, the medical practitioner is not liable in damages in respect of the detention; and

2. Where a certificate is given which is not followed by a reception order the medical man may be liable in damages for any consequence of the issue of his certificate, with this proviso, that Section 330 of the Act protects him if he has acted in good faith and with reasonable care.

Obituary.

ARTHUR EVERSIED, M.R.C.P.,

Formerly Senior Physician North London Consumption Hospital.

DR. ARTHUR EVERSIED, who died on November 17th in his 84th year at his residence at Fishbourne, near Chichester, was born at Billingshurst, Sussex, and was the son and grandson of medical men. His inclination, however, was towards art; he entered the studio of the late Mr. Alfred Clint, and attended Leigh's School of Art. He showed great promise, and at an early age had pictures in the Royal Academy and at other exhibitions. At the earnest wish of his father, however, he became apprenticed to the elder of his three brothers, who had entered the medical profession, and eventually became a student at Guy's Hospital. While still a student he became prospector to the Royal College of Surgeons, and used his skill as a draughtsman to execute anatomical drawings for the lecturers. After taking the diplomas of M.R.C.S. and L.S.A. in 1863 he held the appointment of house surgeon to Guy's Hospital. In 1864 he married, and settled in practice in Bedfordshire. In 1873 some failure in health and the lack of educational facilities for his family induced him to remove to Hampstead. He took the diploma of M.R.C.P. Lond. in 1875, and became physician to the North London Consumption Hospital, Mount Vernon. Before he resigned his appointment twenty years later he had the satisfaction of seeing the first wing of the new building erected from a design which embodied his teaching as to the advantages of sunshine and fresh air.

His practice at Hampstead was large, but of such a nature that during the summer afternoons he was able to visit his beloved Thames with his drawing materials. In 1894, when he retired from practice, he received a presentation of silver and a purse of gold from his patients and friends. In his retirement at Fishbourne, though his time was given up to the study of nature and practice of art, yet his services were always at the call of the inhabitants of the village in cases of emergency. To show how this was appreciated, those who had benefited by his skill and other village friends presented his wife and him with an armchair and a writing cabinet on their golden wedding day.

In the late sixties he became interested in etching. So great was his skill that it was as easy for him to draw direct on the copper from nature, reversed without the aid of a mirror, as in the ordinary way; from this time onwards he became better known as an etcher than as a painter, and his etchings were exhibited at the Academy for several years. He joined the Royal Society of Painter-Etchers, and became its treasurer; when it grew difficult for him to attend the meetings, the Fellows elected him an Honorary Fellow and presented him with a collection of their etchings. He published two portfolios of etchings entitled *An Etcher's Rambles*, and also some separate large plates of the Tower of London. He printed many of his plates himself, and collectors may recognize these by the impress of a boar's head.

His funeral was that of a simple villager; his mortal remains lie in the little village churchyard of Fishbourne.

In 1864 he married Mary Hester, eldest daughter of Mr. H. W. Field, Queen's assay master of the Royal Mint, and a descendant of Oliver Cromwell. He is survived by his widow and seven children, the eldest, a son, being the only one who followed his father's profession.

LIEUTENANT-COLONEL CECIL ROBERT STEVENS, Bengal Medical Service, died at Paignton, Devon, on November 18th, aged 52. He was the eldest surviving son of the late Sir Charles Stevens, K.C.S.I., Lieutenant-Governor of Bengal; was born on March 14th, 1867, and was educated at St. Bartholomew's Hospital and at Zurich, taking the diplomas of M.R.C.S. and L.R.C.P. Lond. in 1890. He graduated M.B. and B.S. Lond., with honours in medicine and midwifery, in 1891, and M.D. in 1892, and took the F.R.C.S. Eng. in 1892. He won an exhibition in zoology at the preliminary scientific examination of the University of London, an open scholarship at St. Bartholomew's in 1885, and the Martin gold medal and Payrer prize in pathology at Notley. After filling the posts of house-surgeon and midwifery assistant at St. Bartholomew's

he entered the I.M.S. in 1893, and attained the rank of lieutenant-colonel on January 30th, 1913. After three years' military duty he took civil employment in Bengal in January, 1896, served as resident surgeon of the Medical College Hospital, Calcutta, from 1896 to 1899, as a civil surgeon in various districts, including Bhagalpur and Darjiling, from 1899 to 1907, and in June, 1907, was appointed professor of anatomy in the Calcutta Medical College and second surgeon to the College Hospital. In November, 1914, he reverted to military duty, and came to Europe, and through 1915 served in the Indian hospital at Bournemouth. He had previously served on the North West Frontier of India in the Chitral campaign of 1895, receiving the medal and clasp, and in the Tirah campaign of 1897-98, gaining two more clasps to the Frontier medal.

WE regret to announce the death of Dr. H. L. ATKINSON of Cokermouth at the age of 50. He had not been in the best of health for some time past, but his condition was not regarded as serious, and he had been at his work two days before his death, which took place on November 15th from heart disease. Dr. Atkinson was a Yorkshireman; he was educated at Christ's College, Cambridge, taking his B.A. degree in 1891. He received his practical training in medicine and surgery in the Leeds School of Medicine, and St. Mary's Hospital, London, obtaining the diplomas of M.R.C.S. and L.R.C.P.Lond. in 1902. He then held the appointment of house-surgeon in the Leeds Infirmary. After this he was for some time in practice at Kirkstall, near Leeds, but about seven years ago he went to Cokermouth, taking over an old-established practice formerly carried on by the late Dr. Harrison Mitchell. Here his marked ability and kindness of heart quickly obtained for him the confidence of his patients. He took a keen and practical interest in some of the town's most useful institutions, and it was through his training that the members of the St. John Ambulance Brigade attained their efficiency and the members of the V.A.D. were enabled to do such creditable work in the Cokermouth Castle Auxiliary Military Hospital during the war under his guidance as honorary medical officer. In his recreations his talents were no less marked than in his profession. He was an accomplished musician, an enthusiastic chess player, president of the local Chess Club, and the originator of several published chess problems. He was also interested in golf, and took an active part in local church work. He leaves a widow and two young sons, with whom much sympathy is expressed. A numerous company attended at his funeral, and the local V.A.D. and St. John Ambulance Brigade attended in a body, testifying to the high esteem in which they held their instructor.

DEPUTY INSPECTOR-GENERAL WALTER BOWDEN, D.S.O., R.N. (retired), died at Weymouth on November 13th, aged 60. He was the son of the late William Bowden, was educated at University College, London, and took the diplomas of M.R.C.S., L.R.C.P.Lond., and L.S.A. in 1886, and entered the navy as surgeon in 1887. He became staff surgeon in 1899, fleet surgeon on February 28th, 1903, and retired with an honorary step as D.I.G. on February 27th, 1908. After retirement he settled at Weymouth, where he held the posts of admiralty surgeon and agent, of assistant medical officer of health, and of anaesthetist to the Princess Christian Hospital. He served in the River Gambia expedition in 1894, was present at the bombardment and occupation of Gunjur, and received the African medal with a clasp and also the D.S.O.

DR. HUGH LOGAN CALDER was for many years a well known and busy practitioner in Leith. He died suddenly from heart failure on November 17th. He graduated M.B. and C.M. Edin. in 1878 and proceeded to the M.D. in 1885; in 1888 he gained (by examination) the Fellowship of the Royal Faculty of Physicians and Surgeons of Glasgow. Soon after graduation he served as house-surgeon in Burton-on-Trent Infirmary, and then he settled in Leith, acting for several years as surgeon to the hospital of that town. He was much interested in midwifery, and was a Fellow of the Edinburgh Obstetrical Society.

Universities and Colleges.

UNIVERSITY OF EDINBURGH.

At the meeting of the Edinburgh University Court on November 17th it was reported that the gift of £10,000, from an anonymous donor to found a lectureship in orthopaedics, had been paid over, and that the scheme for the institution of the lectureship, prepared by the Faculty of Medicine and approved by the senatus, was under consideration. The court has also under consideration proposals from the Faculty of Medicine with regard to the institution of a lectureship in venereal diseases. It has been decided, in order to provide the temporary accommodation for the class of practical histology during the next summer term, to erect at once a third story on the agricultural and forestry buildings of the University in George Square. The purchase of land at Craigmillar for the extension of the University has been completed and the erection of a new chemical laboratory begun.

Dr. R. W. Johnstone has been recognized as an extra-academical lecturer in midwifery, and the classes on physical methods in the treatment of disease (Dr. Harry Rainy) and in the history of medicine (Dr. J. D. Comrie), suspended during the war, have been resumed.

UNIVERSITY OF CAMBRIDGE.

DR. H. K. ANDERSON, F.R.S., Master of Caius College, has been appointed a member of the syndicate to consider the allocation and administration of the munificent gift recently made to the University for the department of chemistry by the British Oil Companies.

At a congregation held on November 21st the degrees of M.B. and B.Ch. were conferred on H. D. McLeroy.

UNIVERSITY OF LEEDS.

At a congregation held on November 20th the honorary degree of D.Sc. was conferred upon Lieut.-General Sir Alfred Keogh, G.C.B., G.C.V.O., C.B., late Director-General Army Medical Service, and Sir Almroth Wright, C.B., F.R.S. Sir Alfred Keogh was presented for the degree by Professor J. E. Jamieson, and Sir Almroth Wright by Sir Berkeley Moynihan.

UNIVERSITY OF LONDON.

THE following candidates have been approved at the examination indicated:

THIRD M.B., B.S.—Mary Day (a, c, e), J. Joffe (b, d), R. T. Jones (a, c, e, University Medal), F. Portas (b), A. B. K. Watkins (a, d), G. V. W. Anderson, O. D. Brownfield, M. W. B. Bulman, C. H. O. Byrne, A. J. Churchill, S. M. Cohen, R. Creasy, N. A. Crow, Florence M. Edwards, R. S. Foss, F. J. Freilich, J. N. Glaister, Et G. B. D. Gray, H. G. Gunewardene, C. E. Harrison, H. N. Hornibrook, S. R. Jogekar, S. W. M. Jones, V. E. Jones, V. R. Khanolkar, H. J. Levy, N. M. Lewis, R. G. Lyster, C. D. Maitland, F. N. Moos, Marie M. A. Morait, Edith M. P. Morris, M. J. Panthaky, J. E. Pearce, G. S. B. Philip, Dorothy P. Priestley, Mary M. Prior, W. A. Richards, J. F. Ryan, E. P. Scott, E. D. Scott, G. H. Sims, H. W. Southgate, Frances M. Spicketh, R. Theron, A. D. Wall, C. J. B. Way, J. W. Wayte, W. R. White-Cooper, A. Williams-Walker, A. G. Winter.

(a) Distinguished in Medicine; (b) in Pathology; (c) in Forensic Medicine; (d) in Surgery; (e) in Midwifery.

The following candidates have passed in one of the two groups of subjects:

THIRD M.B., B.S.—Group I: D. W. J. Andrews, Mary R. Barks, W. W. K. Brown, E. A. L. Crichlow, W. E. K. Coles, Joyce E. Craggs, E. I. Davies, Elizabeth C. Eaves, H. Ellis, T. L. Ellis, R. K. Ford, G. O. Hume, Norah D. Pinkerton, W. E. K. A. Quitmann, J. A. W. Robinson, B. M. G. Thomas. Group II: C. P. Beyers, Ella M. Britten, J. Brodetsky, J. R. Dingley, A. Evans, A. S. Green, O. E. E. Herington, C. L. Hewer, E. C. Hinde, O. H. Hyman, G. E. Kidman, R. H. Leigh, S. S. Lindsay, K. McFadyen, H. I. Marriner, H. E. Reburn, W. Thomas, M. J. T. Wallis, J. P. Williams.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

A QUARTERLY meeting of the Royal College of Physicians of Edinburgh was held on November 4th, when the President, Sir Robert Philip, M.D., was in the chair.

The following members were admitted to the Fellowship:

T. A. Ross and R. B. Johnston.

The following were admitted to the Membership of the College:

J. L. Boyd, C. H. Tewsley, R. C. Robertson, J. B. McDougall, and L. B. Cox.

The following new law was adopted:

4 A candidate eligible for the Membership whose work in any sphere of medicine shall be adjudged to be of high distinction may be exempted by the Council from the whole or any part of the prescribed examination.

The Morison lectures for 1920 will be delivered in March by Lieut.-Colonel Richard C. Rows, M.D.Lond.

A SERIOUS fire occurred on November 22nd in the buildings of Laval University, Montreal. According to a Renter's dispatch, the main buildings, containing the medical department, were destroyed, and the damage is estimated at half a million dollars.

Medical News.

THE Council of Epsom College will shortly be considering applications for "France" pensions of £30 a year. Candidates must be registered medical practitioners in necessitous circumstances who are not less than 60 years of age. Forms of application can be obtained from the secretary of the College, Mr. J. Bernard Lamb, 37, Soho Square, W.1.

THE Yarrow Convalescent Home at Broadstairs, which was opened twenty-four years ago for the reception of children belonging to middle-class families of limited means, was closed during the war owing to military occupation. It was reopened in August last. Particulars can be obtained from the Secretary at the London office, 6, Holborn Viaduct, E.C.

THE biography of Sir Victor Horsley, by Mr. Stephen Paget, has now been published by Messrs. Constable and Co.; it is entitled *Sir Victor Horsley: a Study of his Life and Work*. It is illustrated with several portraits and other pictures, and there is a short prefatory note by Lady Horsley. We hope to review the work at an early date.

DR. G. F. V. LEARY of Castlederg has been appointed to the Commission of the Peace for county Tyrone.

DR. B. H. SPILSBURY has been appointed lecturer on morbid anatomy and histology to the Medical School of St. Bartholomew's Hospital.

THE National University of Ireland has conferred the degree of LL.D. (honoris causa) upon Sir Warren Crooke-Lawless, C.B., M.D.

LOUVAIN UNIVERSITY was formally reopened on November 18th with 3,180 students.

THE annual meeting of the Royal Surgical Aid Society will be held at the Mansion House, London, on Thursday next, December 4th, at 4 p.m., under the chairmanship of the Lord Mayor, who will be supported among others by Sir George Makins, P.R.C.S.

A DISCUSSION on diverticulitis will be opened at a meeting of the Subsection of Proctology of the Royal Society of Medicine by Dr. W. Maxwell Telling of Leeds on the afternoon of January 7th. Cases, notes, and specimens are asked for; communications may be addressed to Mr. Sampson Handley, 36, Harley Street, W.1.

THE Röntgen Society is arranging a collection of prints, illustrating the employment of x rays, for exhibition at the house of the Royal Photographic Society from January 6th to February 7th. Further particulars will be published later.

THE Graham Legacy Committee of the University of London have, under the regulations for the administration of the Charles Graham Medical Research Fund, made their first award of the gold medal to Dr. Charles Bolton, D.Sc., F.R.C.P., F.R.S., in recognition of the original work in experimental pathology which he has conducted in the Medical School of University College Hospital.

AT their meeting on Friday, November 21st, the directors of the Edinburgh Royal Maternity and Simpson Memorial Hospital appointed John McGibbon, M.B., Ch.B., and F.R.C.P. (Edin.), Obstetric Physician, New Town Dispensary, to be Assistant Physician to the Hospital. There were four candidates for the vacant post.

THE annual dinner of the Bristol Medical School, which has been in abeyance during the war, will be held once more on Thursday, December 4th, at the Royal Hotel, Bristol. Mr. R. G. P. Lausdown will be the president and Sir Anthony Bowlby, K.C.B., K.C.M.G., K.C.V.O., the guest of the evening.

A JOINT meeting of the Tuberculosis Society and the Association of School Medical Officers will be held at the house of the Medical Society of London, Chandos Street, at 8 p.m., on Monday, December 1st, when Dr. Kerr will open a discussion on the various aspects of tuberculosis in relation to school life.

SIR GEORGE NEWMAN'S memorandum, *An Outline of the Practice of Preventive Medicine* (Cmd. 363), has been temporarily unobtainable, but a third edition has now been printed, and copies are available through any bookseller.

THE late Sir Hermann Weber formed a very fine collection of Greek coins; some of the best specimens have now been bought for the nation, with the help of a special Government grant, and contributions from the National Art Collections Fund, and some friends of the British Museum, including Dr. Parkes Weber and his sister.

THE British Association for the Advancement of Science, after paying printing and office expenses, devotes its

surplus funds to research. For eighty years it has been able to provide a total of about £1,000 a year for the various research committees it appoints. The National Physical Laboratory grew out of the New Observatory, maintained by the British Association from 1842 to 1872, at a cost to itself of £12,030. An appeal is now made for donations to the research fund. Subscriptions may be sent to the treasurer, Professor John Perry, F.R.S., at Burlington House, London, W.

ST. ANDREW'S HOSPITAL, Dollis Hill, Cricklewood, having been relinquished by the Government, has now reverted to its original purpose—namely, a hospital for the middle classes, where patients who cannot afford the fees which are asked at nursing homes, and who do not desire to take advantage of the ordinary hospitals, can be admitted at charges within their means. The hospital is under Catholic administration (Cardinal Bourne is at its head), but is undenominational in its admission of patients.

THE Children's Jewel Fund, initiated on January 1st, 1918, to provide financial support for the establishment of welfare centres for ante-natal and post-natal care, as well as day nurseries for children whose mothers are compelled to earn their living, has now allocated £22,273 18s., in 126 grants, for the establishment of new centres or for the development of new work in connexion with existing centres—such as dental clinics, ante-natal clinics, observation wards for ailing babies, massage clinics. Only 50 applications have been refused in accordance with certain definite conditions defined by the committee. The war being over, the fund has served its purpose. Now that the importance of welfare work is generally recognized and local authorities are being urged to establish municipal centres and to develop child welfare work in its various branches, the committee has decided to concentrate its efforts in a permanent memorial and to establish a large model centre for ante-natal and post-natal care in a suitable London district. It is hoped that all who have supported the appeal during the years of war will continue to give their interest and help to this centre, which is designed to be not only a model of its kind, but also a centre of useful work. After providing for contingent expenses in connexion with this proposal, there will be a small balance to be allocated for other centres if they apply before December 1st, after which date no further applications will be entertained, and the fund, in so far as the general grants are concerned, will be closed.

THE annual dinner of the staff and past and present students of the Royal Dental Hospital of London was held at the Connaught Rooms on November 22nd, when Sir Harry Baldwin presided. In proposing the loyal toasts the chairman referred to the great interest which the King and Queen and the whole Royal Family took in the art of dentistry. The toasts having been duly honoured, the chairman proposed that of the past and present students. He said that during the war past students of the school had been rendering service in all parts of the world in the interests of the soldiers and sailors, and had helped to carry out the work of the hospital when the regular staff and students were engaged elsewhere. He congratulated the institution on opening its doors to women students. The time had come when the arrangements for the welfare of the patients and students must be amplified. Like other dental hospitals, the Royal Dental Hospital had no beds. The committee had the option of purchasing a site adjoining the hospital for its enlargement, which would enable them to provide beds, and the money to secure completion of the purchase and erection of the building was all that was necessary. It was proposed to enlarge the scope of the hospital's work so as to include treatment of injuries and diseases of the jaw. The staff would include surgeons and dental surgeons, working in collaboration, who had acquired special skill and knowledge in dealing with such injuries. The dean, Mr. W. H. Dolamore, in responding on behalf of the school, said that on the proposed site they could extend the hospital and also the school. Sir George Makins, P.R.C.S., in acknowledging the toast of the guests, recalled the fact that his father was one of the earliest teachers of the staff of the Dental Hospital.

MESSRS. WATSON AND SONS have issued an elaborate illustrated catalogue of x-ray and electro-medical apparatus manufactured by them at Sunb House, Parker Street, Kingsway, W.C.2. It is systematically arranged, dealing in order with, among other matters, the production of x rays, induction coils and transformers, electron x-ray tubes, electric power supplies, alternating current, alternating mercury interrupters, and power mains. A good many interesting notes and short essays are interspersed, and we observe that the firm now offers the services of a radiographer to advise in cases of mechanical difficulty or breakdown.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL. *Aitology, Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.). *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY. *Medisecra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

INCOME TAX.

"W. B. P." explains that on returning to civil life he bought a practice as from May 9th, 1919, with a year's introduction. He is entitled to half the earnings from that date. The firm has been assessed at £669. What proportion relates to himself?

*. The figure £669 presumably represents the average of the past year's profits, and is the assumed profits of the practice for the year ending April 5th, 1920. The assessment would be divisible, approximately, between the two proprietors of the practice as follows:

Former proprietor: $\frac{1}{2}$ of £669	... =	£56
Plus $\frac{1}{2}$ of ($\frac{1}{2}$ of £669)	... =	£306
		£362
"W. B. P.": $\frac{1}{2}$ of ($\frac{1}{2}$ of £669)		£307
		£669

We suggest that "W. B. P." should send the local inspector of taxes a declaration of his total income for 1919-20—including £307 as his civil earnings for the year—and request him to supply particulars showing separately the tax payable by the two persons concerned in the profits for this year.

LETTERS, NOTES, ETC.

DR. W. O. BEDDARD, whose call to the Bar was announced last week, is a member of the Middle, not the Inner, Temple.

LONDON SUPERSTITIONS.

MR. EDWARD LOVETT, honorary curator of the Folklore Section of the Imperial War Museum, gave a lecture to the London Society recently on the folklore of London. While stating that he had not found any aboriginal folklore in London such as was to be found in the provinces and many European countries, he gave some instances of superstitions, particularly with regard to the preservation of health and the cure of disease, to which we have no doubt members of the medical profession could make many additions. He mentioned in particular the practice common among women and children of wearing a string of beads, generally blue, to prevent bronchitis. There is no doubt that the custom is very common in the East End of London, but we were not aware that it was supposed to prevent bronchitis, nor that the beads were not removed in case of death. Mr. Lovett said that beads taken from cemeteries or interment areas were abundant in museums all over Europe, and were to be found also on Egyptian mummies. The East-enders, in burying their dead without removing the beads, were carrying out a custom which had been practised for 7,000 years. From an examination of the poorer kinds of London shops he found they all kept bead necklaces, generally blue, though in some localities they were yellow, and in one or two cases white. He expressed the opinion that the war had revived superstition, and mentioned that in many houses in London horseshoes covered with red cloth were hung over beds to keep the occupants from suffering from nightmares.

THE LARGE PANEL.

"STRATFORD" writes: Although my predecessor was a rough man, who swore at the patients, the people of this region insisted on getting on to his panel, even when it went beyond 4,000. As he was far the best doctor to be found, and as his whole heart and life were devoted to his patients, they got better treatment than could be obtained from inferior men with smaller panels. Why should patients be forbidden to go on the panel of such a man? They know where they can get the best treatment, and should have the right of free choice.

PARTURITION AT ADVANCED AGE.

DR. O. SMYTH (Catford) writes: Some years ago, when practising in North-East London, I delivered a woman at the age of 52 of a strong and healthy baby. There was an unusual interval since the previous confinement, but I do not recollect whether she had menstruated regularly during that time.

ELDERLY PRIMIPARA.

DR. HENRY SALOMON (Leicester) writes to say that he was recently called by a midwife to attend a primipara aged 45. A stillborn infant weighing 8 lb. was delivered with forceps; the mother is doing well.

R.A.M.C. AND STATE SERVICE.

"EXPERIENCE" writes: In answer to "G.P." (p. 550), I beg to state that I have held lucrative panel and non-panel practice, and gave up my regular commission last year in order to take up school work. I have found no reason to regret my choice. In general practice one gets the minimum of work done with the maximum of fatigue; in the army I only served under one O.C. who was really interested in his profession, and he promptly rose to be director-general. The absence of motor cars in school work at least spares us the gilded poverty of many a panel practitioner anxious to "keep up appearances."

EDWARD JENNER'S VERSES.

A CORRESPONDENT writes that he is interested to learn from an article on Medicine and Letters in the BRITISH MEDICAL JOURNAL of June 21st that the well known verses on the signs of rain were written by Edward Jenner in excuse for not accepting the invitation of a friend to make a country excursion. The whole poem, which extends to forty-four lines, will be found in Baron's *Life of Dr. Jenner*, vol. 1, p. 20 (London, 1827). Jenner was the author also of other verses—"Address to a Robin," a description of Berkeley Fair, and several epigrams on persons and things of local interest. Extracts from the "Address to a Robin" and "Berkeley Fair" were quoted in the Jenner Centenary Number of the BRITISH MEDICAL JOURNAL, May 23rd, 1896, p. 1298.

Jenner's inspiring goddess was a *musa pedestris*, but his lyre is not untuneful. His verses, besides a sense of humour, show the power of close observation to be expected from a pupil of John Hunter. His friend, Edward Gardner, a man of cultivated literary taste, who had been a school-fellow of Chatterton, "the marvellous boy, the sleepless soul, who perished in his pride," was wont to say that Jenner in becoming a distinguished physician had lost the opportunity of gaining renown as a poet. Jenner's estimate of himself was more modest. In writing to Gardner he says, "I have thrown in a few more stanzas to 'Ladbroke's Entire'; it is my best song. I wish I could give up, or at least suspend, the little acquaintance I have made with the Muse. Every time I begin a bagatelle, I almost swear it shall be the last; and hardly steer clear of perjury, you see. But when I see that the resolves of the greatest philosophers can be set aside by the most gentle means in the world, I, who am the lowest of the order, should not repine at my lot." In the same letter he alludes to a song which he sang to the "Gallant Bowmen," probably an archery society. Neither of these effusions is reproduced by Baron. For our own part, we think Jenner is at his best in the "Address to a Robin," which is printed in Baron's second volume (p. 434, et seq.). Wordsworth spoke affectionately of "our little English robin" as "the pious bird with the scarlet breast." That worshipper of Nature might have learnt from Jenner how "the bird whom man loves best" showed his piety by cuffing his father and smacking his mother and generally behaving as a blackguard.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 37, 38, 42, 43, 44, and 45 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 39, 40, and 41.

THE following appointments of certifying factory surgeons are vacant: Batley (Yorks, West Riding), Nantwich (Cheshire).

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An average line contains six words.

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Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *post restante* letters addressed either in initials or numbers.

The Thomas Vicary Lecture

ON

THE SURGICAL TRADITION.

DELIVERED IN THE ROYAL COLLEGE OF SURGEONS OF ENGLAND ON DECEMBER 3RD, 1919.

BY

SIR JOHN TWEEDY, LL.D., F.R.C.S.,

PAST PRESIDENT OF THE COLLEGE, AND EMERITUS PROFESSOR OF OPHTHALMIC MEDICINE AND SURGERY IN UNIVERSITY COLLEGE, LONDON.

In the year 1646 Mr. Edward Arris, a member of the Company of Barbers and Surgeons, paid to the Company the sum of £300 for the use of the "New Publique Anatomy." This sum was subsequently repaid to Mr. Arris, and in lieu thereof he settled upon the Company an annuity of £30, which shortly before his death he redeemed by the payment of £510. Nine years later Mr. John Gale, a member of the Company, left to the Company an annuity of £16 for one anatomy lecture in every year, to be called "The Gale's Anatomy." By an Act of Parliament of the year 1745, for dissolving the union between the Barbers and Surgeons, the Arris gift and the Gale's annuity were given to and vested in the Company of Surgeons then incorporated, and upon the dissolution of that Company in the year 1800 they became vested in the Royal College of Surgeons on its incorporation by Royal Charter. Owing to building operations no lectures were delivered in the College until the year 1810, but since that time the Arris and Gale lectures have been delivered every year in this College with only one break. These lectures constitute a memorial of the long association of the Barbers and the Surgeons of London; and the transference of these trusts to the College marks the official dissolution of that association. Although there has been no official connexion between the two bodies since the separation in the year 1745, friendly relations have existed between them for the last hundred and twenty years. Several Members and some Fellows of the College have been freemen or liverymen, and even members of the Court of the Barbers' Company.

Early in the present year the Court of the Company, which for some years has maintained one or two exhibitors at Epsom College and one or two at one or more of the medical schools in London, expressed a desire to found a lectureship in this College on the History of Anatomy and Surgery, and it was suggested that an experiment might be made of giving one lecture a year for five years, the lecture to be called the Thomas Vicary Lecture. This offer was readily accepted by the Council of the College.

The idea of associating the name of Thomas Vicary with this historical lecture was happy. Vicary was Master of the Barbers' Company in the year 1540, when the Surgeons and the Barbers were formally united by Act of Parliament. He had been Master of the Company ten years before this, and he served the office on three other occasions after the union. The most eminent surgeon of the time, he was serjeant-surgeon to Henry VIII., Edward VI., Mary, and Elizabeth, and surgeon to Philip of Spain. In the year 1548 he was appointed Governor of St. Bartholomew's Hospital, and later became resident surgical governor there, and in 1552 was made one of the assistants for the term of his life. He is said to have published in the year 1548 his *Anatomie of the Bodie of Man*. This was long believed to be the first book on the subject in English; but the late Dr. J. F. Payne showed that the work had been wrongly attributed to Vicary, and that it was a transcript of an early English fourteenth century manuscript, which was itself based on Lanfranc and Henry of Mondeville, with a few brief additional passages. No copy of the first edition is now known to be extant, but the work was reissued by the surgeons of St. Bartholomew's in the year 1577, and a reprint of this was published for the Early English Text Society in the year 1888; it was edited by the late Dr. F. J. Furnivall, assisted by his son Percival, now a Fellow of this College.

As the Arris and Gale lectures mark the separation of the Surgeons of London from the Barbers, so the name of Thomas Vicary is very intimately associated with their

union. In Holbein's well known picture Vicary is represented as receiving the Act of Union of the two bodies from the hands of King Henry VIII. The Company of Barbers had, however, existed in London as a trade guild, and many of its members had been engaged in the practice of surgery for more than two and a half centuries before the date of the union. In the letters patent of Edward IV., granted to the Barbers of London in the year 1462, it is declared that "The freemen of the Mystery of Barbers of London, exercising the Mystery or Art of Surgery, as well respecting wounds, bruises, hurts, and other infirmities of our liegemen, . . . have for a long time undergone and supported, and do daily undergo and support, great and manifold applications and labours," etc. And in the year 1388, in the return of the company to the writ of Richard II., the Master recites that they "have found a document amongst the articles of their records made of a time to which the memory runneth not."

It is not my intention to give a history either of the Barbers' Company or of its relations to the practice of surgery. This was superbly done by the late Mr. Sidney Young in his *Annals of the Barber-Surgeons of London*, published twenty-nine years ago. And the main facts relating to the jurisdiction of the Barbers' Company over the Surgeons of London, and of the constitutional relations of the Company of Barbers and Surgeons with this College, are set forth in the Historical Summary which is published in the *Calendar of the College*.

Before proceeding with the subject of this lecture, I desire to thank the Council of the College for the honour which they have done me in inviting me to deliver the first Thomas Vicary lecture. As a Past President of the College and as a Past Master of the Barbers' Company I greatly appreciate the compliment.

As this is the first of what I hope may be a long series of lectures, I propose to take a glance at a few salient points of surgical doctrine and practice rather than some particular subject, of which there is no lack of choice for many years to come. I have therefore taken as the title of my lecture, "The Surgical Tradition."

Egypt and Greece.

Even from prehistoric times we possess evidence of the practice of operative surgery. This evidence is, of course, osseous, and furnished by skulls and other bones. The soft parts have perished. In early historic times we may note that the code of Hammurabi, dating from about 2200 B.C., contains several records of surgical practice, and prescribes the payment to be made for surgical operations and the treatment of certain injuries and diseases, and the penalties in case of failure. Everyone is familiar with Homer's praise of the surgeons in the Trojan war, more particularly Podalirius and Machaon, whose effigies are represented as the supporters in the heraldic Arms of the College. In several places Homer describes injuries received in battle, and his descriptions of the effects of these injuries manifest a notable acquaintance with anatomy and physiology, and with the effects of loss of blood and of shock. Herodotus records many interesting events of medical and surgical interest, especially in Persia and in ancient Egypt. In ancient Egypt medicine and surgery early attained a high standard of proficiency, but were soon split up into a large number of specialities. Eventually extreme specialism put a stop to progress. Every practitioner was compelled to follow the rules for the treatment of diseases prescribed in the sacred books, and departure from these rules was a capital offence if the patient died. Originality and independence of thought and freedom of action were proscribed. Innovation and the trials of new methods were forbidden.

It is only when we come to the writings of Hippocrates that we have a positive and rational account of surgery and surgical operations. Although Hippocrates is usually thought of more in connexion with medicine than with surgery, there is ample evidence of his knowledge and skill as a practical surgeon. Indeed it may be argued that his surgery is of more permanent value than his medicine. With the exception of its method, its logic, and its ethics, Hippocratic medicine is antiquated, and its doctrines, being necessarily speculative and theoretical, are mostly obsolete; but Hippocratic surgery, having a more positive basis, retains its actuality. The directions which he gives concerning the arrangements of an operating room, the situation of the patient, the position of the assistants, the

disposition of the lighting, the care to be taken of the surgeon's hands, the need of ambidexterity, all indicate a careful and experienced practitioner. The Hippocratic treatises on wounds and ulcers, and on the injuries of the head, are replete with well-observed facts, and are full of excellent teaching concerning the treatment of wounds, and especially the extreme importance of cleanliness in dressings and instruments. The treatises on Fractures and Dislocations have been happily described by Littré as "the grandest surgical monument of antiquity."

Celsus and Galen.

For the four centuries after the days of Hippocrates there are few literary remains of surgery until the beginning of the Christian era, when Celsus compiled his famous *De Medicina*, the sixth and seventh books of which relate almost exclusively to surgery. Celsus's treatise is the most complete, the most methodical and didactic medical work that antiquity has transmitted to us. Very little is known of Celsus's personality. Broca remarks that Celsus should be regarded as a book or an epoch rather than as a man, and he is almost the only source of information in the important period between Hippocrates and the Christian era. But for him we should know little of the famous school of Alexandria, where, under the inspiration of Erasistratus and Herophilus and their disciples, anatomy and surgery were more cultivated than ever before, and where surgery made more progress in three hundred years than in the following thirteen centuries. Of the seventy-two authors mentioned by Celsus, the only writer who has come down to us is Hippocrates. Celsus is, moreover, the first and only authority for many operative procedures which were employed in the Middle Ages and even down to our days. He mentions the use of ligature for bleeding arteries, and advises the complete division of a wounded blood vessel after applying a ligature above and below the wound in the artery. His description of the operation for the removal of stone from the bladder is the first we possess, as is also his account of the amputation of a limb for gangrene. Hippocrates speaks of the mortification of a limb, and advises what should be done, but he does not recommend amputation in our sense of the word; indeed, he is opposed to it. In gangrene of a limb he advises that the dead part should be *ablated* at the joint beyond the line of demarcation as soon as death and insensibility of the soft parts are complete. The remainder of the dead portion should be allowed to separate by natural processes. He records that in a case of this kind he had seen the denuded femur fall off on the eightieth day, the leg having been taken off at the knee on the twentieth day.

Celsus's book is of value for another reason. Celsus was probably not a medical practitioner at all, but a learned, judicial, and impartial encyclopaedist. In this respect he contrasts with Galen. Galen mentions some of the surgeons and anatomists of the Alexandrian school, but he is not always impartial. He is generally controversial and polemical, and too much concerned to defend his own opinions or to attack those of other writers. It is, however, noteworthy that, although the writings of Celsus are so precious to us, they do not seem to have influenced the early surgical tradition. For some reason difficult to explain, his writings were rarely, if ever, quoted by later medical authors, and they seem to have been almost, if not entirely, forgotten until the fifteenth century, when a copy of the *De Medicina* was found in the year 1443 by Thomas of Szazanne, afterwards Pope Nicholas V, in the church of St. Ambrose at Milan. Celsus soon had his revenge, for, on the invention of printing, his was one of the first medical writings to issue from the press. The first edition was printed in the year 1478, five years before the *Ars Parva* of Galen and the *Aphorisms* of Hippocrates.

Galen, a native of Pergamus, who flourished in the second half of the second century, was perhaps the most learned and most intellectual man who ever engaged in the study and practice of Medicine. He was the greatest anatomist of antiquity, and made several interesting anatomical and physiological discoveries; but in his varied and voluminous writings there is comparatively little relating to Surgery. Perhaps he never wrote the work on surgery which he intended to write, or if he did write it the work has not come down to us. We know, however, that he practised as a surgeon in his younger days. But

after his second visit to Rome, about 170 A.D., he seems to have abstained from surgical operations and confined himself almost entirely to the practice of medicine. Moreover, his practical surgery was always reserved, if not timorous, and his influence upon Surgery was, on the whole, repressive. For example, his operation of amputation for gangrene was less radical and less bold than that of Celsus. Celsus advises that in amputation the incision should be made in the line of demarcation, but encroaching rather upon the living tissue, while Galen recommends that the incision should encroach on the dead tissues, trusting to the canter to destroy the remnants of the gangrenous tissues left upon the face of the wound. It is clear that in Galen's time surgery was already beginning to decline. He himself remarks that in the days of Hippocrates all the rules of the surgical art were carefully studied, but that in his own day very little attention was paid to surgery, and it was often neglected altogether.

From the third, fourth, and fifth centuries few remains of surgical writings have been preserved, and those which have come down to us are embodied in the compilations of Oribasius and Aetius, of the fourth century and sixth century respectively. By this time, however, intellectual night was beginning to settle upon the Western Roman Empire. The penetration and invasion of the barbarians and the crushing taxation necessary to maintain a large army, an expensive Court, and a numerous body of officials, involved the Western Empire in economic ruin. Excessive taxation wiped out of existence the middle classes from which the professions were most likely to be recruited. Whole districts were depopulated and became solitudes. All the remains of Roman civilization gradually disappeared. There were no schools, no literature, and the inhabitants of the Empire became barbarized. Learning died out and ancient civilization came to an end. Medicine and surgery shared the same fate. The Germans who invaded the Empire did not bring with them a new civilization as the Romans did when they conquered Gaul, nor did they adopt the customs of antiquity as the Arabians did in the East three or four centuries later. They came with habits of life and government alien to those of the Romans; and yet in the fullness of time, under the organizing genius of Charles the Great, the union of the fresh energy of the North with the memories and civilization of the South constituted the beginning of modern history and of modern culture.

Paulus Aegineta.

In the East the Hellenic tradition of surgery was continued, though precariously, chiefly under the influence of the writings of Paulus Aegineta, who flourished in the first half of the seventh century and studied at Alexandria shortly before that city was taken, in the year 640, by the Arabians under Amrou. Historically Paulus Aegineta is in some respects more important than Celsus, chiefly because he carries on the story for six hundred years longer. Both were compilers; but while Celsus was, as I have already suggested, probably not a practising medical man at all, Paulus did engage in the practice both of medicine and of surgery, and was evidently an acute observer and skilled practitioner. In compiling his book on medicine, he states that his object was to give a brief summary of what had been written by the best authors before his time. His work was confessedly an abridged selection, and it was most intelligently done. He states that his compilation contains few of his own observations, except in a small number of things which he had seen and experienced in actual practice. The source from which he principally drew his material was the collection of Oribasius, most of which is now lost. Paulus Aegineta, like Celsus, is always impartial. He takes his descriptions from what he considers the best authorities, sometimes from one and sometimes from another, but always with regard to their practical superiority. He does not discuss theories or systems, and shows no preference for one school over another. The fifth book of his treatise on medicine deals with wounds, bites, and poisoned wounds; the sixth with surgery, which he regards as an integral part of medicine.

Paul closes the era of classical Greek medicine and its traditions, and these traditions would apparently have entirely disappeared but for the intervention of the Mohammedans, who in the seventh and eighth centuries overran and conquered Syria, Persia, and Egypt. Strictly speaking, there is no Arabian science or medicine; there

were Greek, Persian, Spanish, and Jewish. The Arabians themselves had no taste or training for scientific or philosophical pursuits, but in the countries which they conquered they came in contact with much Greek and Oriental learning, which they soon absorbed and assimilated.

Arabian Writers.

Perhaps there is no more striking illustration of the continuity of history than the conditions which favoured the adoption and continuation of the Greek learning by the Mohammedans. These conditions had their origin in the conquests of Alexander the Great over three hundred years before Christ. In Asia Minor and in Persia, and even in India, Alexander planted Greek settlements and founded Greek cities where Hellenic culture established itself. This culture was continued by Alexander's great successors, the Seleucidae and the Ptolemies, whose policy was to blend schemes of civilization and of literary and scientific research with their systems of civil administration. In the East, Greek became universally the state language and the exclusive language of all literature and science. The Hellenic character that was thus imparted remained in more or less vigour down to the time of the Mohammedan conquests. Although the Mohammedans at first manifested fanatical hostility against much of the Greek learning, they made an exception in favour of medicine. In Persia and in Asia Minor there were many Greek philosophers and physicians, not a few of whom were Christians, especially the Nestorians. Through the agency of these Christian Syrians many Greek authors were translated into Arabic. Many Nestorian Syrians lived among the Arabians as physicians. Hareth ibn Kalda, the friend and physician of Mohammed himself, was a Nestorian. Schools of translators were established. The most famous of these schools was at Baghdad, the head of the school being the Nestorian Honain ibn Ishak. Amongst the earliest translations were some of the writings of Hippocrates, Galen, Oribasius, and Paulus Aegineta. The last-named was not only one of the first of the Greek medical authors to be translated into Arabic, but remained for many centuries the chief authority of Arabian surgery, of which the most distinguished exponent was Albucasis of Cordova in Spain about the end of the eleventh century. It is a further illustration of the continuity of history that whilst in Asia the Arab conquerors yielded to the spell of an ancient culture superior to their own, they no sooner crossed the Straits of Gibraltar, at the beginning of the eighth century, than the parts were reversed. The inhabitants of Spain rapidly became imbued with Moslem civilization, and in the course of a few generations the Spanish converts to Islam were completely Arabicized. For several centuries some of the leading cities of Spain, especially Cordova and Toledo, became the principal seats of learning in Western Europe.

Albucasis wrote a compendious treatise on medicine consisting of thirty books, entitled *Kitabu-t-Tasrif* (Book of Derivations). The most important portion, from our point of view, was that on Surgery. Albucasis's surgery is based upon Paulus Aegineta, but without acknowledgement, just as the Latin translations of Albucasis were taken without acknowledgement by the surgeons of Northern Italy in the later half of the thirteenth century. Practical surgery was then in a low state. In the introduction to his book on surgery Albucasis remarks: "Surgery is no longer held in honour in our country. It has disappeared almost without leaving any traces. There remain, indeed, a few vestiges in the writings of the ancients, but the transcription of them has been corrupted and error and confusion have been introduced, so that they are almost unintelligible and useless." He adds that the chief cause why there were no skilful operators in his day was that the study of anatomy as it is described by Galen had been given up, and he states that he had seen an ignorant practitioner, in making an incision upon a scrofulous tumour in the neck of a woman, open the cervical arteries, so that the woman died forthwith of haemorrhage.

Rhazes, a century before Albucasis, refers to the low state of practical surgery. He called most of those who practised it "idiotae, rustici et stolidi," who were unable to read books on the Art, and had not been taught by a master who could read them. Owing to their stupidity, he says, they often aggravated the maladies they undertook to treat.

Lanfranc: Guy de Chauliac.

It was from the translation of Albucasis into mediæval Latin by Gerard of Cremona that the revival of surgery in Northern Italy began. This revival had its chief seat at Bologna, whence surgeons migrated to the famous school of Montpellier, and later to Lyons and Paris, in the second half of the thirteenth century. Many Italian medical practitioners left their country in consequence of the troubles caused by the quarrels of the Guelphs and Ghibellines. They sought refuge on French soil, taking with them the doctrines and works of Albucasis. One of the first of these emigrants was Roger of Parma, from the school of Salerno. Following him were Bruno of Calabria, Lanfranc, and others. Lanfranc delivered a course of lectures on surgery in Paris about the year 1295. These were the first systematic lectures on surgery delivered in Paris, and were published under the title *Cyrurgia Magna*. He insists that surgery should be regarded as an integral part of medicine. Although himself a cleric, he condemns the physicians for having abandoned surgical operations to laymen and barbitonsors. "Why," he asks, "is there now so great a difference between a physician and a surgeon except that the physicians have relinquished manual operations? The physicians say that it is because they deem work with their hands beneath their dignity; but I believe," he retorts, "it is because they do not know how to do operations."

The influence of Lanfranc in France was, however, transitory, notwithstanding the endeavours of Henry of Mondeville, who shortly after wrote the first book on surgery in French. Mondeville's work was, however, soon eclipsed by that of Guy of Chauliac, completed in the year 1363. Guy was not only the most learned surgeon of his time but perhaps the most learned surgeon of all time, and his book is one of the best ever written. Even to-day it may be perused with profit by any one interested in the history and practice of surgery, especially the surgery of the Middle Ages. The work is largely based upon the writings of Rhazes, Avicenna, and Albucasis. As evidence of Guy's extensive learning, and as an indication of the wide range of his studies, it may be mentioned that he cites Albucasis 175 times, Aristotle 62 times, Avicenna 661 times, Galen 890 times, Hippocrates 120 times, Lanfranc 102 times, Rhazes 161 times, Paulus Aegineta 10 times, and many other medical authors more or less frequently. He does not mention Celsus for the reason which I have already suggested, that Celsus's writings had been forgotten and lost and were not rediscovered until after Guy's time. In his remarkable introductory chapter, entitled "*Capitulum Singulare*," Guy defines the nature and object of Surgery, amplifying somewhat Galen's definition. It is, he states, "The science which teaches the manner and quality of operating, principally in consolidating, incising, and performing other manual operations, healing men so far as it is possible." In the same chapter he traces briefly the history of surgery from the time of Hippocrates downwards, and remarks that up to the time of Avicenna and Albucasis all medical writers had been both physicians and surgeons, but that after him surgery became separated from medicine and fell into the hands of mechanics.

Guy observes that not only had surgery become separated from medicine, but that surgeons had themselves been split up into sects, of which he enumerates five. Only three of these need be mentioned now. First, that of Roger, Roland, and the Four Masters who sought to produce suppuration in all wounds and abscesses by means of poultices; the second, that of Bruno and Theodoric, who dried all wounds by the application of wine only; the third, that of William of Salicet and Lanfranc, who followed a middle course and dressed wounds with ointment and soothing plasters.

Guy's ideal of a surgeon was noble. The surgeon should be well read, expert, ingenious, and well mannered; he should be bold when sure but cautious amid dangers. Personally, Guy had great moral courage, as shown by his determination to remain at Avignon and attend to his professional duties during the severe visitation of the plague in the year 1348, while many other practitioners fled from the town. He was himself attacked, but recovered, and was again at the post of professional duties at the time of the next visitation of the plague in the year 1360. As a practical surgeon, however, Guy sometimes erred on the side of over-caution. In his account of the treatment of a

gangrenous limb he describes the operation of amputation as it is given in Paulus Aegineta, whose description differs only in some details from that of Celsus and Galen. He concludes by remarking:

As for myself in these cases, I envelope the whole of the mortified limb with many layers of adhesive plaster and then tie it up, maintaining the constriction until the line of demarcation liquefies and the limb drops off of itself. It brings more credit to the surgeon, he remarks, to let the limb drop off than to cut it off, because when it is cut off there is always a feeling of rancour or regret in the patient's mind that his limb might have remained.

Ambroise Paré.

Guy was almost the only authority in surgery for at least two centuries—that is, until the time of Ambroise Paré, who was born in the year 1517. When about 25 years of age Paré went to Paris and became an apprentice to a barber-surgeon, probably his brother. He attended the instruction given to the apprentices of Barbers and Surgeons at St. Côme. This instruction consisted largely of explanations of parts of Guy of Chauliac. Malgaigne, in his learned introduction to Paré's works, says it is almost certain that the principal, if not the only, books read by Paré in his earlier years were those of Guy and a French translation of John of Vigo. And as showing the esteem in which these works were held it may be noted here that Vicary bequeathed his copy of Guy's surgery to the Barbers' Company and his copy of John of Vigo to one of his assistants.

Malgaigne suggests that Vigo was probably too recent an authority to be admitted to the public course of instruction; but Paré himself tells us that he had read John of Vigo on gunshot wounds, and that when he first went to the wars he knew only what he had read in Vigo about these wounds. Vigo had recommended the use of boiling oil for gunshot wounds, believing them to be venomous. Guy was undoubtedly the more learned, but Paré was the better and bolder practical surgeon. It was perhaps to Paré's advantage that he was not learned. He was not hampered by the trammels of authority. His experience was eminently practical, and in his earlier life was acquired in the wars. He knew little Latin and no Greek, but he possessed what was better, a passion for knowledge, and he could use his eyes and ears and understanding. He is best known for the innovations he made in the treatment of gunshot wounds, and for the suggestion of the use of ligatures to the divided arteries in primary amputations. By a mere accident Paré was led to abandon the use of boiling oil in gunshot wounds, but the employment of the ligature for the divided arteries in primary amputation was the outcome of reasoned observation. Although firearms had been used in battle for a couple of centuries or more before Paré's time, it was only at the end of the fifteenth century that they became efficient weapons. The injuries they inflicted were of an extent and kind previously unknown to surgical experience. The severity of the wounds, the smashing of bones, the laceration of flesh, and even the complete avulsion of limbs, the severe hæmorrhage and shock, were altogether different from anything that had been previously known to surgeons. These new experiences called for new procedures, and ultimately revolutionized the art of operative surgery. Down to Paré's time amputation of a limb was rarely performed except for gangrene, but Paré had to face the necessity of performing primary amputation. In amputation for gangrene, when the incision was made in or near the line of demarcation, the hæmorrhage, as a rule, would be slight and easily controlled by the actual or potential cautery, but in primary amputation Paré soon found the cautery was not sufficient. The copious flow of blood quickly quenched the cauteries, and, even if the bleeding was temporarily arrested, secondary hæmorrhage frequently followed. To avoid this danger Paré proposed to tie the divided blood vessels. There is some evidence that he did this for the first time in the year 1552, and yet two and a half centuries more were to elapse before the true principles of arterial ligation were discovered.

Much controversy has taken place with respect to the originality and value of Paré's innovation, but it must be remembered that Paré did not claim, as is sometimes thought, the credit of being the first to use ligatures to bleeding arteries. He knew that this was one of the modes of arresting hæmorrhage which had been known to and employed by surgeons for many centuries, but he was

the first, or at all events one of the first, to employ the ligature in primary amputation. He did not, however, know the essential conditions of a successful application of ligature. He was not careful to isolate the artery, and indeed recommends that it should not be isolated, arguing that the surrounding tissues should be included in the ligature, because the union of the vessels would take place better and more surely when the tissues were included. We know now that such a mode of tying an artery must often have failed, and that secondary hæmorrhage must have been a not uncommon sequel. The practice of tying an artery in amputation did not, therefore, at once commend itself to practical surgeons, and for many years it was opposed and condemned by most surgeons. In this country Alexander Read, lecturing on Surgery in the Barber-Surgeons' Hall in the year 1634, speaks of Paré's ligature as a "troublesome and dangerous toy." And yet the idea was a compelling one. Those who did employ the ligature were usually afraid to damage the coats of the vessels by too tight a constriction, and various contrivances were made to bind the vessel without injuring the coats. Multiple ligatures, reserve ligatures, broad ligatures, tapes, and ribbons were used, or the artery was flattened against a roll of wood or other material, lest a fine ligature drawn sufficiently tight to stop the bleeding should damage the arterial tunics. Ligatures made of animal tissues, such as strips of untanned deer skin, were also tried. Even so sagacious a surgeon as John Hunter failed to discover the true path. In his first operation of the tying of the femoral artery for popliteal aneurysm he employed no less than four ligatures, thinking thereby to ensure greater safety. Fortunately the operation was successful, in spite of the risk incurred by using multiple ligatures.

Notwithstanding the failure and disappointment which attended the use of the ligature for more than two centuries and a half after Paré, observant practitioners were gradually making progress along two lines of advance. One set called attention to the increased safety of isolating the artery before tying it, and the other demonstrated the greater safety of using fine ligatures tightly applied. But the full credit of discovering the true principles of arterial ligation belongs to Dr. J. F. D. Jones, a Member of this College, who published his treatise on the use of the ligature in the year 1805. By means of a few well designed and skilful experiments on animals, chiefly horses and dogs, Jones discovered that the only safe and sure method of tying an artery was to apply a small ligature with sufficient force to divide the inner and middle coats. Hundreds of surgeons must, of course, have done this without knowing it; but Jones demonstrated why and how it must be done in every case.

When we reflect what a terror the risk of hæmorrhage had been to surgeons for more than two thousand years, and how faulty and misleading clinical and practical observation had been, and when we consider how many thousands of lives must have been lost from hæmorrhage before Jones's investigations, and how many hundreds of thousands of lives have since been saved by the knowledge of the truths which he discovered, it is hardly necessary to make any attempt to justify the use of the experimental method on lower animals. Jones does, however, defend it in noble but simple language, and on this note I will end.

"When we remember," he says, "the incessant carnage of war which has followed man through all the ages of his history, not to mention the consequences of accident and disease, it is not too much to assert that thousands might have been and may still be saved by a perfect knowledge of these subjects, which can only be directly obtained by experiments on brutes, and indirectly and very slowly by observations on the injured arteries of man, and even these cannot be made until he has fallen a sacrifice to the want of assistance or to the imperfect knowledge of the surgeon."

THE Royal Institute of Public Health has received an invitation from the Burgomaster of Brussels, M. Adolphe Max, and the rectors of the universities of Belgium to hold its next congress in Brussels. This will begin on Thursday, May 20th, and end on Monday, May 24th. Further information can be obtained from the Honorary Secretaries of the Institute, 37, Russell Square, W.C.1. The Harben Lectures for 1920 will be delivered in June by Professor Maurice Nicolle, M.D., of the Pasteur Institute, Paris.

FRACTURE-DISLOCATIONS OF THE ANKLE:

POTT'S AND DUPUYTREN'S FRACTURES.

BY

R. P. ROWLANDS, M.S., F.R.C.S.,
SURGEON TO GUY'S HOSPITAL.

[With Special Plate.]

THESE serious accidents are so commonly followed by bad results that I venture to discuss their diagnosis and treatment, in the hope that the subject may be of interest and value to others.

A. POTT'S FRACTURE.

There seems to be some doubt as to the exact nature of these fracture-dislocations, and it is a common mistake to regard a fracture of the lower part of the fibula without any displacement at the ankle as a Pott's fracture, whereas in reality the essence of a Pott's fracture is the dislocation at the ankle. This is clearly shown by Pott's own description, which is as follows: "A case which, according to the general manner of treating it, gives infinite pain and trouble both to the patient and to the surgeon, and very frequently ends in the lameness and disappointment of the former and the disgrace and concern of the latter. I mean the fracture of the fibula, with dislocation of the tibia."

Many of those who claim that they get good results from the conservative treatment of Pott's fracture mistake for it this simple and comparatively harmless fracture of the fibula, which gets rapidly well and leaves no permanent disability.

In a Pott's fracture the fibula is broken in the lower third, and either the internal malleolus is detached from the tibia or the internal lateral ligament is torn. These injuries allow the external malleolus to move outwards and backwards, rotating on the inferior tibio-fibular articulation. The splendid mortise made by the tibia and fibula for the reception of the astragalus is thus widened and spoilt. Instead of allowing only flexion and extension of the ankle, it now permits eversion of the astragalus and of the foot. Moreover, the astragalus not only rotates so that the outer edge of its superior articular surface is uppermost, but it is drawn backwards out of its natural contact with the lower end of the tibia by the unbalanced traction of the powerful heel tendon. Skiagraphic side views often show the posterior inferior edge of the tibia lying on the middle of the superior articular surface of the astragalus, or even on the neck of the astragalus sometimes.

B. DUPUYTREN'S FRACTURE.

In this there are the lesions already described under Pott's fracture, and, in addition, either the inferior tibio-fibular ligaments are torn or there is a vertical fracture in the tibia just mesial to the tibio-fibular articulation. The outer and upper edge of the rotated astragalus then becomes the apex of a wedge which gradually increases the separation of the tibia and fibula when the patient stands.

The astragalus also acts as a wedge when an oblique fracture of the fibula extends upwards and outwards from just below the inferior tibio-fibular articulation. It is particularly difficult to bring this small lower fragment into its natural position, and the usual result is that a weak and unsatisfactory union occurs with the external malleolus abducted and displaced backwards. As soon as the patient walks the astragalus increases the separation (Fig. 1).

I believe that these fracture-dislocations, especially those associated with the name of Dupuytren, are some of the most serious injuries of the lower limbs, especially as they generally occur in working men in the prime of life, when they are most exposed to violent injuries. The earning capacity of a working man who has sustained one of these injuries is much depreciated. I have seen many who have not been able to work for two years from the date of the accident. Unfortunately the abduction, eversion, and flattening of the foot, as well as limitation of movement, increase with time. If there be the slightest uncorrected abduction of the foot when the patient begins to walk, the weight of the body inevitably increases the deformity, and this is especially true of Dupuytren's fracture. Only those who watch these patients for

years know how bad the ultimate results are, and how serious from an economic point of view. They come up later with rigid abducted and flat feet, seeking instrumental support or secondary operation. Osteo-arthritic changes soon take place in the ankle and metatarsal joints. Later the knee and hip may become similarly affected.

DIAGNOSIS.

In both Pott's and Dupuytren's fractures the foot is displaced backwards and outwards, and the heel is raised so that the foot is in the equino-valgus position. The foot is both abducted and everted, so that the toes turn outwards and the sole faces downwards and outwards. (Fig. 2.)

The stump of the internal malleolus is very prominent on the inner side, and may even pierce the skin. It is difficult to differentiate between Pott's and Dupuytren's fractures. A greater widening of the ankle as measured by callipers is supposed to indicate Dupuytren's fracture, but this is by no means reliable, for the external malleolus is often displaced more backwards than outwards, until the patient stands later on and brings the astragaloid wedge into full action.

As in most fractures, an x-ray examination is essential, and the ankle should be examined in two planes, so that both the lateral and the antero-posterior displacements may be seen. In this way it is possible to distinguish these two fractures, but it must be remembered that, although the inferior tibio-fibular ligaments may be torn, the astragalus need not necessarily separate the two bones until the patient stands. The separation of the two bones may be demonstrated by pushing the foot upwards during the x-ray examination.

TREATMENT.

The complete reduction of these fractures is admitted to be very difficult. Some years ago when, fired by Sir Arbuthnot Lane's brilliant pioneer work, I wrote a paper on this subject in the *Guy's Hospital Gazette* (February 29th, 1896, p. 118), there was some doubt upon this question, but the introduction and the improvement of skiagraphy has made it easier to demonstrate the want of perfect apposition that exists after the most careful efforts at reduction. It is only by operation that the broken fragments can be brought into perfect apposition, and maintained in this position until bony union occurs. There are different views, however, as to the need of getting perfect apposition in all cases, for some maintain that good functional results can be obtained by careful conservative treatment, and as this method exposes the patient to no risk to life or limb, it naturally remains popular with the more conservative surgeons. My experience of the late results of the conservative treatment in working men is such as to lead me to believe that early operation is necessary for obtaining a good result in them. There is no doubt, however, that operations for simple fracture are not to be lightly undertaken, and that every aseptic precaution must be taken in order to avoid risk of infection. Considerable mechanical skill and experience are also necessary for the efficient performance of the operation. Therefore the treatment will be described under three heads:

- (a) Conservative.
- (b) Early operation.
- (c) The correction of deformity and restoration of function in late cases.

(a) Conservative Treatment.

Every endeavour should be made to set the fracture accurately, and for this an anaesthetic is absolutely necessary.

The knee should be well flexed, and while it is firmly held by a strong assistant powerful traction is made upon the foot, and the latter is strongly adducted and inverted while the fragments are manipulated into position. In some cases it is necessary to divide the tendo Achillis, flexion of the knee failing to afford a sufficient relaxation of this powerful tendon, which is a strong hindrance to reduction. The setting should be carried out as soon as possible after the accident, for it is much easier to get a good position before extravasation of blood and effusion into the tissues shorten the muscular and other ties around the ankle. But if the ankle is already very swollen before

the patient is brought for treatment it is usually wise to wait four or five days for the swelling to subside.

Whenever possible the setting should be actually guided by the *x* rays. When this is impracticable the result should be checked by subsequent screen examinations.

While the foot is held in a good position at least three wide plaster bandages are applied from the knee to the toes, and the accurate position is maintained until the plaster has firmly set. When there is but little swelling it is only necessary to put a thin bandage or stocking under the plaster, but when there is much swelling, and especially if there are blebs, the limb is painted with tincture of iodine and covered with a layer of cotton wool of moderate thickness before the plaster bandage is applied. It is easier to secure and maintain a good position with a plaster splint than by any other means. Moreover the fracture is so well immobilized that the limb is comfortable and the patient can get about on crutches without pain or risk.

The position of the fragments is later ascertained by screen examinations, and if the setting is not satisfactory it must be repeated. If the splint compresses the limb too much it can be opened up the front along a rubber tube previously placed between the limb and the splint.

The splint is not removed for twenty-one days; after that time it is taken off daily for massage, movement, and exercises, and it is finally abandoned about five weeks after the accident, but the patient is not allowed to stand or walk for two months, and then the inner border of his boot is raised a quarter of an inch to prevent the development of abduction of the foot from ill-directed strain at the line of fracture while the bones are soft. For bad cases an external steel support, with a strong *T* valgus strap, is supplied for nine months after the accident.

(b) Early Operation.

When a good position cannot be obtained by the method already described and the patient is healthy and active, there are no contraindications to an operation, and the services of a good and aseptic surgeon experienced in the operative treatment of fractures can be obtained, early operation, say within a week of the accident, is strongly indicated, for it offers a very good chance of a perfect limb.

A tourniquet is applied around the thigh after the limb has been elevated for a few minutes and all the skin below the knee has been most carefully sterilized. A slightly curved incision is made over the lower third of the fibula, starting over this bone at its lower point of trisection and extending slightly forwards and terminating 1 in. below the tip of the external malleolus. All the soft parts, down to the periosteum, are then reflected backwards. This flap method is better than a straight incision over the line of fracture.

Sterilized pads are accurately secured over the edges of the wound with tissue forceps so that no skin is left exposed. The ends of the fragments are isolated partly with the knife and partly with broad elevators and levers. They are then brought into perfect apposition by means of Lane's long-handled forceps and fixed in position by a steel plate or circumferential wire. In all cases the inferior tibio-fibular joint is exposed near the lower angle of the wound, and if there is separation of the two bones at this point, indicating Dupuytren's fracture, the simplest and most satisfactory way of correcting the deformity is

to chisel away the cartilage from the contiguous surfaces of the two bones, and then pass a long screw obliquely inwards and slightly upwards through the fibula and tibia a little above the ankle-joint (Fig. 3). Fig. 4 shows the failure of a plate and the need of the long screw. A screw passed in a similar way is very effective for those common cases of oblique fracture extending upwards and outwards through the fibula and just below the inferior tibio-fibular joint (Fig. 7). This and the preceding fracture give very bad results with conservative treatment, for the upper and outer edge of the displaced astragalus acts as the apex of a powerful wedge which gradually and certainly increases the separation of the bones at the site of injury. In many cases this is all that is required, for as the screw is driven home the fibular fragments become locked in good position. When this is not so a plate is fixed over the outer surface of the fibula at the site of fracture, which is generally about two inches above the malleolus. When the fracture of the fibula is oblique or spiral a circumferential wire is often simpler and more efficient than a plate.

The internal malleolus when broken rarely needs to be exposed, for the replacement of the external malleolus and astragalus generally forces it into a good position. Throughout the operation the greatest care is taken to maintain asepsis, in order to obtain a perfect result. The wound is then closed with a continuous salmon-gut suture, and a massive dressing is firmly applied before the tourniquet is removed. The tourniquet allows far speedier, gentler, and more accurate work, and the application of the massive firm dressing before its removal prevents extravasation of blood into the tissues. A comfortable back splint is applied and the leg is slung in a Salter's cradle. The long screw has not given rise to any trouble, and in some cases it has been retained for many years.

(c) The Correction of Deformity and Restoration of Function in late Cases.

An attempt to restore the broken fragments to their natural position is not

likely to be successful later than three months after the accident. An operation for this purpose may be very formidable, difficult, and somewhat dangerous, for a good deal of callus has formed, matting and shortening of the soft parts have occurred, and above all the fragments themselves have atrophied and become soft so that they do not hold a plate or screw easily. (Figs. 5 and 6.)

In these cases it is far better to do all we can to obtain a movable ankle without equinus and to restore the proper alignment of the limb. These objects can be attained and a very useful limb secured with ease and safety as follows:

When the patient is under the anaesthetic and the limb has been carefully sterilized, the knee is bent and held by an assistant while the surgeon grasps the fore part of the foot and moves the ankle freely. When flexion is considerably limited it is wise to divide the tendo Achillis subcutaneously. Stronger union is obtained in the tendon if its two lateral halves are divided at two different levels about an inch and a half apart. When good movement has been obtained the limb is turned on its outer edge on a sand pillow, and a small longitudinal incision is made with its centre one inch above the tip of the internal malleolus. An osteotome is then driven transversely outwards across the bone three-quarters of an inch above the

DESCRIPTION OF SPECIAL PLATE

Fig. 1.—Taken a year after the fracture. The astragaloid wedge has gradually separated the external malleolus from the tibia, causing increasing deformity, serious disability and severe pain.

Fig. 2.—Dupuytren's fracture. The fibula is broken and separated from the tibia. The internal malleolus is broken. Note the tilting of the astragalus, and its wedge-like action.

Fig. 3.—Taken a week later. The contiguous surfaces of the tibia and fibula have been pared and a long screw has been inserted to keep the bones together. No re-approximation of the fibular fracture and the adduction of the internal malleolus. The man has walked many miles as a commercial traveller for nine years and still retains the screw and perfect use of the leg and ankle.

Fig. 4.—This picture shows why plating the fibula is insufficient treatment for Dupuytren's fracture. The astragaloid wedge still acts as a powerful abductor of the external malleolus, widening the important malleolar mortise making the ankle insecure and causing osteo-arthritis with a painful adducted and everted foot.

Fig. 5.—This shows a lateral view of a Dupuytren's fracture three months after the accident. Several attempts had been made to reduce the deformity. Note the displacement of the astragalus (and foot generally) backward, and the talipes equinus. Adduction and eversion of the foot were also severe.

Fig. 6.—From the same leg as Fig. 5. Some of the body of the astragalus below the upper articular cartilage had to be removed before the reduction could be done. The screw and circumferential wire secured the bones in good apposition. The function of the ankle was much improved and its shape excellent. The screw and wire have given no trouble and have been retained for eight years.

Fig. 7.—A fracture just like that shown in Fig. 1. Here the screw passed obliquely upwards, forwards, and inwards, secured accurate apposition and a perfect ankle. The screw caused no trouble and has been retained for eight years.

Fig. 8.—Showing a severe Pott's fracture eighteen months after the accident. The foot was almost useless. Note the deformities. The same ankle is shown in Figs. 9 and 10 before and after operation.



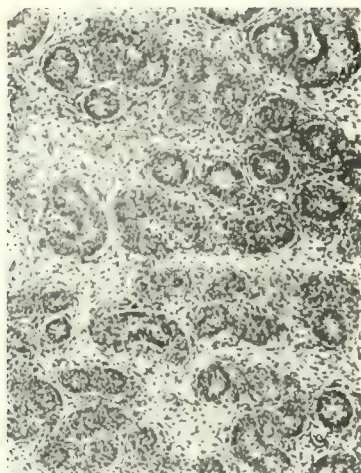


FIG. XVII.—Testis of Juvenile Paralytic, symptoms of which commenced at the age of 8; death at 16. (Mag. 105.)

The tubules are of the same size as those at birth. No cells of Leydig are seen in the interstitial tissue. Infantilisism was well marked in this case. Compare with Figs. I and XIV.

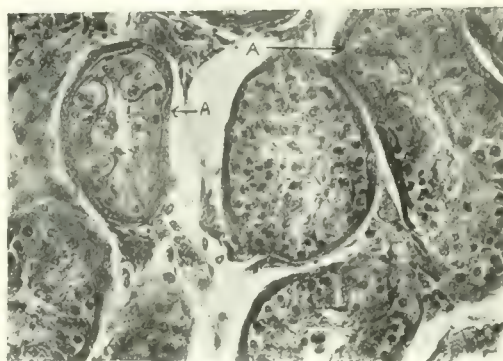


FIG. XX.—Testis of Dementia Praecox Early Second Stage. (Mag. 158.)
Atrophied tubules A, A, showing thickened basement membrane lined mainly by empty cells of Sertoli. No spermatocytes seen in these tubules.

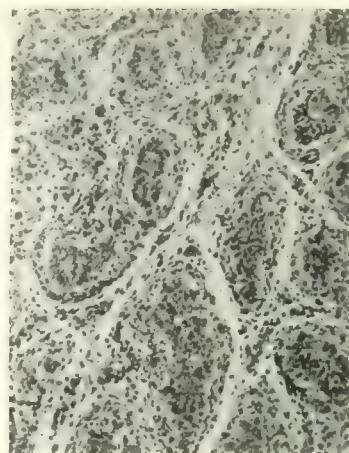


FIG. XVIII.—Testis of Low Grade Imbecile with Congenital Epilepsy. (Mag. 105.)

Basement membrane greatly thickened. The tubules contain only cells of Sertoli. No cells of Leydig seen in the interstitial tissue.

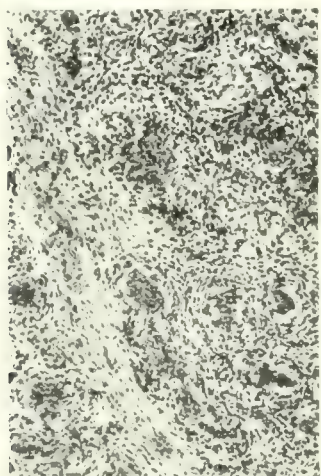


FIG. XIX.—Testis of Idiot.

The section is hardly recognizable as testis. The atrophied organs consist almost entirely of fibrous interstitial tissue. No Leydig cells seen.

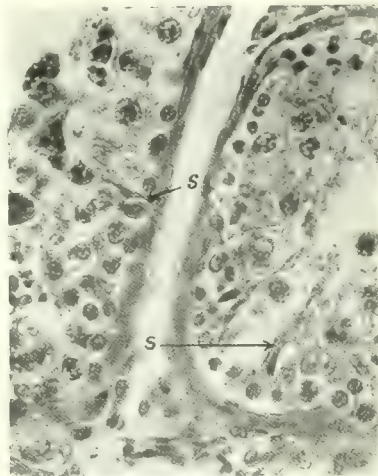


FIG. XXI.—Testis of Dementia Praecox Early Second Stage. (Mag. 394.)

The same showing (s, s) the empty cells of Sertoli. Observe the poor and unequal nuclear staining.

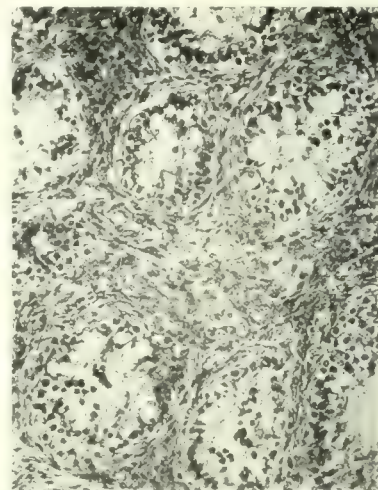


FIG. XXII.—Testis of advanced Dementia Praecox in a Young Adolescent. (Mag. 162.)

Thickened basement membrane increase of interstitial tissue. Complete arrest of spermatogenesis in all its stages. The contents of the tubules mainly Sertoli cells and sustentacular framework.

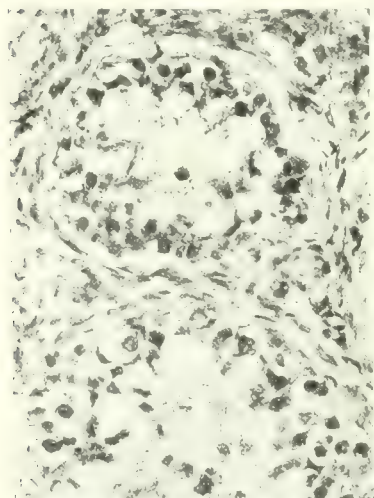


FIG. XXIII.—Testis of advanced Dementia Praecox in a Young Adolescent. (Mag. 500.)

Two tubules of Fig. XXII more highly magnified.

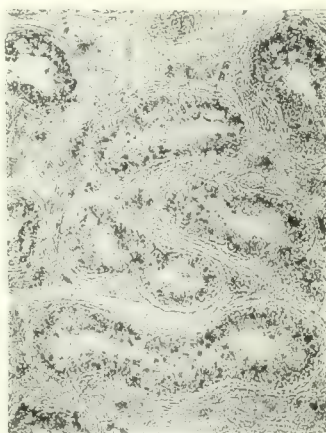


FIG. XXIV.—Testis of advanced Dementia Praecox in a Young Adolescent. (Mag. 70.)

Scarlet-stained preparation for lipid, very little interstitial lipid. Black dots are lipid and fatty acid in Sertoli cells.

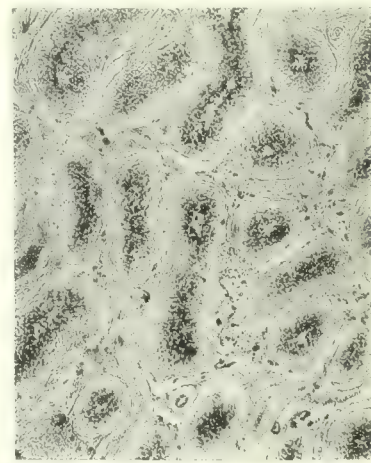


FIG. XXV.—Testis of very advanced Dementia Praecox in a Young Adolescent. (Mag. 70.)

Scarlet-stained preparation for lipids, very little interstitial lipid, very thickened basement membrane. Fatty degenerated cells in tubules.

level of the tip of the malleolus. At this level there is no fear of entering the ankle joint. As far as possible the work is done subperiosteally.

When the bone is almost completely divided an attempt is made to snap the remainder and to bring the foot into

a good position. If this fails the osteotome is reinserted, and, if necessary, driven on to notch or divide the fibula.

The deformity is slightly over-corrected, the wound closed with catgut, and the limb secured in a good position with plaster bandages over an antiseptic dressing. The after-treatment is similar to that already described under conservative treatment. The functional results obtained in this safe and simple way are very gratifying (Figs. 9 and 10).

CASE I.

A commercial traveller, aged 30; alcoholic and stout; admitted into the accident ward on December 15th, 1910, having sustained a Dupuytren's fracture of the left ankle. Endeavours were made to replace the bones in position without avail. A skiagram taken after these endeavours showed the presence of Dupuytren's fracture with considerable separation between the tibia and fibula, and the outer upper edge of the

FIG. 9.—The same ankle as shown in Fig. 8. Showing abduction and flattening of the foot with equinus. The limb was nearly useless.

astragalus was acting as a wedge separating the two bones (Fig. 2). The internal malleolus was broken. In spite of the fact that the man was alcoholic, an operation was advised and performed two days after the accident.

Every care was taken to sterilize the skin. The patient took a great deal of anaesthetic, and was riotous under it. A broad, flat tourniquet was applied just below the knee. Endeavours were made to correct the deformity by traction and manipulation. The tendo Achillis was divided subcutaneously. A long curved incision was made in front of the lower end of the fibula. The broad flap thus made was separated from the fibular periosteum and drawn backwards. The skin was entirely

covered by gauze pads, which were carefully secured to the subcutaneous edges of the wound by means of tissue forceps. The peroneus brevis, being the most powerful abductor of the foot, was sought and divided. The outer part of the lower end of the tibia was defined, its inferior and external articular surfaces being well displayed. Much dark blood and clot escaped from the ankle-joint. Traction and adduction of the foot were made while the lower end of the leg was drawn outwards. These manipulations failed to bring the fibula into its natural position, and it was necessary to use an elevator to prise it out at the site of fracture, and to apply a long-handled Lane forceps to the lower fragment, in order to bring this into its natural relationship with the lower end of the tibia. The surfaces of contact between the tibia and fibula were pared. Then, while a good position was maintained, a long steel screw was driven horizontally through the lower ends of the fibula and tibia about half an inch above the lower articular surface of the latter. The fracture in the fibula, which was about three inches up, was thus brought into a good position. Plating at the site of fracture was seen to be unnecessary (Fig. 3). Moreover, the foot was brought into a good position, and the internal malleolus was also approximated to its original position on the lower end of the tibia. The deep fascia was sewn with catgut and the skin with fishing gut. The wound was dressed and firmly bandaged before the tourniquet was removed. The operation lasted about twenty minutes. A comfortable back splint was applied and the limb suspended in a Salter's cradle.

A skiagram taken a day or two after the operation showed the bones to be in a perfect position. Dr. Morton, who did the x-ray examination, was puzzled by the appearance of the screw, for he had not examined another case of Dupuytren's fracture which had been treated in this way. The patient left the hospital within three weeks of the operation and he made complete recovery. He was seen seven years later, when his leg was as good as ever. The screw was still in.

FIG. 10.—The ankle shown in Figs. 8 and 9 eight months after tenotomy of the tendo Achillis with osteotomy of the tibia and fibula through a small incision one inch above the tip of the internal malleolus. The function of the limb was good, the patient being able to walk long distances without pain, and move the ankle well.

NORMAL AND MORBID CONDITIONS OF THE TESTES FROM BIRTH TO OLD AGE IN ONE HUNDRED ASYLUM AND HOSPITAL CASES.*

BY

SIR FREDERICK W. MOTT, K.B.E., M.D., LL.D.,
F.R.S., F.R.C.P.,

DIRECTOR OF THE PATHOLOGICAL LABORATORY OF THE
LONDON COUNTY COUNCIL ASYLUMS.

[With Special Plate.]

THE INFLUENCE OF SYPHILIS ON THE GERM CELLS.

GENERAL PARALYSIS.

Examination of Emulsion of Brain and of Testes by Dark-ground Illumination.

I HAVE examined *post mortem* an emulsion of the brains of a successive series of 100 cases of general paralysis of the insane by dark-ground illumination and found the spirochaete present in 66 per cent. Seeing that the Wassermann reaction can be obtained in the cerebro-spinal fluid in 97 per cent., it is probable that if the search was sufficiently prolonged spirochaetes would be found in a like percentage of cases. My assistant, Mr. Geary, has examined by dark-ground illumination the seminal fluid obtained *post mortem* from the vesiculae seminales of 50 cases of general paralysis, also an emulsion of the testicles; spirochaetes have not been once seen. This result indicated that the seminal fluid of a paralytic is in all probability non-infective at the time he is suffering with this disease. The family history of 54 male tabic or tabo-paralytic patients showed that they

had 151 children alive, 75 who were born alive but died in early infancy, and 52 born dead or miscarriages. This offered a striking contrast to the family history of 25 female tabic or tabo-paralytic patients, 10 of whom were sterile; the remaining 15 had 10 children alive, 10 who were born alive but died in infancy, and 51 miscarriages or stillbirths. But it must be remembered that in the latter case both father and mother are syphilitic, and in the former the father in most instances married when the spirochaete was no longer circulating in the lymph stream of the body, but confined to the specially closed lymphatic system of the brain and spinal cord, the periaxonal sheath of the vessels and perineuronal spaces which contain the cerebro spinal fluid.

The disease does not arise, on an average, until ten years after infection, consequently if the infected man has not married until five years after, it is unlikely that he will syphilize his wife, and he may, and generally does, procreate and have healthy children, in spite of the fact that he has spirochaetes in his brain and that his blood and fluid give a positive complement reaction. It is possible that the spirochaetes of general paralysis and tabes have a biological disposition to enter the brain and spinal cord, where they can exist in the tissues and cerebro-spinal fluid away from the attacks of leucocytes and spirochaetocidal agents, such as arsenic and mercury preparations. Förster and Tomaszewski removed tissue containing spirochaetes (living) from the brains of general paralytics, but were unable to infect the testicles of monkeys with them.

Now, examination by dark-ground illumination of the seminal fluid in the vesiculae seminales in cases dying of general paralysis or tabo-paralysis (fifty in number), has invariably shown the existence of spermatozoa, generally in great numbers, even at advanced ages—for example, one case of arrested general paralysis of the insane was 69; also active spermatogenesis may be found in sections

* Concluded from p. 700.

of the testes in advanced stages of the disease. The greater number of cases of general paralysis show spermatozoa in emulsions of the testes, proving that there was active spermatogenesis taking place, in spite of advanced brain disease with its accompanying dementia and paresis.

Films of the semen contained in the vesiculæ seminales were stained and showed normal staining and normal-shaped spermatozoa; but also varying, yet generally large, numbers of degenerating forms. In some instances the latter were far in excess of the normal, but in no instance did the semen show the same deficiency in numbers of spermatozoa or such degenerated forms as in the semen contained in the vesiculæ seminales of cases of dementia praecox, even in comparatively early stages.

Examination of Sections of the Testis.

In several cases there was atrophy of one testis, and this, when examined microscopically, showed patches of degenerated and atrophied tubules only; and pale-staining or eosin-staining empty shrunken tubes were seen; all the spermatic cells had disappeared in these patches, leaving only the thickened membrana propria and sustentacular framework. Between the tubules are seen the interstitial cells, and these may form nodules or islands amidst the degenerated empty tubules (Fig. XV). The cause of these patches of degenerated tubules may be some obstruction of the vasa efferentia from an old gonorrhoeal epididymitis, old local syphilitic inflammation, or arterial sclerosis, for the same appearances were found in a well-marked case of generalized arterial sclerosis.

We may conclude therefore that an acquired dementia, due to the direct action of the toxins of the spirochaetes of syphilis on the brain, even though the destruction is great, does not cause any generalized arrest of spermatogenesis. Many of these cases had died with advanced tuberculosis, others had died of bronchopneumonia or dysentery, and yet active spermatogenesis existed in many of the tubules.

These results are of interest when taken into consideration with the results of severe injury of the brain and spinal cord, followed by prolonged sepsis and suppuration, where arrest of spermatogenesis was sometimes observed. It may be assumed that extensive destruction of the brain or a severe lesion of the spinal cord, with prolonged sepsis and pus formation, can arrest spermatogenesis, whereas a slow insidious progressive destruction of the higher cortical structures spread over years, but without prolonged suppuration, will not do so. The arrest of spermatogenesis is probably due to the prolonged suppuration, entailing the using up of lipoids.

CONGENITAL SYPHILIS.

Congenital syphilis may affect the testis in various ways. The spirochaetes may invade the testis in common with other organs of the body, as in the following case of fatal prenatal syphilis.

1. A dead full-term fetus from Shoreditch Infirmary was examined. All the tissues, including the testis, were found to contain spirochaetes. The invasion of the testis was probably recent and due to a spirochaetal septicaemia. Sections of the organs stained by Levaditi's method showed abundance of spirochaetes, many undergoing plasmolysis. There was some degree of inflammatory change, and this has produced a condition by which the groups of interstitial cells of Leydig were only indistinctly seen compared with the normal. Their outline is very indistinct and the cytoplasm appears to be disintegrated and vacuolated. The fibrous tissue is increased and there is an abundance of lymphocytes. It is probable that if this child had survived and lived to adolescence there would have been a complete arrest of development of the tubules and interstitial cells and probably partial or complete destruction of the same, with replacement by dense fibrous tissue.

The accompanying pedigree chart was made by Miss Agnes Kelly, who conducted for the Board of Control an investigation of families in Bethnal Green. It will be observed that she has obtained no syphilitic history in this very degenerate stock. The pedigree chart shows that there were five offspring successively dying in infancy, attributed to teething, convulsions, and consumptive bowels (Diagram Fig. XVI). Observation shows that spirochaetal infection was the cause of this infantile mortality and possibly the previous degenerate and diseased offspring might be accounted for by a syphilitic father and mother; although it is more likely the mother became infected after the ninth conception.

2. In a congenital syphilitic child, aged 4 months, from Shoreditch Infirmary, with syphilitic rash on the body, dead of

pneumonia, the tubuli seminiferi were twice as large again as in the newborn child. The interstitial cells are present and contain lipid, but they are relatively few in number compared to the testis at birth. There are fine lipid granules seen in the epithelial cells of the tubules. In this case the spirochaetes

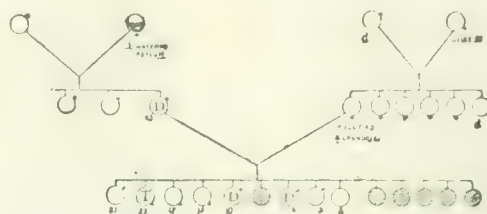


FIG. XVI.—Pedigree of a degenerated stock. The father, D, was a drunkard degenerate, married a woman of fairly healthy stock; thirteen conceptions, the last five being miscarriages. The final was the case in which premature birth occurred, in which the spirochaetes were found in all the organs of the body including the testes. The four previous miscarriages were no doubt due to syphilitic infection of the mother. No history of syphilis was obtained by the investigator of this pedigree, but this objective proof demonstrates that syphilis was the cause in the previous cases.

have not invaded the testicles. Consequently there is no arrest of development and the appearances are normal (Fig. II).

Juvenile General Paralysis.—H. I., aged 8, was brought by his mother to Charing Cross Hospital. He was a typical congenital syphilitic. The mother had had miscarriages and children born dead before he was born. The patient suffered with a gummatous node on the right arm; there was paralysis of the left external rectus; chorio-retinitis; Hutchinsonian teeth and well-marked rhagades round the mouth; he snuffed and was stunted in growth. He was treated with mercury. The mother came and told me later that her boy had had a fit at school. He had passed a motion during the fit; prior to his losing consciousness he was seen to be writing, and rubbing out what he had written on his slate in a strange manner. He was a good boy, but backward at school. I lost sight of him for eight years, when I found him in Colney Hatch Asylum, suffering with juvenile general paralysis. Although 16 years of age, he was in bodily growth and mental development like a boy of 8. There was no hair on the pubes, the genital organs were very small. The testes were infantile in size. The boy died after a few months' residence in the asylum. The brain showed a very advanced condition of dementia paralytica. No doubt the fit he had eight years' previously was due to an active spirochaetal development in the brain. Now the testes in this case were not larger than small filberts; examined microscopically, they showed a complete arrest of development of the tubuli seminiferi (Fig. XVII). They were no larger than those at birth; there was a round-celled infiltration of the interstitial tissue, but no cells of Leydig could be seen. Preparations stained with osmic acid showed no interstitial lipid. It is possible that there had been a spirochaetal invasion, as in the case of C., or it may be that the syphilitic toxæmia, which had persisted from birth, had had a devitalizing influence and caused the arrest.

A. B., admitted to Colney Hatch at the age of 21. Diagnosis epileptic. He was sent to the colony at Ewell, but transferred to Claybury on account of outbursts of violence, attended by excitement, and associated with progressive dementia. He was diagnosed as epileptic dementia, and it was not until he died and was examined by me on the post-mortem table that the true nature of the disease was discovered. I found an old leukoma on the right cornea, but this was the only obvious symptom of congenital syphilis observable. The cerebro-spinal fluid was drawn off post mortem by lumbar puncture and an abundance of lymphocytes found; a marked positive complement deviation of the fluid was obtained. There was a marked excess of fluid in the lateral ventricle, and the fourth ventricle was very granular. The right hemisphere weighed 30 grams more than the left; the convolutions generally were atrophied, and the membranes were thickened and adherent, especially over the mid line, so that I came to the conclusion that this was a case of congenital syphilis and juvenile general paralysis of the insane of slow development. The seminal fluid in the vesiculæ, diluted with pericardial fluid, showed an abundance of normal shaped spermatozoa, some of which were still active eight hours after death. The right testis weighed 20 grams; the left 8.5 grams. Emulsion of each showed spermatozoa.

Microscopic examination of films of the seminal fluid stained with haematoxylin and eosin showed normal stained spermatozoa, with very few degenerate forms. Sections of testis stained with scarlet showed an abundance of interstitial lipid; there was also a fair amount of medium-sized and fine orange granules in the spermatogonia and cells of Sertoli. Here and there were patches of ruby-red, irregular masses of droplets and granules corresponding to the situation of completely degenerated tubules. Haematoxylin and eosin preparations showed a number of tubules with thickened basement membrane. Lying inside were cells of Sertoli and vacuolated degenerated spermatogonia. The greater number of the seminiferous tubes appeared to be perfectly normal, showing normal spermatogenesis in all stages. A few spermatozoa could be seen in some of the atrophied tubules. The most advanced stages of degeneration of the tubes exhibited tubules with thick basement

membrane and the lumen filled with an amorphous matter stained by the eosin dye. The interstitial cells appear to be normal in these degenerated areas.

H. A., aged 23. Admitted to Claybury March 2nd, 1914, diagnosed as dementia tabo-paralytica, died June 26th, 1914. Brain meninges thickened and opaque, granular fourth ventricle. Naked-eye sclerosis of posterior column.

Examination for Spirochaetes.—Right and left temporal lobes few, left mesial frontal numerous, left frontal lobe fairly numerous, also motor area. None in spinal cord. Not only were spirochaetes found in these regions by examination with dark-ground illumination of emulsions of the brain, but in films stained by Fontana method. Emulsions of the testicles were examined by the dark-ground illumination; a few spermatozoa were found, but no spirochaetes.

Sections of the testes show some tubules with spermatozoa and active spermatogenesis in all stages; far more, however, show an arrest of development with thickening of the basement membrane. Sections of material hardened in Flemming's solution show interstitial lipoid and fine granules of lipoid in the cells of Sertoli.

A. R., able-bodied sailor, R.N., aged 21. Father died of general paralysis of the insane. Mother demented. No signs of syphilis on the body visible, but his brothers showed well-marked signs. A younger brother (imbecile), who was in Caterham Asylum, was a well-marked congenital syphilitic. This patient was in the navy, and developed general paralysis with epileptiform seizures, in one of which he died. Although there was no obvious external signs of congenital syphilis, the liver showed marked pericapsular, perivascular and pericellular fibrosis. The brain showed the characteristic lesions of general paralysis of the insane. The testes weighed together only 20 grams but showed active spermatogenesis in many of the tubules.

Sections stained with haematoxylin and eosin show patches of atrophied tubules in which the whole of the epithelium has disappeared, and in these places there is a marked increase of connective tissue. Where the connective tissue is of normal amount the seminiferous tubules are larger and packed close together. These tubules show all stages of active spermatogenesis. There are a large number of lymphocytes in the interstitial tissue where the atrophied tubules are seen. This may have been caused by a localized spirochaetal colonization. The interstitial hormone cells do not seem to have been destroyed, however. The interstitial cells contain lipoid; and lipoid granules are seen in the spermatogonia and Sertoli cells.

The Relation of Congenital Syphilis to Infantilism.

Infantilism, as was long ago pointed out by Fournier, is a frequent condition met with in congenital syphilis, and I have seen a large number of cases of juvenile general paralysis of the insane affecting the male sex in adolescence in which there was an infantile condition of the genitalia, absence of pubic hair, absence of hair on the upper lip and chin, a treble voice, stunted growth—in fact, a failure in the appearance of the secondary sexual characters.

In only one of the four cases here recorded (H. I.) was there infantilism. Examination of the testes showed an infantile condition of the tubules and a disappearance of the interstitial cells. The other three cases all showed plenty of interstitial cells—hence the secondary sexual characters were present.

There can be no doubt that syphilis in the parents may lead to infantilism in the offspring, and I have seen numerous cases of infantilism in which there was no obtrusive signs of syphilis, although other children of the same parents presented well-marked stigmata; moreover, cases show that one individual of a family of congenital syphilitics may exhibit the characteristic stigmata of congenital syphilis and another show no external signs, yet the internal organs may exhibit *post mortem* the most marked evidences of the disease. I have, as previously stated, found spirochaetes in the brain of a juvenile general paralytic who showed no external sign of congenital syphilis, and who during life was regarded as a case of epileptic dementia, the true nature of the disease having been discovered *post mortem*. Are we, then, to consider that every case of infantilism in congenital syphilis is caused by spirochaetal invasion of the testis, or is it not more likely due to the effect of a chronic spirochaetal intoxication depressing the vital energy of the whole body, as in chronic juvenile tuberculous cases?

It would be of interest to examine the pituitary gland in these cases for the spirochaetes which have caused the brain disease. Some cases, as that of R., in which there was extensive perihepatitis and pericellular fibrosis, evidence of a past active spirochaetosis of the internal organs, nevertheless manifested no infantilism.

Examination of the testicle showed that if a spirochaetal invasion had occurred the resultant inflammatory change had caused only a local and partial destruction of the gland. Some of the seminiferous tubules showed an

extreme atrophic change with destruction of the whole of the spermatogenic cells, only the membrana propria remaining, but in the immediate neighbourhood were normal spermatic tubules showing active spermatogenesis; the interstitial cells were present in abundance in the atrophied areas. These three cases of congenital syphilitic dementia paralytica showed in every way the same histological appearances met with in a large number of cases of paralytic dementia due to acquired syphilis. The histology of the testis and vesiculae showed they were capable of procreating. What would be the influence on the offspring? All the evidence tends to show that every syphilitic child has a syphilitic mother. I have only seen one case of congenital syphilis transmitted to the next generation.

CONGENITAL IDIOCY OR IMBECILITY WITH EPILEPSY AND SPERMATOGENESIS.

The testes were obtained from the subjoined five patients dying in Caterham Asylum. The material was kindly sent to me by Dr. Campbell, the superintendent. There was one case also dying in Claybury investigated. All the patients were unmarried, and the history as to heredity was unknown.

CASE 1.

E. W. S.; age on admission 23. Had been an imbecile, with epilepsy, from birth. Died from pulmonary tuberculosis, peritonitis, and enteritis, on March 26th, 1912, aged 32.

Autopsy (March 27th, 1912).—The brain weighed 44½ oz.; there was no deficiency of development of the cerebral convolutions (symmetrical); no gross lesions. Weight of testicles: Right, 18 grams; left, 15 grams.

CASE 2.

H. M.; age on admission 16. Had suffered from idiocy with epilepsy from birth. Died, aged 19, on April 9th, 1912; the cause of death was enteritis, the other organs being normal.

Autopsy (April 12th, 1912).—The brain weighed 33 oz.; there was general deficiency of development. Weight of testicles: Right, 3½ grams; left, 2.8 grams.

CASE 3.

H. A.; age on admission 17. Had suffered from idiocy, without epilepsy, from birth. Died, aged 21, from pulmonary tuberculosis, on April 19th, 1912.

Autopsy (April 20th, 1912).—The brain weighed 43 oz.; there was opacity of the pia arachnoid, considerable accumulation of fluid, and general deficiency of development. Records of the weight of the testicles before preservation were lost; 4.5 grams and 3.2 grams respectively after hardening in Müller, October 18th, 1915.

CASE 4.

W. C.; age on admission 18. Had been an imbecile from birth, but without epilepsy; no arrest of spermatogenesis. Died on June 2nd, 1912, of lobar pneumonia with cardiac dilatation, aged 44.

Autopsy (June 4th, 1912).—The brain weighed 42½ oz.; there was deficiency of development of convolutions with commencing atrophy. Weight of testicles: Right, 20 grams; left, 23 grams.

CASE 5.

J. D.; age on admission 15. Suffered from imbecility, with epilepsy, from birth. Died on June 2nd, 1912, at the age of 15; the cause of death being the status epilepticus.

Autopsy (June 4th, 1912).—The brain weighed 45½ oz.; there was congestion of the meninges, marked increased vascularity of cortex, basal ganglia, and cerebellum, and deficiency of development of convolutions. Weight of testicles: Right, 12 grams; left, 11 grams.

CASE 6.

J. R. Y., a congenital imbecile, was 31 years of age on admission to Claybury; he died of lobar pneumonia, aged 51.

Autopsy.—The brain weighed 1085 grams; each hemisphere only weighed 475 grams. The pons, medulla, and cerebellum only weighed 120 grams. The testes were very small and atrophied; no sign of spermatogenesis.

Cases 1, 2, 3, and 5 all showed a complete arrest of spermatogenesis.

Cases 1, 2, 5, and 6 showed arrest of development of the seminiferous tubes, no evidence of karyokinesis of the nuclei of the cells and a very thickened membrana propria.

In Case 2, with very marked fibrotic atrophy the tubules are hardly discernible in the dense fibrous tissue; where cells are seen in the tubules they are either embryonic in appearance, or more usually they are either degenerated or destroyed, and completely replaced by a hyaline swollen mass, staining pink with eosin as if coagulation necrosis had occurred. So complete and universal is the pathological change that it is difficult to recognize the organ as testicle.

In only Case 1 could I find any normal interstitial endothelial cells, and these existed in characteristic groups and contained lipid granules.

In Case 4—imbecility without epilepsy—there was no naked-eye abnormality of the testis, the weights were normal, and sections of the organ exhibited active spermatogenesis.

Cases 2 and 3—idiots—show the most marked changes in the testes (Figs. XVIII and XIX).

These observations appear to show the influence of congenital epilepsy in completely arresting spermatogenesis, although not necessarily, as in Case 1, affecting the interstitial cells. It may not, however, be due so much to the occurrence of the fits as the morbid condition which has caused the fits. The appearances rather suggest congenital syphilis as the cause. Probably Case 4 was a higher grade imbecile, and the examination of the testes shows that these individuals are, from a eugenic point of view, the most dangerous to the community.

SPERMATOGENESIS IN DEMENTIA PRAECOX.

When dementia praecox manifests itself at puberty or early adolescence the morbid histology of the testis may present a different picture from that seen when the disease commences in adolescence and after the sexual glands have become functionally active. There may be an arrest of development of the seminiferous tubes.

It is often difficult to determine precisely the age of onset of many cases of dementia praecox. Doubtless many of them had really manifested premonitory symptoms years before they were certified and sent to an asylum. Indeed, as Kraepelin points out, many of the cases have commenced in early childhood. They are, in fact, cases of dementia precocissima. So it is not possible to correlate accurately the duration of the clinical symptoms with the degree of regressive atrophy of the testis. As a general rule it may be said, as regards those in which the symptoms commenced in adolescence, that the longer the patient has been in the asylum the more pronounced is the morbid change in the testes.

Eight cases were investigated in which the disease in all probability commenced in early adolescence, and twelve in adolescence or later. Besides those twenty cases which died in the London County Asylum the material from two cases was also received from Dr. Turner of Brentwood; both these latter had only manifested symptoms a relatively short time.

The size and weight of the testicle did not always correspond with the degree of change in the organ, and this may be accounted for by the fact that in some cases the interstitial fibrous tissue is more increased than in others. As a rule, however, large testes were more likely to exhibit spermatogenesis than small ones. The testes with regressive atrophy showed, as a rule, no spermatozoa when an emulsion was made of the organ and microscopic examination by dark-ground illumination effected. There is usually a correspondence between the naked eye and the microscopic changes in the testes.

The contents of the vesiculæ seminales in the cases in which they were examined were either devoid of spermatozoa or the spermatozoa were markedly degenerated in all but the earliest stages of the disease.

Morbid Histological Changes in the Testes.

Microscopic examination of the testes reveals three stages of regressive atrophy in sections stained with haematoxylin and eosin or van Gieson.

Stage I. (Well exemplified in three cases.)

Many of the tubules are considerably diminished in size and contain no spermatozoa (Fig. XX); spermatogenesis is seen in only a few of the tubes relatively to the normal; the spermatocytes are fewer in number and their nuclear staining is not so good, mitosis and karyokinetic figures in the spermatocytes are not so well seen and the nuclear skein of active mitotic division is less evident. The formation of spermatids is either not evident in the tubules or less than in the normal tubules. The cells of Sertoli, which in the normal tubules are crowded with lipid granules, forming a syncytium which fills up the spaces between the spermatogonia and spermatocytes, are in the atrophied tubules empty, or partially empty, thus rendering them distinctly visible (Figs. XX and XXI). The basement membrane is thickened and, instead of consisting of one layer of nucleated flattened cells, consists of several layers.

The nuclear substance of the spermatid cells stains with a variable degree of intensity with the haematoxylin. Indeed, one of the most obvious signs of regressive atrophy is a diminution of stainable nuclear substance. (Compare the appearances of Figs. XIX and XX with Figs. V and VIII.)

First Stage of Regressive Atrophy.

It is difficult to observe the earliest changes of the first stage, and it is only by a systematic examination with an oil-immersion lens and comparison with normal sections stained in a similar manner that changes can be determined.

Some of the tubules may show normal spermatogenesis, and it may be that a patient may suffer with the signs and symptoms of dementia praecox* and have normal testes.

I have already stated that the vesiculæ seminales may contain abundance of degenerated spermatozoa and that this degeneration may be recognized by their staining reaction—for example, the head stains throughout with the eosin and not with the haematoxylin. It may be assumed that this staining indicates that these spermatozoa have long been dead. In sections of the testis of cases diagnosed as dementia praecox* which die within a year or two of the onset of symptoms active spermatogenesis exists in many of the tubules and numbers of spermatids and spermatozoa may be seen; when these are examined with a high-power magnification, a large number of the spermatids, however, do not appear sufficiently stained with the haematoxylin, but are largely stained with the eosin. Again, the heads of the young spermatozoa are similarly imperfectly stained with the haematoxylin, and a large number are stained throughout pink with the eosin, indicating a degenerative condition. These spermatozoa, moreover, do not seem to penetrate into the cells of Sertoli to grow and develop their tails, as occurs in the normal. It is not claimed, however, that a colour reaction alone is a convincing proof of commencing degeneration.

Again, in places the tubules, although containing numerous spermatocytes and spermatogonia, show a deficiency of nuclear matter, for the mitosis and kinetio figures are absent in some of the cells and in others are not so well marked or are deficient. Where these appearances in the tubules occur the cells of the membrana propria have proliferated. In most of the tubules, however, the cells of Sertoli in these early stages show abundance of lipid granules.

These early changes are, as a rule, found in cases in which symptoms of the mental affection have not been long manifest. But I have quite recently had a case of ten years' duration in which active spermatogenesis was found in many of the tubules, in spite of the fact that he was addicted to excessive masturbation.

Many of the patients affected by dementia praecox are known to be excessive masturbators, and it might be assumed that the changes are caused by this act entailing a continuous loss of nuclear substance. But there are many arguments which can be advanced against this—namely: (1) In many of the cases the notes do not give this history; (2) I have pointed out the fact that general paralytics and men suffering with other insanities and neurasthenia, in which prolonged masturbation has occurred, do not exhibit a similar morbid change such as is found in the second and third stages to be presently described; (3) regressive involutional changes in the ovaries with atretic corpora and degenerated follicles containing dead ova have been described by Dr. Laura Forster in a number of cases of dementia praecox, and this has been confirmed in a case investigated by Dr. Kojima. I therefore agree with Kraepelin that loss of seminal fluid by masturbation is not the cause of dementia praecox, for this mental disease is as common in women as men, and this argument would not hold for women who masturbated continuously. All the evidence points to a degenerative condition.

The Lipoid Reaction.

In the first stage abundance of interstitial lipid granules are seen; the syncytial cells contain fine lipid granules,

*It may be mentioned that non-degenerative forms of dementia praecox are occasionally met with, and it is not always easy to diagnose dementia praecox in the early stages. Cases of confusional insanity may present a similarity in clinical symptoms to dementia praecox. As Régis points out, chronic confusional insanity may terminate in dementia.

but in the tubules in which there is regressive atrophy occurring, the fine granules are not equally distributed as a continuous circle in the spermatogonia and syncytial cells.

Second Stage of Regressive Atrophy.

In the second stage the great bulk of the tubuli seminiferi are atrophied and the basement membrane thickened. In relatively few of the tubules are any spermatozoa found. Most of the tubules, however, show spermatogonia and spermatocytes, the latter exhibiting little evidence of active mitosis and formation of spermatids by heterotypical division. In some of the tubules there is evidence of a complete degeneration of the spermatogonia and spermatocytes, the cytoplasm of the cells is swollen and clear, and the nuclei uniformly stained exhibit no evidence of karyokinesis. The interstitial tissue is increased. Scarlet stained preparations show abundance of coarse, deep-red lipid granules in the interstitial tissue. Some fine granules are seen in the syncytial cells mingled with large, irregular sized, coarse, deep, red granules in the outer and inner layers of cells of the atrophied tubules. This is in great measure due to a fatty degeneration of the spermatogenic cells.

Third Stage of Regressive Atrophy.

In this stage the appearances are like those of the second stage, only more advanced, and resemble those described in sections of atrophic testicles of two demented octogenarians (vide Cases p. 6 8).

The third stage of regressive atrophy is often found in the testes of patients dying in early adolescence, and it is probable some of these were cases of dementia praecox and spermatogenesis had never occurred.

With haematoxylin and eosin stain the sections show a very marked increase of interstitial fibrous tissue, the cells of Leydig are not distinctly seen.

The basement membrane is markedly thickened, consisting of three or four layers of flattened cells. The cells contained in the tubules may consist of a single or double layer of round cells with clear swollen cytoplasm and round uniformly stained nuclei which exhibit no evidence of karyokinetic figures or active mitosis. In many of the tubules there is nothing left except a few irregular shaped nuclei and sustentacular threads (Figs. XXII and XXI(1)).

Scarlet-stained preparations show no fine orange lipid granules in the syncytial cells, but numbers of coarse and fine ruby-red granules of varying size within the thickened basement membrane, filling up the lumen of the tube (Figs. XXIV and XXV). Obviously these are the products of fatty degeneration of the cells and provide evidence of the last stage of degenerative regressive atrophy.

The above described histological examination of the testes in dementia praecox tends to show that a precocious senility of the germ plasma is a fundamental biological condition in this disease.

Why should this Degeneracy come on in Adolescence?

If we look at the matter from a broad biological standpoint, and consider that Nature is unmindful of the individual and mindful only of the species, it will be obvious that a progressive degeneration of the most vital tissue of the body at an early age would stop procreation of a degenerate stock by anticipation.

Likewise the examination and atrophy of the testes with suppression of spermatogenesis in idiots and imbeciles may be regarded as evidence of the same provision of Nature to eliminate degenerates and thereby support the survival of the fittest. Unfortunately, high grade imbeciles are very fertile, and serve as a constant source of fresh degeneracy. Space prohibits me from doing more than summarizing the investigation of the male sexual organs in dementia praecox. The essential change in the central nervous system is a degeneration of the nucleus of the neuron, and in all probability a diminution of the organic phosphorus in the cell. This nuclear degeneration is not limited to the cortex cerebri, but is found in all regions of the brain, although in varying degree in different situations in different cases. A full account of the cases will be published in a separate monograph, in which an attempt will be made to correlate the biochemical changes in the sexual organs and the central nervous system in explanation of the disordered psychic functions of this

degenerative demential disease of adolescence—a disease which we have seen offers a marked contrast to paralytic dementia, which we know to be due invariably to spirochaetal infection, resulting in chronic inflammatory reaction.

SUMMARY.

1. The testes were examined in 100 cases of death occurring at all ages from birth to 86 in London asylums and various civil and military hospitals. The fluid contained in the vesiculæ seminales was examined in a considerable number of these cases, and in a few of the cases—especially dementia praecox cases—the thyroid, adrenals, and pituitary glands were also examined.

2. The development of the testis from birth to puberty was studied in a number of cases, with the following results: At birth there is a large amount of interstitial tissue between the seminiferous tubules; the interstitial cells of Leydig are observable in great numbers and have the appearance of a gland; these cells contain a lipochrome substance like lutein and lipid granules. At four months the tubules are twice the size; the interstitial cells are hardly visible and there are no lipid granules seen. At eleven there is very little change in the size of the tubules and the interstitial cells are only discernible by examination with an oil-immersion lens (resting stage). There is little or no interstitial lipid seen. There are commencing evidences of nuclear activity and karyokinetic figures, but no spermatids nor spermatozoa.

At fifteen (puberty) the tubules are closely approximated and all stages of active spermatogenesis are observable. There is abundant interstitial lipid, and lipid granules are seen in the cells of Sertoli, but not so abundant as in the adult.

3. Cases dying before puberty of chronic diseases—for example, tuberculosis, congenital syphilis, and chronic morbus cordis—show appearances of complete arrest of development of the seminiferous tubules. Probably Kyle's view is correct, that arrested development of the tubuli seminiferi is a sign of deficient vital resistance to disease.

4. Normal spermatogenesis was studied in cases of death from shock caused by severe injuries. Active spermatogenesis is seen in all stages. The interstitial cells contain abundant lipid and the spermatogonia, and especially the Sertoli cells lining the tubules, are filled with fine lipid granules.

5. Where there are sheaves of spermatozoa these granules in the Sertoli cells are less numerous. The immature spermatozoa dive into the Sertoli cells and there acquire their tails, which consist almost entirely of lipid, lecithin and some cholesterol.

6. Evidence is given to show that the lipid granules seen in the interstitial tissue and in the cells lining the basement membrane of the tubules constitute the raw material from which the nucleic acid, necessary for active nuclear proliferation and spermatogenesis, is formed. These lipid granules give the oxidase reaction owing to the presence of traces of unsaturated fatty acid. Decomposition and recombination processes are brought about by the catalytic action of the iron of the cell nucleus upon the oxidase, causing molecular oxygen O_2 to be converted into free atomic oxygen $O\cdot$ on the surface of the granules.

7. Reasons are given for supposing that these lipid granules are derived from the lipid store in the cortex adrenalis. Elliot's work, showing that the lipid content of the cells of the cortex adrenalis is diminished in microbial intoxication, is confirmed. However much it is diminished on this account, the lipid granules in the testes are not appreciably so. This may explain the fact, so frequently observed in this inquiry, that prolonged microbial toxæmia does not arrest spermatogenesis. It seems as if the lipid substance in the testes acted not only as the phosphorized raw material of nuclear activity, but as a protective barrier to the effects of circulating microbial poisons.

8. The spermatozoa in the vesiculæ seminales were observed alive and active eight hours after death in two cases, but the majority were dead. Examination of the seminal fluid from a large number of vesiculæ showed several important facts. In a healthy man the heads of the spermatozoa are stained by the basic dye, whereas in persons dying of various chronic diseases the majority of the spermatozoa are stained by the acid dye indicative of a death change. May not this indicate a survival of the

fittest in the vesiculæ seminales, and a protective provision of Nature? The most marked degenerative changes in the spermatozoa were found in dementia praecox.

9. Whereas in 66 successive cases of general paralysis spirochaetes were found in an emulsion of the brain, spirochaetes were not once found in 50 cases in which an emulsion of the testis was examined microscopically by dark-ground illumination. This fact may be correlated with the fact that general paralytics, unless the wives are infected, have healthy children.

10. The testes of a large number of general paralytics, including four of the juvenile form, were examined. In not one of these cases was there a complete arrest of spermatogenesis. In many there was very active spermatogenesis and normal staining spermatozoa in the seminal fluid. A considerable proportion of the testes, however, showed strands and islands of completely atrophied tubules amidst normal tubules. Seeing that where this atrophy occurred islands of normal Leydig cells are seen, it must be concluded that the atrophy of the tubules was due to local obstruction of the vasa efferentia by gonorrhoea or syphilitic inflammation. In one case of juvenile general paralysis in which the secondary sexual characters had not developed the testes were infantile in development.

11. The testes of 22 cases of dementia praecox were examined. Three stages of regressive atrophy are described for convenience and brevity, but they all gradually merge from the earliest change in the biochemical reaction of the heads of the spermatozoa to a complete regressive atrophy of all the seminiferous tubules, so that the appearances of the organ as regards capacity for function in an adolescent was less than that observed in the decrepit dement of 86. Indeed, the testis of an old dement of 80 showed more microscopic evidences of virility than any one, even of the earliest cases, of dementia praecox. In one-half at least of the cases there was complete regressive atrophy. It is possible that this regressive atrophy of the testes may be correlated with a deficient vital resistance to infective disease, especially tuberculosis, from which the vast majority of these cases die.

12. The testes of 6 cases of imbecility and idiocy were examined; 5 of the 6 showed complete absence of spermatogenesis. Various other forms of mental and bodily disease at varying ages showed active spermatogenesis, in spite of the most advanced and active tuberculosis, dysentery, bronchopneumonia, and gangrene of lung.

13. A full account of the microscopic and biochemical changes in the reproductive organs and the central nervous system in dementia praecox will form the subject of a future communication.

14. There is abundant evidence to show that whereas, on the one hand, the degenerative changes in general paralysis obvious to the naked eye in the brain are due to a chronic inflammatory reaction occasioned by spirochaetal poison; on the other hand, dementia praecox is a primary nuclear degenerative process with no inflammatory reaction and no obvious naked-eye changes of the brain. An attempt will be made later to correlate the morbid biochemical changes observed in the reproductive organs with those in the brain in this disease.

Note.—In referring (JOURNAL, November 29th, p. 699) to Marshall's work, *The Physiology of the Reproductive Organs*, I should have stated that the article in this work from which the quotation was made was written by Dr. Cramer, and that it was his experiments that led to the conclusion that the lipid granules serve as oxygen carriers.

MUMPS IN ADULTS:

AN ANALYSIS OF 694 CASES.

BY

GEORGE MACLEOD, M.A., M.B., Ch.B., D.P.H.

THE only plea for the publication of these clinical notes on what is usually regarded as a mild contagious disease of childhood is the circumstance that the war has afforded opportunities for the study of its manifestations in adults. Of the 694 cases, 78 per cent. occurred amongst Australian troops, who offered peculiar facilities for the spread of the disease in a virgin soil, as very few of them had previously been exposed to this infection, which consequently overran entire units in a short space of time.

Parotitis.—The onset, usually abrupt, was characterized, as usual, by general malaise, stiffness in the lower jaws, pain on mastication, with rise of temperature (99° to 101° F.), followed by swelling of the salivary glands, which subsided in three to nine days. In many cases there was no fever, and the temperature usually subsided by the fifth day, though the glandular swelling had by no means subsided by that time. The parotid glands were usually first affected, and in 64 per cent. of the cases the left parotid was the first to be involved; in 17 per cent. the disease was confined to the left side, in 20 per cent. the right side was alone affected, while in the remainder the glands on both sides were ultimately implicated. In two cases the disease first appeared in the submaxillary glands, and spread to the parotids later. In nine cases orchitis was the first manifestation; four of these had no glandular involvement, two others had pain only in the lower jaws, and the remaining three developed parotitis three to four days after the onset of the orchitis. In several cases redness and oedema or a whitish exudate was observed around the orifice of Stenson's duct, but no causal organism has been recovered.

Orchitis.—This has been the most frequent complication, occurring in 140, or 20 per cent. of the cases. It usually begins about the seventh day of the disease, but sixteen cases developed this complication after the tenth day, the latest recorded being on the twenty-second, thirty-fourth, and forty-fourth days respectively; while in fifteen cases orchitis set in on the first day of illness with or without swelling of the salivary glands. The orchitis is usually heralded by general malaise, sudden rise of temperature to 103° or frequently to 105° F., with, as a rule, severe pain and tenderness in the affected testicle, which soon becomes swollen, sometimes to a great size, with signs of fluctuation. It is accompanied by swelling of the cord and of the hydatids of Morgagni, and oedema of the scrotum. In 16 per cent. of the cases of orchitis both testicles were affected, while the remaining one-sided affections were divided almost equally between the right and the left sides. The temperature is frequently maintained at 104° or 105° F. for three or four days, is accompanied by delirium and vomiting, and falls by crisis. In order to prevent or forestall this complication the patient, if an adult male, should be kept in bed for ten days from the commencement of his illness; once it is established, orchitis should be treated by rest in bed, restriction of the patient to a bland fluid dietary, and regulation of his bowels by mercurial and saline purgatives; local support and the application of belladonna ointment help to soothe the inflamed gland. When the patient has recovered from the orchitis and is allowed up, he should be advised to continue wearing a suitable suspensory bandage for some weeks. A relapse of orchitis has been met with twenty-three days after its original appearance; in none of these cases has there been any evidence of atrophy of the gland, and in no case did suppuration occur in an inflamed testicle.

Other Complications.—Symptoms suggestive of pancreatitis—namely, fever, headache, vomiting, pain and tenderness around the umbilicus, with a small rapid pulse—have been observed in 6 cases, all of whom made a good recovery in seven to ten days, the vomiting being the most troublesome symptom. There was considerable rigidity of the left rectus abdominis muscle, but no tumour could be felt and there was no evidence of undigested fats in the stools, while the subsequent history of these cases gave no indication of impairment in function of the pancreatic gland. In 48 cases which, after a primary attack of ordinary severity, had already entered on convalescence, the temperature rose abruptly on the seventh to tenth day to 100° or even 104° F., with a pulse rate of 80 to 120. Apart from a feeling of general malaise, there were no local manifestations to indicate the seat of this complication, which is apparently toxic in nature; the temperature fell by crisis in two to five days, and thereafter convalescence was uninterrupted. Other complications include bronchitis, tonsillitis, rheumatism, and conjunctivitis; laryngitis and aphonia occurred in 8 cases, earache and deafness in 3, otorrhoea in 2, while in 2 cases suppuration of the parotid occurred. In 2 cases death occurred from intercurrent disease.

Relapses.—These are not uncommon and were met with in 17 cases. In 8 of these the parotid was involved, in 8

the submaxillary, and in the remaining one the sublingual gland. The relapses occurred from the tenth to the thirtieth day and always at a distinct interval after subsidence of the primary swelling. In one case a chronic recurring soft swelling of the parotids persisted for over eleven weeks.

All the above cases were in adult males of 18 to 40 years of age; seventeen were second attacks and one claimed to have celebrated his third attack.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

TREATMENT OF DELIRIUM TREMENS.

YEARS ago, while in practice in South America, where I had considerable experience of it, I found the treatment of delirium tremens most unsatisfactory. I tried everything then recommended, including potassium bromide in half-ounce doses by the rectum every four hours, without much effect. The war having called me back out of retirement, I chose asylum work, and learned much about hypnotics; first, perhaps, that hyoscine in pharmacopoeial doses is useless. I confirmed the late Charles Mercier's statement that it is harmless at any rate up to doses of one thirty-third of a grain; that its effect, even then, is very transient, and that this dose may be repeated at frequent intervals, say every four hours, if necessary. In sudden emergencies, and for immediate effect, I look upon it as the best hypnotic. In adequate doses it has never failed me, and it has never given a moment's anxiety. A colleague, who suffered from "heart disease" with anasarca, orthopnoea, and insomnia, found it the most satisfactory of all the hypnotics in his case until, after fourteen doses of one seventy-fifth of a grain each, it completely lost its effect. For prolonged use, sulphonal would, but for its high price, supplant all other hypnotics except hyoscine. I often give thirty grains night and morning, and I have never had any cause to repent doing so. Owing to its slowness in action I prefer not to give it three times a day, lest the doses should overtake one another. I have never met any one who has seen a case of haematoporphyria. In addition to its hypnotic effect, sulphonal appears to me to be the only mental sedative we have for prolonged use.

On taking charge of this institution I was instructed that the guardians objected to the use of alcohol. This was somewhat of a disappointment, for I had been looking forward to testing Dr. Francis Hare's recommendation to treat the delirium with alcohol. Failing that, I fell back on hypnotics. Here are short notes of the first case:

A publican, aged 40, was admitted on December 20th, 1918, in an excited and violent state, suffering from delusions of persecution. The heart and lungs were normal. At 4 p.m. he was given hyoscine hydrobromide (gr. $\frac{1}{3}$), and was ordered sulphonal (gr. 30) night and morning. At 8 p.m., as he was still very agitated and restless and had had no sleep, he was given a hypodermic injection of hyoscine hydrobromide (gr. $\frac{1}{3}$), and calomel (gr. 5) was ordered. He slept for two hours, but then became unmanageable. At 1 a.m. the hypodermic injection (gr. $\frac{1}{3}$) was repeated, and 1 oz. of white mixture ordered. He slept for an hour and a half, but again became unmanageable, and was given another hypodermic injection. In the evening he again became unmanageable, and the injection was repeated; he slept for a few hours, but next morning he was noisy and violent, though he seemed stronger. The pulse was 100, and the skin cool and dry. The hyoscine was not repeated, but the sulphonal was continued. On the morning of December 23rd it was reported that he had slept well, and in the evening the dose of sulphonal was reduced to 20 grains. On December 24th he looked well, and the pulse was 76. On the next day the sulphonal was given up.

It will be noticed that the first efficient dose of hyoscine broke his sleeplessness. The others carried on until the sulphonal could act, and between them I think we may safely claim that they cured in three days what threatened to be a severe attack. This man was in good physical condition, and scarcely caused anxiety. Not so the next—fat, bloated, and a soaker all his life. He was a bad subject for any disease, and most unpromising as a case of delirium tremens.

A man, aged 52, was admitted as an epileptic on August 26th, 1919. It was reported that he had always been a heavy drinker and had been strange for more than a year. His first epileptic seizure occurred nine months ago, and he was a patient in the infirmary in a strait-jacket in May, 1919. His memory had

often been a blank of late, and on the morning of his admission he was found on the floor covered with bruises. He was at first treated with paraldehyde; he did not sleep, and became very excited, restless, and hallucinated. On the evening of August 29th it was obvious that he was suffering from delirium tremens. At 7.30 p.m. he was given hyoscine hydrobromide gr. $\frac{1}{3}$. He slept for over four hours, but as he was very restless when he woke he was given gr. $\frac{1}{3}$. On August 30th it was reported that he had slept well; he was ordered sulphonal (gr. 30) night and morning. He slept well that night, and woke rational in the morning. On September 1st the dose of sulphonal was reduced to gr. 20 night and morning, and on the following day it was stopped. On September 5th he had recovered.

F. WYATT-SMITH, M.B. Cantab.

Constance Road Institution,
East Dulwich, S.E.

Reports of Societies.

TREATMENT OF MALARIA IN ENGLAND.

Incidence in England: Importance of Efficient Treatment.

At a meeting of the Medical Society of London, held on November 24th, the President, Mr. V. WARREN LOW, being in the chair, Lieutenant-Colonel S. P. JAMES opened a discussion on the treatment of malaria in England. He said that since March 1st of this year medical practitioners had been obliged to notify all cases in which a patient upon whom they were in professional attendance was suffering from malaria, and since the order came into force nearly 14,000 patients had been so notified, and the weekly number of notifications showed no signs of diminution. The number of official notifications had increased from 598 in March to 1,172 in October, together with 405 additional cases reported by the Ministry of Pensions; for the first three weeks of November there were 918 official notifications, and 1,247 additional cases reported by the Ministry of Pensions. A map was exhibited showing that cases of malaria were now distributed almost everywhere in England and Wales, so that a thorough knowledge of the diagnosis and treatment of the disease must be communicated as widely as possible to medical practitioners throughout the country. From the point of view of treatment the most important cases were those in which the treatment of an acute relapse had not been successful in preventing a fatal issue. The number of deaths registered as due to malaria was usually, in this country, between 50 and 60 per annum, but in 1917 the number rose to 86, in 1918 to 103, and in the present year, if the rate of mortality now prevailing continued, the number would be 280. During the first three months of 1919 there were 70 deaths, and a most disquieting feature was that most of them were of young men and men in the prime of life; the same was true of the deaths in 1918. Another serious feature was that there was evidence that in at least some instances death might have been prevented if all medical practitioners in England had had a sufficient knowledge of diagnosis and treatment of the disease. In the hope of preventing some avoidable deaths the Ministry of Health issued a note which was published in the leading medical journals of August 16th this year. With a view to early inquiry into the deaths which might occur, it had since been arranged that registrars throughout the country should send immediately to the Ministry a certified copy of the registration of a death attributed to malaria.

The total number of cases of malaria contracted in England which had been discovered and notified since September, 1917, now amounted to 414. Among these cases occurring in the civil population the great majority (75 per cent.) had been in children under 15 years of age. In these indigenous cases, as in a fatal case of exotic malaria which was described, some of the patients received quite inadequate quinine treatment even after a definite diagnosis of malaria had been made. Serious cases of malaria occurred in great numbers during the war on ships returning home from Dakar, Sierra Leone, and other West African ports, and in these also quinine treatment was inadequate.

Having in view that in present circumstances a practicable method of treatment must be a simple and inexpensive routine, Colonel James said that he believed that

no material change in the rules of treatment given on pages 15 and 16 of the official pamphlet, *Suggestions for the Care of Malaria Patients*, was necessary, but the degree of success with any of the four methods of after-treatment mentioned in the pamphlet depended almost entirely on the administrative arrangements for ensuring that the routine was conscientiously followed. Although all demobilized soldiers suffering from malaria were entitled to receive treatment from an insurance practitioner, a great many men who still suffered from relapses had not applied to any medical practitioner for treatment since they were demobilized. The Ministry of Pensions had recently arranged to forward particulars of these cases (which presumably had not been notified) to the Ministry of Health, and the number of such reports received each week now averaged about 300.

With regard to the men who did place themselves under the care of a medical practitioner there were great difficulties in exercising more than a small amount of supervision over their treatment, especially in country districts. Some of them were gametocyte carriers when they were demobilized and still remained so; some thought that they knew more than their physicians about what was the best treatment in their particular case; some were men whose illness was really in the nature of one of the psychoses in which the patient continued to nurse a complaint, the cure of which would deprive him of some of the benefits to which he was entitled while his disability lasted. As an unfortunate consequence of the neglect to continue systematic treatment after demobilization, some men had this year been the source from which members of their own family and visitors in their households had become infected with the disease. Such occurrences showed that arrangements for preventing the spread of malaria in this country were intimately connected with arrangements for ensuring the satisfactory treatment of demobilized soldiers. The Ministry of Pensions had recently instituted a special malaria clinic through which, under the direction of Sir Ronald Ross, the systematic examination and treatment of pensioned soldiers in the London area was being undertaken. If it was the intention of the Ministry of Pensions to make similar arrangements in other parts of England he would suggest that the next area selected should be one in which it would be possible eventually to prove that the establishment of the clinic had not only been the means of curing all the patients in the area, but had also, for that reason, been an effective means of preventing the occurrence of cases contracted locally.

Intravenous Injections of Quinine.

Dr. G. NEWTON PITT said that intravenous injection was a simple and valuable method of administering quinine but was seldom employed. Apparently a groundless fear of tetanus had prevented its more general use in India. It had also been hitherto disapproved of by the army authorities. The chief objection seemed to be associated with the idea that a large amount of fluid must be injected and that the method must be reserved for only the most pernicious cases, but it was allowed that it was often most successful when all other methods had failed. Dr. J. D. Thomson and others had shown that 12 to 15 grains of quinine in 5 to 15 c.cm. of fluid had been injected in some thousands of cases with practically no ill results, but most observers had not used it. The amount absorbed was definite; the asexual parasites rapidly disappeared from the peripheral circulation, and it would seem that cases which had previously been through intensive quinine courses and had relapsed obtained much benefit from it. Relapses, however, could only be prevented by prolonged daily use of quinine, however administered, and hence it would not replace the oral method, but might be much more generally used as an alternative method in all resistant and severe cases. For the past four years relapsing cases had received an intravenous injection; and at the 2nd London General Hospital this had been followed by 10 grains of quinine three times a day by the mouth, excepting once a week, when the injection was repeated. A stock solution of bihydrochlorid of quinine 4 grains per cubic centimetre was kept and sterilized; 3 c.cm. diluted up to 15 c.cm. with warm saline was injected slowly with a small needle. The patient was kept quiet for an hour, or in bed if the temperature was not normal. There had been no ill results and but little

discomfort. Thrombosis was quite exceptional; the proceeding was painless and much preferred by the patients to intramuscular injections. The cases of blackwater fever with abundant parasites in the blood, when the urine was not very scanty, quickly cleared up with one or two injections. Dr. Dudgeon had shown that there was a tendency to necrosis when the injection was intramuscular; it was painful, and the rate of absorption was uncertain; the number of cases of resulting paralysis had not been small. The rectal method was irritating, and an examination of the urine showed that often the quinine was not absorbed. The subcutaneous method recommended in the *Military Medical Manual* was very painful and should never be adopted. The speaker claimed that the intravenous injection of quinine in 15 c.cm. of liquid might be much more generally adopted in all serious cases, especially in hospitals.

Dosage of Quinine.

Dr. ALDO CASTELLANI said that the treatment of malaria could be summarized in one word—quinine. The dosage should be considerable; he used 30 grains daily for adults, often 45 grains, and occasionally 60 grains. Possibly in temperate climates smaller doses might bring down the temperature. Children required more quinine than might be supposed. He usually advocated 8 to 10 grains daily for a child one year old. The drug should be given by the mouth in ordinary cases, intramuscularly in severe cases, and both intramuscularly and intravenously in pernicious cases. He preferred the bisulphate for oral administration. Intramuscular injections were extremely useful, but the following precautions were necessary: the skin should be disinfected thoroughly, the solution should be sterile and non-irritating, the injection should be deep, and an area already infiltrated should be avoided. The time for giving quinine in malaria in the tropics and malarial countries was "at once." The noxious effects had been too much emphasized. Idiosyncrasy to quinine was very rare. It might be asked whether quinine provided a cure. It produced a symptomatic cure; but no doubt the infection often only became dormant. No other drug had a specific action. Methylene blue was occasionally useful in cases where quinine could not be taken. Arsenic was useful in chronic cases, but salvarsan and neo-salvarsan had no specific action. Tartar emetic was beneficial in certain cases by reinforcing the action of quinine; the same was true of phosphorus. He preferred to inject the phosphorus subcutaneously (phosphorated oil m i-iv, in sterile olive oil).

Importance of Early Treatment.

Dr. ANDREW BALFOUR said that most people were in agreement about the treatment of malaria in the acute phase. It was important to treat malaria early before gametocytes were formed, and he advised that at the onset the patient should be kept in bed for from ten to fourteen days. The patient should be treated, not the disease. For ordinary cases oral administration sufficed; intramuscular injections were at times exceedingly useful and succeeded when treatment orally failed. Intravenous injections were valuable, but he thought it was a method chiefly useful for hospitals. The subcutaneous method, which had fallen into disuse, had recently been employed with some success in Dar-es-Salam. As an explanation for relapses it might be that there were different strains of parasites, some not easily affected by quinine. Not the same difficulties had been encountered in this respect in Mesopotamia as in Macedonia. Sufficient emphasis had not been laid on tonic measures, and it was often forgotten how frequently the liver was affected. Injections of adrenalin as a means of treatment had nothing to recommend it, but it was possibly a useful diagnostic measure.

Rational Treatment of Malaria.

Dr. GORDON WARD said that the treatment of malaria depended much on the phase in which it was seen first, the duration of the infection, the associated symptoms, and the status and intelligence of the patient. It might be prophylactic for the disease or prophylactic for relapses. The practitioner felt at a loss both in diagnosis and treatment, because he could nowhere find authoritative information as to the nature of the disease or as to the part really played by quinine in its treatment. Much of the knowledge existed, but it was not widespread or easily available. He

urged upon the society the desirability of supporting a committee charged with the duty of summarizing our knowledge of the nature of malaria in a form suitable for the general practitioner. It should read as a continuous story, so that symptoms fell into their proper place and seemed to call naturally for the treatment which was appropriate. A more rational mode of treatment would give its proper place to quinine, but would not deny the efficiency of auxiliary modes of treatment. Dr. Ward then gave a few examples of his ideas as to the nature of the disease and their bearing on treatment, choosing examples which seemed to him to point to modes of treatment diametrically opposed to those officially advised. With regard to the acute relapse, the rigor, hot stage, and stage of sweating, he conceived the sequence of events to be as follows:

First there was sporulation of the parasite, conditioned by circumstances with which we were imperfectly acquainted. Sporulation was accompanied by liberation of toxins. The toxins affected many tissues, but chiefly the proteins of the circulating blood, especially those of the red cells. These were so altered as to become in effect "foreign" proteins, and this change was followed by the sequence of events which in other circumstances we called shock or anaphylactic shock. These events were a primary vaso-constriction leading to capillary stagnation, withdrawal of fluid from the vessels, and consequent fall of blood pressure. With this there was some degree of exhaustion of the adrenal secretion. The primary vaso-constriction corresponded to the stage of rigor with pallor or cyanosis. The remaining stages were, he thought, associated with the return to normal, passing on the way through a stage of reactionary vaso-dilatation. The pyrexia was not an essential part of a rigor, for many observers had seen rigors in which it was absent. The fall of blood pressure and the adrenal exhaustion had been recorded by several observers.

Proceeding on the supposition that the above view was correct in general outline, he traced the symptoms of rigor to the changes in the blood proteins and not to the sporulation of parasites. It did not therefore seem essential to give quinine at once. He did not worry the patient while shivering, as he was officially advised to do, nor introduce any drug into his stomach until the temperature began to fall. Experience told him that there would be plenty of parasites in the blood an hour or so later and intravenous quinine could then be given with as much success as at any time, and with a great deal less discomfort to the patient. Assuming that these views were correct in general outline, Dr. Ward deduced that the altered proteins would have to be excreted. Sometimes this happened in the form of albuminuria, rarely as haemoglobinuria, not very frequently a tinge of jaundice told the same tale. He was therefore careful to assist elimination and recuperation as far as possible. The probability of a low blood pressure led him to give plenty of fluid, as did the certainty that the kidneys were in some danger of being blocked with waste products. Should there be haemoglobinuria the danger was very apparent, but if there were only albuminuria it was apt to be overlooked. The necessity for recuperation pointed to strict confinement to bed, attention to diet, etc. Opium was an antispasmodic, and might therefore tend to mitigate the severity of rigors, consequently he always included a little liq. morph. hydrochlor. in a quinine prescription. Moreover aspirin had the reputation of being a vaso-dilator, and he therefore gave it in the hope of hastening the sweating stage, and had very little doubt that it had this effect. If the acute relapse were essentially an auto-anaphylactic process it might be possible to treat the disease by anaphylactic injections. Vidal, Abraham, and Brissaud had demonstrated that the paroxysmal haemoglobinuria of syphilis, which closely resembled in all clinical particulars blackwater fever, was auto-anaphylactic in origin and nature. By measures devised from this point of view it had been possible so far to cure patients of this disease that they no longer had attacks, even when exposed to cold in a way which had hitherto always produced them.

He supposed that the destruction of red cells by the lodgement of parasites was a negligible factor in the production of anaemia, and that toxic haemolysis taking place in the peripheral circulation in part, but chiefly in the portal, was all-important. It might be explained by supposing that red cells in the peripheral circulation injured short of haemolysis were unable to resist the haemolytic activity of the spleen in the portal circulation, and so succumbed there. If there were much peripheral

destruction haemoglobinuria might occur, but the kidney was able to deal with a certain amount of haemoglobin. Some was retained in the kidney as an iron-containing pigment. That in the portal circulation was partly turned into bile and partly also stored; there were good grounds for supposing that the marrow also retained some iron. It therefore followed that in a severe anaemia after many relapses, or even after a single severe relapse, such as in blackwater fever, the body had very large stores of iron. According to this view, the administration of iron for the anaemia of malaria was not necessary, and it was often not well borne. He insisted on plenty of light and fresh air, and found that the red cells augmented as quickly as had been recorded for any sort of anaemia. He therefore reached a point of view very opposite to that to which he was asked to subscribe not long ago—namely, the treatment of malaria in dark tents with iron tonics.

Specific Differences.

Major H. W. ACTON said it was often not realized that "malaria" constituted a group of three fevers, each with its own parasite. In order of frequency of relapses, quartan came first, benign tertian next, and malignant tertian last. Malignant tertian cases did not relapse after quinine treatment, but there seemed to be a chance-like character about the action of the drug in the benign tertian form. It was suggested that the malignant tertian parasite was attacked because the drug became fixed in the internal organs, whilst the parasites of quartan and benign tertian malaria circulating in the peripheral blood might escape for the same reason. Attempts were made to find another cinchona alkaloid which would have the action of quinine and yet remain unfixed. Cinchona febrifuge, which contains quinine, quinidine, cinchonine, and cinchonidine, was found to be more beneficial in benign tertian infection than quinine. By exclusion it was shown that the therapeutic result was attributable either to the quinidine or to quinidine and cinchonidine.

The East African Campaign.

Major J. PRATT JOHNSON recounted his experiences of the treatment of malaria in South Africa in the troops returning from the East African campaign. Malaria varied greatly in its effects in different individuals, and the treatment of every case should be controlled by systematic blood examinations. The treatment he had advocated was 30 grains of quinine daily for three weeks, followed by 20 grains for a month, and then by 10 grains for two months. No man was discharged until two consecutive examinations of his blood were negative for parasites, and until he was clinically fit. Important to the success of treatment was the patient's own defensive mechanism; quinine did not exert a parasitocidal effect in debilitated persons. Salvarsan preparations were used considerably; benign tertian infections appeared to be cured by it, but in malignant tertian malaria it seemed to act rather as a tonic. Soamin exerted no definite parasitocidal effect, but was a so apparently tonic in its action. If quinine were absorbed, the route by which it was administered did not matter.

ARTHRITIS IN DYSENTERY.

At a meeting of the Section of Medicine of the Royal Society of Medicine, held on November 25th, the President, Dr. A. F. VOGLER, being in the chair, Dr. GEORGE GRAHAM read a paper on arthritis in dysentery: its causation, prognosis, and treatment. After a reference to the previous records of the condition, he said that during the summer and autumn of 1916, when the dysentery cases which came from Salonica were almost entirely of the bacillary type, a number of cases of arthritis were seen in Malta. The paper was based on notes taken from thirty-three of these. With one exception all the patients contracted dysentery elsewhere, and the joints were usually already affected before the patients arrived in Malta; the early stages were in consequence not seen there, though the progress of the disease and its spread from joint to joint could be watched. The usual day of onset lay between the sixth and twenty-third after the first symptoms of dysentery. The first symptom was severe pain, which preceded the swelling of the joint by some hours. The effusion into the joint took

place very quickly and was usually large. The severe pain went long before the joint swelling subsided. There was no reddening of the skin, and the joint was not hot, even in the most acute cases. In some many joints were attacked on the same day, but in most the joints were attacked at intervals. The commonest joint to be affected was the knee, and the ankles and elbows came next in frequency. The small joints of the wrists and hands were occasionally affected. There was no relationship between the time of onset of the arthritis and the severity of the dysentery. In severe cases there was a considerable rise in temperature, which might oscillate for many weeks. In mild cases the temperature was little, if at all, raised. Seven patients were quite well within four weeks, twenty were ill for much longer periods. When the joints subsided quickly there was seldom any after-trouble, but when the process was a slow one with relapses there was often stiffness.

Some of the patients developed eye symptoms, which were of two kinds:

1. Infection of the conjunctivae, without purulent discharge, but accompanied by pain and lacrymation.
 2. Cyclitis or irido-cyclitis.
- The latter occurred in seven cases. The conjunctivitis always cleared up quickly with washes such as argyrol (2 per cent.). When the iridocyclitis developed under observation it yielded readily to treatment by atropine, but in three cases in which it had become well developed, recovery was very slow, and in one case iridectomy was subsequently needed for synechiae.

The arthritis was distinct from that produced by serum; the evidence suggested that early treatment of dysentery by serum prevented the occurrence of arthritis. The mode of onset resembled that of rheumatic fever, but the absence of flushing of the skin and of great heat in the joint was against this diagnosis; moreover, sodium salicylate gave no relief. Aspirin relieved the pain, but the joint swelling did not subside. The chronicity of the arthritis and the absence of endocarditis was also unlike rheumatic fever. The appearance resembled gonococcal arthritis, a resemblance enhanced by the eye changes, but fasciae were not affected, and there was no evidence of gonorrhoea. "Rheumatoid arthritis" was simulated closely by dysenteric arthritis in its later stages. Treatment was most unsatisfactory. Aspirin seemed to relieve the pain, and Scott's dressing was useful locally. Application of a splint was advisable if the pain were severe or if the limb tended to assume a bad position. Massage was of great use in later stages. The joints were not relieved by serum administered in two cases.

His conclusions were:

- (1) An affection of one or more joints takes place as a rare complication of bacillary dysentery.
- (2) The joint affection is often accompanied by a severe constitutional disturbance.
- (3) Conjunctivitis and iridocyclitis are secondary complications in about half the cases.
- (4) The disease runs a slow and chronic course, but apparently ends in complete recovery.

In the discussion which followed Dr. P. MANSON-BAHR said that arthritis occurred in some epidemics and not in others. In Fiji in one epidemic it occurred in 47 per cent., but again in 1910, of 350 cases of dysentery none developed arthritis. In 1916 he had seen cases from Gallipoli, and 9 out of 27 in one series had arthritis, whilst in another hospital of 150 cases none had arthritis. He had not seen arthritis develop after the serum of the Lister Institute had been used. The wasting of muscles was often marked, and caused a resemblance to rheumatoid arthritis, the joint changes being also more periarticular than intra-articular. He had punctured the joints in 3 cases, but the fluid was always sterile. He had seen the conjunctivitis and iritis in 2 cases. Parotitis was also seen at the time, but it was questionable if it was related. In the cases of arthritis Shiga's bacillus was the infecting agent in all, and the arthritis came on sometimes with alarming rapidity, and might affect almost any joint, including the hip and temporo-maxillary joints.

Dr. C. J. MARTIN said that he had not encountered arthritis at Lemnos in many hundreds of cases of dysentery, but afterwards met with it in Egypt and in France. This suggested that there was some local difference to account for the peculiarity, perhaps either in the serum or in the organism. The majority were in cases of Shiga infection, but in three the infection was by the Flexner group. The joints were sterile, but this was

not unexpected, especially in view of the high content of antibodies in the joint fluids.

Sir ARCHIBALD GARROD emphasized the occurrence of the syndrome—arthritis and eye changes. The recognition of the iridocyclitis was an acquisition from the war. The similarity to gonococcal arthritis was very close. Aspirin relieved the joint pains.

Dr. W. H. WILLCOX spoke of the occurrence of the arthritis in Mesopotamia. Though the infection in most cases was bacillary, especially by Shiga's bacillus, he had seen it in amoebic cases. In these it occurred late, and was possibly a secondary infection. He preferred to call the joint condition caused by serum synovitis rather than arthritis, but fluid actually occurred in the joint. Eye symptoms were met with associated with the arthritis. In some cases he had seen with the arthritis a fibrositis. He thought that serum was important in the prevention of arthritis. With great patience and rest improvement occurred in the joints, and they sometimes cleared up altogether. In Indians he had been surprised to find remarkably good results by the administration of salol.

Dr. PHILIP HAMILL had seen successful results by treating the arthritis with serum after attempts by other methods had failed. More than one injection had been found necessary.

DETAIL IN ABDOMINAL OPERATIONS.

THE opening meeting of the Glasgow Medico-Chirurgical Society was held on November 21st, when the president, Mr. A. ERNEST MAYNARD, delivered an address on the practical significance of attention to detail in abdominal operations. It was not, he said, in books, and but rarely in special monographs, that such surgical minutiae were described; rather they were to be observed in the practical work of individual surgeons. Nothing could be considered too trivial, however small the detail, when compared with the major end in view, if the execution of that detail might lessen the possibility of subsequent complications, hasten the process of repair, and diminish the occurrence of pain. Details in connexion with abdominal operations were considered under three heads: (1) Those in connexion with the abdominal parietes. The incision should be carried through that part of the abdominal wall where there was aponeurotic tissue, as the efficient healing of the aponeurosis was the surest preventive against subsequent hernia. As few cuts as possible should be made. To "dissect" an incision was practically to lacerate the tissues, so that in addition to the time which such dissection entailed, it exposed devitalized tissue to the risk of autogenous infection. In the closure of a wound the most perfect possible coaptation of the margins should be aimed at, so that no spaces be left for the accumulation of blood, serum, or liquid fat. Hence if the deep part of a very fat wound could not be effectually coapted, it was wise to introduce along the floor of the wound a small rubber drainage tube. Too tight stitching and the strangulation of tissues should be avoided, such tight stitching being more likely to occur with interrupted than with continuous sutures, and in the former if the knot was a "reef" and not a "surgical" one. The "granny" knot and so-called "anchor" dressing were undesirable because apt to cause discomfort to the patient. The procedure advocated by Mr. C. J. Bond, of wiping the wound previous to its final closure with 3 or 4 per cent. iodine solution, was of proved value, but not the least soiling of the peritoneum must be permitted, as this was almost certain to lead to the subsequent formation of intraperitoneal adhesions. (2) Details associated with the parietal and visceral peritoneum. One of the details most frequently neglected was the failure to evert the edges of the peritoneum in suturing the parietal wound, the result being the formation of adhesions of omentum, mesenteries or bowel to the under surface of the parietal cicatrix. In suturing a visceral wound, on the other hand, the peritoneal edges should be carefully inverted. The edges of divided peritoneum should be seized by sharp hooks, and not by pressure forceps, which damaged and devitalized the compressed part so as to render it more likely to contract adhesions. (3) Details associated with the viscera. All raw surfaces, including any accidental laceration of visceral peritoneum, must be carefully obliterated, not only to prevent subsequent adhesions, but to avoid

infection of the peritoneal cavity from the intestinal canal. All undue mechanical irritation of the peritoneum, by long exposure, undue manipulation, or prolonged contact with foreign material, such as dry gauze compresses or plugs, must be avoided, as must also any accumulation of extravasated blood, which may later become organized into fibrous tissue. With a view to inhibiting the formation of organized tissue during the period required for the healing of the peritoneal lesion, a 3.8 per cent. solution of sodium citrate should be used for soaking gauze compresses, etc., and for washing away blood and other exudates from the peritoneal cavity. It was doubtful whether drainage tubes were of any service, except to drain distinct abscess cavities and the pelvic cavity when it was practically a large abscess; and it was certainly pernicious to retain them for any length of time, as ulceration might result from their pressure on the bowel. If used, the occlusion of their calibre should not be promoted by the insertion of a retaining safety-pin through the centre. As to sutures, if the skin edges were united by non-absorbent material, such as silk or silkworm gut, not less than ten days should elapse before removal in wounds which had healed by primary union. The patient, after an abdominal operation, should be kept in the recumbent position until it was felt that the cicatrix would not yield to the ordinary demands made upon it, and a good test of its complete organization was that when pressed upon no difference could be felt between it and the surrounding parts—in other words, any obvious thickening along the line of the incision indicated the presence of still soft tissue. On an average, the period of recumbency might be taken as four weeks.

A discussion followed the address, in which Drs. JONES, BAUFOR MARSHALL, W. D. MACFARLANE, and others took part.

Reviews.

DEMENTIA PRAECOX.

THE translation of Professor KRAEPELIN'S work on *Dementia Praecox and Paraphrenia*¹ furnishes a valuable addition to the English literature of psychiatry. While the conception of dementia praecox has been provocative of much discussion, it has also been the stimulus for work of the greatest value in relation to mental disorder. The formulation of the two great groups—manic-depressive insanity and dementia praecox—marked a new era in the study of insanity and constituted the most important attempt to give symptoms a prognostic significance. Since this volume deals with cases which bulk largely in the chronic wards of every asylum, no better guide could be suggested to those who are commencing the study of insanity, and the excellent and full description of symptoms and cases will indicate what should be looked for in clinical observation. The disorder is defined in the following terms:

Dementia praecox consists of a series of states, the common characteristic of which is a peculiar destruction of the internal connections of the psychic personality. The effects of this injury predominate in the emotional and volitional spheres of mental life.

The early chapters of the book are devoted to a general survey of the mental and bodily symptoms of the disorder, and subsequently the various clinical groups are described in detail. The forms which the disorder assumes were previously included under the headings of katatonic, hebephrenic, and paranoid dementia praecox, but here they are subdivided into no fewer than eleven groups. How far it is advisable to attempt such refinements in what is a purely artificial grouping is open to question. Such a method leads to much repetition in description, and perhaps tends to over-emphasize the value of symptomatological classification, and to obscure the value of the broad generalization included in the conception of dementia praecox. The question of prognosis is, of course, of the greatest importance, and it is significant to observe that only 12.5 per cent. of Professor Kraepelin's cases could be said to have completely recovered. It must be remembered that these data are based upon careful observations

spread over a number of years, and thus the fact cannot be ignored that the symptoms of dementia praecox in young persons must be regarded as a serious matter for their future, even in those cases in which temporary readjustment takes place. To what extent deterioration will occur cannot always be accurately determined in the acute phases of the disorder, but the prognostic indications suggested in this volume will be found helpful to the clinician.

Special interest will naturally attach to the conclusions reached in respect to the pathology of the disorder, a subject to which Sir Frederick Mott makes references in his important paper, publication of which is concluded in this issue of the JOURNAL. On these matters Professor Kraepelin expresses himself with the greatest reserve. As regards the morbid anatomy, the findings of Alzheimer, Nissl, and others are detailed and their significance discussed in relation to the symptoms. In reviewing the results of these researches the author makes the guarded suggestion that, "In the roughest outlines clinical experience and anatomical findings in dementia praecox may with certain presuppositions be brought into agreement to some extent." It may perhaps be said that in many cases it is difficult to associate the clinical features of the disorder with destructive cerebral changes. The "dementia" differs in character from that occurring in the frankly organic psychoses, and it is by no means unusual to find a characteristic case of dementia praecox, after showing for many years the signs of extreme deterioration, eventually make a recovery, and not only exhibit a complete awareness of the past, but also undertake intellectual tasks of a high order.

The causation of the disorder the author finds "still wrapped in impenetrable darkness." He discusses the influence of age, general conditions of life, hereditary disposition—present in 70 per cent. of his Heidelberg cases—injury to the germ, personal idiosyncrasy, external causes, sexual life, and auto-intoxication. In regard to the last factor, Professor Kraepelin writes: "The general statement may, perhaps, with all reserve, be made that a series of facts in dementia praecox up to a certain degree makes probable the existence of an auto-intoxication in consequence of a disorder of metabolism," and it would appear that he is inclined to favour the view that such a factor is instrumental in the causation of the disorder. To the psychogenetic point of view in relation to dementia praecox he is entirely unsympathetic, and he apparently finds no place of contact with those who have regarded the study of the individual psychology as illuminating and significant.

Differences of opinion will still undoubtedly exist as to how far Professor Kraepelin has succeeded in demonstrating in the dementia praecox group the existence of a definite morbid entity, or as to how far the term is suitable to include the clinical groups it is made to cover. Types of mental disorder shade so imperceptibly into one another in respect to their symptom pictures that it is most difficult to make convincing divisions of them into clear-cut entities on a purely symptomatological basis. This point is fully discussed in the volume, and the conclusion is reached that it is justifiable to connect the great majority of the cases brought together within the term "dementia praecox," because they are due to the same morbid process, and therefore to regard it as a single form of disease. There is no doubt that in instigating the study of mental disorder from the point of view of the course it will take—the longitudinal method—Professor Kraepelin has rendered a great service to psychiatry, and the editor and translator are to be thanked for making this important work available to English readers.

PHYSIOLOGY OF EXERCISE.

The Physiology of Muscular Exercise,² by Dr. F. A. BAINBRIDGE, is a most useful and valuable addition to the series of monographs on physiology edited by Professor E. H. STARLING. It does not deal in detail with the physiology pure and simple of muscle contraction, although the second chapter gives a short and quite adequate account of the processes involved. The volume is a definite and, on the whole, a successful, attempt to promote

¹ *Dementia Praecox and Paraphrenia*. By Professor Emil Kraepelin of Munich. Translated by R. Mary Barclay, M.A., M.B. Edited by G. G. M. Robertson, M.D., F.R.C.P. (Edin.). Edinburgh: E. and S. Livingstone, 1919. (Demy 8vo, pp. 331; 43 figures. 15s. net; postage 6d.)

² *The Physiology of Muscular Exercise*. By Professor F. A. Bainbridge, M.A., M.D., F.R.S. London: Longmans, Green, and Co., 1919. (Demy 8vo, pp. ix + 215; 22 diagrams. 10s. 6d. net.)

"a closer connexion between the investigator in the laboratory and those directly concerned with the health and well-being of the community." It must not, however, be presumed that this is a book suitable for placing in the hands of the lay enthusiast. It contains the scientific exposition of the principles which underlie the behaviour of the body during muscular exercise, knowledge which is absolutely essential for those who have to undertake the treatment of the sick and the unfit.

The field covered is wide. Following the discussion of the physiological processes involved in contraction, the effects of exercise on respiration, and more particularly on the reaction of the blood, are dealt with. There follow two full and interesting chapters on the output of the heart and the factors which influence and control it, and then come chapters dealing with the arterial pressure and the blood supply to organs, the passage of oxygen into the tissues and its consumption, the co-ordination of the changes taking place during exercise, training and its effects, and the after-effects of exercise, fatigue, and exercise at high altitudes. In connexion with the much debated question as to the mode of the passage of oxygen into the blood, there is a short and fair discussion of the two rival theories of diffusion and secretion. Professor Bainbridge does not state his preference, but contents himself with an apt, although not judicial, quotation from Gibbon: "It is not the duty of the (writer) to interpose his private judgement on this nice and important controversy," and with the cautious general statement that the latest evidence "appears to have weighted the scales heavily in favour of the diffusion theory."

It is a pity that this excellent general survey of the question has not a better index. There is a fairly good, although not exhaustive, bibliography.

HAVELOCK ELLIS'S ESSAYS.

UNDER the title *The Philosophy of Conflict, and other Essays in War Time*, Mr. HAVELOCK ELLIS³ has added a second collection of well written and thoughtful articles to his first series of *Essays in War Time* (1916). Some of these later essays have a closer relation to the war than their title might suggest; thus that on Herbert Spencer maintains that the great war set the final seal on this philosopher's fame, so that henceforth he takes his rightful position in the great English tradition; "The Star in the East" deals with problems raised by the Russian revolution; and the study of "Élie Faure," the author of *Histoire de l'Art*, describes the temperamental revolution caused by experience as a surgeon in the trenches. In "Vae Victibus" the great wars of history are stated to have been for the most part ambiguous, but that when any meaning emerges the moral is clearly "Woe to the victors." In another article the author maintains that war became possible with the advent of the metals; the Stone Age, he thinks, was, in the main, peaceful. Eugenics in relation to the war, war and the sex problem, and the unmarried mother, are discussed, and in an essay on the "Mind of Woman" the author lays it down that genius—as roughly distinguished from talent, which means the ability to do better what others do well—is the far rarer ability to do something which others have hitherto been unable to do, and that among British geniuses only 5.3 per cent. have been women.

In the chapter on "Psycho-analysis in relation to sex," Freud's position is defended, and some of the reasons for the opposition to his doctrines are discussed. After the appearance of Breuer and Freud's original *Studien über Hysterie*, the senior of the two, having acted as a missionary for the conversion of his more distinguished colleague, disappeared from the scene; Freud, originally a pupil of Charcot, who regarded hysteria as a purely physical problem and the recognition of a sex element in the causation of disease as degrading, subsequently carried the sexual and psychical factors in hysteria much further than Breuer. Freud's doctrine that primitive impulses cannot be destroyed—though they may be suppressed, converted into morbid forms, or sublimated—is considered to be of great importance. The volume closes with a charming sketch of Abraham Cowley, the poet.

NOTES ON BOOKS.

THE *Medical Directory*⁴ for 1920, being the seventy-sixth annual issue, is a little larger than that for this year, but contains the same classes of information arranged in the same way. The increase in bulk is to be accounted for, in part at least, by the fact that the number of names of practitioners has been increased by 1,160. In England there has been an increase of 269, but there has been a decrease in Wales (4), in Scotland (34), and in Ireland (23), so that the net increase in Great Britain and Ireland is 208. Of the increase of 269 in England, more than half (153) is credited to London, but probably many of these addresses are temporary. The increase in the Services is 114. A great increase has occurred in British registered medical practitioners resident abroad (838), of whom a large proportion reside in the dominions, colonies, and dependencies. In the official lists in the *Directory* the changes necessitated by the establishment of the Ministry of Health, the Welsh Board of Health, and the Scottish Board of Health, have been made. We would suggest that in future issues the names of the members of the Medical Consultative Councils and of the Irish Public Health Council should be given. It is almost superfluous to praise the *Medical Directory*, for it is well known and highly appreciated by the medical profession; perhaps those responsible for the conduct of medical journals owe it a special debt of gratitude.

The December issue of *Medical Science: Abstracts and Reviews* opens with a long paper on influenza, dealing in succession with epidemiology, bacteriology, symptoms, complications, morbid anatomy, prophylaxis, and treatment, by way of abstracts of recent papers. The next section is concerned with malaria. We observe an abstract of a paper by Patrick on intravenous injections of a 5 per cent. solution of quinine bihydrochloride, leading to the conclusion that they will check any series of attacks, but have not much effect in preventing relapses. Intravenous injections of antimony tartrate in a 1 per cent. solution gradually exercise a destructive influence on the parasite and have an effect in preventing relapses. The periodical is published for the Medical Research Committee by the Oxford University Press. The annual subscription is 21s.; the price of a single number is 2s.

The third edition of Professor J. ARTHUR THOMSON'S volume on *Heredity*⁵ appears to be substantially the same as the second. Some additional references have been introduced and certain errors have, the author says, been corrected. He claims that his book is a fair-minded treatment of the numerous debatable questions, and this claim is fully justified. His attitude is judicial, and sometimes the jury of readers may think that he leaves too much to them. But as a convenient and comprehensive presentation of a subject as important to medicine as to any other department of biology, the book remains unequalled. We can heartily commend it to readers; any one of them who wishes to pursue the subject further will find guidance in a copious bibliography and in a subject index the author has provided to it.

Professor HOFFMAN'S *Everyday Greek*⁶ is a little book for anyone who wants to know the derivation of a number of the ordinary English words or scientific terms (particularly medical terms) that have been formed from Greek originals. It is a class book primarily, and its use demands the ability to read Greek; so far as it goes it should be of service and interest to many readers. Perhaps the author might add to a later edition the reasons why the word "aneurysm" should not be spelt—as it so often is in medical literature—"aneurism"; and how it is that infection with a "streptothrix" gives rise to "streptotrichosis," not "streptothricosis."

DR. M. ARANGO, of the National University of Colombia, has written a pamphlet on the treatment of epilepsy,⁷ advocating the use of lumbar puncture and the injection of stovaine into the spinal theca, the dose being from 1 to 8 cc. of the salt. In status epilepticus the intravenous injection of normal saline also is advised.

⁴ *The Medical Directory*. 1920. Seventy-sixth annual issue. London: J. and A. Churchill. 1920. (21s. net.)

⁵ *Heredity*. By J. Arthur Thomson, M.A., LL.D. Third edition. London: John Murray. 1919. (Med. 8vo, pp. xvi+627. 15s.)

⁶ *Everyday Greek*. Greek words in English, including scientific terms. By Horace Addison Hoffman, Professor of Greek and Dean of the College of Liberal Arts, Indiana University. Chicago: The University of Chicago Press. 1919. (Post 8vo, pp. ix+107. \$1.25 net.)

⁷ *A Prposito del Tratamiento de la Epilepsia*. By Dr. Miguel Arango, Universidad Nacional de Colombia, etc. Barranquilla: Tip. El Derecho. (Cr. 8vo, pp. 103.)

⁸ *The Philosophy of Conflict, and other Essays in War Time*. Second Series. By Havelock Ellis. London: Constable and Co. 1919. (Post 8vo, pp. 293. 6s. 6d. net.)

British Medical Journal.

SATURDAY, DECEMBER 6TH, 1919.

THE PATHOLOGY OF DEMENTIA PRAECOX.

No problem of psychiatry is deserving of more careful investigation than that of dementia praecox. Cases included under this category present a variety of clinical pictures, but the tendency towards a greater or lesser degree of mental deterioration is the fundamental characteristic of the group, and no therapeutic measures are available at present to arrest or control the dementing process. It is true that the disorder cannot always be diagnosed with certainty in its early stages, and that a certain number of cases appear to recover, but the fact remains that a considerable proportion of chronic asylum inmates belong to this group and are incurable. The matter is therefore one of much social importance.

The causation of dementia praecox is veiled in obscurity and every effort made to determine the factors which are instrumental in its production is to be welcomed. In this connexion the important researches of Sir F. W. Mott recorded in his article on normal and morbid conditions in the testes from birth to old age, the publication of which is completed in our issue of this week, deserve the closest attention. The article covers much ground, and includes observations on general paralysis and other forms of mental disorder; but attention may here be directed especially to the distinctive findings in respect of dementia praecox. The research also included systematic histological and biochemical investigation of spermatogenesis from the developmental point of view. The observations are based on the examination of the vesiculæ seminales, emulsions of the testes, the seminal contents, and sections of the testis in normal cases from birth to adult life, with special reference to the biochemical reactions. Similar methods of investigation applied to twenty-two cases of dementia praecox furnish evidence of regressive atrophic changes in the testes ranging from the earliest change in the head of the spermatozoon up to advanced stages of regressive atrophy in the seminiferous tubules. In commenting upon the significance of this arrest of sexual function Sir Frederick Mott makes the suggestion that "if we look at the matter from a broad biological standpoint, and consider that nature is unmindful of the individual and mindful only of the species, it will be obvious that a progressive degeneration of the most vital tissue of the body at an early age would stop procreation of a degenerate stock by anticipation." With his observations on the testes may be correlated the observations of Dr. Laura Forster, who found that the ovaries of cases of dementia praecox exhibited evidence of regressive changes, which may be regarded as serving the same biological purpose in respect to the extinction of degenerate stock.

It is to be gathered from a paper contributed to a recent meeting of the Psychiatric Section of the Royal Society of Medicine (not yet published) that Sir Frederick Mott does not regard the progressive atrophy of the reproductive organs as the cause of the nuclear change in the cerebral cells, but looks on the changes in both organs as the expression of a

premature senility due either to inborn lack of durability manifesting itself in early life, or to a biochemical deficiency by which the nuclear functions are paralysed. He finds that the essential histological change in the central nervous system is one of nuclear decay and degeneration and that "dementia praecox is dependent upon a progressive degeneration of the nucleus and the nucleo-protein basophil substances of the neurones unattended by vascular or perivascular or meningeal changes, and dependent upon or associated with, a chemical alteration of the nuclear substance." He notes, further, that sections of the cortex show that the neurones of the same layer are not equally affected by the degenerative process; in some the nucleus may appear nearly normal, while others present signs of advanced decay and destruction. In the cases he has examined he has found no indications of a vascular change such as would be expected if the nuclear decay were caused by a circulating toxin. Other observers also have found evidence of destructive changes in certain layers of the cerebral cortex in cases of dementia praecox, but their observations and those of Sir Frederick Mott raise the question whether under the term "dementia praecox" conditions due to more than one pathological cause may not be included. He refers to this point in a footnote (p. 740), where he says that non-degenerative forms of dementia praecox are occasionally met with, and that it is not always easy to diagnose dementia praecox in the early stages, since the clinical symptoms of cases of confusional insanity may present a similarity. It is difficult to correlate the existence of such irreparable changes as are described in the cases so minutely examined with the clinical history of a number of the cases to which the diagnosis of dementia praecox is commonly applied. Patients so diagnosed are not infrequently seen who, after exhibiting states of apparently profound dementia for years, eventually recover. Such cases suggest a suspension of function rather than a progressive structural change.

There is no doubt that the conception of dementia praecox has to some extent created an atmosphere of pessimism towards mental disorder which is not entirely justified in the light of experience. That a large number of cases of adolescent insanity deteriorate is evidenced in every chronic asylum ward. Many such cases may be the expression of that process of premature decay of the sexual organs and brain which Sir Frederick Mott describes; but the recovery of a number of the cases included in the perhaps too wide group of dementia praecox suggests that, in such instances, the term functional may be applied to the underlying cerebral disturbance. Further clinical and pathological investigations will, it may be hoped, make it possible to determine in the early stages of mental disorder whether the illness is the result of a definite organic process or of functional disturbance due perhaps to some form of toxæmia. In a large number of cases of adolescent insanity presenting the features of dementia praecox this is not now possible.

Regarded purely from the clinical point of view the characteristic symptoms of dementia praecox suggest a defect of the emotional life attended by curious apathy towards conditions in the environment. In a general way it may be said that the whole sequence of psychological events in such cases is explicable as due to an arrest or fixation of the *libido* or psychio energy at an infantile level. In normal adolescence the evolution of the sexual characteristics are expressed in the personality by a feeling of superabundant energy bringing a new outlook on life, which detaches the individual from the interests of

childhood, and finds an outlet in creative activities, useful pursuits, and in the struggle against the forces of the external world. In the subjects of dementia praecox, however, though a high degree of intellectual attainment is often apparent, absence of that psychological tension which maintains the individual in contact with reality—a tension dependent on the energizing of the personality at adolescence by the sexual impulse or *libido*—seems to be responsible for or associated with the regressive mental symptoms that characterize the disorder. The defect of personality which results is often manifest for years before the actual appearance of psychotic symptoms, and has been described as the "shut-in" personality.

In a case of dementia praecox is seen an individual whose psychic energy has been inadequate to sustain him in the struggle against the claims of real life, and who has regressed into phantasy, an infantile mode of adaptation which makes no demands and requires no effort, and becomes the substitute for an efficient adjustment to reality. Such a mechanism finds its complete expression in the katatonic who shuts out all objective interests, who exhibits an obstinate resistance to every solicitation from the world without, and who gives himself up entirely to subjective preoccupations. It is of interest to note that it is at important sexual epochs in the life-history that individuals are especially prone to develop the symptoms of dementia praecox—engagement, marriage, childbirth. It would seem in such cases that the sexual impulse has not energy enough to meet the claims upon it which civilization exacts. The sexual impulse does not reach its biological goal merely through a physical relationship; it only finds its complete expression in the claims of parenthood, which in modern life demand a strenuous adjustment on the part of the individual. In dementia praecox the arrested sexuality of the patient expresses itself in delusional phantasies and onanistic tendencies, for the claims of reality exceed the stage to which the individual is fundamentally capable of adapting himself. He is forced by reason of his inadequacy into the easier path of regression.

The research of Sir Frederick Mott includes many valuable suggestions on the biochemistry of the sexual organs in health and disease. These demand close attention and study, but we have been led to limit our observations to the broader implications of the research and the relation it appears to bear to the clinical findings in dementia praecox, since it would seem that the aim of psychiatry must be to study the various forms of mental disorder from a wide biological standpoint. It is a research such as this that makes it possible to determine the significance of dementia praecox from such a point of view. The disordered conduct and the fantastic delusional formations in dementia praecox are the expression of failure on the part of the whole psycho-physical organization to make an efficient adaptation to the manifold demands of life. The physical regressive changes in the sexual glands which these researches describe in cases of dementia praecox have their counterpart in the regressive mental phenomena of the disease; not only does the mental life in such cases regress to an infantile level, but, as Jung has suggested, it assumes an archaic character resembling primitive modes of thought in bygone races. To obtain a full understanding of insanity it is necessary to approach it from all angles and points of view, otherwise partial and narrow conceptions as to its significance are formed. Mental disorder of whatever kind may be ultimately regarded as the expression of the reaction to experience on the part of individuals of defective endowment, either inherent

or acquired. It is only when the psycho-physical organization is looked at as a whole that the biological significance and purpose of a psychosis become clear. It may certainly be said that, as a result of this pathological research, much light has been shed on the mental reactions included under the term "dementia praecox."

THE CONFERENCE OF LOCAL MEDICAL AND PANEL COMMITTEES.

If the Ministry of Health had any doubts as to the feeling of the medical profession towards certain features of the 1920 Medical Benefit Regulations, or if it supposed they would be accepted for any slight increase in the capitation fee which the Minister might choose to suggest to the Treasury, it must have been considerably enlightened by the outcome of the Panel Conference, a report of which appears in the SUPPLEMENT this week. It may fairly be claimed—the Minister at any rate would hardly deny it—that the constitution of the Conference has established it as the accredited mouthpiece of insurance practitioners as a whole, both members of the British Medical Association and others; and no Minister can afford to neglect its opinions and decisions as to any matters coming under the medical service of National Insurance. The figures of attendance on November 27th are instructive: of the 127 Panel Committees in England 115 were represented; of the 17 in Wales, 10 were represented; and of the 56 in Scotland 28 were represented. In all, 153 constituencies were represented by 147 individual representatives.

It was evident throughout the Conference that there is a great body of discontent with both the present and the proposed terms of service. Speaking generally, what is resented more than anything else in the new Regulations is the autocratic element which permeates them. The plain man is not to be beguiled by the offer of advisory committees and the frequent gratuitous permission for consultation between Panel and Insurance Committees. There is evidence, too, that the panel medical service has become more and more unpopular among the insured. The number of insured persons in some parts of the country who regularly ask their panel doctor to charge them a fee and to provide them with medicines out of his own surgery is said to be increasing, and this occurs when there has not been the least encouragement given by the doctor to the idea that better treatment is obtained when it is paid for separately. To a Minister knowing nothing at first hand about actual panel work it would come as a surprise to find how often the insured apologize to their panel doctor for troubling him, knowing how ill paid he is for his panel work. Neither is it uncommon for officials of approved societies to make the same acknowledgement, and we refuse to admit that the *National Insurance Gazette* was speaking on behalf of approved societies or Insurance Committees when it said in a leading article on November 22nd that "insurance workers will strongly resent any suggestion of a larger figure than 10s." That this periodical is not the recognized mouthpiece of approved societies generally is quite clear from another leading article in its next issue appealing for their support, which so far has evidently not been given to any great extent.

It need hardly be said that last week's Conference welcomed and carried with acclamation the resolution proposed by the Chairman of the Insurance Acts Committee: "That the Conference maintains the opinion that 13s. 6d. is the lowest capitation fee that can properly be accepted for an effective service."

The only objections raised to this were that it did not go far enough; that 13s. 6d. was too low a figure; and that, if it were not granted, there should be a refusal to take any service. The general feeling, however, of the Conference was that it would be premature at present to make any threat to withhold service. The latest communication from the Minister of Health, dated November 25th (see SUPPLEMENT, November 29th, page 132), states that "the case before him does not satisfy him that the Government and Parliament should be asked to sanction the large expenditure of public money which a capitation fee of 13s. 6d. suggested by the Insurance Acts Committee would involve." It remains to be seen whether the deputation which meets the Minister this week has been able to convince him that the suggestion is not simply that of the Committee, but must now be regarded as the definite demand of the whole of the panel practitioners, and that in deciding for or against it he will be deciding whether the insurance medical service shall be improved or marred. It must be recognized that the executive body of the Conference has been in a very difficult position in fixing on a reasonable capitation fee. On the one hand, it cannot be denied that there is a small minority of doctors who would be content to go on as at present. Some of them are men with excessively large panel practices who rush through their work at high routine speed and give the public the impression, sometimes rightly and sometimes wrongly, that they are less careful in the treatment of panel patients than of private patients. At the opposite extreme there is a considerable body of practitioners whose demands are—to be quite frank—excessive, and who gain some encouragement from the fact that in meetings of medical men fiery language often extorts some applause which has really but little practical weight when facts have to be faced. The Committee has had the task of shaping a course between these two extremes. To give way to either of them would, without doubt, have alienated the great bulk of the profession and have led to failure. The general common sense of the Conference has decided that the figure put forward by the Insurance Acts Committee is reasonable and fair, and the Ministry is to be asked to embody it in a three years' undertaking. The Ministry may refuse it, and may even refuse an offer of arbitration, but, if so, the Conference has made it quite clear that the Ministry will not, however much the Regulations may be tightened up, secure that hearty self-sacrificing co-operation of the profession which is absolutely necessary to make any medical service a success.

Dealing with the Regulations as a whole, the Chairman of the Insurance Acts Committee was supported by the vote of the Conference when he stated that "the new Regulations offered a great advantage over the old" in at least the following respects: the increased importance attached to professional committees, the increased local option in administration, the clearing up of doubtful points, an improvement in judicial or quasi-judicial procedure, and the method and time of payment of the doctors. The Conference, with only three dissentients, expressed a general approval of the new Regulations, subject to the condition that the Insurance Acts Committee must use its best endeavours to secure such emendations as the Conference might approve. This reservation was regarded by the representatives as of the highest importance, as was manifest most especially in the discussion on the new provisions about the transfer of death or other vacancies. The Ministry of Health—ostensibly in order to prevent possible abuses, but perhaps with some quite other

object in view—has stated its determination to alter the present regulations about transfers. Practitioners, for their part, are equally determined not to submit to any confiscation of the goodwill in their panel practices. How far the new regulation involves or permits confiscation of goodwill may be arguable. The Chairman of the Insurance Acts Committee believes that at present there is a 97½ per cent. chance of insured persons being transferred to the successor, and that under the new regulation the chance would be about 50 per cent. If these figures be accepted it means that the new regulation would confiscate 7½ per cent. of the goodwill of panel practices. The loss would rarely be less than this, and in some cases might be much more; but the main point is that the uncertainty introduced would cause a serious fall in the general market value of panel practices. A keen debate accordingly arose on Dr. Brackenbury's proposal to the effect that insured persons who failed within the prescribed time to choose a doctor on the death or retirement of their previous doctor should be assigned under the allocation scheme to the successor, unless there were specific reasons for not doing so, the assignment taking effect from the date of such death or retirement. The argument in favour of adding a section to this effect is that it would remove most of the medical objections to the Ministry's scheme of transfers. It would afford Panel and Insurance Committees a chance of checking abuses in transfers, and it is difficult to see how it could be resisted from the Ministry's point of view. The Conference, however, was not content with this, and after long discussion the proposer withdrew the above motion in favour of a resolution instructing the Committee to use every endeavour to get the new regulation about transfers deleted, and to maintain the existing arrangements. This subject aroused more interest and was more keenly debated than any other except perhaps the fee question. A large number of notices of motion had been sent in, but as the ground was in the main covered by the resolutions actually under discussion, they were mostly passed over.

Coming now to the question of certificates, as the draft Regulations now stand it appeared that doctors might be compelled to give, free of charge, any certificates needed by the insured for any purpose, and the Conference carried unanimously a resolution which would make it clear that only certificates to enable patients to claim sickness and disablement benefit under the Insurance Acts are required to be given gratis. A letter was later received from the Ministry which cleared up this point and practically agreed with the resolution of the Conference. The scheme of the London Panel Committee for providing pensions for panel practitioners was only briefly examined, the general view of the meeting being that the scheme had not had full consideration by the profession. It was accordingly referred to the Panel Committees of the country for further study.

A rather disturbing point has arisen on which some explanation is due from the Ministry, as it would appear to undermine the effectiveness of the Conference. A circular letter has been sent to Insurance Committees (I.C.L. 281, October 31st) forwarding the draft Regulations and stating that inasmuch as the provisions embodied in the draft had been arrived at after consultation with representatives of all parties concerned, it might be assumed that the Regulations were substantially in the form in which they would appear. Such a letter was surely ill advised at a time when it was known that alterations reflecting the strong feeling of the medical profession were likely

to be proposed by the Conference of Local Medical and Panel Committees. The medical profession would not like to think that the Ministry had made up its mind beforehand to take no notice of important emendations which the Conference might suggest.

THE LOCAL GOVERNMENT BOARD

THE forty-eighth, and last, annual report¹ of the Local Government Board contains in the introduction a review of the work of the Board from 1871, when it was established, until it disappeared in the Ministry of Health, established by the Act which received the Royal assent on June 3rd this year. The principal measures, legislative and administrative, initiated or superintended by the Board are enumerated, and we hope to have an opportunity of discussing this part of the report on another occasion. Part I of the report is concerned with public health, and its earliest pages with infectious diseases. It is noted that the development of sanatoriums for tuberculosis has been delayed by the war; some such institutions were temporarily converted into military hospitals, and sixty proposals which would have provided 4,000 additional beds, by the erection of new institutions and the extension of some already in existence, had to be deferred. The next section, dealing with the prevention and treatment of venereal diseases, after describing the schemes adopted, states that the number of attendances at the treatment centres has progressively increased; they were 205,000 in 1917 and 488,000 in 1918. During 1918, approximately 31,500 cases of syphilis were dealt with for the first time, 900 cases of soft chancre, and 18,500 cases of gonorrhoea; the remaining cases, amounting to approximately 7,000, proved on examination not to be suffering from venereal disease. The last-mentioned figure is regarded as very satisfactory, because it indicates that persons who are apprehensive that they may have contracted venereal disease are willing to avail themselves of the facilities provided for diagnosis and treatment. Of the 145 county councils and county borough councils, 143, including the City of London, provide pathological facilities through which a medical practitioner can obtain a scientific report on material he may submit from a patient suspected to be suffering from venereal disease. In another section, dealing with maternity and child welfare, it is shown that the additional services for which the Exchequer grant is available are the hospital treatment of children up to 5 years of age; maternity beds for women; provision of home helps during confinement at home; of food for expectant and nursing mothers and for children under 5 years of age; of crèches and day nurseries; of convalescent homes and homes for young children of widowed, deserted, and unmarried mothers; and, finally, for experimental work in matters affecting the health of mothers and infants. The provision of infants' hospitals, needed chiefly for wasting babies and those suffering from digestive disorders who cannot be accepted by the general or children's hospitals, does not seem to have made much progress; the twenty local authorities which have made, or are proposing to make, direct provision will only have two hundred beds in all. At Leeds and Bradford the town councils maintain separate hospitals; some other authorities have made subsidies to existing institutions. The total amount of the Exchequer grants for maternity and child welfare for the year 1917-18, representing half the expenditure of local authorities and voluntary agencies, amounted to £218,000, as compared with £11,000 when the grants were first made. The last section of the report deals with special work arising out of the war; the Board's medical staff discharged many miscellaneous duties, and served on numerous joint committees. The duties of the foods branch

of the Board were greatly extended, to include a system of sanitary supervision of the manufacture of all food for troops at home and abroad. In pursuance of this work Dr. Spencer Low has been in South America since April, 1915, and Dr. A. R. Litteljohn, who went to North America in the same year, has recently proceeded to Australia on similar work. In an appendix a list is given of the principal circular letters issued by the Board in connexion with its special work arising out of the war.

THE ROYAL SOCIETY OF MEDICINE.

THE Royal Society of Medicine has arranged to hold a monthly social meeting. The first took place on Monday, December 1st. The guests were received by the President and Lady Rolleston in the library, where a number of interesting objects were displayed, including some Napoleonic relics and autographs. Dr. Raymond Crawford lent the commission of a surgeon with the army of Italy signed by Napoleon, and Dr. Arnold Chaplin and Dr. J. F. W. Silk various objects from their collections. The most interesting document was without doubt the original, lent by the Rev. E. Brook-Jackson, of the report of the *post-mortem* examination of Napoleon signed by Dr. Thomas Shortt, the P.M.O. of St. Helena, and three of the surgeons present at it. The report contained a statement to the effect that the liver was a little larger than natural. This was crossed out, and an endorsement by Shortt states that the omission was made by direction of Sir Hudson Lowe. The report, written in a firm, large hand on stout foolscap, sets out that "On exposing the stomach that viscus was found the seat of extensive disease; strong adhesions connected the whole superior surface, particularly about the pyloric extremity, to the concave surface of the left lobe of the liver; and on separating these an ulcer, which penetrated the coats of the stomach, was discovered one inch from the pylorus, sufficient to allow the passage of the little finger. The internal surface of the stomach, to nearly its whole extent, was a mass of cancerous disease, or scirrhus portions, advancing to cancer; this was particularly noticed near the pylorus. The cardiac extremity, for a small space near the termination of the oesophagus, was the only part appearing in a healthy state. The stomach was found nearly filled with a large quantity of fluid, resembling coffee grounds." Antommarchi, who actually performed the autopsy, in a private note described the lesions of the stomach as much less extensive. He says it was generally in a perfectly healthy state, but that on its interior surface, near the small curve, and at the breadth of three fingers from the pylorus, there was a slight obstruction, apparently of a scirrhus nature, and that the stomach was perforated through and through in the centre of the induration, the aperture being closed by the adhesion of that part to the left lobe of the liver. In a lecture published in our columns on January 11th, 1913, Professor Arthur Keith gave reasons for supposing that secondary infection of the abdominal lymphatic glands had occurred. His reading of the story is that Napoleon suffered originally from an endemic fever, possibly Malta fever, in which the liver was severely affected, and that in the course of the illness cancer of the stomach supervened, its symptoms being entirely masked by the original disease. Another and possibly more probable explanation is that ulceration led to septicaemia, evidenced by hectic fever, a sequence not rare in the later stages of gastric cancer. Among the other objects exhibited on December 1st were a collection of toys made at a class conducted by Mrs. Dundas Grant for deafened sailors and soldiers attending the Ministry of Pensions' lip-reading classes, and a number of objects made by disabled soldiers shown by Dr. Jane Walker. Dr. Peachey gave an epidiascope lecture on book plates, and Captain Hollis, secretary of the Village Centres Council, showed a film of the Enham settlement for disabled soldiers. It is intended for

¹ H.M. Stationery Office. [Cmd. 413.] Through any bookseller, price 1s. net.

propaganda purposes, and is divided into three parts, being chapters in the history of a manual worker prevented by the loss of an arm from following his pre-war occupation and rescued from despondency by the re-education in dexterity which he receives at the village centre. The Enham Village Centre now has 150 inmates undergoing concurrent treatment and training, and a new medical block with a complete instalment of curative baths—the gift of the British Red Cross—comes into use this week. Music was provided during the evening by Mr. Herbert McQuown's Bijou Orchestra of professional and amateur musicians, introduced by Dr. Dundas Grant.

NOTIFICATION AND CONTROL OF MEASLES.

THE Ministry of Health has issued an Order rescinding that issued four years ago rendering notification of measles compulsory under certain conditions. The obligation to notify any case of measles or German measles in a household to the medical officer of health was laid on the parent or guardian; medical practitioners were only required to notify the first case, and not any second case occurring within two months. An explanatory letter accompanying the new Order states that the Ministry, after giving consideration to various criticisms as to the ineffectiveness of the old Order, has come to the conclusion that its continuance on present lines is not the best method of dealing with the problem. The magnitude of the problem is not minimized, and it is recognized that the large number of deaths which occur annually from measles, and the disabilities and impairment of health which are its after-results in so many cases, render it extremely important that all practical measures for combating it should be extended and developed as much as possible. The number of notifications in 1916 and 1917 can be compared with the number of deaths recorded by the Registrar General in those years. In 1916 the number of deaths was 5,413, and of notifications 348,090. In 1917 the number of deaths was 10,538, and the number of notifications 533,833. In 1918 the number of notifications was 414,346, but the Registrar-General's returns for that year are not yet available. The death rate at ages under 15 years in 1917 was 915 per million; the rate for the five years 1911-1915 was 1,100, and for the five years 1906-1910, 930. The measures suggested for combating measles are the instruction of parents and guardians by formal and informal lectures by the medical officer of health or medical practitioners, and by the assistance and advice of health visitors. Nursing, it is recognized, is of the first importance, and sanitary authorities are advised that they should arrange to have a call on the services of nurses for home nursing, unless the county councils, exercising their powers under the Maternity and Child Welfare Act, 1918, provide a staff of nurses for the visiting and nursing of measles and such other infectious diseases as whooping-cough, poliomyelitis, and epidemic diarrhoea. The very large number of cases of measles which may occur in any district in a short time makes hospital treatment impracticable, except in special circumstances, and in severe cases—which usually means complicated cases. The Metropolitan Asylums Board receives very severe cases of children of the poorest classes, and in certain other large urban centres similar provision has been made. The order does not preclude any local authority which believes notification to be useful from seeking permission from the Ministry to maintain it in force.

THE HEALTH OF SCHOOL CHILDREN.

THE report of the Chief Medical Officer of the Board of Education for 1918¹ was issued this week. It is a record of the work of the School Medical Service of the local

education authorities in England and Wales, and Sir George Newman, in a prefatory note, points out that its duties and responsibilities "extend far beyond the medical inspection and treatment of the individual school child. Its concern is with the whole physical nurture of childhood from the age of two years up to adolescence, and with the conditions normal and abnormal, which are attendant upon it." The Education Act of 1918 enlarged its scope and increased its opportunities of providing in youth a healthy physical foundation for maturity, while the Ministry of Health Act for this year has brought the School Medical Service into integral relation with other elements of the national scheme for the improvement of the health of the people as a whole. Experience, it is added, shows that, to be effective, the supervision of the physical development of the child must begin early and be steadily continued. No one solution of the numerous complex and far-reaching problems involved is to be looked for. "Exclusive insistence upon any one factor, whether it be improved nutrition or medical treatment, or physical training or the teaching of hygiene, or the open-air life, can only end in failure. All are required, and in all schools, and at all times." The report has twelve sections, some of them concerned mainly with administrative details, but there is one in which, under the heading "The Beginnings of Disease," Sir George Newman shows that he has an understanding of the particular fascination which attaches to the study and treatment of the diseases and disorders of infancy and childhood: it is very commonly a disorder of function rather than definite disease which is presented for consideration. On the one hand, we have to investigate the apparently trivial causes which may upset the balance of nutrition, and, on the other, to note the extraordinary rapidity with which the organism of the growing child responds when the cause is discovered and removed. The motto for him who would treat the young, more than for any other follower of medicine, is *primum non nocere*. It is the particular function of the school doctor to detect the early evidences of some injurious factor in a child's environment, and to determine what that factor is. Nutritional defect, we are told, now shows itself less in mere malnutrition; it is still evidenced by rickets and dental defect, both, it now seems more than probable, due not to a deficiency in the quantity of food, but to sophistication of the food itself. Catarrhal conditions of the upper air passages and their related lymphatics constitute, we are told, in the sum total a large proportion of the defects presented by the young child, and here again, as Dr. Hector Cameron has suggested, we may look to defects in diet as being at least as important as infection. The next section deals with the medical treatment of the school child, and gives details of the extensive organization which has been brought into existence: its importance lies not in direct treatment—except, of course, in disorders of vision and such local lesions as ringworm—but rather in the spread of knowledge among parents, to which the popularity now achieved by the clinics will greatly contribute. The treatment of dental disease is another special department of work which calls for judicious extension. Mr. Norman Bennett, who was asked to report on the work of school dental clinics, is of opinion that all children should be inspected and treated on entering school at the age of 5 years and reinspected at least once a year; he also thinks that inspection in nursery schools at 3 years of age should be encouraged. His reason would seem to be that only by such attention to deciduous teeth can the mouth be in a condition to produce a good set of permanent teeth. With regard to eyesight, it is advised that early and effective treatment of eye disease and visual defect should be provided, as also special classes for children with myopia, and that school authorities should consider how far they are themselves responsible for the actual manufacture of cases of faulty vision. The

¹ [Cmd. 420.] Published by H.M. Stationery Office. To be obtained through any bookseller, price 1s. 3d.

effective lighting of the schoolroom and school desk, the form of the desk, the size and character of the type of school books, near distance work, and fine sewing, are enumerated as examples of the evil conditions which are producing bad eyesight. There is a special section on the education of the blind, in which further provision for the blind and partially blind is recommended.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

THE Ministry of Health Act enacted that the powers and duties of the Board of Education with respect to the medical inspection and treatment of children and young persons should be transferred to the Minister of Health, but it also provided that he might make arrangements with the Board of Education respecting the submission and approval of schemes of local education authorities and the payments of grants to them so far as such schemes and payments related to medical inspection and treatment. An Order in Council was issued on November 25th fixing December 1st last as the day for the transfer. A circular letter has been issued by the Minister of Health stating that he has decided to exercise his discretion, and that the Board of Education will be responsible for receiving and approving on behalf of the Ministry of Health all schemes of local education authorities, and for the payment of grants in aid of medical inspection and treatment. The Minister of Health will retain the ultimate right to determine what is necessary in regard to the work of medical inspection and medical treatment, and to settle the standards to be adopted from time to time in regard to the character, adequacy, and efficiency of the provision made. Under this arrangement control both of the work and of the way in which it is done will be in the hands of the Minister of Health. Arrangements have also been made to secure co-operation between the two departments in respect also of the other functions of the Board of Education and local education authorities, which directly concern the health of children and young persons. The two departments are actuated, it is stated, by the desire that there shall be a comprehensive, consistent, and progressive policy for promoting health and physical welfare, so as to facilitate to the utmost extent the development of health services by local authorities, whether under the Education Acts, the Public Health Acts, the Maternity and Child Welfare Act, or otherwise. The circular letter conveying this information to local authorities is signed by Sir George Newman, who, it will be remembered, is chief medical officer both to the Board of Education and the Ministry of Health. Under these arrangements the officers of the Board of Education will continue to carry on the work of inspection. All communications relating to medical inspection and treatment should be addressed as heretofore to the Board of Education, Victoria and Albert Museum, London, S.W.7.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

WITH regard to the note by a correspondent, "Ex-R.M.O." (BRITISH MEDICAL JOURNAL, November 8th, 1919, p. 620), in connexion with the revision of medical referee appointments, we are asked to state that the replacement of civilian general practitioners by demobilized R.A.M.C. officers is now in operation in each region where the Commissioner of Medical Service has reported that all the practitioners from each particular area likely to return have in fact done so, and been demobilized. It will be remembered only too well that complete demobilization did not automatically follow the armistice, but was a gradual process regulated by the exigencies of the services. In many instances the Ministry of Pensions has been requested to delay action until all the doctors have returned. A circular was distributed in May last¹ em-

bodying the Ministry's policy in this matter; effect has already been given to it in the Scottish and Welsh regions, and it is being daily put into practice throughout England. This policy is that, other things being equal, and subject to the final test of efficiency, preference should be given to practitioners who have been overseas and have suffered financially thereby. The positions are offered in open competition by advertisement in the local press or by individual circulation to all doctors in the areas of the various local committees, and it is believed that in every case all practitioners have been given the opportunity of competing *pari passu* for the new appointments. From this information it would appear that the Ministry of Pensions has gone along the line indicated by our correspondent in this matter.

PROPOSED SPECIAL DIPLOMA IN OPHTHALMOLOGY.

THE Council of British Ophthalmologists has prepared a report dealing with existing conditions concerning examination in special subjects, and in ophthalmology in particular, in the United Kingdom; a note on the qualifications required by the principal hospitals for appointment to the post of ophthalmic surgeon is added. Consideration of these matters leads the Council to express the view that it is desirable that the universities and colleges of the United Kingdom should make provision for a special examination in ophthalmology for those who propose to devote themselves to this branch of medicine. It is recommended that the examination should be written, oral, and practical, and should comprise anatomy, pathology, optics, systematic and clinical ophthalmology, and operative surgery. It is further recommended that ophthalmology should be one of the optional subjects in which a candidate can elect to be examined for the degree of Master of Surgery of a university, or for the diploma of Fellow of a Royal College of Surgeons, as is at present the case at the University of London and the Royal College of Surgeons of Edinburgh. A candidate before presenting himself for such an examination should be required to furnish evidence of having studied ophthalmology for at least two years, of which one had been spent in holding a recognized ophthalmic appointment.

A HISTORIC CASE OF INSTRUMENTS.

THE case of surgical instruments which belonged to Dr. David Livingstone and was brought with his body from Central Africa to the east coast by his faithful natives in 1873-4, will be exhibited in the Museum of the Royal College of Surgeons of England during December and January. The case is of mahogany with brass fittings, and contains amputating knives, saws, bone forceps, scalpels, lancet, artery forceps, aneurysm needle, tourniquet, bullet forceps, various trephining instruments, trocar and cannula, dental key, silver catheters, etc. A few instruments are missing. The authenticity of this relic of the great missionary-explorer is attested by a manuscript, of which the following is a copy:

Case of surgical instruments, the property of the late David Livingstone, the African explorer, and presented to me by Dr. Oswald Livingstone, the traveller's only surviving son. This case was bought in 1865 by Dr. Livingstone of Messrs. Hilliard, of Glasgow, who made and fitted it to his order. It was used by him in his travels in Africa and was sent back along with his other property from that country in 1874, when the Dr.'s remains were brought to England.—I hereby certify to the correctness of the above statement and the card attached was my father's visiting card.

(Signed) W. OSWALD LIVINGSTONE,
M.B., C.M.

W. M. Dunlop, October 15, 1885.

The case has been acquired from Dr. Dunlop, a former fellow-student of the explorer's son in Glasgow, by Dr. Claude Chidell, and will ultimately be presented to the London Missionary Society, which originally sent Livingstone to Afr. ca. Dr. W. Oswald Livingstone went to Africa to inquire about his father's body, and on his return

¹ BRITISH MEDICAL JOURNAL, June 7th, 1919, p. 716.

was given a medical appointment in Trinidad by Lord Granville. He returned to England in bad health, settled at St. Albans, and died there in 1839.

THE ROYAL SOCIETY.

THE anniversary meeting of the Royal Society was held on December 1st. The annual report of the Council stated that progress was being made with the preparation and issue of the International Catalogue of Scientific Literature. In the thirteenth issue the volume on bacteriology has been published and that on physiology was in type. Seven volumes, including botany and anatomy, in the fourteenth issue, have been published; the volume on anthropology is in the press, those on biology and bacteriology are in type, and that on physiology in manuscript. The special fund at the disposal of the society for the support of the Catalogue is exhausted and further assistance will be required. The Council has decided to award this year two Foulerton studentships of the value of £400 a year each, tenable for three years in the first instance. The fund is derived from the gift made by Miss Lucy Foulerton, in accordance with the wishes of the late Dr. John Foulerton, and since the trust was established Miss Foulerton has died, leaving the residue of her estate, which is expected to amount to a large sum of money, for purposes akin to those of the trust. The studentships will be awarded to encourage original research in medicine, the improvement of the treatment of disease, and the relief of human suffering. Persons of either sex are eligible, but must be of unmixed British nationality. After the annual meeting an anniversary dinner was held, when the President, Sir J. J. Thomson, was in the chair. In reply to a toast given by Sir William McCormick, the President said that the last anniversary dinner had been held in 1913; since then the Fellows of the Society had been largely occupied in war duties. There was no country, he said, excepting France, in which men of science threw themselves with so much ardour as in this country into the immense number and variety of questions raised by the war. Every branch of science had had its application in the service and defence of the country, and British science had proved itself superior to that of our enemies. There had, he added, been nothing more conspicuous in the war than the triumph of medicine, and what had been done in the preservation of health and the restoration of function must be a source of continual gratification to the medical profession. British science had, he said, made up leeway in the war, which had caused five years of suffering, sorrow, and loss. Had the nation before the war been alive to the part which science must play, and instituted departments in which the development of the science of war could have been worked out in peace, the duration of the war would have been much less.

Medical Notes in Parliament.

Mental Deficiency and Lunacy Amendment Bill.

MAJOR BAIRD (Parliamentary Under Secretary, Home Office), on November 27th, moved the second reading of the Mental Deficiency and Lunacy (Amendment) Bill. He said that although this appeared to be merely a financial measure its effects would be more far-reaching. The problem was the necessity, in the light of experience, of making it possible to carry out the recommendation of the Royal Commission appointed in 1904. The fourth annual report of the Board of Control (for 1917) showed that the action so far taken had been wholly inadequate. Not only had the few years which had elapsed since the passing of the Lunacy Act of 1913 been disturbed by the war, so that it had been impossible to devote as much attention as should have been given to this very important question, but the increase in the cost of everything made it impossible for local authorities to carry out their functions without a larger sum from the State. There was the

further fact that many feeble-minded persons were able during the war to obtain regular employment; they unfortunately were perhaps the first to lose their employment under present conditions. It was therefore advisable, in the interests of these unfortunate people themselves as well as of the community, that no effort should be spared to deal with the matter humanely and efficiently. To do that it was necessary to afford the local authorities financial support. Furthermore, it was necessary to stimulate the activity of some of the local authorities who had not put as much energy into this branch of their duties as the importance and seriousness of the subject demanded. It was hoped by removing the limit of the total sum which the Treasury could pay in the shape of a 50 per cent. grant, to enable these authorities to embark on a much more thorough scheme of work than had been possible in the past. He therefore asked the House to remove the financial limit imposed by the Act of 1913 on the total amount of the Treasury grant both as regard England and Scotland. The total expenditure contemplated eventually would be £1,400,000. It was not anticipated that the total sum would be expended in any one year before at least five years from now, and the gradual increase of expenditure could not be accurately estimated. In the remaining months of the financial year not a very large sum could be spent, but it was very important that the House should sanction the policy embodied in the bill. Under the Act of 1913 the Treasury was limited to a grant of £150,000 to the English and Welsh local authorities and to a grant of £40,000 to the Scottish authorities, and these in turn were not called upon to deal with cases beyond the point where they could receive from the Exchequer half the total sum expended. It was estimated that in England and Wales the number of people who ought to be dealt with was about 21,700; in Scotland the number was 4,000. It was estimated that each case would cost about £60 a year for treatment. The necessity for removing the limit was therefore obvious. Clause 2 of the bill referred to the Lunacy (Scotland) Act, 1857, which imposed a limit to the interest payable by Scottish local authorities on sums borrowed by them; the rate was then fixed at 5 per cent., which was not adequate now; hence the limit was to be removed. Clause 3 had reference to the power of district boards in Scotland to borrow for current expenditure. It was proposed to enable the district boards to finance themselves temporarily by bank overdrafts or otherwise. That power was already possessed by all other local authorities in Scotland. The bill was then read a second time and referred to a committee of the whole House.

Nurses Registration (Ireland) Bill.—The text of this bill, introduced by Mr. Macpherson (Chief Secretary for Ireland), which was read a first time on November 26th, has now been published. It is practically identical in terms with the measure for England and Wales; save that the name of the Chief Secretary for Ireland is substituted for that of the Minister of Health; and that the provision in the schedule for the first constitution of the council is different. The Irish council on its first constitution is to be composed of the following persons:

Four persons appointed by the Chief Secretary, after consultation with persons and bodies having special knowledge and experience of training schools for nurses, of the work of matrons of hospitals, of general and special nursing services, and of general and special medical practice.

Six persons, who are or have at some time been nurses actually engaged in rendering services in direct connexion with the nursing of the sick, appointed by the Chief Secretary after consultation with such associations or organized bodies of nurses or matrons as represent to the Chief Secretary that they desire to be consulted in the matter.

Nurses Registration Bill in Committee.—The Government measure for the registration of nurses in England and Wales was considered in Grand Committee on December 2nd, Mr. T. P. O'Connor in the chair. Sir Watson Cheyne submitted a number of consequential amendments, which had for their purpose to provide that the nursing register to be set up by the General Nursing Council should be restricted to fully trained male and female nurses; and that others should be put into a supplementary register. Dr. Addison objected that the proposal struck at the root of the bill. Its effect would be to make the first register consist of a higher class and an inferior class of nurses. It was a parliamentary principle that existing interests should be protected, and the distinction proposed would be invidious. In the course of time the register would come up to the standard of full training sought to be imposed. In view of the feeling of the Committee Sir Watson Cheyne withdrew his amendments. On Clause vi Captain Elliott moved an amendment, which Dr. Addison accepted, designed to secure a uniform standard of qualification in all parts of the United Kingdom by instructing the English Nursing Council to consult with the Councils for Scotland and Ireland. Dr. Addison gave an undertaking to place on the first Council two persons with experience of children's nursing. The bill afterwards passed through Committee to be reported to the House of Commons.

The Medical Staff of the Pensions Ministry.—Mr. Doyle asked, on November 27th, if the Pensions Minister would state the number of medical men permanently employed in his department who had not served in the forces overseas during the war, the number so employed who had served overseas, how many who had not served overseas now held high administrative rank, including deputy commissioners of medical services and assessors, the number of medical men who had applied for permanent appointment, and how many applications had been granted; also if the Minister was aware that many, if not most, of the well-paid posts had never been advertised in the medical or other press; if he could give information how these posts were filled; if the official in charge of the Appointments Department of the Ministry of Pensions (Director-General's Department, 14, Great Smith Street, S.W.), Dr. R. McQueen, had served overseas; and if steps would be taken that ex-R.A.M.C. and naval medical officers should get preference for all appointments before the appointments were made permanent. Sir L. Worthington-Evans replied, as to the personal matter, that Dr. McQueen was mobilized on the first day of the war and served continuously until four months after the signing of the armistice, when he was invalided with a 30 per cent. disability resulting from service in France, Belgium, and Macedonia. In making appointments to the medical service division of the Ministry it was the invariable practice to give preference to men who had seen war service overseas. In regard to the statistics sought the Minister supplied the following written statement: "The medical officers of the Ministry are, almost without exception, serving on temporary engagements terminable at a month's notice. There are only three permanent officials, of whom one has served overseas. There are 59 temporary officers who have not served overseas, of whom 48 have served at home, and others with the British Red Cross or similar units. Since April 1st between 1,600 and 1,700 applicants have been interviewed. The present number of salaried appointments is 244. As will be seen from these figures, the material for selection for the few posts available has been so great that advertisement has been unnecessary. Each applicant is personally interviewed, and his suitability is carefully considered in the light of his former service and general qualifications and experience, special attention being given to his experience of the kind of work at which it is proposed to employ him. Since April 1st no applicant has been favourably considered unless he has had war service in the Navy, Army, or Air Force." In reply to a further question by Mr. Rose, Sir L. Worthington-Evans said that a net reduction in the staff at head quarters in September was 497. Against this the staff in the regions and in medical institutions showed a net increase of 214. The reduction was almost entirely in the clerical grades with wages averaging about 46s. a week. No transfers were made to other Government departments.

Pay of Medical Staff in the Pensions Ministry.—Major-General Croft asked, on December 1st, whether from October 9th, 1919, the rate of pay for medical men on examining boards had been increased by 50 per cent. to £1 11s. 6d. a session, while the pay of assessors and other full-time men paid on sessional bases remained at one guinea a session; whether a part-time man working at the new rate of two sessions a day, or four days a week, made 52 guineas a year more than a full-time man who worked six days a week. Sir James Craig replied that the statement in the first part of the question was correct, but the conditions of work of the member of the board and of the assessor were very different. It was not inequitable that the difference between occasional employment and regular and full employment should be marked by a difference in the rate of payment.

The Demobilization of Medical Officers.—Lord Henry Cavendish-Bentick asked, on November 26th, the Secretary of State for War whether he was aware that numbers of medical officers who joined the army voluntarily in 1914, or before the passing of the Military Service Acts, had persistently applied for demobilization, and had had their applications refused; whether some of these medical officers were receiving £60 a year less than others who had voluntarily enlisted for a further six months, though there was no certainty that these volunteers would not be demobilized on or before the same date as the others; whether large numbers of younger medical officers had been demobilized after short periods of service; whether, if so, there was any justification for this different treatment; and whether he could make any promise with regard to the early demobilization of the medical officers referred to, or, alternatively, could undertake that their rate of payment during service should be not less than that of the medical officers who consented, often for personal reasons, to stay in the army. Mr. Churchill replied: "I am aware that many medical officers who joined the army voluntarily before the passing of the Military Service Acts, and who afterwards came under the provisions of those Acts, are still of necessity retained on military service, and that some of these officers are receiving less than those who have undertaken to serve for a further period of six months. A considerable number of medical officers with comparatively short service have from time to time been demobilized for special reasons, more particularly in order to meet the urgent needs of the civil population, and in accordance with the demand of the Ministry of National Service. Medical officers are now being demobilized in order of priority, having regard to length of service, age, etc., immediately they can be spared. I regret it is not possible to extend the terms given to officers who bind themselves for a definite period to those who will not undertake this obligation."

Temporary Officers R.A.M.C.—Mr. Churchill, in reply to Mr. Pulley, on December 2nd, said that every endeavour was being made to provide reliefs for temporary medical officers serving in India, who, as the reliefs arrived, were sent home in order of priority, according to length of service, age, etc. The attention of the authorities in India was again being called to the specific case mentioned in the question.

Medical Remuneration in Voluntary Aid Hospitals.—On the motion for the adjournment on December 1st, Mr. Waterson said that for some months he had been endeavouring to secure justice from the War Office in a matter interesting the medical profession. Many doctors gave their services free to the local auxiliary hospitals. These medical men volunteered without hope of reward, and many had made serious sacrifices. (On June 16th, 1915, a confidential circular was issued by the War Office allowing so much a day to the doctors in charge of voluntary auxiliary hospitals, but added that the communication was confidential, and it was not intended that payment should be made unless it is asked for. The information ought not to have been kept back from the profession as a whole. At this point the House was counted out.

Insurance Practitioners' Rates.—Mr. A. Short asked, on November 27th, whether at a recent conference of medical men held in Wigmore Hall, London, it was decided to recommend practitioners not to accept service under the Ministry of Health until a satisfactory rate had been secured; and whether he would afford the House facilities to discuss the matter. Mr. Parker replied that a general conference of representatives of all Local Medical and Panel Committees was being held that day to discuss the terms and conditions of service of insurance practitioners, and the Minister of Health proposed to receive a deputation from that conference to learn from them the outcome of their deliberations.

Irish Health Council.—In answer to Major O'Neill, on November 27th, Mr. Macpherson said that the Irish Health Council set up under the Ministry of Health Act had at several meetings since its constitution in September considered the formation of a comprehensive health measure for Ireland. This involved a detailed examination of the existing machinery for health administration, but substantial progress had been made. The Council had been engaged upon the preparation of regulations under the Public Health (Medical Treatment of Children) (Ireland) Act, and had also, after conference with the various nursing associations, submitted the bill providing for the registration of nurses in Ireland.

Coroners' Inquests.—Mr. Shortt said, in answer to Mr. Gilbert on November 27th, that he hoped it would be possible next session, after more urgent matters had been dealt with, to introduce legislation to amend the law relating to coroners and coroners' inquests.

Medical Research Committee.—Mr. R. Young asked, on November 27th, whether the Medical Research Committee was to work under the control of the Privy Council after June next; and whether in that case the funds available for the Committee's work were still to be derived from moneys provided by Parliament under the National Insurance Act, or whether a separate vote would be made of this money. Dr. Addison said in reply that a separate vote would be taken after the transference.

Delays in Civil Liabilities Department.—Colonel Ashley asked, on November 26th, whether any steps could be taken to expedite decisions by the Military Service (Civil Liabilities) Department, and whether it would be possible for applicants to be informed of the grounds of refusal of grant, as the present practice of giving no reason led to dissatisfaction on the part of discharged and demobilized officers and men, who, from facts available, appeared to be entitled to assistance. Mr. Forster replied in the affirmative, adding that the gratuity under Article 497 of the Pay Warrant applied to such officers.

Delay in Hospital Treatment.—Mr. Mosley asked, on November 27th, whether approximately four hundred disabled still awaited hospital treatment as bed cases in the London district. Sir L. Worthington-Evans replied that there were at present about 130 discharged disabled men awaiting hospital treatment as bed cases in the London area. The surgical cases would be admitted forthwith, and other cases with as little delay as possible.

Medical Officers of Approved Institutions.—In reply to Sir Alfred Yeo, on December 1st, Dr. Addison said that the medical officers of approved institutions were not themselves under any contract with the insurance authorities, but with the institutions by whom they were employed; no direct payments therefore could be made to them from Exchequer funds. The information needed to substantiate the claims of these institutions was strictly analogous to that needed in the case of insurance practitioners. Letters that had been addressed to the Friendly Societies' Medical Alliance left no doubt as to the particulars required, or as to the necessity for such figures being furnished.

The Exchange Value of the Rupee.—Sir J. Hope asked, on November 26th, why the bonuses and gratuities earned by officers serving in Mesopotamia were to be converted at 22d. to the rupee, when it had been decided that 16l. to the rupee was the rate of conversion in the case of those serving in the ranks. Mr. Parker, for the Treasury, said it had been decided that the payments of war gratuities to officers in India should be readjusted at 1s. 4d. the rupee. The instruction applied also to officers in Mesopotamia.

Scotland.

LECTURESHIP IN PATHOLOGY, ABERDEEN.

DR. JOHN CRUICKSHANK, pathologist to the Crichton Royal Institution, Dumfries, has been appointed Georgina McRobert lecturer in pathology in the University of Aberdeen. Dr. Cruickshank, who graduated in medicine at Glasgow in 1903, was for three years assistant to the professor of pathology there, and in 1911 received the appointment at the Crichton Royal Institution, where he conducted investigations into the pathology of mental diseases. He served in France as officer in charge of a mobile bacteriological laboratory and assistant adviser in pathology to the Third Army. The lectureship was founded for the investigation of cancer and other malignant diseases.

ROYAL PHYSICAL SOCIETY OF EDINBURGH.

The Royal Physical Society of Edinburgh, which is probably the oldest scientific society in Scotland, since it was founded in 1771—twelve years before the Royal Society of Edinburgh—held its annual meeting on November 24th. Dr. J. H. Ashworth, F.R.S., lecturer in invertebrate zoology and in medical entomology and protozoology in the University of Edinburgh, who presided, said that the society was in a flourishing condition with regard to both membership and finance. Dr. Ashworth was re-elected president, and Professor J. F. Gemmill, university lecturer on embryology, Glasgow, one of the vice-presidents. Captain A. D. Peacock, entomologist to the American Trench Fever Commission, read a paper on lice in trench fever. The problem, he said, had been attacked both by English and American investigators. The English workers had demonstrated that the excreta of normal lice, which had fed on trench fever cases, could produce the disease on inoculation into scarified areas on the arms of healthy men. The American workers found that the disease could be produced by allowing infected lice to live for a number of days under practically natural conditions in cloth cells attached to the arms of the volunteers. By the combination of the results of the two sets of workers it had been possible to obtain a fairly complete picture of the disease cycle. The evidence obtained by the American workers indicated that the causal agent was extremely small, and at times could pass through a fine filter; and the English workers discovered a micro-organism which was closely associated with the disease.

THE GLASGOW ODONTOLOGICAL SOCIETY.

The annual dinner of the Glasgow Odontological Society was held on November 22nd, when Dr. J. F. Webster, president, was in the chair. Dr. Freeland Fergus, president of the Royal Faculty of Physicians and Surgeons of Glasgow, in proposing the toast of the society, after observing that its objects were largely scientific, and consisted chiefly of the reading and discussion of papers, suggested that it should have in view research work of a pathological kind, and that it should publish transactions. Dr. Webster, in replying, said that the society in the last fifteen years had grown to be representative of the dental profession in the west of Scotland. Some had complained that one reason why the dental profession had not reached its proper status was that it was under the control of the medical profession through the General Medical Council. He, however, would be sorry to see the dental dissociated from the medical profession. If dentists were to be recognized as a branch of the great healing art they must be in the medical profession; at the same time, they should have some say both in the management of education and in the conduct of their own affairs. He hoped that among the changes which were coming in the General Medical Council would be the establishment of a fully representative dental board. There was for dentists in Scotland no higher qualification than the L.D.S., and he suggested to the President of the Royal Faculty that a higher diploma might be established to encourage the ambitious dentist to go forward with research work. Mr. J. W. A. McGowan, in proposing a toast to the medical profession, said that the relations between it and the society had always been of the happiest kind. The bond of union between the two professions should be strengthened. Dr. James Harper,

lecturer on diseases of the throat and nose in the University of Glasgow, who replied, expressed the hope that the medical profession would become more united in order to deal effectively with questions relating to public health.

Ireland.

MEDICAL FEES.

A MEETING of the medical profession of Belfast and district, summoned by advertisement, was held in the Medical Institute, Belfast, on November 27th. Mr. A. Fullerton, C.B., C.M.G., F.R.C.S., President of the Ulster Medical Society, was called to the chair; Mr. P. T. Crymble, F.R.C.S., Honorary Secretary of the Ulster Branch of the British Medical Association, acted as honorary secretary.

Dr. Leatham proposed, and Mr. A. B. Mitchell, F.R.C.S., seconded the following resolution:

That this meeting of the medical men of Belfast and surrounding districts resolve that a general increase of at least 50 per cent. shall be made in all medical fees.

Dr. Leatham advanced the well recognized and admitted reasons for this increase; it did not, he said, meet the fall in the economic value of money, which in some directions had gone down 150 per cent., but it helped. Meetings of medical men had been held in London and Edinburgh with successful issues, and generally the time was ripe; many of the public expected the rise. He referred also to the questions of telephone consultations, evening and Sunday work, and the fee to be charged where more than one member of a family was seen on the same visit or consultation. Mr. Mitchell cordially supported the resolution, and a friendly discussion showed that the mind of the meeting was unanimously in favour of the principle; accordingly the Chairman put it to the meeting, and it was passed without a dissentient voice. It was decided to publish the resolution in the daily press. The councils of both the Ulster Medical Society and of the Ulster Branch of the British Medical Association had approved the proposal. Dr. Bennett, Bangor, co. Down, gave a short account of a meeting of the medical men of North Down, where a number of analogous resolutions had been adopted and published.

SIR PATRICK DUN'S LIBRARY.

The report of Sir Patrick Dun's Library for the years 1918-19, written by Dr. Kirkpatrick and Mr. Robert Phelps, Dun's Librarian, states that during the last year activities were considerably curtailed, as the Ministry of Food took possession of the buildings. The premises have, however, now been returned to the lawful owners, and there is a prospect of the library resuming its work at an early date. Three letters written by Sir Edward Barry to Lord Orrery have been purchased, and these are printed in the report. Sir Edward Barry occupied a considerable position in the world of medicine in the first half of the eighteenth century. He was president of the King and Queen's College of Physicians, Physician-General to the Forces in Ireland, member of Parliament for Charleville, Regius Professor of Physic in Dublin University, and a Fellow of the Royal College of Physicians, London. His features are preserved to us in the fine portrait by Sir Joshua Reynolds which hangs in the house of the College in Dublin. The letters published in the report are of some interest, for they mention various physicians of that day, and contain many references to the great Dean of St. Patrick's.

England and Wales.

MEDICAL REUNION DINNER AT BOLTON.

ON November 26th, at the Pack Horse Hotel, a most enjoyable dinner was given by the doctors of Bolton to those of their colleagues who had served with the army during the war. Seventy-four members were present, with Sir Thomas Flitcroft in the chair. The chairman, in proposing the health of the guests, spoke of the arduous and often unpleasant work of the local Medical War Committee during the last few years. The members of the committee fully realized the deep responsibility placed upon them

when selecting medical recruits, and although he was happy to say that every man who had passed into service through the committee had safely returned, he sincerely sympathized with those present who had lost brothers and sons. He called upon four of the returned men who had received honours for military service to respond—namely, Dr. Marshall, D.S.O., Dr. Derham Reid, M.C., Dr. Scott, M.C., and Dr. Laslett, M.C. Dr. Mothersole, as the senior of those who had served, suitably replied, and speeches by the above named gentlemen followed, each bearing tribute to the conscientious manner in which the men at home had kept before them the interests of the absentees. The festivities ended with a musical evening and a "mix among the boys." Everyone declared it had been a most successful reunion.

THE SANITARY HISTORY OF COVENTRY.

A particular interest attaching to the reports of Dr. E. H. Snell is due to his practice of giving statistical and other information relating to far-back periods. He tells us, for example, that the population of the city of Coventry, which is now 133,000, was only 7,000 in the year 1377, and that the birth rate of 21 per 1,000 and the death rate of 15 per 1,000, recorded in 1918, had fallen from rates of 35 and 32 per 1,000 respectively in the year 1748. For twenty-two years Dr. Snell has occupied the position of executive health officer in Coventry, and is indeed the first whole-time medical officer of health of the city. During this period the death-rate has been reduced from 19 per 1,000 to less than 15 per 1,000, and, what is still more creditable to the public health department, the rate of infant mortality has been reduced from 200 per 1,000 births to 92 per 1,000. This last achievement has not been brought about by accident. It is the result of a carefully thought out scheme carried out by a well qualified staff of health visitors in conjunction with an infant consultation centre. It is with amazement we learn that there are no less than forty-eight private slaughterhouses in Coventry, requiring to be visited by inspectors nearly 1,000 times during the year—a very costly and unsatisfactory mode of procedure. One of the earliest reconstruction enterprises of the corporation should surely be the establishment of a municipal slaughterhouse.

Correspondence.

CARDINAL PRINCIPLES IN CARDIOLOGICAL PRACTICE.

SIR,—My recent excursion, at very short notice, into medical politics (for the gratifying measure of success in which under the circumstances perhaps you will permit me to thank my supporters) has prevented my reading sooner Dr. Thomas Lewis's lecture on cardinal principles in cardiological practice (BRITISH MEDICAL JOURNAL, November 15th). As an old member of the Association, the divisions in which no one deplures more than I do, I rejoice to see its title—namely a "British Medical Association lecture"—as reminiscent of the purely scientific activities of the Association in the good old days. I fervently hope that the political differences which have agitated the Association for some years, since the Government turned its attention towards the utilization of the profession, may revert as fully to orthodox professional opinion as Dr. Lewis shows in his lecture, the revolutionary thoughts of the new cardiology have done to what is not only true but old, in matters cardiological.

I have advisedly used the medico-political parallel, for, when the hurricane of new cardiological dogmatism broke on the profession, there was an unfortunate reticence on the part of the leaders of the profession which gave the tornado a chance, just as in matters medico-political the sudden gust of Governmental action momentarily swept much before it. The neo-cardiological storm is now nearly spent, and let us hope that the profession has also now sufficiently regained its self-possession to be able to control the politician as well in the interest of the public as of the profession. Let me justify this preamble.

I have read Dr. Lewis's lecture with the interest and care with which I have read much of his work. The entire lecture will repay perusal, and the general view taken of the patient—not as a "heart case" but as an organism, in

which the heart influences the whole and is influenced by it—is, it will be agreed, the only rational conception of the situation.

I have no intention of following the lecturer throughout his theme, but it is pleasant to observe the reassertion of the diagnostic value of time-old signs and methods of examination, such as the value of cardiac dyspnoea as an indication of cardiac failure in various degrees, the limited sphere of actual necessity for the use of some elaborate methods such as electro-cardiography, the serious import of at least two kinds of valvular defect (and more may follow), the value of the cardio-pulmonary nervous reflex as evidence of the absence of auricular fibrillation and the use of digitalis in other than this form of cardiac irregularity.

It is within the memory of all of us, when, I think, even Dr. Lewis spoke less conservatively, and the occurrence of the neo-cardiological storm will be a matter of less regret, if it again impresses the lesson, that the professional crew need not be flustered by any new wind of doctrine even if it reaches the shriek of a gale, as this one did at one time, to the dismay even of some old hands who should have known better.

The pity is when, during the tempest in all such matters, those to whom the profession looks for guidance, metaphorically hold their hats tightly on their heads and their tongues still more tightly in their mouths and afford no help. Some, anxious to do the best for their patients under these circumstances, tend to disbelieve even their own experience, and in view of modern insistence fail to utilize, at critical moments in some cases, those methods and measures which general and particular experience have shown to be valuable.

Well, Sir, Dr. Lewis has helped in his lecture to allay much of the disturbance of the late neo-cardiac storm, and—if one may take it as indicative of his future action—he may allay still more of it, especially as regards the use of digitalis, which has before been termed the "opium of the heart," and is now regarded by him as "powerfully hypnotic" of that organ. May we not hope that the political storm about to break upon us may leave the profession kissed by as gentle and familiar a zephyr as have the "cardinal principles" of Dr. Lewis's cardiology?—I am, etc.,

London, Nov. 28th.

ALEXANDER BLACKHALL-MORISON.

KALA-AZAR IN MESOPOTAMIA AND ITS INCUBATION PERIOD.

SIR,—I have read Lieut.-Colonel Sprawson's paper on kala-azar in Mesopotamia (BRITISH MEDICAL JOURNAL, November 22nd, 1919) with interest, but I cannot say that his arguments are in any way convincing. As a matter of fact, to my mind they support rather than otherwise my contention that indigenous cases of kala-azar have recently occurred in Mesopotamia. The author states, in conclusion, "that the evidence as to the existence of kala-azar in Mesopotamia is negative," though he has just previously admitted that the long intervals given in his series of cases, though not conclusive proof of the endemicity of the disease, are certainly weighty evidence, and, further, has weakened his conclusion by his final statement, "Perhaps when the Mosul area has been more opened up we may obtain some positive evidence from that direction; but meanwhile the matter must be considered unsettled." It is unfortunate that he does not state definitely how many cases of the disease he has met with in Mesopotamia, but the fact that he has selected five from his records would seem to indicate that he had seen a good many. In the five cases described the patients had been in Mesopotamia for periods varying from seventeen months up to two years and over, and the theory of a long "incubation period" is evolved to explain this discrepancy. The term "incubation period" is not strictly a correct one; if the cases had acquired their infection in India, then the disease must have remained latent and they were really carriers of the disease. One cannot entirely disregard the possibility of such latent cases or carriers, especially amongst natives, but it would certainly appear to be rare amongst white people, in whom the disease generally takes on an acute form and runs a rapid course.

Sir Patrick Manson describes a case in a white patient where the incubation period was known. This was one of

our first cases at the London School of Tropical Medicine after the parasitic cause of the disease was discovered, and here the period was less than a month—Sir Patrick says ten days, but from my notes I believe twenty days was the correct time. Castellani and Chalmers state that the incubation period ranges from three weeks to several months. Granting, then, for a moment, that all Lieut.-Colonel Sprawson's five cases were examples of prolonged latency, it seems strange that so many of this type should crop up in Mesopotamia together. A much more simple explanation is that they acquired the disease locally, somewhere round Baghdad. That cases have occurred near there, in addition to those described by myself, Hamill, and Ledingham, is evidenced by the fact mentioned in Dr. Ledingham's note of July 19th, 1919, that a Syrian bacteriologist had diagnosed a few cases (again exact number not stated) of kala-azar by splenic puncture amongst Turkish soldiers at Kut and had heard of many more cases amongst the Turks. In my reply to Dr. Ledingham's letter I said that the Turks quite probably introduced the disease into Mesopotamia or that sporadic cases had occurred there all along.

Dr. Ramsy's evidence as regards Basra does not mean anything as the cases all appear to have acquired their infections further up in or about Baghdad.

It is of great importance that the movements, previous to their acquiring the infections, of the five cases mentioned should be carefully gone into, as this might afford some clue to the source of infection. Another point not quite clear in Lieut.-Colonel Sprawson's paper is the statement that he has met other cases of the disease (kala-azar) from Bangalore. Were these true indigenous cases that had never lived in any other part of India?

Further researches, by native practitioners, into the illnesses of indigenous persons living in and about Baghdad should prove interesting, and quite likely will furnish the proof of native infection which Dr. Ledingham and Lieut.-Colonel Sprawson consider necessary to establish the existence of kala-azar in Mesopotamia.—I am, etc.,

London, W., Nov. 25th. GEORGE C. LOW, M.D., M.R.C.P.

CHRONIC PANCREATITIS.

SIR,—In a letter appearing in your issue of November 29th, p. 725 Mr. J. H. Nicoll states that he and Mr. Cairns Forsyth "seem to belong to different epochs" regarding the diagnosis of chronic pancreatitis. A perusal of their contributions tends to confirm the truth of this statement, but hardly in the direction Mr. Nicoll probably intends to imply. Mr. Nicoll expresses the opinion that the so-called pancreatic reaction is of no practical value, and states that the same conclusion has been reached by many others. May I be permitted to point out that there are also many others who have confirmed its value, and constantly employ it in their clinical work?

The pancreatic reaction is dependent upon the presence of dextrins in the urine (*Lancet*, September 26th, 1914, p. 791), and as clinical observation and experiments on animals have shown that lesions of the pancreas are associated with dextrinuria long before the appearance of sugar in the urine—which, as Mr. Nicoll says, is a late symptom—the test, when carefully carried out by a competent observer under proper conditions, is an early index of the functional efficiency of the gland. The difficulty is that normal urine contains a small amount of dextrin, the quantity depending upon the carbohydrate content of the diet, and it is for this reason that the original qualitative test is liable to give misleading results in inexperienced hands. With the quantitative method no such difficulty arises, for allowance can be made for the normal dextrinuria which occurs when a mixed diet containing an average amount of starchy food is being taken. As far back as 1910 Dr. Chalmers Watson drew attention to the relation of the pancreatic reaction to the carbohydrate content of the diet. This question and the effects of treatment on the amount of dextrin in the urine were fully dealt with in a paper I read before the Medical Section of the Seventeenth International Congress, held in London in 1913; while Hoogenhuyze and Nagasaki in 1916 (*Nederl. Tijdschr. voor Geneesk.*, Amsterdam, 1916, 1, p. 1260) showed how the qualitative test could be made to vary with the amount of carbohydrate food, although they expressed

themselves as firm believers in the value of the reaction when carried out quantitatively under controlled conditions as to diet.

The time at which the urine for analysis is collected also exerts considerable influence on the result. Normally the dextrin content of the urine is lowest in the early morning before breakfast. After a meal containing starchy food it commences to rise in about an hour, and continues to do so for five or six hours, depending upon the amount and nature of the carbohydrate taken. It is obvious, therefore, that if comparable results are to be obtained, and a reliable diagnosis made, either a sample of the mixed twenty-four hours' excretion should be examined, or the time after a meal and the nature of the diet should be taken into account if an odd sample is submitted to analysis. The former is undoubtedly the better way as the total dextrin output for the day can be calculated if the urine is measured, and this I find is a much more reliable guide than the percentage, especially in the earlier stages of pancreatic disease.

I gather that Mr. Nicoll is not aware of these newer developments in connexion with the interpretation of the results of the pancreatic reaction. If he will take them into account, approach the matter with an open mind, and estimate the dextrin content of the urine by the method I described under the title of the "Iodine Coefficient" (*Glycosuria and Allied Conditions*, E. Arnold, 1913, p. 275), or by the simpler process suggested by Hoogenhuyze and Nagasaki for sugar-free urines, I think he will find he is able to make a correct diagnosis of functional inefficiency of the pancreas in many cases long before the methods he now relies upon give even a doubtful indication of any disturbance of metabolism.—I am, etc.,

London, W., Nov. 29th.

P. J. CAMMIDGE.

PREVENTION OF VENEREAL DISEASE.

SIR,—We have read with extreme amazement the letter in the current number of the *BRITISH MEDICAL JOURNAL* signed by the officers and Executive Committee of the Society for the Prevention of Venereal Disease.

We are at a loss to understand how the eminent men who have attached their names to this letter can, in speaking of venereal diseases, lend themselves to the statement that "such diseases are very easily prevented." No evidence has been brought forward by this society or by anyone else on which it is fair or scientific to base the statement that immediate self-disinfection, when practised by the general public, offers "any real hope of efficiently combating the terrible scourge."

Again, we are amazed that any body of medical men can make the implication that "self-disinfection" requires "no special skill or training." Even the evidence given before the Interdepartmental Committee on Infectious Diseases in connexion with Demobilization concerning the use of the method of immediate self-disinfection of the soldiers during the war in no way justifies such a statement. The conclusions arrived at by that Committee, on seriously considering the whole evidence, were that the method was unreliable and that the instances of its failure, even under favourable circumstances, were too numerous to allow of any other conclusion.

And if under army supervision such uncertain results were obtained, how can it be suggested that less elaborate precautions carried out by the general public without supervision are likely to succeed? Consider the out-of-door conditions under which so much sexual irregularity occurs. How can immediate self-disinfection be applied? Consider the frequency of other adverse conditions such as: (1) drunkenness; (2) the careless ignorance of young persons; (3) the hardened recklessness of older men and women; (4) the disagreeableness of applying disinfectants to the interior of the body; and, finally, the scientific fact of vast importance—that even under most favourable circumstances satisfactory self-disinfection by women is difficult to carry out and uncertain in result.

How can any one believe that effort expended in this direction will produce the satisfactory results suggested to the laity by the letter above mentioned?—We are, etc.,

MARY D. STURGE,
ROSE LYNCH MOLLOY,

Birmingham, November 30th.

"NEW LAMPS FOR OLD" IN OBSTETRICS.

SIR,—In your issue of to-day I notice that Dr. Fairbairn, who appears to be one of the "New Lamps," says, *inter alia*, "The other great change in our methods is to rely more on Nature." But I have always understood that this "method" was exactly what Mother Eve had to put up with; and it is a sorry confession of ineptitude on the part of the profession if we have to admit that we have not yet discovered a safe method of helping nature when help is required—as it undoubtedly is in 50 per cent. of cases in this country. To come to more recent times, I notice on page 701 the record of a certain Dr. Park of Liverpool, between the years 1769 and 1830. He attended 3,900 cases, and put on the forceps twice. Here was "a campaigner of the old school," yet his practice was remarkably like that advocated by the so-called New Lamps. One can easily imagine the agony that at least half of these poor women must have endured through want of assistance.

Dr. Fairbairn talks of the old tactics of force; but unfortunately a child can only be delivered by force, which must be exerted either by the mother or else by the doctor. I have attended a larger number of cases in the course of thirty-five years' general practice than even the venerable Dr. Park; and I am pleased to think that I have been able to save my patients all severe pain in at least 50 per cent., by giving chloroform and using the forceps; and that the results are better than those of the lying-in hospitals quoted in your issue of to-day's date. The reason is that the forceps are used early, and the placenta removed immediately after the birth of the child. One can only presume that nature welcomes and appreciates this help.

There is ample material at every large hospital for the practical teaching of obstetrics, but at present this is wasted, and men are forced to learn after starting in practice.—I am, etc.,

North Shields, Nov. 29th.

F. C. MEARS.

THE MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

SIR,—I was present at the annual meeting of the Royal College of Surgeons on Thursday last, and once again witnessed and heard the farcical proceedings. A number of elderly Members made their annual attempt to persuade the Council to admit Members to the Council, which by charter is confined to Fellows. This year it was an appeal *ad misericordiam*, with touching references to the great war and the suitability of the time of peace for a reconciliation, together with, in one case, a personal reference, in doubtful taste, to the President. The speeches were received with indifference, and the stock reply was made by the President to the effect that the resolutions would be placed before the Council. The usual reply will appear next year.

What is the use of this nonsense? In my opinion, the only question is whether the Council are not doing something for the Members which they ought to be doing. They manage the library efficiently, the museum is splendid, and the examinations are probably satisfactory. Is there anything else which they should be doing for us, the Members—that is, the general practitioners? For instance, at the same time as this meeting, there was being held a conference of panel practitioners at which the new conditions of service under the Insurance Act were being discussed. This is a matter of vital importance to Members. Have the Council done anything to make the terms acceptable to Members? Have they done anything—at any time—to improve the medical service that could and should be given to the public by general practitioners—had they the consulting practitioners behind them? Do the Council know anything whatever about Insurance Act work, which concerns the Members so deeply? Finally, is it part of the duty of the Council to consider such questions? If so, there ought to be some representation of Members on the Council. If not, it does not matter whether they are represented or not. We are going to have consultants connected with Insurance Act work. Probably a Government will offer the Fellows five shillings for a consultation and report and the Council will demand two guineas and look to the Members to back them up. The Government may rise to seven and six with a floating sixpence to cover notepaper, etc., and there will be enough impecunious men in Harley and Wimpole Streets to take it on.

I suggest that the attack should be taken up upon more modern lines. Prove first that there is a case for the admission of Members to the Council. Then let the matter be put before the Divisions of the British Medical Association and strong representations be sent up. Anyway, do not let the silly proceedings continue as they are. It is degrading to the Members.—I am, etc.,

London, E. Dec. 1st.

P. I. WATKIN.

Universities and Colleges.

ROYAL COLLEGE OF SURGEONS.

ANNUAL MEETING OF FELLOWS AND MEMBERS.

THE annual meeting of Fellows and Members was held at the College on November 27th, when the PRESIDENT, Sir George Makins, was in the chair.

THE PRESIDENT, in presenting the annual report, an abstract of which was published in our issue of October 25th, p. 548, called attention to the principal points. He stated, in reply to Dr. LAWRENCE, that Mr. Victor Bonney was the only nominee of the Council who had been elected on the Consultative Committee of the Ministry of Health, and also that no action had been taken with regard to the honorary Fellowship of enemy aliens.

Dr. BRINDLEY JAMES, President of the Society of Members of the Royal College of Surgeons of England, called attention to the vast amount of distinguished surgical work which Members of the College had done during the late war. He considered this entitled them to some share in the affairs of the College, and moved:

That this thirty-fourth annual meeting of Fellows and Members again affirms the desirability of admitting Members to direct representation on the Council of the College, which as now constituted only represents those Members who also hold the Fellowship; and that it does so in order that the constitution of the Council of the Royal College of Surgeons of England shall be in keeping with modern ideas of true representation.

Dr. F. W. COLLINGWOOD, in seconding the motion, said that the present would be a favourable opportunity to commemorate peace after the great war, and also to commemorate the names of the Members who had died for their country by inaugurating a new era in the College by admitting Members to direct representation on the Council. Dr. VINRACE and Dr. FITZGERALD supported the motion, which, on being put to the vote, was carried, twenty-six votes being given in its favour.

Dr. FINUCANE said that the Members, being by far the larger in number, had a right to some voice in the management of the College affairs. Whether it involved any fundamental alterations in the charter of the College, or whether it would be possible to co-opt or nominate two or more Members, might be left to the good sense and justice of the Council, which might be expected to adopt the simplest course. The government of the College at the present time was either despotic or bureaucratic. He moved:

That as the Royal College of Surgeons is composed of about 19,000 persons, of whom nearly 18,000 are engaged in general practice, this annual meeting requests the President and Council to nominate at least two Members in general practice to represent the interests of general practitioners in the management of College affairs.

Dr. DUNSTAN, who seconded the motion, said that the College should follow the present-day trend of public opinion by giving its Members some representation in the conduct of its affairs. It would not be long before there would be a Labour Government in power, which would probably take the necessary steps to give Members the representation they desired.

Dr. EDMOND ROCHE having spoken in support of the motion the PRESIDENT put it to the meeting, when it was carried; twenty-five voted in its favour and none against.

Dr. A. K. BARRETT proposed a motion inviting the President to make a statement as to the views of the Council regarding the proposed nomination on the Council of two Members in general practice to represent the interests of general practitioners.

THE PRESIDENT said that the resolution would be discussed by the Council, but he could not give any forecast of its decision. Special committees had in the past been appointed to consider similar resolutions, and the Council had come to the conclusion that it was not in the interest of the College that the Members should be represented on the Council.

The proceedings terminated with a vote of thanks to the President for taking the chair.

Primary Fellowship Examination.

The following have passed the First Professional Examination for the diploma of Fellow:

Wm. Anderson, Helen R. Ashton, E. M. Atkinson, J. T. Blackburn, L. R. Broster, Edith K. Budden, N. St. J. G. D. Buxton, H. W. B. Cairns, C. L. Chapman, R. M. Clarke, J. H. Cobb, A. J. Cockkinis, Gwendolyn O. Coaton, E. A. Crook, D. I. Currie, P. P. Debono, H. B. Dew, L. A. Dingley, R. Fowler, Hilda M. Garlick, S. Ghosh, J. F. Gilj, C. D. Gimblett, Marie L. P. Goetze, W. A. Hewitson, F. G. Hunt, Lily G. H. P., L. M. Ingle, J. A. Jenkins, Gladys H. E. H. J. Jones, J. M. Keegan, T. P. Kilner, D. Krestin, C. Lambird, J. V. London, R. L. Laver, R. J. McN. Love, K. MacComick, A. L. McGregor, Wm. MacMurray, R. P. S. Mason, Isabella M. Mears, C. H. Medlock, J. M. D. Mitchell, W. E. M. Mitchell, J. B. G. Muir, T. P. Noble, H. C. W. Nuttall, C. A. Patison, C. S. L. Roberts, A. E. Roche, J. J. McI. Shaw, W. Shaw, J. L. Shellshear, L. R. Shore, A. I. Silverman, H. J. D. Smythe, L. A. Spedding, H. F. R. Stephens, H. C. Trumble, N. S. B. Vinter, H. M. Wharry, F. W. W. Widgery, N. J. Wigram, E. A. Wilson, H. H. Woodard, H. W. S. Wright.

UNIVERSITY OF LONDON.

THE University Chair of Pathology, tenable at Middlesex Hospital Medical School, is vacant owing to the appointment of Dr. C. H. Browning to the Gardiner Chair of Bacteriology in the University of Glasgow. The salary is £300 per annum. Further particulars can be obtained from the Academic Registrar, University of London, South Kensington, S.W.7. Applications (12 copies) must be received by him not later than January 27th.

The Paul Philip Reitlinger prize, founded by Mr. Albert Reitlinger in memory of his son, a student of the Middlesex Hospital Medical School, who died on December 3rd, 1911, has been awarded to Mr. B. I. Evans for his essay on English poetry in the twentieth century. Next year the prize will be awarded for the best essay embodying the result of some research on a medical subject carried out by the candidate.

The Services.

HONOURS.

FOREIGN DECORATIONS.

The following decorations have been awarded by the Allied Powers for distinguished services rendered during the course of the campaign.

Conferred by the President of the French Republic.

Légion d'Honneur.—Officer: Major General Sir Michael Thomas Yarr, K.C.M.G., C.B., A.M.S. *Chevalier*: Captain (acting Lieut.) Colonel Duncan Campbell L. Fitzwilliams, R.A.M.C.(T.F.), temporary Captain Alan Edward Staflurth, R.A.M.C.

Croix de Guerre: Temporary Captain Oscar Glennie Donovan, C.A.M.C.

Conferred by the King of the Belgians.

Croix de Guerre: Temporary Captain (acting Major) Douglas Edward Crosbie, M.C., R.A.M.C.

Conferred by the Sultan of Egypt.

Order of Nile.—3rd Class: Lieut.-Colonel and Brevet Colonel (temporary Colonel) Walter Holland Ogilvie, C.M.G., I.M.S., temporary Captain (acting Lieut.-Colonel) William Angus, R.A.M.C. 4th Class: Majors Dodington G. R. S. Baker, I.M.S., Samuel Hubert Seecombe, A.A.M.C.; Captains Charles Henry Allen, O.B.E., R.A.M.C.(T.F.), Hubert Horan Brown, I.M.S.; temporary Captains Roland Hurst Hadfield, and William Noel Montgomery, R.A.M.C.

Obituary.

THE LATE DR. HUGH LOGAN CALDER.—Dr. H. G. Langwill (Leith) writes: In last week's brief obituary notice no reference was made to one important aspect of Dr. Calder's work—namely, as a teacher of clinical surgery. Up till the 'nineties the only hospital in the Edinburgh Medical School where facilities for clinical instruction for lady students were provided was Leith Hospital, and in those early days of teaching practical surgery to ladies Calder took an active part (in association with the late W. A. Finlay). His bedside and operative teaching was always eminently practical and full of interest to the student. Widely read in his subject but a man of few words, he had the knack of seizing the vitally important features of his subject and imparting clearly the essential facts of the case before the student, so that to many a lady practitioner to day the news of his death will recall with regret the figure of "Hugh"—as he was affectionately called—with his incisive speech, promptness of decision, and deftness in execution. Naturally shy, he took no part in public work beyond his many years of hospital service; but to his brethren loyalty and absolute sincerity were over his characteristics, though he would not accept office in the Leith Practitioners' Association, of which he was practically the "begetter."

Medical News.

THE Unhealthy Areas Committee of the Ministry of Health has recently heard evidence as to the high mortality in slum areas in London within which, it is estimated, an aggregate of 184,000 persons live. In the Tabard Street area, to which Dr. Waldo, in his capacity as coroner for Southwark, has so often called attention, the death-rate between the years 1904 and 1908 was 36.8, as against an average of 14.9 for the rest of London.

THE Mayor of Kensington (Dr. A. J. Rice-Oxley) opened last week a laboratory which has been provided at the Kensington and Fulham General Hospital. He spoke of the advantages of such a laboratory, especially in respect of preventive medicine, and invited medical practitioners in the neighbourhood to take an interest in its working.

A MEETING of the Harveian Society will be held at the Medical Society's rooms, 11, Chandos Street, W.1. on Thursday, December 11th, at 8.30 p.m. Sir James Galloway will give an address on the external signs of certain internal diseases.

DR. HARRY CAMPBELL will deliver the first Savill Memorial lecture on "The integration and disintegration of the mental personality," on Wednesday, December 10th, at 5 p.m., at the West End Hospital for Diseases of the Nervous System, 73, Welbeck Street, W.

ON All Souls' day (November 2nd) a number of his former pupils gathered at the grave of Professor Dejerine; a few speeches were made, and flowers were placed on the tomb.

THE first number of a monthly journal entitled *Surgical Appliances* has been issued. It contains notes of interest to instrument makers and gives special prominence to the manufacture and adjustment of artificial limbs. It contains also particulars of the British Artificial Limb Makers' Association, established in 1917. The publishers are W. B. Tattersall, Ltd., 40, Fleet Street, and the annual subscription is 10s. post free.

AT a meeting of the Royal Sanitary Institute to be held at 90, Buckingham Palace Road, S.W.1, on Friday, December 12th, at 3 p.m., Dr. H. Scurfield, M.O.H. Sheffield, will open a discussion on mothers' pensions.

THE Board of Education (Midwives' Training Regulations, 1919, draft copies of which were circulated recently, have now been confirmed without amendment, and can be purchased through any bookseller, price 1d., or from H.M. Stationery Office, Imperial House, Kingsway, London, W.C.2. price 1½d., post free.

AT a general meeting of the medical profession of Hampstead, called by the Hampstead Medical Society, on November 27th, 1919, a committee to be called the Hampstead Medical Committee was appointed with a general reference to watch over the interests of the profession in the borough, to act as arbiter or adviser in any questions submitted to it by both parties to a dispute, and to take over any outstanding matters not dealt with by the local Medical War Committee. It was resolved also to discontinue the war charge hitherto imposed, and to make an increase of fees of at least 50 per cent. beyond the pre-war charges on all medical accounts, this decision being notified in the lay press; and, further, to recommend to the local profession that medical accounts should be rendered quarterly instead of half-yearly as hitherto.

IT is announced that the governors of the Hospital for Consumption and Diseases of the Chest, Brompton, have decided that the superintendent of the laboratory and the medical officer in charge of the x-ray department shall be members of the Medical Committee of the hospital. A letter appears also in *The Times* from the house governor and secretary of the Wolverhampton and Staffordshire General Hospital stating that the board of management of that institution, acting on a suggestion of the Medical Committee, have lately elected both the pathologist and the medical officer in charge of the venereal department members of the Medical Committee, an alteration of the rules of the hospital being made for this purpose. These events point to a gradual change in the outlook of hospital staffs and managers towards the essential unity of the work of the hospital as a whole and of its laboratories and special departments.

A MEETING of the Australasian Medical Congress will be held in Brisbane in 1920. The last congress was held at Sydney in 1911. It was then decided to recommend the Federal Government to give increased financial assistance to an Australian institute of tropical medicine, and the Government granted a permanent subsidy. At the

Congress at Brisbane the possibilities of white settlement in tropical Australia will be discussed, and the large amount of work done at the institute will help to provide a basis for the discussion. Other subjects of debate will be the control of venereal disease, military surgery and hygiene, the dispute between the medical profession and the lodges, and the adjustment of health administration between the Commonwealth and the States. All the states of the Australian Commonwealth and New Zealand will be represented at the Congress.

THE current number of *Parasitology* contains a note by Dr. D. Keilin, reporting some observations by M. A. Ségué, which indicate that larvae of the house-fly may survive during the winter, feeding on snails and living within the shells. M. Ségué has proved that larvae of the house-fly readily penetrate the closed diaphragm of the shell and entirely devour the snail inside, and that, moreover, having destroyed one snail, they pass on to another. He found larvae in nine out of fifty snail shells taken off a wall in the middle of last January. Dr. C. J. Gahan, Keeper of the Department of Entomology, British Museum, asks for snails collected during this winter. They should be sent to him at the Natural History Museum, S.W.7.

MESSRS. SIEMENS BROTHERS AND CO., LTD. (of Palace Place Mansions, Kensington), have issued a new catalogue from which it appears that they now furnish dry cells and batteries in upwards of six hundred different sizes and shapes. Their keeping qualities have been tested in countries where the climate is not considered favourable to cell storage. The catalogue contains some useful advice on the cells suitable for the galvano-cautery and similar purposes. Particular attention is drawn to the "inert" cells, in which, until water has been added, no action takes place, so that they can be stored for an indefinite period without deterioration.

Letters, Notes, and Answers.

AUTHORS desiring reprints of their articles published in the *BRITISH MEDICAL JOURNAL* are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

In order to avoid delay, it is particularly requested that ALL letters on the editorial business of the *JOURNAL* be addressed to the Editor at the Office of the *JOURNAL*.

THE postal address of the *BRITISH MEDICAL ASSOCIATION* and *BRITISH MEDICAL JOURNAL* is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the *BRITISH MEDICAL JOURNAL*, *Aitology*, Westrand, London; telephone, 2651, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate*, Westrand, London; telephone, 2650, Gerrard.
3. MEDICAL SECRETARY, *Melissera*, Westrand, London; telephone, 2654, Gerrard. The address of the Irish Office of the *British Medical Association* is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

INCOME TAX.

W. E. H. inquires as to certain expenses incurred in connexion with the conduct of the practice during his absence on military service.

*. * *Locum tenent.*—Salary, fees, and cost of board and lodging provided are admissible expenses. It is difficult to suggest a figure for the board and lodging, as it would vary according to circumstances; perhaps £2 10s. a week would be reasonable.

Motor Expenses.—All running costs and repairs, also the expense of replacing the car as a whole as and when incurred are allowable expenses.

Rent, Rates, Lighting, and Heating.—For a rural practice we suggest that one-half would be the maximum allowable.

Other expenses, such as telephone charges, a reasonable proportion of cost of domestic service to cover attendance at the surgery, cleaning of motor car, etc., cost of drugs supplied, medical periodicals and subscriptions, upkeep of instruments, etc., are allowable if and when laid out in the conduct of the practice as distinct from expenses incurred for private purposes or in improving or adding to the equipment of the practitioner.

LETTERS, NOTES, ETC.

MEDICAL OFFICER OF HEALTH, PORT ELIZABETH.

DR. ARCHIBALD KIDD (2, Sunnyside, Gravesend, Kent), late M.O.H. Port Elizabeth, writes: If candidates for the above appointment, advertised in your issue of November 22nd, will communicate with me, I shall be pleased to give them any information in regard to it that they may desire.

SCHOOLBOYS' WEIGHT.

DR. COURTENAY DUNN (Torquay) writes: Surely it is a fact that young growing animals of all species, when in a normal condition of health, increase in weight more or less regularly, and that any interruption to this regular increase in weight must be due to some want of assimilation, variation in amount or quality of food, or disease. This any Aylesbury duck breeder will have at his finger-tips. That boys do lose weight at boarding schools is an undoubted fact, and there are many causes to which this may be attributed. The boy may be unhappy in his surroundings, or it may be the work and confinement, the amount of actual rest, or even the food supplied. It is very difficult, unless one is intimately connected with the particular school, to say what reason there obtains. We know that it happens, but we do not always know why.

The tuck-shop is and always has been the cause of some trouble, but the master who allows "extra milk" lays himself open to the suspicion of either starving his pupils or receiving invalids amongst healthy boys. Both pretty serious charges.

I am afraid that it is true that the dietary is either insufficient in quantity or feeding value in schools of repute. A head is expected to be a scholar, a teacher, a disciplinarian, and a man not only able to pull along comfortably with undermasters and boys of every temperament, but to undertake the duties of rearing healthy and educated men. It is a large order. When as a matter of fact many of these men have obtained their reputations owing to the abilities of their undermasters, then it is a larger order still.

THE MANDRAKE.

A CORRESPONDENT who was in Russia in 1917 met there a Russian who looked about 30 years of age but said he was nearly 70. He attributed his youthful appearance to the use of mandrake; he soaked the root in port wine and took three glasses occasionally. He produced a number of roots of mandrake, one of which was "exactly the shape of a man sitting." It is curious to find belief in the magical virtues of the mandrake still existing in Europe. It goes back to a very remote antiquity, and the literature is enormous. There is a short article on the subject in the *Encyclopaedia Britannica* (eleventh edition). The subject is discussed by Sir J. G. Frazer in his *Folk-Lore in the Old Testament* (London: Macmillan and Co., 1919), vol. ii, chapter vii, and may be pursued further in Professor Elliot Smith's remarkable volume *The Evolution of the Dragon* (London: Longmans, Green and Co., 1919).

AN IMBECILE'S MEMORY.

DR. J. PEREIRA GRAY (Exeter) writes: There is in the Exeter Poor Law Institution a man whose memory is so remarkable that I feel constrained to bring him to the notice of medical men. James C. is a native of Devonport, is 60 years old, and a certified imbecile. He has been in a Poor Law institution practically all his life. He has the facial expression and gait of an imbecile. He makes use of very few words, and has a tendency to repeat the same phrases over and over again. Yet this man, if given the number of any psalm taken at random, can repeat the psalm correctly. He can do the same with any hymn. He can give the right lesson for any Sunday in the year. But what I consider a still more remarkable feat is that if given any date he will name the day of the week on which that date fell. I have tested his memory on several occasions and his answers were invariably correct.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 33, 36, 37, 38, 39, 40, and 41 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 34, 35, and 36.

THE following vacant appointments of certifying factory surgeons are announced: Ipswich (Suffolk), Steyning (Sussex), Whithorn (Wigtown), Workington (Cumberland).

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *post restante* letters addressed either in initials or numbers.

MEDICINE AND THE PEOPLE:

A REVIEW OF SOME LATTER-DAY TRACTS.

BY

SIR T. CLIFFORD ALLBUTT, K.C.B., M.D., F.R.S.,

REGIUS PROFESSOR OF PHYSIC IN THE UNIVERSITY OF CAMBRIDGE;
PRESIDENT OF THE BRITISH MEDICAL ASSOCIATION.

THE Report of Mr. Flexner upon *Medical Education in Europe*, 1912, a remarkable document for a while eclipsed by the Great War, and the two impressive Reports of Sir George Newman¹ not only mark a cardinal period in the history of Medicine but also, by showing us where we stand, contribute no little to its advance. As we issue from the mist these observers take our bearings on a new horizon, reveal to us our new positions and scenes, and determine our future course. Happily we are not far out of our reckoning, and are well on the way to our more immediate ends. Far indeed, it is true, from the summit of our climb, a summit after the manner of peaks, continually receding as we rise, we have reached nevertheless a shoulder of the hill whence the landscape is spread out before our eyes. We have journeyed thus far by half-conscious instincts, now henceforth for a while we can go forward in the light and direction of reason. At present Sir George Newman's latter Report, on Preventive Medicine, is occupying our attention; but, as the author himself insists, preventive and curative medicine are but the silver and gold of the two sides of the one shield; and "Education" in them is not only the instruction of the apprentice but also the nourishment of the practitioner and the equipment of the pioneer.

The Width of the Problem of Disease.

We are rather too prone to regard disease exclusively from the point of view of the organism—or rather, in our neglect and ignorance of comparative medicine, from the point of view of the human body only; a narrow outlook. However, whether in man, animal, or plant life, we are too introspective; or in the other extreme of late years too ready to cast back our gaze upon the *milieu* alone (a term unfortunately without an English equivalent); but the play of life, the physiological drama, lies not in either organism or *milieu* severally; it is an interplay, a halo about their common edges; in health a dynamic equipoise. Five hundred years before Christ physicians of the school of Croton (such as Alcmaeon) began to regard normal life as consisting in this "isonomy," this balance and reciprocation of inward and outward. And, if we see life as in this loom of woof and web, we shall understand better one of Sir George Newman's main themes, that—as, for example, in the phenomena of immunity—preventive and curative medicine, if for the limits of the human mind they must be studied in some severalty, are notwithstanding but different aspects of the same subject matter. Preventive medicine, as Sir George says, is by no means external sanitation only.

Disease then is some failure, or some discord in this interplay; some actor in the drama, on the one side or the other, has missed his cue, or struck the wrong note; or some foreign actor has thrust himself upon the stage. The result is that the interplay, the dynamic balance, attained in the continuity of readjustments over many ages, is disordered or upset. In spite of the great Ionian thinkers, and in the following of imaginary spirits and witchcraft, the notion that disease is an entity has reigned for hundreds of generations, and over realms of space, to the present day, when even considerable medical writers still continue to talk of diseases as "entities." Thus for our forefathers heat, for instance, was an entity, electricity a "fluid." Against this "daemonic" notion of disease Sir George Newman fights directly and indirectly.

The Body's Margin of Safety.

It is true therefore, as he himself and Sir James Mackenzie likewise earnestly contend, that one leading adventure of medicine must be to investigate the beginnings of diseases; that is, the first faint discords

in the reciprocal interplay. Whether Sir James Mackenzie be right in shifting our point of search altogether or chiefly from the larger disturbances to those minor and incipient variations, wherein diseases begin, is another question. That this view must ultimately be taken there is no doubt; but probably at more advanced stages of pathology, not at the beginnings or earlier ways of research. If we read the stories of intrepid explorers, of pioneers who have discovered the sources of great rivers and the distributions of the streams of watersheds, we shall see that the method of following the several rivers up stream has been more successful than the endeavour to ascertain at the sources how to identify and describe the various and occult fountains of these greater rivers of the plain. To the present writer it seems that on this method, by tracking back from the main reaches of diseases, noting their various stages and branches, unravelling their complications, and comparing their features and directions in men, animals, and plants, we shall map out their several origins more quickly than by studying only or chiefly the areas where they are less differentiated. A cell may perhaps be ill in all ways at once; but a congeries of cells moulded into a system of various co-ordinate functions must in its disorders swing this way or that or the other according to the several lines of the lay out of its parts. With differentiation of structures must come a corresponding differentiation of lapses.

Another difficulty of study when directed mainly to incipient stages of disease and working down from these, is the large "margin of safety" with which our organs are, each and all of them, endowed. They all hold a store against extraordinary needs or assaults. It is a matter of familiar experience that a part or system of the body in man may on its own reserves have undergone no little deterioration or disadvantage before, on some larger demand, its failure becomes manifest. Moreover we know well how compensation in one department for default in another may mask the oncomings of disease. However let not our reconnoitring parties neglect any opening, occasion, or source for investigation.

While considering early or late deviations from the normal equipoise, we shall not allow ourselves to be entangled in terms; in terms such as diathesis, soil, susceptibility, and so on. For instance, to speak of the organism as a "soil" misleads teacher as well as disciple. That is an odd kind of "soil" which is rather the fed than the feeder; the warrior against insown germs rather than their nurse. Besides, by such phrases we are liable to get lost in the abstract, that continual peril of the student. May not individual vulnerability lie as often in some local peculiarity as in a vague and general proclivity; in the malformation, let us say, of a bronchiole or of a diverticulum, creating, or favouring, the accumulation of a local culture medium; or of a blood vessel, shutting off the nutrition of a part; or in the lack of a biochemical element, such as calcium? There is no inconsiderable field open here for the minuter anatomist, and for the student of beginnings.

The Allies of Clinical Medicine.

Anatomy is far from completion; physiology still offers an extensive unknown or unexploited field; pathology, great as are its recent achievements, leaves much yet to be done; still for Clinical Medicine—and Sir George Newman does well to beat in the claims of Clinical Medicine as the main purpose and end to which our efforts are to be directed, and as the key to social regenerations, material and spiritual—for Clinical Medicine these sciences have already done much and carried us far. But we must not forget that there are other ancillary sciences no less effectual, to which as yet we have scarcely betaken ourselves.

The bearings of biophysics and biochemistry upon Clinical Medicine are not yet come into full view. Hopkins, Bayliss, Moore, and many others are calling to us from their remoter thrones, telling us what biophysics and biochemistry can do for Medicine; how we might push on would we but summon their young prophets to the bad sides of our patients. Yet our colleagues, and especially perhaps our surgeons whose great feats are our daily admiration, assure us that these views are "speculative," remote, and "academic"! The truth is quite utterly otherwise: it is since the present writer, after twenty or more years of lecturing on Medicine, had, from the outbreak of the war to the present time, again to undertake

¹ Some Notes on Medical Education in England, 1918 (Cd. 9121). Pt. 1, net.; and An Outline of the Practice of Preventive Medicine, 1919 (Cmd. 365), 6d. net. H. M. Stationery Office; to be obtained through any bookseller.

full personal responsibility for the treatment of hospital patients, that he has perceived the close limits of our knowledge and the bright promise of these "academic" studies of applied physiology, pathology, and now emphatically of biophysics and biochemistry. Arrangements have accordingly been made for the co-operation of a biochemist also with the clinical staff of the Addenbrooke's Hospital. How can we be satisfied with empirical routine when we find ourselves face to face with the intimate working of colloids and their syntheses with crystalloids that, in health and disease, governs those very movements of fluids and solids throughout the body, with which we are incessantly concerned, that governs normal secretion and excretion, and in disorder the retention or discharge of morbid excrements? Or, again, when we are face to face with the changes of viscous fluids to and from more rigid forms; with the vast range of catalytic action, as of the ubiquitous enzymes, normal and hostile, of vitamins; and of those balances of chemical equilibrium within the corporeal system which the researches of Professor Starling, Professor Schafer and others have shown to us, shall we not try to learn their physical and chemical paths? And this outlook is far from being even a sketch of what might already be revealed from this point of view, the point of view, or one of them, from which Sir George Newman has appealed to us; that we should take, and give to our pupils, the "university quality" of learning, that we should lift medicine—preventive and clinical alike—out of the ruts of mere cleverness, adroitness in detail, handbook learning, empirical rules, into a larger and steadier atmosphere. Not that these qualities of handiness, dexterity, quick sight, versatility, are valueless, indeed they are precious; but they are gems which ought to be set in a far larger design.

The Risk of a Rootless Tree.

Conversely, the scientist has much to learn from the artist. Of middle-men who shall join the discoveries of the scientist to the practice of Medicine we are lamentably in need. Sir George Newman has insisted again upon this urgent need, as for "Clinical units" in our city and university hospitals. But, although such leaders and such "teams" are to forge ahead, instructing and inspiring their followers, yet much of the advance depends also upon the rank and file. How then are the practitioners, the artists of Medicine, to aid in maintaining and developing this larger design? Such is the question that Sir George Newman anxiously reiterates, that physicians and the public have now to consider. Meanwhile he urges, as many others of us have pointed out, that a contrary and mischievous tendency is at work to shake the whole structure of British Medicine by undermining its foundation, the foundation of the "general practitioner." When the midwives are in possession of births, the infants under maternity nurses, the tuberculous and venereally infected gathered away under their several wings, the fevers moved off to isolation, the preventive methods—which penetrate the curative—handed over to officers of health, and even the cases of minor surgery collected in Hospitals or "Homes," what is to become of General Practice? It must descend to the sweeping up of trifles outside the orbits of these constellations of specialists! The tree, all top and no roots, must wither. Now let us think of this, when we learn that in 1918 ninety-two thousand fresh cases of tuberculosis were notified; and six thousand five hundred of ophthalmia neonatorum; and that rheumatic fever is probably not far behind.

Roots and Branches Both.

How this peril to family practice is apprehended, and how it should be provided against, Sir George Newman forcibly and critically declares in these constructive essays. Gladly we learn that one large edition after another of both Reports is being rapidly absorbed. The seed is falling on good ground. The Author repeats that the family physician must, by revised education and provision of the means, be enabled to work on these larger lines. That by education he is becoming year by year more fit to accept and to develop the sciences of Clinical Medicine the present writer has ample evidence. It may be forgotten that the Budget, which unhappily was suffocated in 1914 by the War, contained such a provision—a

substantial grant towards the provision of a comprehensive laboratory in every health area of England, whether affiliation to a university were available or not; but in any case linking up to the local hospital as the medical centre of the area. So far as the present writer is aware, only one such laboratory has come into existence apart from a university—namely, in Wolverhampton. This excellent Institute, sadly deranged as it has been by the War, is now again in full work, under Dr. S. G. Billington; and practitioners in the district, on the restoration of home work, are making more and more use of its aids and incentives.

Did space permit, some fuller reference might be made to the very promising movement in the United States for the formation of medical groups, or large partnerships. A certain number of the general medical practitioners in a district combine to provide central offices, where provision is made for scientific diagnosis, and for treatment medical and surgical. The members in turn are encouraged to give especial attention to this or that department of practice, and so are released for occasional attendance at special university clinics, both at home and abroad; and holidays are mutually arranged in like manner. This thoroughness of the diagnostic methods makes the scheme popular with the public, and lessens domiciliary rounds. The revenue is said to be larger than the sum of the independent practices.

After all this introduction much, indeed the chief part, of Sir George Newman's Reports must be left to the readers of them. We want, as he says, to instil new "health habits and health conscience." Our readers will recall *Punch's* recent picture of the soldier son, home on leave, tubbing himself vigorously in the back kitchen to the wonder of his slovenly old parents at the fireside, "He gives way to it, Mary, that's where it is." Sir George looks forward to yet larger federations of workers, from professors to health visitors and mothercraft; to more and better playgrounds, open-air schools, and summer camps; to better housing; to eugenics; to dietetics; to more personal cleanliness, especially of the teeth and mouth; to the reform of infirmaries, and their alliance with the voluntary hospitals; to a reconstruction of psychiatry; to reforms of industrial conditions, to extension of health and unemployment insurance and to other such efforts for the banishment not only of overt maladies but also of "all the crippling morbidity and invalidism" which sap the vitality of the nation, and "impair intellectual and moral fibre." Moreover the amenities of life make for health as well as happiness.*

Comparative Medicine.

We look forward to further reports from Sir George Newman, and would welcome from his hand a judgement on the importance of Comparative Medicine, a study, as we have said, unaccountably neglected. What the comparative method has done for anatomy and embryology, for ethnology, for philology, for sociology, for religions, and so forth, we know and prize; yet for Medicine, a study no less needful of this method, we have no systematic organization of workers or plants. Whatever little is done in this way is fragmentary and incidental. *A hiatus valde deflendus.*

The Guardian of the Tabernacle.

It is strange that not until the present generation did we recognize the "masses of the people." Even the vast imagination of Shakespeare himself failed to see in the people more than a malignant and turbulent herd. The "churches" are said to have "failed"; if in the past ecclesiastics have failed, Christianity has at length revealed our brethren the people to our hearts, and opened to them our sympathy. And it is in this spirit, in his intense humanity, that Sir George Newman represents his epoch and kindles in us a new hope, leading us to a wider vision, to a more unselfish devotion to the public good, to a liberal sympathy with all men in town, village, and field; to co-operation with the highest aspirations of the individual and of the national mind. He proclaims to us that the human body is the tabernacle of the spirit of Man, and that if the instrument be out of tune the music is discordant and dies.

* In respect of the amenities, in addition to sanitation, as a great part of hygiene, public and private, see the interesting reports of the work done under the Carnegie bequest at Duferrilline.

THE DIAGNOSIS AND TREATMENT OF CHRONIC GASTRIC ULCER.

BY

SIR BERKELEY MOYNIHAN, K.C.M.G., C.B., F.R.C.S.,
SURGEON, LEEDS GENERAL INFIRMARY.

(With Special Plate.)

AROUND the subject of gastric ulcer a very extensive literature has accumulated. Every country, and a host of authors, have contributed to it, until there must be many who doubt whether anything really fresh or important remains to be said. Yet I hold a firm belief, based upon an experience the length of which I dread to contemplate, that no small part of what is written requires ruthless revision in the light of the modern methods of inquiry conducted by the radiographer and the surgeon. The wealth of teaching in the textbooks is too often impersonal, and represents rather a legacy flowing from one's ancestors than a fortune newly won by hard endeavour. The heritage in respect of gastric ulcer is heavy enough, but not all of the securities are worth their face value.

A gastric ulcer is, of course, an ulcer occurring in the stomach. During development the stomach is differentiated as one part of the foregut from that other part which forms the duodenum as far down as the ampulla of Vater. The foregut terminates at the point of entrance of the ducts of the liver and pancreas; at the end of the second month of fetal life the pylorus marks off the stomach from the duodenum. When development is complete it is as a rule easily possible in all periods of life to distinguish the stomach from the duodenum. On palpation the pyloric muscle and valve are felt at once. Exactly in the line of the pylorus a thin white line is to be seen on careful examination; the line becomes clearer if in the living subject the pylorus is held forward by a finger and thumb placed one on the stomach, the other on the duodenum, and closed to meet in the pylorus. In close proximity to the "pyloric white line" is a vein, the "pyloric vein," which begins at or near the middle of the anterior surface of the pylorus and runs downwards to the greater curvature. The "pyloric vein" is constant, its arrangement variable. It may be single and large, short and branched, or long with only very slender branches; it may be double; it may or may not be met by a smaller vein running up towards the lesser curvature; it may lie on either side of the pyloric white line. The perfectly fair criticism has been made against the acceptance of this vein as a landmark, that veins are very irregular in their arrangement, position, and distribution, and that nowhere else in the body is the position of a vein so constant as this is asserted to be. And it must be frankly admitted that there is a very small number of cases in which the venous arrangement is such that no accurate localization of the pylorus is possible from a surface inspection. But there is no landmark in the body that is invariable. For many years past I have drawn the position of this vein as seen during an operation while the parts were under inspection, and it is quite safe to say that in at least 90 per cent. of the cases the markings I have mentioned may be accepted as accurate. Latarjet (*Lyon Chirurgical*, 1911, vi, 337), after a research conducted for the purpose of deciding the value of the vein as an accurate landmark, concludes in favour of its acceptance.

An ulcer occurring on the proximal side of this vein is a "gastric ulcer"; an ulcer occurring $\frac{1}{2}$ in. or $\frac{1}{3}$ in. or more beyond it is a "duodenal ulcer." It is not merely a matter of academic interest to distinguish them; their symptoms are sufficiently distinct to allow an accurate diagnosis of duodenal ulcer to be made with remarkable constancy; their complications and sequels in respect of perforation and haemorrhage are very different; cancer develops often upon the base of a gastric ulcer, and almost never upon the base of an ulcer in the duodenum. Gastric ulcer is a disease of comparative rarity; its diagnosis from the clinical evidence alone is difficult; its mimicry by other conditions extremely frequent. These statements may not find a ready acceptance everywhere. For if the textbooks of medicine, or the special works of distinguished authors

are read, or if the diagnoses made in the out patient medical clinics are reviewed, it will be found that there is a general agreement that gastric ulceration occurs frequently, and that its symptoms are of a kind hardly admitting of doubt or difficulty in diagnosis. I have spent a great deal of time in reading almost everything to which I could obtain access that has been written about gastric ulcer, and I am compelled to say that when the statements universally made are tested by the experience gained in the operation theatre they are found to be inaccurate. My contention is that a full, clear, and truthful description of the symptoms of gastric ulcer is rarely given; and that the conditions described as "gastric ulcer" are in the majority of cases indicative of other diseases.

What are the symptoms of gastric ulcer, and how may the diagnosis be made?

Ulcer of the stomach occurs twice as often in men as in women; its chief symptom is pain. All the attributes of this symptom merit and must receive the closest scrutiny. The chief attribute is, I think, regularity. In all cases of gastric ulcer there are periods of intermission, longer or shorter, at one period of the year or another; but when the attacks are present the pain which is then the chief feature always displays regularity. It comes after all meals, even light meals; it is not present after breakfast on one day, after dinner on another, and absent entirely on another day. If a meal is eaten, pain during the attack follows invariably. The interval between the taking of the meal and the onset of pain is fairly constant. As a rule the earlier the pain is felt after a meal the nearer is the ulcer to the oesophagus. That is to say, if pain comes, regularly, one or one hour and a half after a meal, the ulcer that causes it is in the stomach, it is a "pre-pyloric" ulcer. If pain comes two, three, or four hours after a meal the ulcer lies generally beyond the pylorus. This period of relief from pain after a meal is constant and invariable, both in gastric and duodenal ulcers, until stenosis, subacute perforation, or the formation of crippling and embarrassing adhesions takes place. These conditions may lead to a delay in the time of the appearance of the pain in cases of gastric ulcer, or to the hurried appearance of the pain in cases of duodenal ulcer.

In over three cases in five of gastric ulcer, seen during operation, the pain came within one and a half hours of the taking of food; in rather more than four cases in five of duodenal ulcer the pain appeared two hours or more after food. The pain in cases of gastric ulcer very often disappears after an hour, or even less, and may be completely relieved, indeed it generally is, before the next meal is due. The pain of duodenal ulcer, on the other hand, appearing later, generally persists, often with a slowly increasing severity, until the meal is taken. The character of the meal influences the pain. A generous meal of heavy foods causes severe pain to appear at an earlier time in gastric ulcer; it delays the appearance of the pain in cases of duodenal ulcer. Smaller meals of soft, pulqueous food, easy of digestion and easily propelled, produce less pain, and the interval of relief brought by the food is longer. An indiscreet and hasty meal, especially of fruits, or salads, or pastry, may give instant and grievous pain. A bland and blameless diet taken in small quantities at brief intervals may reduce the chances of pain appearing, or even afford complete relief. In a small proportion of cases pain may not be influenced by food in the manner and to the extent now described. When the ulcer is near the cardia there may be no relief from taking food, or pain may immediately be made worse; each of these features is present in approximately 4 per cent. of the cases.

The pain is variously described: it is a deep, "boring," "burning," or "aching" pain; there may be "gnawing" or a sense of acidity and a desire for food or warmth. The pain in a majority of cases is said to be on the left side or high in the epigastrium; in some severe types there may be great complaint of pain in the back. In twenty three cases in which there was a deep excavation in the pancreas consecutive to a subacute perforation of the ulcer on the lesser curvature or posterior wall of the stomach, seventeen patients complained bitterly of the intolerable aching in the back. As we know, many patients attacked with acute pancreatitis suffer most from pain in the back, and it is an old observation and an accurate one that a deep eroding ulcer of the pancreas may also produce this most distressing symptom.

* A paper read at the opening of the session of the Harveian Society, October 23rd, 1919.

The position of the ulcer, its freedom from adhesion to neighbouring parts, and its size, all seem to affect the type of pain, its periods of latency, and its time of onset after meals. When ulcers are small and seated high up on the lesser curvature, or just on the posterior surface, the symptoms are shorter in duration, but more prone to recurrence. They are often, as we learn from the radiographic examination, attended by severe forms of local spasm, which are responsible for the sensations of distension, weight, and pressure, which appear to accompany these ulcers more often than those of other types. If the ulcer is large, excavating the liver, or burrowing deeply into the pancreas, or if it is fixed by firm broad adhesions to the abdominal wall or the liver, the symptoms are less likely to show those intermissions which are so characteristic of the earlier stages. If, therefore, in the history of an individual case we learn that the periods of freedom from suffering have become by degrees shorter, and have finally vanished, we may often predict that some of the conditions named are present. If, in addition, there are wasting and especially anaemia, we may be very suspicious of the onset of malignant disease.

Relief from pain is obtained not only from food, but from alkalis, sodium carbonate, "mint drops," or from vomiting. Lavage of the stomach often gives great temporary relief.

The fact that the severity of the pain is so often mitigated by food accounts for the fact that many patients do not lose weight, or may actually gain weight during an attack. Patients with gastric ulcer recognize that heavy meals three times a day bring their own punishment. Lighter meals are taken at shorter intervals, and the total amount of food, much of it of high value, is accordingly far greater than that usually consumed. Weight is therefore gained.

About one-fifth of the patients who are found to have gastric ulcers complain not only of pain, but of great prostration, feebleness, or lassitude coming on just at the time when the pain is due. On close inquiry this most distressing symptom may be found to have preceded the experience of pain by weeks or months. The periodicity of the two is identical.

It is not possible to emphasize unduly the importance of ascertaining all these various modifications of the one symptom pain. The constancy of the sequence—food, comfort, pain; food, comfort, pain—is the most important of all the clinical matters concerned with the diagnosis of gastric ulcer.

The next symptom in point of frequency is *vomiting*. In all forms of ulceration of the stomach or duodenum vomiting is an inconspicuous feature, unless obstruction has developed as the result of the cicatrization of the ulcer. Indeed a degree of obstruction which is by no means trivial may be present, and yet vomiting is very infrequent or entirely absent. It is no uncommon experience to hear a patient say, "I never vomit," and for an operation to disclose an extensive ulcer or a moderate degree of stenosis in the body or near the pyloric orifice of the stomach. Patients seem to have a great capacity for estimating the degree of tolerance possessed by the stomach, and of taking only such foods, or foods in such measure, as will arouse no resentment. In the earlier stages of the development of their malady vomiting is not seldom self-induced in order to ease the stomach of a heavy load, and a sense of pressure and distension. But a very little experience seems to teach the greater number of patients the quantity of food that is appropriate for them. Thereafter vomiting occurs quite infrequently. It has probably been present on a few occasions in more than half the number of patients who have suffered in many attacks; but it is rare to find that quick reference is made to it when the history is being disclosed.

When in the record of any patient suffering from "dyspepsia" there is a story of frequent vomiting, of the inability of the stomach to tolerate the presence of any foods, of even fluid nourishment sparsely taken being at once rejected, the thought that gastric ulcer is the cause should be driven from one's mind. That type of history, which is commonly heard, is, I find, rarely present in cases of organic disease of the stomach. The vomiting due to the presence of an ulcer is infrequent, and occurs almost always not immediately after food, but after a shorter or longer interval. The meal at first causes relief, and only after that period of relief does it cause disturbance.

Haematemesis also occurs far less commonly than is supposed. Haemorrhage manifest as melaena, or in the vomit, is recorded in less than 25 per cent. of my cases; in the majority of these the amount of blood lost was trivial, and of many in which "haematemesis" is recorded it is at least doubtful whether blood was, in truth, present. I think it is true to say that when blood is discharged from the stomach either in a fresh state or as "black vomit," it is commonly believed that a chronic ulcer is present. There is a great fallacy in such opinions. That gastric haemorrhage occurs, and occurs profusely, in ulceration both of the stomach and duodenum is certain; but the number of other conditions that give rise to haemorrhage is so large that the possibility of a gastric ulcer being the source of the blood should not be strongly, or exclusively, held. I have so often seen haemorrhage of the most abundant kind ascribed to "gastric ulcer" which was caused by such other conditions as splenic anaemia, cirrhosis of the liver, appendicitis, and other infective conditions within the abdomen, that in the elucidation of the cause of such a condition as profuse haematemesis I seem to turn to other possibilities than gastric ulcer in the first instance. It is true that there may be a confusion as to terms here. For when a patient dies of such haemorrhage a very close examination of the gastric mucosa may reveal the existence of tiny chaps, or cracks, or fissures from which blood has certainly issued. And when in the old days of unwisdom we operated upon such patients and explored the cavity of the stomach the mucous membrane was said to "weep blood," little trickles of blood could be seen to issue from many points. But these little gaps in the mucosa are not ulcers of the kind that produce clinical symptoms. If a patient has suffered for months or years from dyspepsia, and then is seized with an acute attack of vomiting and haematemesis, and if an operation urgently performed reveals the condition of the mucosa I have just described, it is the worst of fallacies to connect the dyspepsia with the "ulcer" or ulcers then supposed to be present in the stomach. The ulcer which has caused repeated attacks of indigestion is always a gross lesion, a lesion in which there are present not only the evidences of destruction, but also of defence; around the crater of the ulcer is an area, greater or less, of inflammatory action, and the serous coat of the stomach is plainly involved. If the breaches of continuity which permit the escape of blood in cases of cirrhosis of the liver, splenic anaemia, and the toxic conditions which, as a rule, have their origin within the abdomen, are called "acute ulcers," as they often are, it is essential to remember that such ulcers are recognizable by no other clinical evidence than haemorrhage, or in exceedingly rare instances by perforation; they are never the cause of a continuing or recent dyspepsia. The relation between acute ulcers and the chronic ulcer which is so disabling is not certain. Dr. Bolton, whose work on *Ulcer of the Stomach* is the best of all books on its subject, believes that one is a sequence of the other. He is probably right. Yet the acute ulcer as such gives no other clinical indication of its existence than haemorrhage or perforation. The diagnosis of "gastric ulcer" in these cases of grave haemorrhage was held to be confirmed by the after-history and the results of medical treatment. The patients regained health rapidly, soon lost their anaemia, and were able to take food without restraint. But everyone who has considered the history of cases in which there has been a copious haemorrhage from the stomach will agree that this rebound to full and vigorous health is quite common. It is so even in cases in which at a later operation a frank gastric ulcer is seen.

Such, briefly stated, are the symptoms of gastric ulcer. As will be realized, the chief dependence in making a diagnosis is placed upon the one symptom—pain. What are the other methods of investigation which can help us to a decision? Chief among them I now place the examination of the stomach after a barium or bismuth meal by x-rays. In this work I have relied upon my colleague, Mr. Scargill, and I am greatly indebted to him for his most careful and accurate work and for the skill which he shows in the technical sides of it. His methods, which follow closely upon those of R. D. Carman of the Mayo Clinic, show that the possibility of making an accurate diagnosis of gastric ulcer is greatly increased by the x-ray examination; that, indeed, the radiographic examination alone is more accurate than all other

Radiographs by Mr. H. B. Scargill illustrating Sir Berkeley Mopmihan's Paper.

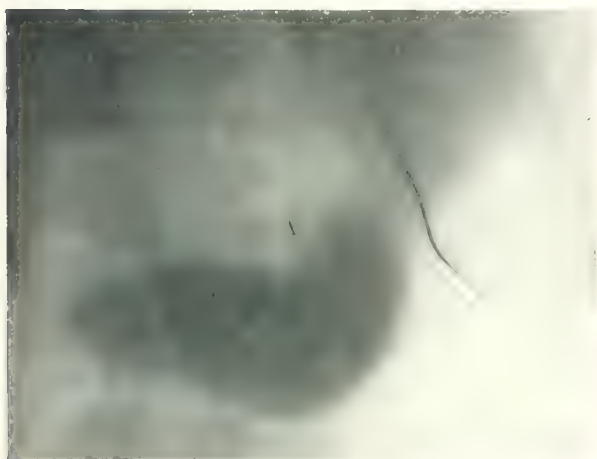


FIG. 1.—Very small "niche" type of ulcer on lesser curvature. Involves stomach wall only. No incisura seen in this case. Wire marks costal margin.



FIG. 3.—Ulcer crater on lesser curvature penetrating lesser omentum and adherent to left lobe of liver. Well marked incisura.



FIG. 2.—Ulcer crater on lesser curvature penetrating into lesser omentum. Well marked incisura on the greater curvature, almost bisecting the stomach.



FIG. 4.—Ulcer crater on lesser curvature. Incisura in this case is a little above the level of the ulcer.

Radiographs by Mr. H. B. Scargill illustrating Sir Berkeley Moynihan's Paper.



FIG. 5.—Ulcer crater on posterior surface near lesser curvature, only seen when stomach was almost empty. At operation found adherent to pancreas.



FIG. 7.—Groove-like ulcer on the lesser curvature $1\frac{1}{2}$ in. long. Very well marked spasmodic hour-glass contraction. No hour-glass at operation.



FIG. 6.—Huge ulcer cavity on lesser curvature penetrating left lobe of liver. The cavity was nearly $3\frac{1}{2}$ in. long.



FIG. 8.—Ulcer crater on lesser curvature with well marked incisura. (Dr. G. W. Watson's case.)

methods combined, and that a diagnosis which is proved by subsequent operations to be correct in indicating the presence of the ulcer or in demonstrating its size and position can be made in about 90 per cent. of cases.

The following is his method of examination: After a few hours of fasting, when the stomach is presumed to be empty, a bismuth or barium meal of thin consistency is given, and six hours later the first examination is made. By this time a normal stomach is able to empty itself of the small amount of opaque food administered. If a residue is seen, there is a delay indicating defective action. A second similar meal is now given and the stomach examined forthwith. The radiographic signs of gastric ulcer are:

I. *Direct*.—The ulcer cavity itself is demonstrated. If an ulcer has penetrated into the walls of the stomach, or eroded the liver or the pancreas, or perforated subacutely and become adherent to the abdominal wall, the crater of the ulcer can be seen filled with the opaque substance of a meal. If the ulcer is near the lesser curvature, it is visible in either an antero-posterior or semilateral view. If the ulcer is on the posterior surface the best view is obtained when the stomach is emptying. An ulcer on the anterior or posterior surface of the stomach close to the pylorus is more difficult to demonstrate.

II. *Indirect*.—In the majority of cases of gastric ulcer a very remarkable and sustained contraction of the circular muscular fibres of the stomach occurs in or near the segment on which the ulcer lies. An indentation of the greater curvature, of varying degree and extent, but often so considerable as to appear almost to bisect the stomach, is most clearly seen. Its appearance, whether on the screen or on a photographic plate, is remarkable. The spasm, in the majority of cases, remains stationary during the examination; it is unaltered by palpation, massage, or by the administration of large quantities of belladonna. It relaxes under a general anaesthetic, and is not seen on the operation table, the stomach wall being then quite soft and flaccid. A similar "incisura" is present as the result of extrinsic causes—causes lying, perhaps, remote from the stomach. The commonest excitants are duodenal ulcer, infection of the gall bladder, with or without stones, and chronic appendicitis. The spasm due to these causes is variable in position and duration, is modified by massage or pressure, and relaxes almost always after the administration of atropin given in an amount which produces a physiological response. It is also inconstant, present on one occasion, absent on another, and changes capriciously.

The presence of the persistent spasm is strong presumptive evidence of the existence of an ulcer; the presence of an "incisura" on the greater curvature, with a "bud-like" opaque projection on the lesser curvature, is an unequivocal evidence; in every such case an ulcer is present.

The radiographic method is the one certain method of diagnosis, and is now an indispensable addition to the older and far less accurate procedures.

Of the chemical examination of the stomach contents I do not speak with any enthusiasm. For several years my patients were submitted to this form of investigation, but I cannot think that the evidence thereby obtained enabled a greater accuracy to attach to the diagnosis or justified the increased trouble it gave to them. Hyperchlorhydria is present in so many other diseases than gastric or duodenal ulcer that its presence does not offer positive or even contributory evidence of any real value. In rather over 40 per cent. of the total number of cases in which an ulcer is present there is no hyperchlorhydria, and in a small number, estimated at from 10 to 20 per cent., there is a reduction in the gastric acidity. For reasons connected with the war I have rarely submitted patients to this form of inquiry in the last four years, but it will be interesting to discover the relationship, if any, between the degree of gastric acidity and the quality and duration of the gastric spasm due to extrinsic as well as intrinsic causes.

Physical examination, in the absence of obstruction in the body, or at the outlet of the stomach, reveals very little. There is a record of tenderness in the epigastrium in almost every one of the patients who are subsequently found to have an ulcer in the stomach. In ulcers of the lesser curvature I have sometimes found great tenderness high up on the left along the costal margin—tenderness

which becomes more acute when the patient breathes deeply. The kind of sensitiveness is then present on the left side which on the right establishes "Murphy's sign." The signs in pyloric obstruction, and in hour glass stomach are, of course, well known.

If all the methods of examination are strictly brought to bear upon the cases commonly referred to as those of "gastric ulcer" it will be found that in a majority the diagnosis cannot be upheld. The diagnosis of gastric ulcer is loosely and inaccurately made; a host of other diseases, functional and organic alike, are so described, and in consequence the belief is widely held that "gastric ulcer" is a common disease. It would be more accurate to call it a rare disease. Over a series of years I find that for every gastric ulcer seen on the operation table, there are four or five duodenal ulcers, and five to six cases of cholelithiasis. A gastric ulcer is by no means easy to recognize even after the most scrupulous inquiry and examination. More mistakes are made in the diagnosis of gastric ulcer than is the case in any other abdominal disorder.

It must now be generally recognized that many of the diseases arising in connexion with the abdominal viscera are, for months or years, looked upon as cases of gastric disorder. I pointed this out a few years ago in two papers published in the *BRITISH MEDICAL JOURNAL* (October 18th, 1907, "Pathology of the living," and November 28th, 1908, "Inaugural symptoms"). Up to the time of the publication of these articles it had not been recognized that in cholelithiasis, for example, all the prodromal symptoms were attributed to defects in the stomach, and the medicaments administered were in consequence those used in gastric diseases. The same statement holds good with regard to chronic disease in the appendix, in the small or in the large intestine. We are now familiar, as the result of x-ray examination and of the chemical examination of the gastric contents, with the truth that all these conditions express themselves in terms of gastric disturbance, of hyperscretion, and of spasm. And at the time when operations are performed we can discover by inspection of the stomach such conditions as enable one to predict that a lesion will be found on closer manual examination, not in the stomach, but in the appendix or its neighbourhood.

If, for example, a patient has had a type of dyspepsia which has led to a diagnosis of gastric ulcer and an operation is performed, the stomach may show no scar, nor can any examination, however careful, display the ulcer whose presence was predicted. If, however, the stomach is closely inspected before it is handled the following conditions may be seen: The pyloric part of the stomach is decidedly redder than natural—there is a "pyloric blush." That part of the stomach is soon observed to contract eagerly and vigorously; sometimes the spasm is so severe and so prolonged that there may be a suspicion of a tumour, but by degrees the spasm relaxes, and the parts become supple again. The spasm may be irregular, now at one part, now at another; now slow and deliberate, now fugitive. Along the greater curvature the glands are enlarged. When these three conditions are seen the prophecy may be confidently made that the stomach is healthy and that the appendix (or one of its neighbours in the alimentary canal) is diseased. In such cases gastro-enterostomy has often been performed, sometimes, it is curious to note, with benefit, but as a rule with disastrous effects. It has been my lot to perform a secondary operation upon many such patients, and to remove a badly diseased appendix or to resect a tuberculous intestine, and perhaps to undo the anastomosis which should never have been made. The work of Cole, Barclay, Carman, and others explains quite clearly how it comes about that these intestinal disorders affect the stomach and cause its musculature to contract in the irregular and painful manner which raises the suspicion, or seems to make certain the opinion, that an ulcer is present. But there is also the infective element in such cases, as Wilkie has shown experimentally, and it is the toxæmia which is its outcome that leads, as Spencer and Hutchinson have shown, to profuse hæmorrhage from the stomach.

The stomach is an organ full of sympathy for other sufferers. Hardly any of the viscera connected with the intestine, or the bowel itself, can be affected without the stomach playing its part in the disturbance also. This it does by pouring out an excess of secretion, and by

tumultuous and irregular activities. It speaks so loudly that its voice only is heard.

The whole subject now briefly mentioned requires close and prolonged investigation. We must seek to find out as accurately as possible the clinical indication that will lead us to diagnose a veritable lesion of the stomach in certain cases, and in others to be able confidently to say that the stomach is intact, and that other organs are telling the story of their own disease in terms of stomach discomfort.

Differential Diagnosis.

The very great difficulties in the diagnosis of gastric ulcer are due to reasons which we can now fully appreciate. An ulcer of the stomach does not arouse symptoms merely because of the gap in one or more of the several layers of the stomach. We may be certain of this because, after an "attack" of gastric ulcer is over, and the patient is wholly free from symptoms, an operation may disclose the open crater of an ulcer large or small. The exact cause of the symptoms is uncertain, but, so far as we know at present, other conditions, in addition to the structural defect, must be present before the symptoms appear. These are:

I. Evidences of infection round the ulcer, such as induration, local peritonitis, the deposit of fat in and around the base of the ulcer, and enlargement of neighbouring glands. The "sentinel gland" of Lund is constant in cases of active ulceration.

II. Spasm of the musculature of the stomach. Of the presence, severity, and duration of this condition we had very little knowledge until the methods of examination by *x* ray became perfected, chiefly by R. D. Carman. We now know that a high degree of spasm is present and constant in examples of ulcer of the stomach, and present, though inconstant and variable, in those cases where there is no primary lesion in the stomach.

III. An increase in the acidity of the gastric juice. This hyperacidity is by no means constant either in gastric or in duodenal ulcer, but it is possibly a factor of importance in the awakening of symptoms.

These three conditions—infection, localized spasm of the gastric muscle, and hyperacidity—are all present not only in true ulcer of the stomach but also, in varying degrees, in most of those distant conditions which are able to arouse a gastric reflex; and it is their presence which causes that mimicry of the symptoms of gastric ulcer by other lesions which may be so exact as to deceive the most expert inquirer. My own strong feeling is that in order to obtain precision where so much has been vague, no diagnosis of chronic ulcer should now be confidently accepted unless the ulcer is diagnosed by *x*-ray examination or is displayed upon the operation table.

The diagnosis of gastric ulcer from a study of the clinical and chemical evidences alone is so uncertain; the various methods of treatment associated with the names of Lenhart, Leube, Cohnheim, Bolton, Sippy, and others, so helpful in all cases of infection of the alimentary canal, and the physical repose which accompanies the treatment so weighty an influence for good, that no certain conclusions can be drawn from even a long series of cases. What is needed nowadays to attest the value of medical treatment is an assured diagnosis of gastric ulcer before the treatment is begun. That has most certainly been lacking in the past. Of the methods of treatment, that laid down by Dr. Sippy of Chicago would appear to be the soundest, and to meet more fittingly the conditions in the stomach, which, it is thought, must be controlled before an ulcer has the chance to heal.

How great the difficulty in diagnosis really is could not be better shown than by a study of those cases in which the patients have been given over to the care of the surgeon for treatment, and in which the operation of gastro-enterostomy has been performed without benefit. There was a time when this operation was held to be the certain cure for ulcer of the stomach. If its "mechanical" virtues were not urgently needed because of the obstruction caused by the ulcer, its "physiological" effects at least would be salutary. A list of the diseases called "gastric ulcer" by careful medical men, often after consultation with others, and treated by operation, was considered by me in a paper in the *BRITISH MEDICAL JOURNAL* (July 12th, 1919). It is humiliating and heart-breaking to ponder over the mistakes in diagnosis which came to light in the records which were considered

during the preparation of that article. In many of these cases a diagnosis of gastric ulcer had been made on evidence that was considered adequate by careful practitioners. We cannot rid the matter of error until we realize how very difficult the diagnosis of gastric ulcer really is and until we decide that, no matter how confident the clinical diagnosis may be before operation, it shall not guide us during the operation too firmly. It is many years since I decided for myself that no gastric or duodenal ulcer existed unless it could be seen, felt, and demonstrated to a sceptical onlooker. It will help to a better understanding of the whole most difficult subject if in future no diagnosis of gastric ulcer is accepted, as a basis for treatment, unless the presence of the ulcer is made certain by *x*-ray examination or by operation. To accept the clinical diagnosis of gastric ulcer and to perform any operation upon the stomach without most clearly recognizing the ulcer is to court disaster. If the mistakes in diagnosis to which I have referred had been followed by medical rather than by surgical treatment, what would be the value of the experience derived from the cases in deciding upon the effect of similar treatment in veritable cases of ulcer? The truth is that we cannot state in terms of accuracy the results of medical treatment of gastric ulcer unless and until we are certain that an ulcer has been present. And as I have said the clinical evidences alone are very fallacious.

THE TREATMENT OF CHRONIC GASTRIC ULCER.

A. Medical Treatment.

I hope we may now agree that the results of the treatment of gastric ulcer by any of the systems already mentioned, or by any dietary or medicinal regimen, are vitiated by the lack of accuracy in the diagnosis of gastric ulcer. The most rational of all methods is that introduced by Sippy, which would appear to meet more combatantly those conditions in the stomach which we believe must be controlled before an ulcer can have the chance to heal. It is based upon a recognition of the fact that the reduction of the acid in the stomach is the first necessity. This is attained by dilution of food, alkalization of the gastric contents every hour, and by the administration of fats.

The questions which in this connexion require answer are:

1. Does a chronic gastric ulcer ever heal under medical treatment?
2. Does it long remain healed?
3. Does it heal without producing such conditions as need surgical treatment for their relief?

1. Chronic gastric ulcers undoubtedly heal under treatment or after the exercise of continued care in diet. The scars left by their healing are seen in the *post mortem* room and, very infrequently, in the operation theatre. The discrepancy between the reputed frequency of gastric ulcer and the scarcity of the scars found in the dead-house has not attracted adequate attention. The number of healed cicatrices found in the operation theatre, when the stomach is examined as a routine in almost all operations, is very small. This may be due to the rarity with which sound healing occurs, or to the tendency of healed ulcers to break out afresh.

2. Do ulcers when healed long remain so? In the majority of cases the answer must be No. The characteristic quality in the symptoms of gastric ulcer is recurrence. There is a succession of "attacks," of changing severity and of variable length. The tendency on the whole is towards more serious attacks with briefer intervals. It is not by any means certain that an interval in which there is freedom from suffering means that the ulcer is healed.

3. When a gastric ulcer of moderate or large size heals there is inevitably some degree of contraction. In this way hour-glass stomachs are produced, and stenosis near to the pylorus. We cannot say with what frequency the successful medical treatment of a chronic gastric ulcer produces the conditions which need surgical relief, but it is certainly not seldom, for any large scar wherever placed, and especially if it has contracted adhesions to neighbouring parts, must embarrass the action of the stomach, or cause distress after food. Notwithstanding any or all of these considerations a really serious attempt to treat all cases of chronic gastric ulcer by medical treatment should be made. It is best to have no half-measures. It is at least arguable that the necessity for surgical relief

in many patients is due to a too perfunctory trial of medical treatment in the earlier attacks. The hospital accommodation in the country is too small to allow of the poorer classes receiving the rest and supervision that is necessary. The pressure on beds is too heavy. The ideal would be to keep the patient under treatment until an x-ray examination showed that the ulcer was healed.

B. Surgical Treatment.

When a chronic gastric ulcer has refused to heal, or has recurred, after medical treatment, surgical treatment is necessary. There is not yet any close agreement as to the procedure which is best adapted to the various types of cases, and there is not yet available a full record of the after history of large groups of cases.

The operation of gastro-enterostomy is that which has been most frequently practised. Its success at first was wonderful, probably because only the cases of obstruction were then treated. Later its results appeared to be capricious. A small number of cases did well, a larger number were not satisfactory, some of the results were bad. The operation may be supposed to have two effects: a "mechanical" one, whereby the stomach is more readily drained, and a "physiological" one, as the result of which the gastric contents are alkalinized by the escape into the stomach of the pancreatic juice and the bile.

If an ulcer lies near the pylorus, or is distal to the new opening created by the operation, the results are often good; food escapes more readily, and does not, in the same degree at least, come into contact with the ulcer; and the spasm excited by the ulcer disappears in many cases. But in some cases the ulcer will not heal, or if it heals breaks down again, and a further operation is needed. In such cases I have performed gastrectomy. In other cases the ulcer certainly becomes malignant after the lapse of two years or more. In one of my own cases, which I have formerly recorded, cancer occurred in the base of the ulcer treated by gastro-enterostomy thirteen years before. Gastro-enterostomy has also succeeded in cases in which the ulcer in the body of the stomach is of moderate size, and is free from any adhesion to neighbouring parts; but in many cases it has certainly failed. That this operation alone cannot be of complete value is shown by the fact that fresh ulcers can occur in the stomach after it has been performed for duodenal ulcer. I have operated upon two such cases. At the first operation in each the stomach was healthy. In both cases the ulcer was large and well away from the anastomotic opening.

There is a general agreement among those who have written upon the subject of the treatment of gastric ulcers that an important part of every method consists in counteracting the normal or the increased acidity of the gastric juice. If this effect is necessary, then the physiological effect of gastro-enterostomy must play some part in causing the good results that do certainly follow at times upon its performance. Whether the partial or complete neutralization of the acidity is necessary to healing is, however, by no means as certain as is supposed; for in cases both of gastric and duodenal ulcer hypoacidity is sometimes found. According to Friedenwald a reduction of the acidity occurs in about one-fifth of the total number in cases of gastric ulcer, and in my experience in rather more than this proportion of cases of duodenal ulcer.

I have little faith in the "physiological" action of gastro-enterostomy. If the access of bile to the stomach with its alkalinizing properties were proved to be of any value, it would surely be better to anastomose the gall bladder to the stomach, as I have many times done in cases of carcinoma of the pancreas causing obstruction to the common duct. The entrance of bile into the stomach in these cases causes no discomfort whatever. Those surgeons who rely on gastro-enterostomy alone in the treatment of gastric ulcer usually insist upon a protracted period of dietetic restriction, of rest, and of the administration of such drugs as the "triple carbonates." I am personally averse from the performance of gastro-enterostomy except in cases of existing or threatened obstruction—that is, in cases of duodenal ulcer, or, in special circumstances only, of pyloric ulcer. The whole matter requires fuller investigation; the effects upon the healing of the ulcer and upon the spasm of the stomach, as judged by x-rays, must

be studied and the late results of the operations carefully recorded.

Gastro-enterostomy may be combined with excision of the ulcer, or its cauterization (Balfour's operation); or the ulcer may be infolded in the manner practised after peritonectomy occurs. Excision alone I have discarded, partly because the ulcers occasionally recurred, and partly because such a deformity of the stomach followed as not seldom necessitated a short-circuiting operation. Balfour's operation has many claims to favourable consideration. It destroys the ulcer crater completely; it gets rid, therefore, of the tissues in which carcinoma begins its development; it is simple in character, involves no great handling of parts nor any exposure; it adds little or nothing to the dangers of gastro-enterostomy alone. Local recurrence of the ulcer, so far as I am aware, has not taken place.

I saw the operation performed several times in Rochester, where the results were excellent. I have, however, practised it seldom, because I have felt that in the majority of cases of gastric ulcer it was better to perform partial gastrectomy. That appears to me the only way to make sure of curing the patient. There are, unhappily, certain cases in which gastrectomy cannot possibly be done—when, for example, in a patient who is ill and feeble and a "poor surgical risk," there is a large ulcer excavating the liver or the pancreas and extending up almost to the oesophageal opening. In such a case an almost complete gastrectomy would be necessary, and a fatal result would be probable. In some such cases also Balfour's operation may be practised. My own inclination is to perform gastro-enterostomy in "Y" and at the same time to introduce a tube into the proximal limb of the "Y," and through this jejunostomy opening to feed the patient exclusively for months or years until the ulcer is shown by a radiograph to be healed. As a rule I give nothing by the mouth; but perhaps bismuth and alkalis in large doses are helpful. In one case the patient took no food or drink by the mouth for thirty-three months. In this case the ulcer was the largest I have ever seen in any specimen, and the cure has been complete and permanent.

The advantages of gastrectomy over all other operations are that it does away, so far as our experience goes, with any chance of recurrence of the ulcer, that it results in a complete and immediate freedom from all gastric troubles, and that it banishes the danger—it may be large or small, but it certainly is real—of a cancerous change taking place in the base of the chronic ulcer. In the last forty specimens removed on account of simple gastric ulceration, three showed early evidence of carcinoma. It is true that in the majority of cases an accurate discrimination between simple and malignant ulcers may be made. But no one is competent always to judge rightly; and it is safer to decide by microscopical examination in a captured specimen than to learn of a mistake from the late issue of the case.

A Clinical Lecture

HYPOCHLORHYDRIA AND AIR SWALLOWING.

WILLIAM RUSSELL, M.D., F.R.C.P. EDIN.,

EMERITUS PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF EDINBURGH, AND CONSULTING PHYSICIAN TO THE ROYAL INFIRMARY.

In a recent lecture I explained that for the true understanding of gastric and digestive disorders it was essential to begin their consideration from the functional side. I said that there were practically two types of functional disorder, and two only; that they were characterized by aberrations of gastric secretion, and that the chemical element at fault was the hydrochloric acid. The acid might be excessive, or it might be diminished in amount. I further explained the significance of the symptoms present in over secretion or hypochlorhydria; the results it often produced, such as atony, dilatation, ulceration, pyloric obstruction, and ptosis; while attached to it were such misleading terms as nervous dyspepsia, gastralgia,

* Summary of a clinical lecture delivered in the Royal Infirmary, summer term, 1919.

and such like. To-day I ask your attention to the anti-thesis to that condition, namely, hypochlorhydria or achilia.

This condition is, in my experience, less common than hyperchlorhydria; at all events, I see fewer cases, which may mean that they are more commonly corrected in the early stages than is the other class. However that may be, the result of treatment based on correct diagnosis is even more dramatic in some cases, as will presently be shown. It is only necessary to recall the essential part hydrochloric acid takes in digestion as the activator of pepsinogen to realize that with an insufficient secretion the digestion of protein is delayed until the stomach contents enter the duodenum, while the physical condition in which the food has been taken into the stomach may lead to its retention until removed by vomiting. Here, as in hyperchlorhydria, the individual equation has to be reckoned with. There are individuals with limited secretion whose digestion gives no trouble so long as the amount and kind of protein food is in accordance with the quantity of acid secreted, or who avoid foods experience has taught them lead to discomfort. Milk is one of the outstanding foods which perturb the meagre secreter; it gives rise to discomfort by the slow disintegration of the casein curd. Not only this, but the milk acts as an inhibitor of acid secretion, so this additional factor has to be remembered. Some individuals, for instance, who take an ordinary meat meal with impunity get indigestion if milk is added to it, whereas the hyperchlorhydric takes the combination with impunity, and can relieve or remove discomfort by drinking some.

CLINICAL INVESTIGATION.

Before passing to a consideration of the symptoms I would impress upon you the importance of subjective phenomena—that is to say, the patient's history of his experiences. This history is of first-rate importance in all cases of stomach disorder, but it has to be obtained and sifted with great care. It often requires tact, judgement, and skill to get an intelligible story, and sometimes the most expert skill as a sympathetic cross-examiner will be baulked. In the great majority of cases, however, you will succeed with patience, if the questions are put with the understanding that there are the two great types of digestive disturbance.

Symptoms.

The symptoms due to hypochlorhydria vary within considerable limits, as might be anticipated, in view of the fact that they result from delay or arrest of gastric digestion and the retention of food in the stomach. The presence of food which has not effectively stimulated secretion soon gives rise to "a feeling of heaviness," or of a "load," referred to the stomach. This discomfort is not a true pain, although to begin with the patient may so describe it. Later there is a feeling of distension also referred to the stomach, and due evidently to accumulation of air or gas, the eructation of which gives temporary relief. If any other part of the stomach contents is eructated there is usually an absence of complaint of sourness or acidity. In other cases the symptom is described as "a lump" or "ball" referred to "the pit of the stomach"—that is, to the epigastrium, or to behind the sternum. The feeling of heaviness and of distension or fullness usually comes on soon after food, but in other cases it is delayed; it may last for hours, and the sense of discomfort and oppression may only get relief by vomiting. When the condition has lasted for some time the tongue becomes furred, the appetite impaired, and the bowels irregular and usually constipated. There may be vomiting after every meal, but only in severe cases. In such cases, although there is much general discomfort, want of vigour, and of interest in all things, there is not the same degree of mental and physical inability as is met with in cases of hyperchlorhydria.

Symptoms Indefinite or Delayed.

In some cases the symptoms, while definitely digestive, are very indefinite. In this respect they may be in striking contrast to those of hyperchlorhydria. The times and duration of discomfort are not only indefinite, but the patient's statements are frequently so interlarded with views and explanations that the utmost patience and tact on the part of the physician may fail to elicit a history worthy or indeed capable of record; and yet the very

indefiniteness, and the entire absence of such a history as can usually be obtained from a patient suffering from hyperchlorhydria, will often lead to a provisional diagnosis of hypochlorhydria. In other instances the symptoms are delayed, or do not become intolerable until late in the day, and may continue and even become more severe after the patient has gone to bed.

The following cases, taken from many, illustrate the foregoing propositions.

CASE I.

This man was in the prime of life and looked well nourished. He complained of weakness in the legs and inability to walk any considerable distance, half a mile tiring him. He also complained of discomfort after taking food, and that recently he had vomited.

Symptoms and History.—On questioning him it was ascertained that the gastric symptoms consisted of a feeling of the food he took lying as a heavy load in the stomach; this continued all day. This discomfort led him to consult a medical man of good repute living near where he was spending a holiday on account of his health. The doctor put him on "light diet." Before that his diet had consisted of porridge and milk followed by tea for breakfast; fish for mid-day dinner three days a week, lentil soup and semolina the other days; a plain tea at night. He volunteered the information that he had not taken butcher meat for six months. A week after his first visit to the doctor he vomited about 8 p.m., having only taken breakfast and dinner. The vomit consisted of the bread and milk he had taken at 1 p.m. A fortnight later he vomited four times one day, the vomit consisting of the food he had taken. At this point he was sent to see me at the infirmary. There was no history of flatulence, of eructations, or of constipation. The tongue was fairly clean and moist. He had lost 28 lb. in weight during the preceding six months. In spite of this loss he was still a big heavy man, rather soft looking, but not cachectic. Examination of the abdomen gave no evidence of gastric dilatation such as is present when there is pyloric obstruction from any cause. The stomach was indeed normal in size and position, the pylorus was not palpable, and nothing abnormal was to be felt in any part of the abdomen.

The leading points in this case were: (1) Food lying like "a load" in the stomach; (2) that he had dieted himself along certain popular lines without benefit; (3) that he had lost 28 lb. in weight in six months; (4) that there had been vomiting; and (5) the absence of stomach dilatation.

The provisional diagnosis was (a) simple hypochlorhydria, or (b) malignant disease of the body of the stomach. The next step was the examination of the stomach contents. These were obtained the following morning after a test meal and showed an entire absence of free hydrochloric acid. From the history of the case the diagnosis was the former of the two alternatives. The patient got prompt and complete relief from his troubles.

CASE II.

Miss M., aged 30, was sent to me with a history of headache, constipation, depression, and as a difficult neurotic. She herself dwelt much upon her digestive discomforts, and her strongly expressed opinion was that life would be quite pleasant if her digestive system could be put right. She had, as is common in digestive inefficiency, beliefs about her liver being sluggish and so forth. The symptoms, as dwelt on by her, pointed to stomach discomfort with heaviness and flatulence, which did not present the relationship to meals which hyperchlorhydria presents. The fundus of the stomach was enlarged. The next step was to get the stomach contents. A test meal was given, and showed no free hydrochloric acid. On a second occasion the stomach residuum was removed shortly before luncheon; it also showed entire absence of free acid.

This patient had been dieted on the lines commonly adopted whenever digestive trouble is complained of, but without benefit. She was now treated on the lines indicated later, and the bowels were regulated by means of a simple laxative. She improved rapidly, and lost all the neurotic manifestations which had been so pronounced. Her friends were surprised at the change in her appearance. In three weeks she left the nursing home satisfied as to the radical change in her condition. She continued to be well when last heard of.

CASE III.

M. M., aged 23, from the North of Scotland, was admitted to my ward at the request of a benevolent lady on whose property the girl lived. She had been an invalid for two years, and had been kept in bed most of the time. Her own statement was that she had an "ulcerated stomach." The stomach trouble had begun two years before, with pain or discomfort after food; later she began to vomit food, and she stated that sometimes there was blood in the vomit. There had been no blood for two months. She had been treated by various doctors, and she had been in a local hospital for two months, without apparent benefit. Her domestic surroundings were good; she helped her mother with the house work, and she used to walk and cycle a good deal. She was intelligent, animated, fairly well nourished, and not anaemic. The height was 5 ft. 2 in., and the weight 8 st. 6 lb. Appetite was good, but she was afraid to eat because

of the pain which followed. She lived largely on Benger's food and Allenbury's diet, an occasional cup of tea, and some toast. The pain was referred to the epigastrium; it was constant, but worse half an hour after taking food. Vomiting usually took place when the pain was most severe, and somewhat relieved it. Lately she had vomited more, especially if she deviated from her strict dietary. The vomit came up easily, and was not preceded by nausea. She suffered from constipation, for which she took compound liquorice powder every few days.

On careful inquiry after admission, the symptoms were not definite enough to warrant a diagnosis of gastric ulcer. With symptoms of this kind associated with constipation the first procedure we adopt is to have the colon thoroughly washed out by means of a douche can. She was given light diet, consisting of fish, farinaceous foods, and milk. The stomach discomforts continued but there was no vomiting. Examination of the abdomen revealed nothing abnormal; there was no gastric dilatation or ptosis, and not a suspicion of tenderness in the caecal region.

A test meal was then given, and on removal showed entire absence of free HCl. She was at once dieted and treated as a hypochlorhydric. The sudden improvement in her condition amazed her, and in a few days her discomforts and pains had wholly disappeared. She was allowed out of bed, and rapidly regained the health and vigour she had enjoyed before her two years of invalidism. After a short stay in hospital she returned home and has continued well.

CASE IV.

This case was one of special interest, as it occurred in a soldier during the war, the malady keeping him at home when he wished to be at the front. He may be designated Captain X., he was 30 years of age, and had been a civilian. The story he gave was that for years he had suffered from stomach trouble, and had to be very careful of his feeding. He had been dieted and treated by several doctors and physicians without benefit. The main symptom was discomfort and pain coming on about 10 p.m. and lasting until 2 a.m. He was fairly comfortable in the forenoon and the afternoon. There was no nausea or vomiting, but considerable gaseous eructation. The bowels were regular. He mixed up his symptoms with ideas about kinds of food, and the way in which his food was cooked. When he tried to live on army rations he got much worse, and the state of his digestion was such that he was not allowed to go overseas. He was kept at home as an instructor. He thought he suffered less when living in his own house and with his own cook to prepare his food. He complained bitterly of his condition hindering his work and limiting his activities. His bad nights made his day duties a burden which he often felt to be more than he could bear, and yet by sheer force of will he kept at it.

Examination.—He was poorly nourished, the cheeks were slightly hollowed, and there was a dusky shadow under the eyes. The abdominal wall was thin. The epigastric and abdominal reflexes were active. No peristalsis was visible. There was no tenderness on palpation in any region of the abdomen; but palpation promptly produced loud splashing over the stomach, which extended to the level of the umbilicus; its fundal end was enlarged, but the right border did not extend beyond the middle line. This was the condition three hours after the midday meal, which had consisted of cold chicken, farinaceous pudding made with milk, and a tumblerful of milk. By means of the stomach tube some ounces of stomach contents were withdrawn, which consisted of finely divided starch, curd of milk, and pieces of softened chicken; it showed complete absence of free hydrochloric acid.

Treatment.—The diet was regulated in accordance with this finding, and a prescription was given containing dilute hydrochloric acid, liquor strychninae hydrochlor., and compound infusion of gentian. This visit was on May 16th.

He came to see me again on June 1st. He looked much improved, and his own account was that the pain had disappeared, he had no discomfort after food, he was sleeping well, and was more energetic and lively. The weight was 9 st. 12 lb. He was seen two hours after his midday meal and the stomach splashed on palpation.

On June 6th I again saw him, at 1.15 p.m., before the midday meal, and found the stomach empty. His own statement was that he had not had "a touch of pain" since his first visit to me, and that he was sleeping well. On June 27th I saw him again. His weight was 10 st. 4½ lb., he was quite free of gastric or other discomfort, and was full of gratitude for increased vigour, and comfort in his work.

The history in this case pointed to hypochlorhydria, but the diagnosis from symptoms alone may be so unsatisfactory that it is unwise to be guided by them, especially as the means of attaining certainty are within easy reach when the stomach tube can be used. In this patient I used the stomach tube at our first interview, and a correct diagnosis was at once established, as malignant disease of the body of the viscus was not a reasonable proposition. The diet of white flesh, as chicken and fish farinaceous puddings, and milk, which had been proscribed and conscientiously adhered to, under the manipulative skill of an expert cook, was departed from. The whole idea of bland and soothing nourishment was revolutionized; milk was stopped, farinaceous puddings were to be taken

with stewed fruit, all kinds of flesh were allowed, but they were to be minced and eaten with stimulating condiments and sauces. Acid and strychnine were also given to help and to encourage gastric secretion. By these measures stomach function and secretion were stimulated, and the result was complete removal of the symptoms which were making work a burden and life a struggle.

AIR SWALLOWING.

I next ask your attention to a condition I call "air swallowing," as it has important relations to the gastric disorders I have discussed with you. This is illustrated in the following records.

CASE V.

Mrs. B. was sent to me by a medical friend in the city, as he feared she had some serious disease of the stomach. Her complaint was stomach discomfort and pain. When closely questioned about the "pain" we were able to get the time of onset and the kind of discomfort defined. The time of onset was immediately after eating, it occurred after every meal, and she had suffered from it for months. The kind of discomfort was ascertained by making certain suggestions to her. When asked if the pain was severe the reply was negative, and when asked if it were pain or an uncomfortable feeling of tightness she readily replied that it was a great tightness and fullness. On this definition she became quite clear and decisive. As to the duration of the feeling she thought the time varied. Asked if she brought up much wind, the reply was that she brought up "a lot of wind," and she was quite sure that the bringing up of the wind gave her prompt relief. In other respects the digestive system presented no abnormal symptoms; but she was emphatic as to the discomfort, anxiety, and depression the stomach condition caused. Nothing abnormal was made out on examination of the abdomen; there was no stomach enlargement or ptosis, no tenderness at the caecum or elsewhere. The abdomen was lax and easily explored.

Such were the facts obtained by a carefully elicited history and from physical examination. Note specially the onset of the symptom of "pain," which was converted into "fullness and tightness," coming on with the taking of food, increasing as food was swallowed, until eating was stopped owing to the feeling of "fullness"—no more could be swallowed. The history in this case is quite different from the history obtainable in a case of gastric ulcer, which is the only condition with which it might be confused, if the history of the symptoms were not carefully and critically examined. The statement of the onset of pain "immediately after food" and of "flatulence," must not be accepted at their bare word value; not that a patient means to mislead, but because patients do not understand the physiology of digestion and use words loosely. A history has to be sifted in the light of the knowledge of normal digestion, of the aberrations to which digestion is liable, and of the clinical knowledge we have acquired of these disorders.

The phenomena presented by this patient are not very rare, and yet they are not widely recognized. I call the condition "air swallowing," as the air is swallowed when food is taken. The amount swallowed varies in individual instances, and consequently the degree of discomfort varies. In this patient the discomfort was great, because the amount swallowed was considerable. It sometimes gives rise to visible distension; it may lead to pronounced neurosis or neurasthenia; it may act reflexly on heart and vessels, leading to functional angina pectoris. This air swallowing when food is taken is different from "air gulping" or "air sucking." Air swallowing is mainly confined to the time food is being taken, although, to a much less degree, it may be continued during the period of discomfort. The "air gulper" swallows air at any time, and it may or may not be induced by an initial stomach discomfort. In animals the condition is known as "air sucking"; it occurs in cattle and horses, and in them is a very serious condition which may cause death. It is difficult to treat, and when once acquired the habit is difficult to break.

Air-swallowing occurs in both sexes and probably in children pretty frequently. It may not only be associated with, but apparently may even be caused by, abnormal gastric secretion, abnormal in the sense of the secretion containing too much or too little hydrochloric acid—that is either hyperchlorhydria or hypochlorhydria. Although I cannot give figures, it is in my experience more common in the latter than the former. I arranged to have this patient screened in the electrical department. If she were an air swallower to a considerable extent it would be seen that, as the bismuth passed into the dependent part of the

stomach, the fundus would become large and translucent. In some cases this is very marked and gives a striking picture; in other cases it is not so striking. Dr. Hlope Fowler demonstrated the appearances in this case, but they were only fairly well marked.

The next case illustrates a combination of hypochlorhydria and air swallowing persisting after removal of the appendix.

CASE VI.

Mr. W. C., aged 34, a mercantile marine officer, had been at sea for fourteen years, and consulted me on September 6th. His complaints were obstinate constipation, the bowels never moving without a purgative, and frequent, almost daily, vomiting. The vomiting had become more frequent, and sometimes occurred two or three times a day. His appendix had been removed in Bombay eighteen months before I saw him, but without any relief to his symptoms.

On questioning him it was ascertained that he had a feeling of weight and heaviness half an hour after food—"a feeling like lead" in the lower half of the abdomen. There was no pain. He often felt sick before breakfast, and if he did he might vomit a quarter of an hour to half an hour after breakfast. The vomiting occurred especially if he took anything hot, cold not being so bad in this respect. He might vomit again after the midday meal. He never vomited after 4 p.m. The vomiting was preceded by some degree of nausea, but it did not appear to be great. The motions were dry and lumpy.

Examination.—He was rather pale and flabby looking, but stout. He had never had malaria or other fever in the East. The scar of the appendix operation was good. The fundus of the stomach was enlarged. The descending and pelvic colon were felt small and contracted. The urine contained neither sugar nor albumin. The brachial systolic pressure was 135 mm. Hg. The apex of the heart was slightly to the left of its normal position. From the foregoing facts it looked as if it were only necessary to find a suitable laxative to secure the removal of the symptoms. With this object in view I prescribed a pill containing 2 grains each of extract of cascara and extract of taraxacum with $\frac{1}{4}$ grain of extract of belladonna to be taken at night.

He returned to me on September 26th, when he informed me that half a pill gave him a free motion every day, but that there was no improvement in other symptoms; that he vomited daily, sometimes two or three times; and had much flatulence after taking food, feeling "blown up" with it, and that he got relief when he got it up. From the account he gave it seemed clear that he was an air swallower. He was examined by x-rays and watched by the screen. The screen picture was not satisfactory, but the fact of air swallowing was established by his sense of distension after the bismuth was swallowed, and by the visible and marked projection of the stomach, the projection disappearing after he belched up wind. I asked him to return to see me the following day, September 27th, and to bring his vomit for examination. On September 28th he brought me another specimen. On both occasions the vomit consisted mainly of disintegrated cereal food, some milk curd, etc. On both occasions it contained no free acid. I prescribed dilute acid, strychnine, and gentian; stopped milk and farinaceous puddings; put him on meat and fish, to be eaten with savoury sauces, and stewed fruits. He reported himself on October 2nd. He stated that the first dose of the mixture I had prescribed had relieved him, that he had no more vomiting or nausea, and practically no flatulence. He felt quite well and stated that the bowels were regulated by one-fourth of the pill I had ordered for him. He was naturally much gratified at the complete removal of symptoms, which he had suffered from more or less for the fourteen years he had been at sea. An interesting and important observation made this day was that the brachial pressure instead of being 135 mm. was only 115 mm. Hg. I saw him again on October 8th and was assured that complete relief was maintained.

Remarks.

The points of special interest in this case were (1) the air swallowing, which stopped when the hypochlorhydria was successfully treated; (2) that it was not a case of "appendicular dyspepsia," which presumably was the diagnosis which led to the removal of the appendix; and (3) the fall of 20 mm. Hg when the gastric condition was rectified.

Many years ago I published my first paper on hyperchlorhydria, and since then have lectured on it many times, and also dealt with it many times in the wards in the course of bedside teaching. This is the first time I have lectured on hypochlorhydria and air swallowing, although I have long taught these subjects in the wards; and I hope that I have aroused your interest in this other phase of gastric and digestive disturbance.

THE latest official statistics show that the total mortality from tuberculosis in Italy decreased from 1887 to 1914, but in varying degrees in different regions. On the other hand, in Sardinia it increased. For all tuberculous diseases the diminution was about one-third, but for pulmonary tuberculosis it was only one-fifth.

INDOLENT SORES ON THE FINGERS.

BY

ROBERT W. MACKENNA, M.A., M.D.,

HONORARY DERMATOLOGIST TO THE DAVID LEWIS NORTHERN HOSPITAL,
LIVERPOOL.

AN indolent sore on the finger of a nurse, a dental surgeon, or a doctor is all too often the precursor of a systemic spirochaetal infection, and, as time is a factor of paramount importance, the purpose of this note is to emphasize the necessity of having serum from such a sore examined early, and if need be often, for the micro-organism of syphilis. The clinical appearances of a primary chancre at the seat of election are sufficiently well known. What is not so generally recognized is that the appearance of such a sore upon the fingers may present few if any of the accepted characteristics of a Hunterian chancre.

That unique clinical observer, Sir Jonathan Hutchinson, described the evolution of a syphilitic chancre as follows:

If the virus of syphilis in a pure form be inoculated, it rarely produces any irritation at first. A period of from three to five weeks will elapse before anything is observed. At the end of that time a little red spot will be noticed, which itches more or less, and which, extending from day to day, soon becomes a papule, and by the end of a week or ten days is probably a little indurated disc or button. The induration is usually very marked and its margins definite.

This is an accurate description of a primary sore in the usual site on the male patient. It differs markedly, it may differ by the whole width of heaven, from the usual appearance of a chancre on the finger, which rarely shows characteristic induration. As induration has come to be regarded as the one pathognomonic clinical feature of a primary sore, the absence of that cartilaginous resilient hardness which training leads one to expect may prove misleading, and lull the sufferer, if he be a medical man, into a false sense of security. It is because of the frequent absence of this hardness that so many doctors who have unfortunately been inoculated on the finger fail to seek treatment until a general systemic invasion has occurred.

Diagnosis.

There are no definite and inseparable characteristics appertaining to a chancre on the finger. It varies according as it is due to a specific infection superadded to an already existing simple sore, or is the result of a pure infection *de novo* through an abraded epidermis, or is due to an infection coincident with the implantation of one or other of the ordinary micro-organisms of suppuration. Within the compass of such a note as this it is impossible to describe the varying evolution and appearances of a specific sore arising under these three different conditions; but in my experience the chief features of a chancre on the finger are:

1. Its indolent character.
2. Its slow but progressive increase in area.
3. Its shallowness.
4. Its scanty discharge.
5. Its comparative painlessness.
6. The early involvement of the nearest lymphatic glands.

Any one or all of these features may be masked by some coincident infection. The one constant characteristic by which it can be recognized, and ought to be recognized at an early date, is the presence, revealed by microscopical examination, of the infecting spirochaete. At this stage a blood test is of little or no avail. Indeed it may give a sense of security which the subsequent progress of the disease shatters rudely. A positive Wassermann reaction is rarely if ever given before the seventeenth day of a chancre's existence. More than once I have been assured by a medical man that the sore on his finger could not be specific, because he had had a blood test done, with a negative result, while all the time the industrious spirochaete was multiplying abundantly in the sore, and only waiting to be revealed by dark-ground illumination, or by Burri's Indian-ink method.

Tubercle of the lungs is nowadays proven early by the discovery of the tubercle bacillus in the sputum, and the examination of the sputum is a routine procedure in every suspected case. It were well if a similar routine were followed in the case of all indolent sores on the fingers. All such sores should be regarded with grave suspicion

from the first, and we should keep our suspicion alive until repeated examinations for the spirochaete have yielded a succession of negative results. Theoretically the spirochaete ought to be discoverable from the time of inoculation. Practically it is readily discovered in an untreated sore within a day or two of its appearance. Even in a sore that has been dressed constantly with antiseptics, patience and repeated examinations will sooner or later reveal it. As the time factor is of incalculable importance in the treatment of syphilis, much misery, serious ill health, and possibly tragedy, may be avoided if the diagnosis is established early.

Method of Taking Serum for Examination.

Wherever possible the serum should be taken by the pathologist who is to examine it. But if this cannot be done the procedure to be adopted is as follows:

Cleanse the sore with a pledget of wool soaked in normal saline. Then gently abrade the edge of the sore with the edge, not the point, of a bayonet-shaped needle. Rub the abraded edge briskly with a pledget of wool soaked in methylated spirit. After a short interval serum will be found exuding from the abraded surface. This serum may be wiped away, and if there is no further flow, it may be excited by a further application of spirit. This second issue of serum should be collected in capillary tubes, and sent at once to a laboratory for examination. If the report is negative, a further sample should be examined forty-eight hours later. Care should be taken to send clear serum, and not that which is copiously admixed with blood corpuscles. Three consecutive negative reports are not likely to be contradicted by the subsequent history of the case; but anything short of three negative examinations should not be regarded as sufficient to put syphilis out of court.

Cases.

I will quote three cases:

I.

A nursing sister on overseas duty in Malta developed a sore on the back of the proximal phalanx of the left thumb in the beginning of the third week of May, 1916. The sore was diagnosed as a poisoned sand-fly bite and dressed with an antiseptic dressing. She proceeded on duty to Salonica, reaching her destination on June 6th. On arrival she reported sick with a sore throat. She was isolated on the suspicion that she was suffering from diphtheria, but swabs were taken and yielded negative results both as to the presence of the Klebs-Loeffler bacillus, and the spirillum of Vincent's angina. The following week she developed an abscess in the neck in front of the sterno-mastoid on the right side. This would lead one to imagine that the mischief in her throat at this stage, if specific at all, was complicated by a mixed infection, as suppuration in the neck is an extremely rare outcome of syphilitic tonsillitis in the secondary stage. The abscess was opened on June 20th, 1916. At this time there was no eruption on her body, and, so far as she can remember, she did not call the attention of anyone at Salonica to the sore on the thumb.

At the end of June she was transferred to Malta to convalesce after the operation, and either on the voyage or immediately after her arrival in Malta she broke out in a copious eruption. This was diagnosed as multiple sand-fly bites, and was treated with zinc ointment and a tonic. She was feeling weak and ill, and on reporting this she was admitted into hospital as a case of debility due to sand-fly bites. So far as she is aware, not one of the five medical officers who saw her in Malta suspected syphilis, and she received no treatment for that disease. As she did not improve she was boarded, and sent home on six weeks' sick leave. On arriving in London she was again boarded, as is the custom in the Army Nursing Service, and at this board, for the first time, one of the medical officers suggested the possibility of syphilis. A blood test was made, and yielded a strongly positive reaction, and she came under antiseptic treatment for the first time at the end of September. She has not yet recovered her full health, and her left eye is irreparably damaged. One cannot but think that the course of her illness would have been more satisfactory if the original sore on the thumb had been examined for the spirochaete in May, 1916.

II.

In the first week of June, 1919, a dental surgeon developed a small sore on the left index finger, just beyond the base of the nail. It steadily and progressively increased in size, but remained shallow, and at no stage in its evolution showed induration. The sore was carefully treated by a doctor, who very early suspected syphilis, but who hesitated to commit himself to the diagnosis of a specific infection in the absence of any induration. But as he was dissatisfied with the progress of the case he took his patient to a surgeon, who suggested that a blood test be made. Blood was taken for that purpose, but while the result was being waited for a faint macular eruption appeared on the patient's trunk, and his doctor referred him to me.

I found that he had an indolent sore a little larger than a sixpenny piece on the left index finger, general adenitis of a typical character, and a very faint roseolar rash was beginning to appear on his body. Although on clinical evidences alone there could now be no doubt as to the diagnosis, for my own

satisfaction I had some of the serum from the sore examined by dark-ground illumination, and in spite of the fact that the chancre had all along been dressed with an antiseptic dressing, typical spirochaetes were found without difficulty.

III.

The third case is that of a medical man who developed an abrasion over the middle phalanx of the left little finger early in August of this year, and about the same time a second abrasion on the web between the bases of the ring and little fingers of that hand. He believes that he pricked himself with a needle in the course of an operation. However that may be, these sores were at that time, or soon afterwards, inoculated with the spirochaete, but at the same time with a somewhat virulent pus organism, probably a streptococcus, which set up violent inflammation in the finger and severe lymphangitis, which extended up to the glands in the left axilla. The mixed infection effectually masked the true nature of the condition. After some weeks of treatment the inflammation in the finger and the lymphangitis in the arm began to subside, but the sore on the finger showed no signs of healing.

On October 4th he consulted Mr. Paul, who kindly sent him to me. I found the finger greatly swollen and inflamed, the skin over it tight and glazed, and the digit presenting the appearance of an over-filled sausage. Over the middle of the second phalanx was an open sore about the size of a sixpence, shallow, definitely margined, covered with weak-looking granulations, and with only a small quantity of discharge. No induration could be felt. Running up the forearm, and extending half-way to the elbow, was a red line of inflamed lymphatics. The epitrochlear gland and the glands in the left axilla were swollen, as were also the glands behind both sterno-mastoid muscles. In spite of the fact that the finger had been constantly dressed with antiseptics, serum taken from the abraded edge of the sore and examined by Burri's method showed many spirochaetes. Eight hours after I first saw him a roseolar eruption broke out on the body and limbs.

Here, again, valuable time had been lost, and the mischief had reached the threshold of the secondary stage before the cause was discovered. It is in the hope of making such unfortunate delays less frequent that I have written this note, and, in conclusion, I would reiterate this opinion, that a syphilitic primary sore on the finger rarely, if ever, shows "characteristic" induration, and never if it is secondarily infected. The path of wisdom is an early examination for the spirochaete.

SEVERE DERMATITIS DURING TREATMENT WITH NOVARSENOBILLON.

L. G. LEONARD, M.R.C.S., L.R.C.P.

DERMATOLOGIST ATTACHED NEW BRIDGE STREET MILITARY HOSPITAL;
CONSULTING DERMATOLOGIST, NELL LANE MILITARY HOSPITAL,
MANCHESTER.

The following case is instructive as an illustration of the risks attending the use of novarsenobillon:

Pte. J. M., aged 23, was admitted to New Bridge Street Military Hospital, Manchester, on July 24th, 1919, suffering from secondary syphilis; the secondary lesions were a well-developed macular syphilitide and general adenitis. The Wassermann reaction was strongly positive. The primary sore, contracted four months previously, had partially healed. The skin was normal and there was no history of skin disease.

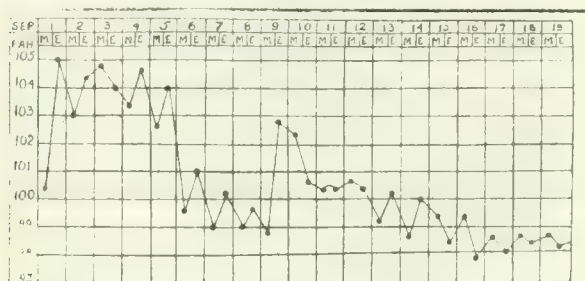
Treatment was commenced the following day, and three injections of 0.45 gram novarsenobillon intravenously and 1 grain of mercury intramuscularly were given at weekly intervals. All the injections were well tolerated; there was no reaction, and a gain in weight of 2 lb. was recorded. All primary and secondary lesions cleared up, and he was made an out-patient, the usual fortnight's rest being allowed.

On August 23rd 0.6 gram novarsenobillon and 1 grain of mercury were given. There was no immediate reaction either complained of or noted. On August 25th, two days after the last injection, he reported sick, with shivering, headache, pain in the back, and diarrhoea. The temperature was 99.2°. These symptoms continued, and on August 27th the temperature was 102.2°. Sodium salicylate and quinine were given, and by August 31st all symptoms, including the rise in temperature, had subsided and the patient was apparently well again.

On September 1st, nine days after the last injection, the temperature suddenly rose in the evening to 105°, with a return of headache and backache. The next day the temperature was 104.4°, and he was covered with "an erythematous rash of an urticarial character over the whole body" (extract from notes by M.O.). No change in rash or general condition was noted on September 3rd, and next day he was transferred to New Bridge Street Military Hospital, where and when I first saw him. The temperature was 105°, pulse 130. The tongue was coated with a thick brown fur, and there was frequent retching with vomiting of bile-stained fluid. He complained of severe headache, backache, epigastric pain, intense itching of the skin, and of feeling very ill generally. The face, neck, scalp, and forearms were thickly covered with a maculo-papular eruption.

resembling severe measles, with areas of fully developed urticaria between the macules. The backs of the wrists and hands were a mass of large discrete papules. The papules on the scalp were already pustular. The rest of the skin of the body was covered with an intense erythematous rash, scarlatiniform in character but of a darker red colour; scattered over the back and legs were islands of unaffected skin, thus differing from the uniform blush of a true scarlatina. The ears were very swollen with inflammatory oedema, and bathed with a profuse watery exudation which hung on to the lobes and helices in large drops. The conjunctivae were injected, lachrymation and photophobia being very distressing. The fauces were congested. There was a very marked general adenitis, the axillary glands being as large as pigeon's eggs and very tender. A moderate amount of albumin was present in the urine.

On September 5th the temperature was 104°, and the vomiting was relieved, but otherwise the condition was about the same. On September 6th the temperature was 101°; he was much improved, and the rash less pronounced. On September 8th the temperature was 99°; the whole face was much swollen and oedematous, the eyelids so much so that the eyes could not be opened and appeared as mere slits. The scalp was pustular. On September 9th the temperature was 102.8°, and the exudation from the face profuse; the rest of the body scaly.



On September 11th he had severe diarrhoea (ten motions during the night). The temperature was 100° F. On September 13th the face was much improved. From the rest of the body there was abundant desquamation of branny flakes and scales of large size, the exposed skin being smooth and pink, with the dull glazed appearance so peculiar to these cases.

On September 14th the temperature was 100°, and an extensive papulo-pustular eruption suddenly developed on the chest, abdomen, back, and forearms. This eruption was pustular at the onset. On September 16th diarrhoea was very severe (thirteen motions during the night). A small bed sore developed on the right hip, and there was inguinal adenitis. On September 24th the face was dry and scaling and the rest of the body almost clear.

A moist papular eruption appeared on the lower abdomen, but on October 8th the skin was almost clear, with the exception of the scalp, which was covered with a mass of thick dry silvery scales very difficult to remove. There was neither atrophy nor infiltration of the skin, the only remains of the dermatitis being a very faint brown pigmentation.

On October 16th yellowness of the conjunctivae was quickly followed by general icterus. The urine was acid and bile-stained, but contained no albumin. The stools were paler than normal, but not typical clay-coloured. Gastric symptoms were absent, and nothing was complained of beyond occasional headache.

The jaundice had cleared on October 28th and recovery was quite complete.

A blood test on October 8th gave a negative Wassermann reaction. In spite of the severity of his illness the patient's general condition remained good throughout; the loss of weight was $\frac{3}{4}$ lb. only.

Treatment in the acute weeping stage consisted of applications of lint soaked with a lead-zinc oxide and starch lotion previously warmed; it was changed as often as the lint became dry. An ointment of similar composition was substituted when the exudation dried up; any relapse from dryness to moisture was dealt with by prompt recourse to the lotion. Daily warm baths were very soothing; sodium bicarbonate was added to the water. A mixture of potassium citrate and antimonial wine was given three times a day.

A strict diet of warm milk, milk and soda, with large quantities of barley water, was given in the acute stage. Eggs and meat extracts were avoided at all times.

The points of interest in this case appear to be:

1. The occurrence of so severe a dermatitis and toxæmia after the administration of only 1.9 grams of novarsenobillon.

2. The high temperature recorded—105° F.

3. The simultaneous occurrence of three distinct types of eruption—maculo papular, scarlatiniform, and urticarial.

4. The marked general adenitis at the onset, present before the lesions other than the scalp, had become pustular.

5. The negative Wassermann reaction of October 8th; that on July 24th, before treatment commenced, being strongly positive.

Colonel Harrison, Officer Commanding Rochester Row, commenting on arsenical dermatitis in general and on this case in particular, expressed the opinion that it is by no means the severity of the skin affection which determines the prognosis; his idea is that the skin is a sort of reflex of the intestinal and lung alveolar linings, and that with a mild dermatitis there may be severe internal complications with disastrous results, and vice versa. Reflecting on my own experience of past cases this conclusion seems to be very true.

I beg to thank Lieut.-Colonel Smith, R.A.M.C., Officer Commanding New Bridge Street Military Hospital, for kind permission to publish this case.

PREGNANCY COMPLICATED BY VOLVULUS OF THE SIGMOID FLEXURE, CAUSING INTESTINAL OBSTRUCTION.

BY

MALCOLM DONALDSON, F.R.C.S.,

OBSTETRIC PHYSICIAN, GREAT NORTHERN HOSPITAL; TEMPORARY
ASSISTANT PHYSICIAN ACCOUCHEUR, ST. BARTHOLOMEW'S
HOSPITAL.

The following case is of sufficient interest to warrant publication, on account of its rarity:

The patient, aged 35, was in the thirty-seventh week of her first pregnancy. There was nothing of importance in her past history, except that she had always suffered from constipation; and nothing abnormal occurred during the pregnancy until October 16th, when the patient states that she slipped in the street, recovered herself without actually falling, had a pain in her side, and thought she had strained a muscle. Three days later she sought medical advice, as the bowels had not acted since the above incident.

Her doctor stated that when he saw her she had intermittent pain, and he therefore examined her to see if labour had started. No evidence of uterine contraction or dilatation of the cervix was found, and he treated her with aperients and enemata without, however, any result, and no flatus was passed.

Two days later my colleague, Dr. Barris, was consulted; he diagnosed intestinal obstruction, and sent her into the maternity ward, St. Bartholomew's Hospital, of which I then had charge. The patient did not look very ill; the temperature and pulse were normal and there was no vomiting. She had all the signs of pregnancy, but, in addition, the abdomen was very much distended, especially in the upper half. The whole abdomen was tender; the upper part of the uterus was to some extent obscured by the distended bowels, and the whole organ much displaced to the left. The fetus was found to be in the L.O.A. position, and no obstruction could be felt in the pelvis, either by vaginal or rectal examination. I decided to operate at once, and opened the abdomen.

A small quantity of free fluid was found, which proved to be sterile. It was quite impossible to examine the intestines before emptying the uterus, so I performed Caesarean section, and after this was complete, kept the uterus well out of the abdomen whilst examining the intestines.

The pelvic colon, the transverse colon, together with a large loop of small intestine, were found to be much distended. Further investigation showed a volvulus of the sigmoid flexure, involving also a large loop of small intestine. The volvulus consisted of one and a half twists, but was not sufficiently tight to have caused any gangrene of the intestine. After untwisting the bowel, I spent a considerable time in emptying the colon through a rectal tube, as I was very anxious not to open the bowel. By this time the anaesthetist considered the patient's condition was critical, so I closed the abdomen without anchoring the colon to the abdominal parietes. The operation lasted forty minutes. The patient and the baby made an uneventful recovery.

On looking up the literature, I find an account of 8 cases collected by Dr. Lampe, and published in the *Monatsschrift für Geburtshilfe und Gynäkologie*, vol. 29, 1909. Of these, 2 only recovered, 6 having been operated upon; the other 2 died without operation. Another case is reported by Dr. Schmidt in 1914 (*Medical Review*, Bergen), and in this case recovery took place.

THE Washington University School of Medicine, St. Louis, has been granted £30,000 by the General Education Board on condition that an equal amount is raised by subscription. This fund of £60,000 is to be applied to the endowment of the department of pharmacology.

THREE CASES OF RECONSTRUCTION OF THE THUMB.

By P. JENNER VERRALL, M.B., F.R.C.S.

VISITING SURGEON, SHEPHERD'S BUSH ORTHOPAEDIC HOSPITAL;
CHIEF ASSISTANT, ORTHOPAEDIC DEPARTMENT,
ST. BARTHOLOMEW'S HOSPITAL, E.C.

THE following three cases illustrate some methods of replacing a lost thumb.

CASE A.

A man had had his hand crushed by a pile-driver, losing thereby the thumb at the metacarpo-phalangeal joint and the whole index with its metacarpal bone. The third metacarpo-phalangeal joint was dislocated and partially ankylosed, and the interphalangeal joints of the middle finger were acutely flexed. The first and third metacarpal bones were firmly bound together by fibrous tissue.

In this case, after turning up a dorsal skin flap, I removed all the intervening fibrous tissue, taking care to preserve part of the insertion of the opponens, and brought the flap through so as to lower the web nearly to the metacarpal base, thus converting the metacarpal into a free digit. At the same time an arthroplasty of the dislocated joint was performed, while the flexed finger joints were left undisturbed, so as to enable the finger-tip to be opposed to the short thumb. The man had good use of his reconstructed thumb. The movements of the freed metacarpal were not perfect, but he could easily hold objects between the thumb and flexed middle finger, and could oppose the thumb to meet his remaining digits.

CASE B.

Owing to the explosion of a detonator a man had lost from his right hand the thumb at the metacarpo-phalangeal joint, and the index, middle, and ring fingers through the proximal phalanx.

In this case I transplanted the remains of the index on to the thumb metacarpal by the following method: A flap was turned up exposing the head of the first metacarpal and having its base over the dorsal surface of the trapezium. From the ulnar end of this incision a racket incision was made as for amputating the index. The index metacarpal was cut at its narrowest part and the finger left attached only by the flexor and extensor tendons and the tissue surrounding the radial artery. A large hole was made in the head of the first metacarpal, reaching its medulla. By blunt dissection the cut end of the index metacarpal bone was made to emerge between the flexor and extensor structures of the first interosseous space, and by a levering movement inserted as a peg into the hole in the metacarpal. The index tendons were realigned by blunt dissection and the gap covered by a flap from the dorsum of the hand, so arranged as to reach the palm and cover the web with skin. The man has control over his transplanted index, can move the transplanted joint, and can hold a pen with ease.

Those members of the British Medical Association who visited Shepherd's Bush at the Clinical Meeting may remember this case.

CASE C.

Pte. T. had lost the thumb at the middle of the metacarpal bone, and the index and middle fingers at the metacarpo-phalangeal joint; he suffered from very severe median causalgia. An injection of 65 per cent. alcohol into the median nerve in the mid forearm cured the causalgia, but unexpectedly did not cause complete anaesthesia or paralyse the median intrinsic. Later I reconstructed the thumb by the following method: A dorsal flap was turned up exposing the whole of the first two metacarpals. An incision was then made through the whole second intermetacarpal space including the palmar skin. The stump of the first metacarpal was exposed, and its medulla opened. The index metacarpal was divided at its middle and the base excised. From the excised base a small graft was cut, and by means of this, used as an intramedullary graft, the head of the index metacarpal was fixed to the stump of the thumb metacarpal. The skin flap was placed as a web across the newly made space.

The man can now use the thumb freely and grasp a stick.

In all plastic operations on the hand the chief difficulty is the skin covering. In my opinion the available skin should be used to cover the web and the points which will have to bear pressure; all other parts, such as the dorsal surface of the thumb, being, if necessary, left to heal over, or skin-grafted, as any excessive tension seriously risks the vitality of the web.

The subsequent use of plaster splints moulded to the part serves to ensure abduction and opposition of the new thumb. These may need to be worn at night until all danger of contraction is over.

THE construction of a model leper house for Brazil, equipped with all necessary provisions for the isolation and treatment of patients, has been begun near Santo Angelo.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

ACUTE SUFFOCATIVE CATARRH.

SOME years ago I was called to a man, aged 42, who was in bed and in every detail presented the exact counterpart of the woman Dr. Robert Anderson describes in the *JOURNAL* of November 8th, p. 597. The attack had come on suddenly a quarter of an hour before I arrived. The patient's complexion was leaden and his skin clammy. He had eaten a large meal of steak and kidney pudding about an hour and a half before. I gave him a capsule of amyl nitrite to inhale, and he died suddenly whilst doing so. Feeling convinced that the condition was due to reflex nervous action, and seeing the parallel between such an attack and those cases of asthma which follow the ingestion of certain indigestible foods, I decided that if ever I saw another case I would at once inject morphine hypodermically.

I did not expect ever to see another case, but two weeks later I was called to a man aged between 50 and 60. He was standing up fully dressed, bending over a bucket and bringing up quantities of frothy watery fluid of a mucous character, faintly tinged pink. He spoke with difficulty owing to dyspnoea and because he was entirely engaged in expectorating the fluid in gulps (I can find no other descriptive word). His pulse was full, rapid, and bounding. I at once gave him a hypodermic dose of one-third of a grain of morphine. The effect was magical. His breathing was much easier in two minutes, and he was apparently quite well within ten minutes. I then learnt from him that he had enjoyed a good dinner of liver and bacon two hours previous to the attack, and that it came on suddenly with no previous indigestion or warning. I put him to bed and he slept well, and was perfectly recovered the next day.

Both men were healthy, and had had no previous illness for some years before the attacks.

I have had no opportunity of trying morphine in another similar case. To my mind there is no alternative cause of the condition but a nervous one, and it is probably started in every case by gastric irritation. The cases are rare, but I hope morphine will soon have another and successful trial.

Kingston Hill.

ARTHUR GALE.

DYSTOCIA DUE TO ANAL FISSURE.

I was recently sent for by a midwife on account of a "vaginal obstruction" in a somewhat delicate multipara whose previous confinements had been easy. On examining during a pain I was surprised to feel what seemed to be a horseshoe magnet of large size, with the arch backwards obstructing the head. When the pain passed off the "obstruction" disappeared, and there seemed no obstacle to delivery; the "obstruction" reappeared with the next pain, and I realized the condition was due to a tonic spasm of part of the anterior levator ani muscle. On further examination I found two small haemorrhoids with an irritable fissure between them. Happening to have a bottle of codrenine* with me I applied some, undiluted, to the fissure, and the effect was almost instantaneous, for with the two following pains the head was born. Next day, on pressing the fissure, sharp reflex spasm of both the rectum and vagina resulted, also of the abdominal muscles, though there was no reappearance of the "magnet."

Bath.

F. C. FORBERRY.

EPITHELIOMA OF THE MOUTH IN A YOUNG PERSON.

EPITHELIOMA of the nasopharynx and contiguous parts is frequently seen between the ages of 30 and 50, but the following note records its occurrence in a lad not out of his teens.

On August 9th, 1918, M. C., aged 17 years and 11 months, consulted me regarding a swelling of the face, due, he thought, to

*Codrenine is a proprietary preparation stated (Extra Pharmacopoeia) to contain cocaine hydrochloride and adrenalin.

a gumboil. His complexion was sallow, and he did not appear to be strong. For eighteen months he had been working as an upholsterer and, as is usual in that trade, had been in the habit of nipping threads with his teeth as also of filling his mouth with tacks. About May 25th, 1918, the left cheek began to swell. By July 5th he felt "a kind of soreness at the top of the mouth," and while passing his fingers round he was able to remove the left upper second bicuspid tooth. Soon afterwards, in the same way he extracted the two molars on the same side.

A growth of typical epitheliomatous character was found to involve the left half of the palate with an extension to the right of the middle line. The alveolar margin from the upper second bicuspid on the left side backwards was broken down, and a probe passed into the maxillary antrum gave the sensation of having entered a rather soft mass which bled freely. The Wassermann reaction was negative.

Two pieces of the growth were removed and submitted to Dr. J. H. Teacher for microscopic examination, who reported on August 23rd that the specimen consisted of two portions of rather firm, pinkish-white tissue; both consisted almost entirely of squamous epithelioma of somewhat active-looking type, many of the cell processes being very fine and free from horny change, while others showed typical concentric cell nests.

Mr. Peter Paterson excised the left upper jaw; the diseased structures were removed as thoroughly as possible up to and including part of the floor of the orbit. The anterior ethmoidal cells, being involved, were cleared out. Subsequently, under Dr. James Riddell's direction, radium was repeatedly applied in the naris and externally below the left orbit.

The patient made a good recovery from the operation, and for some months his condition was improved, but symptoms developed gradually which indicated extension of the disease to the cerebral centres, and he died in July, 1919.

Bland Sutton states that squamous-celled cancer has been found as early as the twenty-fifth and as late as the one hundred and third year, but the victims generally are past middle age.

In this instance the age at which the growth presented itself and the comparatively small amount of suffering are noteworthy. The irritants which acted as the exciting cause of the disease were probably conveyed by the tacks and threads which he had been in the habit of putting in his mouth when working at his trade.

P. NAPIER GRANT, M.B., C.M.,

Surgeon for Diseases of the Ear, Throat, and Nose, Out-patient Department, Royal Infirmary, Glasgow.

Reports of Societies.

THE TEACHING OF OBSTETRICS AND GYNAECOLOGY.

In the Section of Obstetrics and Gynaecology of the Royal Society of Medicine, on December 4th, a discussion took place on the report on the teaching of obstetrics and gynaecology to medical students and graduates in London, recently made by the Committee appointed by the Section. (The report was published in the JOURNAL of September 27th and October 11th.)

Mr. J. D. MALCOLM, the President of the Section, who occupied the chair, said that in February, 1919, a committee was appointed by the Council of the Section to discuss reconstruction in the teaching of obstetrics and gynaecology to medical students, and under the able chairmanship of Dr. Eden a very great amount of work was effected. A report was handed to the Council which made it plain that some difference of opinion existed, and Dr. Eden and his colleagues were asked to obtain more uniformity of opinion. They sent in a report, which was published in the BRITISH MEDICAL JOURNAL, and also in the *Transactions* of the society. There had also been prepared a criticism, which would be read by one of the three who had drawn it up. In the meanwhile he asked Dr. Eden to make a statement.

Dr. T. W. EDEN said that, as the report had been widely distributed, he proposed to make a statement. The Committee was appointed to consider and report on the teaching of midwifery and gynaecology to medical students and graduates in London. The chief point was the teaching of midwifery, especially practical midwifery, and he did not propose to deal with the recommendations of the report with regard to gynaecology and post-graduate teaching. The training was to a large extent determined by the requirements of the examining bodies—the Society of Apothecaries, the Conjoint Board,

and the M.B. examinations of the Universities of London, Oxford, and Cambridge. These all made it a central point of their requirements that the student should attend 20 cases of labour. The Conjoint Board, in insisting on these 20 cases, made it necessary that the student should be signed up for his cases by a member of the hospital staff. The Universities of Oxford and Cambridge insisted that a part should be taken in the indoor practice of the hospital. In 1906 Sir John Williams's committee of the General Medical Council made a valuable report, in which they pointed out that the recommendations of the General Medical Council were being ignored very largely by all the examining bodies, and that students were not receiving a sufficient training to equip them for practising midwifery afterwards. They laid it down as a principle that every student should for one month give his undivided attention to midwifery, either at a lying-in hospital or the midwifery ward of a general hospital. The General Medical Council watered down the recommendations a good deal. In the first place, the student might spend three months in daily—not continuous—attendance at a lying-in hospital or midwifery ward, during which he must attend 20 cases under the supervision of the staff; or he might spend one month in the hospital, and, being judged competent by a member of the staff, he might attend 20 cases in the maternity district of the hospital. Oxford and Cambridge had adopted this recommendation; all the other examining bodies had ignored it. The result was that the majority of students attended their 20 cases in the out-patient maternity district of their own hospital; so that when they began their district training they had had no experience of labour. On the district they were under the regulations of their hospital, and were supposed to be accompanied to their first case or two by the obstetric resident. Wherever possible that was carried out. Many hospitals, however, had only one obstetric resident, who could not always attend the cases, and it not infrequently happened that the student went alone. He was just as untrained in the conduct of the puerperium as in that of labour, and of course he knew nothing about infant management. It was impossible to conceive anything more unsuitable than for a student to learn the conduct of labour under the muddle, makeshift, and insanitary conditions found in the homes of the poorest classes whom the students generally attended. The student had no hospital standard by which he could correct his practice. If he was a man of great ability, perhaps he picked up a great deal, but this was not true of average men. The case of the student who went first to the maternity ward was very much better than this. Usually he spent a month there before he did his district work, and though in most of the maternity wards the student was not in residence, when he went on to the district he was in a much better position than the student who went from a hospital which had no maternity ward. Some of the hospitals were situated in neighbourhoods with only a small out-patient district. These got over their difficulty by sending their students to the lying-in hospitals. There the student could get signed up for his 20 cases in from fourteen to twenty-one days. He delivered a certain number of them himself, but more often he saw the midwife instructing a pupil midwife in delivery. The student saw a certain amount of abnormal cases, and picked up some clinical instruction, but did not actually attend anything like the 20 cases for which he was certified. This was very unsatisfactory.

There could be no doubt that the evidence all went to show that the general level of midwifery practice in the country was unsatisfactory. Mr. Bonney had put before them a great deal of evidence in May last to prove this; he brought out the point that the mortality from puerperal fever during the last twenty-five years—a time during which the mortality from wound infection following surgical operations had almost disappeared—had shown very little reduction; it had dropped from 5.8 per 1,000 to 5 per 1,000 in twenty-five years. The mortality was high from the diseases and accidents of childbirth. There had been a certain reduction here also, of about the same proportion as in puerperal fever, but between 1911 and 1915 from twelve to thirteen hundred women in the United Kingdom died in each year from puerperal infection, and, in addition, from 550 to 600 women died every year from

haemorrhage either during pregnancy or in connexion with labour. Mortality was not the only consideration; one had to remember, too, the large amount of maternal morbidity. Women suffered much from the injuries and the minor infections which followed miscarriage and labour; the hospital out-patient departments and wards were teeming with them always. The loss to the State of the earning power of women and of their activity in the home from prolonged illness after miscarriage and confinement was a serious matter, and one to be put very largely to the score of unsatisfactory midwifery. Unsatisfactory midwifery practice had its bearing on infant mortality, because the man who attended the confinement was responsible for the health of the infant during the first three or four weeks of its life, the period during which infant mortality was so high. While 40 per cent. of the confinements in the United Kingdom were attended by midwives, a great deal of responsibility for the unsatisfactory state of things rested upon practitioners also. At the same time it was not fair to blame the practitioners for the unsatisfactory results they got. Men who were taught badly could not practise well, and responsibility must be placed upon the bad system of teaching under which they had been working for so many years. It was true that obstetricians had grumbled from time to time at the blindness of their medical and surgical colleagues, but they had never made any serious effort to get things altered until now. Let them take their own share of the blame as teachers.

The evils of existing conditions were agreed upon, but differences of opinion arose as to the remedy. The members of the Teaching Committee had tried to regard the matter from the broadest possible standpoint, not only from that of education and its necessities, but also from the point of view of the needs of the public. The Committee had tried to find a solution. The first thing of which it was satisfied was this: that the evil was so great that it was no use tinkering at the present system; something must be compassed involving drastic and far-reaching changes if the position was to be put right. The first drastic change was that it would be necessary for students to devote a much larger part of their curriculum to midwifery and gynaecology than at present, and the Committee had suggested four months' continuous service as the minimum; it would like to have made it six months. The next point was that the present close association of obstetrics and gynaecology should be continued and made closer if possible. The Committee would like the men to be instructed in these two subjects together at the same time and by the same teachers. It was clear, too, that men could only be taught their practical midwifery properly in hospital. He supposed there was no single subject in the curriculum of more practical importance to a young doctor than his training in midwifery. Unfortunately, it was one of the subjects in which he was worst trained. The Committee agreed entirely with Mr. Bonney that the conduct of labour should be taught as a surgical procedure under hospital conditions with the highest possible organization of antiseptic ritual. Every student ought to have the opportunity of learning in hospital and under the eye of his teacher how to deal with all the common difficulties of midwifery. This involved a very large increase in the amount of hospital accommodation for midwifery cases; also a recasting of ideas of teaching midwifery and of the duties of teachers. Another important principle was that the training in midwifery should, if possible, be so extended as to give the student a much larger outlook on abnormal conditions in pregnancy; also that ante-natal and infant welfare clinics should be included, because they gave the student a continuous outlook upon the whole reproductive phase of a woman's life and the management of infants. The Committee, in order to find out how these requirements could be carried into effect, looked round to see if it was at all possible so to alter the present institutions as to fit them to train students upon the principles just mentioned. Was it possible so to modify the organization of lying-in hospitals that they would meet the case? They reluctantly came to the conclusion that it was not. The lying-in hospitals were badly needed for the training of midwives, and if their present facilities were taken away and given to medical students the difficulty as regards midwives would be made still greater. Was it possible by any extension of

the system of the midwifery ward to meet the situation? A scheme had been sketched out by which it was thought the midwifery wards might be made to yield a much better result than at present. But in order to supply the proper number of cases, to give the student adequate experience in normal and abnormal labour, at least fifty beds were needed, and in addition the department should have at least twenty-five gynaecological beds. The students must be in residence, since one of the weak points in the present midwifery ward system was that, save in one hospital, the students were not in residence; all that happened at night they missed. The teachers would be two or three visiting physicians, and, to run the department, one senior resident about the status of the resident assistant physician, and under him a sufficient staff of resident assistants.

The advantages of such a scheme were obvious. The difficulties were these: it was only the largest hospitals that could by any possibility give up that number of beds to midwifery and gynaecology. After looking into the matter, the Committee came to the conclusion that probably not more than four out of the twelve teaching hospitals in London could provide a maternity department or clinic of that size. They suggested, therefore, that the students from hospitals unable to provide a midwifery ward of that size might attend the midwifery department of a hospital that could. They contemplated that the out-patient maternity department would remain at most hospitals whether a maternity ward was put in or not, so that the student who went to the maternity ward elsewhere might do his out-patient cases in the district of his own hospital. There were certain further objections; in order to provide training space for all the London students six of these departments would be necessary, and the number entering medicine was growing so much that probably there would have to be more. The Committee did not think that six centres such as these could ever be arranged. An enormous increase in maternity accommodation was not required in central London, but it was badly needed in the outlying parts. The cost of medical education was being met to a greater extent by Government grants, and such questions would have to be settled with the concurrence of the Ministry of Health. It was not likely that so many departments would ever be allowed under Government control or have Government assistance in central London. The Committee therefore suggested the formation of a centre—a hospital for women of a type new to London, including maternity and gynaecology. If these hospitals were placed in districts where there was no maternity service they could be made fairly large. Such hospitals were certainly needed. It was well known that it was difficult for a general practitioner to get a difficult maternity case into hospital. Hospital accommodation ought to be available for obstetric emergencies to just the same extent as it was now for surgical emergencies. Sir Arthur Newsholme's report in 1915 showed that the maternal death rate in connexion with childbirth was lowest in the districts best supplied with hospitals. Such centres, if established, should be used for educational purposes. The Committee thought that such a hospital would be best staffed in this way. The whole staff should be resident. At the head should be a director, giving nearly his full time, but in touch with general practice for a limited part of his time. Under him should be two full-time assistant directors. Such a hospital could give practical training in midwifery, both to students and to graduates in considerable numbers. He knew objections could be urged. The first was that such an institution would be isolated from the schools. He did not think this was necessarily so at all, but he would rather have men properly trained in a separate institution than badly trained within their own school. It was anticipated, however, that the medical schools which did not put in a midwifery department of their own would become affiliated to these new hospitals; hence the services of pathologist, radiologist, chemical pathologist, etc., would be available for the centre. The question of resident teachers raised another point. If they were going to demand more efficient medical practice from doctors, the demand could not be resisted that teachers should be more efficient. Therefore there would have to be a concentration of teachers as well as of clinical material.

In conclusion, Dr. Eden said they all recognized that a good deal of responsibility rested on them as teachers.

He did not think there was a great deal of difference between the Committee and its critics. The Committee had no objection to their proposals at all, except that it thought them timid. At the same time, if they were to get on rapidly there must be something like agreement, and he hoped the effect of the discussion might be to bring it nearer. Changes were coming, and it would be much better if the teachers were in a position to direct them when they came.

Dr. HERBERT SPENCER then read the criticism of the report which appeared under his own name and that of Lady Barrett and Dr. Herbert Williamson.

CRITICISM OF THE REPORT.

We endorse the sections of the report dealing with the deficiencies of the present system of education in obstetrics and gynaecology, and wish to express our indebtedness to the Committee for their clear and outspoken review. We agree fully that reforms are urgently needed, but we do not think the system proposed is the best that can be devised.

Although an intermediate phase is suggested, the ultimate goal of the Committee is a system of education based upon two essential principles:

1. The establishment of large centres devoted solely to the study of obstetrics and gynaecology, and not forming part of a general hospital and medical school.
2. That the student can only be educated efficiently when large masses of clinical material are available.

We think these two principles are wrong. We believe that the obstetric and gynaecological clinic should be part and parcel of a general hospital and medical school. These subjects are only one part of general medicine, and are intimately connected with every other branch. From the point of view both of the student's education and the advancement of the science they should be kept in the closest possible touch with other branches of medicine; the student should not be taught to regard them as something separate and distinct. There is no essential difference between puerperal infections and other wound infections; the fact that cardiac disease complicates pregnancy does not put it in a new category, nor is pyelitis of pregnancy a disease *sui generis*.

Close co-operation should exist between the gynaecologist, the pathologist, the surgeon, and the physician; such co-operation is only possible when the obstetric clinic forms part of a general hospital, both geographically and constitutionally. It is essential that the help of specialists in every branch of medicine should be available—a radiologist, a neurologist, a chemical pathologist, a physiologist, a bacteriologist, a morbid anatomist, and an ophthalmologist, to mention only a few. Consultations should be frequent, and should take place at the bedside of the patient in the presence of the student. By such consultations the student is taught the essential unity of medicine and the application of general principles to special problems. The consultants learn much from one another and the patient is benefited. This close co-operation can only be obtained within the walls of a general hospital.

We do not think very large quantities of clinical material are essential for the education of the student. The clinic need not be a large one. The minimum requirements are:

1. An out-patient pre-maternity clinic.
2. A few (say six) pre-maternity beds.
3. A lying-in ward of not less than twenty beds.
4. A few (say four) beds for septic cases.
5. An out-patient maternity district adequately supervised.
6. An infants' welfare centre—preferably a branch of the children's department.
7. A gynaecological ward of twenty-five to thirty beds with operating theatre.
8. A well-equipped clinical laboratory.
9. A room for storage and investigation of morbid anatomical material.

The staff of such a clinic should consist of:

1. Three visiting obstetricians, all of whom should teach both obstetrics and gynaecology.
2. A resident officer of the standing of a resident assistant surgeon or physician. He should hold office for a period of not less than three years, and should be responsible, under the direction of the visiting staff, for the practical instruction of the students in the lying-in ward, and should also be responsible for seeing that the pathological work of the clinic is

carried out. This officer should receive a salary of not less than £500 per annum.

3. A registrar and tutor.

4. Two resident officers of the standing of house-physicians or house-surgeons.

We believe this system to offer many advantages to the student, the school, and the public over that of the whole-time officer proposed by the Committee. The system of teaching large classes of students by means of lecture demonstrations produces a practitioner inferior to the one produced by a system which aims at the instruction of the student individually by the bedside of the patient. A few cases adequately investigated and well demonstrated teach the student more than many cases hurried over.

We think it desirable that obstetrics and gynaecology should be taught as one subject, should be taught by the same teachers, and that the student's studies in the two branches should be carried on simultaneously. We think that the clinic should remain essentially a part of the general hospital, and the whole course in obstetrics and gynaecology should be taken in one school. We think that every medical school should have its own lying-in ward. At the present time this appears to be impossible in the case of some of the smaller schools, and in our opinion the deficiency would best be met by amalgamation. One or two new hospital centres in outlying parts of London might be formed in the near future by co-operation amongst themselves of the smaller teaching hospitals, and by association of their plans for expansions with State schemes of hospital provision. This would involve the sacrifice of their present central positions, and the fusing of two or more hospitals and their staffs in the creation of the new hospital. The medical school would still be retained, and its students would have the advantages of modern and efficient hospital equipment, of adequate buildings, of working in a district where the need was great, and of a consultation service with local practitioners. The funds obtained by disposal of existing hospital sites supplemented by State grants would be used for building, equipment, and endowment of the new hospital.

It is likely that under the Ministry of Health obstetric and gynaecological institutions will be established in outlying districts of London, probably as parts of new general hospitals. If these institutions are staffed on the principle suggested by the Committee they will form centres for research and post-graduate work. Such institutions will be of the greatest value and are urgently needed.

We think that the director of clinic of these new institutions should hold office in most cases for a limited term of years, and on his resignation of the post be eligible for the staff of the hospitals with medical schools. The experience and skill he gained as director would then become available for the general public and for the education of medical students.

Dr. SPENCER wished to add a few remarks on his own behalf. He agreed with many of the points in the Committee's report, and he thought it most important that they should all be unanimous in insisting upon the need of more beds for gynaecology and midwifery, and of more time to be devoted by students to these subjects. Obstetrics and gynaecology should be taught by the same teacher, but he disagreed on the question of the association of the general hospital. On the question of teaching students, he did not think the senior teachers had had quite sufficient credit given to them in the past for what they had done in the way of teaching. He did not know how these centres were going to get their material if the general hospitals maintained their outdoor maternities as at present. One other point related to the director. He read the passages in the report with regard to this proposal, and noted that this director would be of the status of an obstetric physician at the teaching hospital, responsible for the control of the work of the institution generally, and taking a large share in operative work, in teaching, and in research. The director was not to be a whole-time officer, but to remain in touch with consulting practice. This was a great deal to require of a resident director. The organization under this director seemed to suggest a German method of getting control of the machine and of the work of individuals which was contrary to the ideas of liberty which British subjects cherished. It had been always the glory of the British teacher that he was independent. Dr. Spencer objected, therefore, very strongly to the control by the director over the teacher's work.

(To be concluded.)

SURGERY OF THE PITUITARY GLAND.

At a meeting of the Section of Surgery of the Royal Society of Medicine held on December 3rd, the President, Sir JOHN BLAND-SUTTON, being in the chair, Mr. PERCY SARGENT read a paper on the surgery of the pituitary gland, in which he suggested for discussion a certain number of points connected with the surgical aspects of the diseased gland. He realized how much had yet to be learnt before operative treatment of pituitary lesions could be established upon a firm basis. Disease of the gland might manifest itself in many different ways, and the patient might be brought in the first place to the ophthalmic surgeon, the physician, the paediatrist, the neurologist, or the gynaecologist. Lesions of or implicating the pituitary gland gave rise to symptoms which fell into three groups: (1) Those dependent upon disordered function, whether in the direction of excessive or of deficient activity, or of a combination of both; (2) those which resulted from an increase of the general intracranial pressure, and (3) those due to pressure upon neighbouring structures, particularly the optic chiasma. Tumours which caused pituitary symptoms did not necessarily arise in the gland; interpeduncular tumours, frontal lobe tumours, and growths involving the base of the skull might cause pressure upon it and the surrounding structures, whilst symptoms due to disordered pituitary function were also met with in hydrocephalus. He dealt first with the question as to what effects upon the symptoms of pituitary disease were to be expected from operative treatment, and secondly, what was the best method of attack.

Symptoms.

It was now commonly believed that gigantism and acromegaly were manifestations of excessive activity of the pituitary gland, whilst infantilism, adiposity, and impotence resulted from deficient activity, and that there was thus an analogy with the corresponding disorders of the thyroid gland. In both cases the symptoms of excessive or deficient functional activity might merge into one another. Further, both thyroid and pituitary tumours caused symptoms due to pressure upon neighbouring structures. He was unable to express an opinion as to whether or not an operation for glandular symptoms alone was justifiable. Cushing had related two cases in which he operated on account of glandular symptoms and headache. In one case there was immediate cessation of the headaches, and later a marked change in the patient's appearance. In the other a subtemporal decompression afforded no relief of headache, but later some improvement was noted after a course of whole-gland extract to the extent of 100 grains a day. In a third case the predominating signs were those of deficient glandular activity. Treatment by glandular feeding was carried out for a time with some slight improvement, but later the headaches became more severe and the vision began to fail. A sellar decompression was then done, with prompt cessation of the headache. The speaker himself would hesitate greatly before attempting the experiment in a patient with little or no enlargement of the sella, in whom neither headache of any severity nor neighbourhood symptoms existed. In the opposite class, with a large sella easily accessible through the nose, and with a progressive Fröhlich syndrome, the operation might be more readily undertaken. It was possible that the relief of pressure upon any remaining normal gland tissue afforded by the emptying of a cyst, the removal of a mass of adenomatous tissue, or by merely incising the dural capsule, might be beneficial. The onset of general pressure symptoms marked the beginning of the terminal stage. A simple decompression operation would abolish the headache due to general intracranial pressure, but could not be reckoned upon to relieve the "bursting" frontal pain due to sellar distension. In those cases which showed papilloedema subsidence of the swelling was to be expected after decompression. It was probable that a simple decompression operation would prove a useful if not an essential preliminary measure before making an attack upon a pituitary tumour. It was chiefly for visual disturbances that the pituitary region had hitherto been subjected to surgical interference. According to Cope, operation or *post-mortem* examination on cases of this description revealed a large intracranial extension, and he concluded that all pituitary tumours which came to

operation for symptoms other than acromegaly had long before burst the bounds of the fossa.

Nature of Pituitary Tumours.

The majority of the tumours which arose in or primarily involved the pituitary gland appeared to be of an adenomatous character, and were called by Cushing "chromophobe struma"—that is to say, an adenomatous hyperplasia characterized by deficiency or absence of the eosinophile granules, which seemed to be associated with functional activity. In three series of cases quoted 62 per cent. of the tumours subjected to operation were of an adenomatous nature. Another kind of tumour, not arising in but secondarily affecting the gland, was the suprasellar endothelioma. Although he thought it was impossible to extirpate a solid pituitary tumour completely (so far any removal that had been accomplished had been only partial), nevertheless a sufficiently large part of such a tumour could be removed to afford some relief, at any rate for a time.

Methods of Approach.

These fell into two groups—the *extradural*, including transpalatal, nasal, and paranasal operations; and the *intradural*, comprising the temporal and frontal. At present the two methods of approach which held the field were the nasal and the frontal. Of the former the trans-sphenoidal operation of Cushing was probably the best; of the latter, the orbito-frontal operation of Frazier might be taken as the type. Although rival methods, neither should be altogether rejected. In time it might be possible to make a sufficiently accurate diagnosis to enable one or other to be selected for any individual case. Mr. Sargent then described Cushing's nasal operation and that of the frontal route, and related his own experience of 14 cases on which he had operated, 6 of them by the nasal route and 7 by the frontal route. In attempting to make a fair comparison between the two methods, he said that not only the route of approach, but also what could be accomplished when the objective had been reached should be considered. The nasal route presented several disadvantages. It was narrow and unclear, and the difficulties might be increased by acromegalic deformity of the bones. Even in the most favourable circumstances very little room could be obtained for dealing with a solid tumour, and when (as was always the case when chiasmal pressure was present) there was an intracranial extension, it was only the smallest part of the tumour which could be attacked. The relief afforded by removing this part of the mass, or even by evacuating the contents of a cyst, was small and transient. On the other hand, the frontal operation was free from risk of meningeal infection, and allowed the intracranial part of the tumour to be inspected and dealt with. Its chief dangers were that the frontal lobe might be injured, and that serious or even fatal haemorrhage might occur. The latter depended upon the fact that the circle of Willis was stretched out around the tumour, and so might easily be damaged. If these dangers could be avoided, a much more radical and efficient operation could be accomplished. From his own experience and from a study of the literature on the subject, he had come to the conclusion that the beneficial effects upon vision of partial removal of a pituitary tumour through the nose, or of merely allowing it to bulge downwards into the sphenoidal sinus, were uncertain, inadequate, and transitory. The effect upon severe headache due to sellar distension was more uniform, and might be very striking, but there was a tendency to recurrence. Of the effect upon glandular symptoms it was less easy to form an estimate, the more so as practically all the cases were treated at the same time with large doses of pituitary gland extract. Until some medicinal form of treatment had been devised which was capable of arresting the growth of such a common variety of pituitary enlargement as the adenomatous hyperplastic tumour, it was to surgical treatment that we had to look for the relief of symptoms due to tumours of or in the neighbourhood of the pituitary gland. He urged that if surgical treatment was to be given a fair field it should be applied at an early stage, and not merely as a last resort in cases rapidly advancing towards a fatal termination. The existence of a high degree of intracranial pressure due to the invasion of the cranium undoubtedly increased the risks of a surgical attack upon the pituitary tumour, just as in all other cases of cerebral tumour. He looked

forward to the time when headache, vomiting, and papilloedema would no longer be regarded as symptoms of cerebral tumour, to be expected and awaited before operation was proposed, but as signs of impending disaster in neglected cases. There was no reason why pituitary tumours should not be diagnosed at a very early stage, for with them we had many sources of information in radiography, examination of the visual fields and optic discs, and all the symptoms which might be due to abnormalities in the glandular function. Whatever advance in pituitary surgery might take place in the future it was to be looked for mainly in three directions—first, in earlier and more accurate diagnosis; secondly, in a better understanding of the objective to be aimed at in every individual case, so that the most suitable surgical procedure might be selected; and, thirdly, in the improvement in the technique of the intracranial operation.

Dr. HOWARD TOOTH spoke from the point of view of the physician. He had been anxious to find some evidence as to whether the expectation of life were better with operation or if the pituitary tumour were left alone. He had traced seven cases, and found that the average time which had elapsed since the appearance of the first symptom was 7.5 years. The survival period of operation cases was 5.13 years. The symptom above others which called for operation was severe and recurrent headache. He described cases in which headache and polyuria had been relieved.

Mr. V. Z. COPE described a case to illustrate the difficulties in diagnosis. There was a large tumour with erosion of the sella turcica. Temporal decompression was done, and a large tumour of the lateral ventricle was found which was pressing upon the pituitary gland. He thought that the surgical outlook was not quite so bad as the last speaker had indicated. Much could be done to relieve the blindness. He spoke of a case of increasing blindness in a dancer; after operation the vision improved and giddiness was so much relieved that the man was able to return to his calling.

Mr. J. HERBERT FISHER said that it was impossible to decide by ophthalmoscopic examination when recovery of the optic nerve could take place. Even with advanced atrophy and with poor vision recovery of function might follow. Speaking of organotherapy, he related a case which had been treated by administering thyroid, in which the visual field and direct vision had much improved, although later the vision had again deteriorated. In another case administration of thyroid and pituitary extract had led to decided improvement. In cystic cases there were usually adenomata as well. The solid growth was probably progressive.

Mr. F. R. B. ATKINSON said that few cases of acromegaly, due to adenoma, had been operated upon, yet in this condition the expectation of life was good. Most of the patients operated upon had died; in a few the general condition had improved though the extremities had not become smaller.

Mr. W. G. HOWARTH thought that there was something to be said for the trans-sphenoidal route. It was simple and gave a wider view than Mr. Sargent would suggest. Another advantage was that if the tumour proved to be malignant it was possible to insert radium afterwards. If cases were seen early it was useful as a preliminary to more severe operations.

Mr. E. D. D. DAVIS thought that the trans-sphenoidal route was unsatisfactory. The opening was small, and there was a danger of entering the anterior fossa.

Mr. SARGENT, in reply, agreed that in some cases the headache was of a most distressing character, and something had to be done to relieve the patient. If ophthalmologists could give the surgeon some indication as to the prospects of return of vision, it would be easier to decide upon the value of operation. The cases which improved under glandular treatment were those with under-activity, for this could be compensated for by oral or hypodermic administration.

TYPHUS AND RELAPSING FEVER IN SERBIA.

At a meeting, on November 28th, of the Section of Epidemiology and State Medicine of the Royal Society of Medicine, with the President, Dr. E. W. GOODALL, in the chair, Colonel WILLIAM HUNTER, C.B., A.M.S., read a paper on the Serbian epidemics of typhus and relapsing fever

in 1915: their origin, course, and preventive measures employed for their arrest.

The principal data analysed by Colonel Hunter consisted of returns of cases in hospitals in forty-two towns of Serbia, and more detailed information respecting patients in the central military hospital and seven reserve hospitals of Kragujevatz. The first and worst seat of the outbreak was Valjevo, a small town near the Bosnian frontier, where the disease broke out after the second Serbian advance; when the town was evacuated for sanitary reasons large numbers of Austrian prisoners were distributed throughout the country. Cases of typhus and relapsing fever in the hospitals increased rapidly from 2,400 on January 2nd, 1915, to 6,500 by February 1st, 11,500 on March 3rd, and 16,700 on April 2nd. At the time of arrival of the British Mission, conditions were appalling; the sanitary circumstances were terrible and the fatality of the disease reached 40 per cent. The sanitary measures taken by the British Mission consisted in (a) suspension of railway traffic, (b) stoppage of leave from the army, (c) establishment of Mladenovac quarantine and cleansing station, (d) formation of sanitary disinfecting train, (e) introduction of "barrel disinfectors," (f) introduction of railway van disinfectors, (g) introduction of railway van douche baths, (h) cleansing of railway stations and rolling stock. The first wide measure of prevention placed in the foreground of the programme was suspension of railway traffic and stoppage of army leave. The particular area selected lay between the first army area and the rest of Serbia, and a large quarantine and disinfecting station was established at Mladenovac, situated at the junction of two army areas, in order to shut off the first army area (heavily infected) from the adjacent area, and to prevent the southward extension of infection from either. It was hoped to get this station into working order before railway traffic was resumed, but actually, owing to local difficulties, traffic was resumed some days before the station operated. The consequence was a recrudescence of disease, which had abated when the traffic ceased, but by great efforts the station was brought into full work on May 3rd. The epidemic declined suddenly on March 16th, following the administrative measures brought into force within ten days of the arrival of the British Mission, and this mitigation continued for six weeks—that is, during the month of railway suspension, and ten days longer. A recrudescence set in ten to twelve days after traffic was resumed. This was clearly related to movements of troops and civilians occurring in areas and places chiefly affected by such movements. The whole experience pointed to the importance of such definite administrative measures affecting the country as a whole, in arresting epidemics of this kind, in addition to and far more effective than the usual measures adopted locally in individual towns or hospitals for the prevention of the spread of these diseases. Some indication of the effects is given by the statistics of the Kragujevatz fever hospital. The number of cases admitted in January had been 118, in February 961, in March 1,138. The fatality was 30 per cent. in January and February, 40 per cent. in March. In April the admissions fell to 360 and in May to 200.

Colonel HUNTER exhibited a large number of instructive charts and statistical tables.

In the ensuing discussion Lieut. Colonel STAMMERS, Dr. HAIG, Dr. MOON, and Dr. McVAIL took part.

X RAYS IN ABDOMINAL DIAGNOSIS.

THE second sessional meeting of the East York Division of the British Medical Association was held in the board room of the Royal Infirmary, Hull, on November 7th, with Dr. EDWARD TURTON in the chair. Mr. E. H. HOWLETT, F.R.C.S., spoke on "The x-ray abdomen." He began with a plea for close intercommunication between the physician, surgeon, and radiographer. The two methods employed in the x-ray examination of a case were: (1) Screen, (2) plating. The latter required very good apparatus and a lavish expenditure of plates; for this reason the lecturer confined himself to a description of the screen work. Radiographic examination of the abdomen had been made possible by the employment of the opaque meal, using bismuth carbonate, or oxychloride or sulphate of barium, the latter being largely employed owing to its comparative

cheapness. The lecturer said that he followed in Handek's footsteps, with a slight alteration in the method of administration. Handek used a thin medium as the filling test, which was given at the first examination after the opaque meal administered six hours previously. The condition of the stomach and situation of the meal was first observed; next, the tube still running, the thin filling meal was given. It could be watched whilst being swallowed, and various observations made. The tube was then stopped and a further opaque meal given. The stomach could now be examined at leisure.

The normal stomach was next described, with its departures in the way of hypotonicity or hypertonicity and atony. The position, mobility, flexibility, peristalsis, and motility of the normal stomach must be known, so that its departures in disease could be recognized. Gastro-spasm was next dealt with, and the confusion that it might cause in the reading of the screen picture. Mr. Howlett then spoke of the great utility of the x-ray examination; as a method of diagnosis it was second only to the hand and eye of the surgeon. Cancer of the stomach, ulcer, duodenal ulcer, were described and their differences pointed out, emphasis being laid on the power to distinguish between gastric and duodenal ulceration. The passage of the meal through the intestines was described, and the method of using an opaque enema in place of, or in conjunction with, a meal by the mouth, in cases in which the larger hausted bowel was under suspicion. With regard to affections of the gall bladder the presence of a calculus holding lime salts was possible of detection; it was necessary to differentiate between a renal calculus and a gall stone. In attempting the diagnosis of gall bladder troubles, plating was to be preferred to the screen, but numerous plates frequently had to be employed.

The CHAIRMAN offered his congratulations, and proposed a hearty vote of thanks to Mr. Howlett for his very instructive lecture, remarking that in all cases x-ray reports were of the greatest value. He suggested that doses of belladonna might be given as a routine method to get rid of gastro-spasm prior to screening.

Mr. UPCOTT, Dr. DENYER, Dr. HARRISON, and Mr. BERTRAM BLAIR also took part in the discussion, and Mr. HOWLETT replied.

RUPTURED AORTA.

At the November meeting of the Cardiff Medical Society Dr. IVOR J. DAVIES read a preliminary note on a case of ruptured aorta, with haemopericardium, causing sudden death. A colliery repairer, aged 52, previously healthy, was found dead beside a truck of pit props (pine wood) which he was unloading alone; he had been seen five minutes previously actively at work. One of these heavy props was lying across his chest. On examination there were severe contusions in the entire extent of the soft parts over the ascending aorta; they were strictly limited to this situation. The pericardium, of normal capacity, was full of blood and clot. The aorta in its intrapericardial portion, and immediately above the sigmoid area, showed a transverse clean rent, involving two-thirds of the circumference. The cut edges of intima were sharp and were retracted slightly over the whole area of rupture. There was a linear vertical crack in the intima extending upwards for 1½ in. from the posterior extremity of complete rupture, and a smaller lesion was seen in the endothelium of the posterior sinus of Valsalva. The aorta in its entire extent did not present any evidence of disease. The heart was somewhat fatty and flabby, but otherwise healthy. The kidneys showed early granular changes. All the other organs were healthy. The opinion was expressed that the man received a heavy blow over the ascending aorta from one of the pit props slipping end-on towards him.

Dr. HERBERT T. EVANS showed a case of chronic progressive paralysis of the cranial nuclei of nine months' duration. It began with ptosis of the left eyelid and diplopia, followed by strabismus, and subsequently by ophthalmoplegia externa of both eyes, and finally complete ophthalmoplegia of both eyes. During the last three months the soft palate became paralysed, and in addition to the nasal voice the articulation had become defective, while deafness had set in. So far the tongue showed no sign of wasting, and no changes had been noted in the discs or elsewhere.

Dr. LEIGHTON DAVIES showed a case of double microphthalmia in a boy of 6 years of age. Both eyes were undersized, the left being the smaller. In each eye there was an incomplete coloboma of the iris down and slightly

in, together with a coloboma of the choroid, very extensive in the left eye, less so in the right. There was no coloboma of either lens. Dr. Leighton Davies also exhibited a specimen of bisected buphthalmic eye. The condition was shown to be entirely different in its pathogenesis from microphthalmos, as buphthalmos was always due to definite pathological changes associated with permanent or transient rise of intraocular tension—that is, glaucoma. Such eyes were always more or less blind, whereas microphthalmia might be associated with useful vision.

Mr. B. K. T. COLLINS contributed notes of a case of multiple fibromyomata of uterus with double haemato-salpinx and double cystic ovaries removed by supra-vaginal hysterectomy; and gynaecological specimens were shown and discussed by Dr. EWEN MACLEAN and Mr. E. T. COLLINS.

GASTRIC ULCER.

At a meeting of the Leeds and West Riding Medical-Chirurgical Society, held at the Leeds General Infirmary on November 28th, Mr. E. R. FLINT contributed a paper on gastric ulcer, its clinical and surgical aspects. After dealing with the symptomatology of chronic and recurring gastric ulcer, and the recent experimental work which has been undertaken to determine its causation, Mr. Flint reviewed the various operative procedures which have been adopted for its treatment. He strongly advocated partial gastrectomy as the ideal procedure for chronic ulcers at the pylorus or on the lesser curvature, and the results in over forty cases in which he had performed the operation added much weight to his contention.

Mr. H. B. SCARGILL exhibited a number of slides illustrating the x-ray diagnosis of gastric ulcer and the specimens subsequently removed by operation which confirmed the diagnosis. An interesting discussion followed.

Among the cases and specimens exhibited at the meeting Sir BERKELEY MOYNIHAN showed a specimen of three-quarters of the stomach with attached portion of jejunum including a gastro-enterostomy opening. The patient, a woman aged 38, suffered from the perforation of a gastric ulcer on May 17th, 1903, and a perforation of a second ulcer on May 30th, 1904; at the second operation a gastro-enterostomy was performed. Perforation of a third gastric ulcer occurred on October 14th, 1914. Symptoms recurred, and on November 2nd, 1919, a further operation was performed; a jejunal ulcer was found. The stomach, with the scars of the three ulcers and the jejunum attached to it, was successfully removed.

Mr. HARRY LEE exhibited a series of water-colour drawings of the fundus oculi, showing injuries and abnormalities met with during the war; and Dr. MAXWELL TELLING and Professor STEWART showed specimens from a case of endothelioma of the dura mater.

Reviews.

INJURIES OF THE BLOOD VESSELS.

SIR GEORGE HENRY MAKINS's monograph *On Gunshot Injuries of the Blood Vessels*,¹ founded upon his unrivalled experience and following on his well-known earlier contributions to the subject, will certainly be read with all the interest it deserves. It is not a very easy book to assimilate; even experience can hardly stem the infinite variety of these lesions. It is not that the characters of the initial hurts cannot be discriminated and classified, but that the consequent changes and developments, in their permutations and combinations, have lapse of time to complicate the issues. Fortunately, the end-results form a fairly simple series, but the author is diffident of dogmatism, and the data of the intermediate stages are necessarily less ample; it is probably for this reason that very close attention is needed for full appreciation of the argument.

Briefly summarized, the results of war experience are a more accurate knowledge of the signs of injury to arteries; of the mode of development of their consequences; of the effect of obliteration of main vessels upon the vitality of the parts supplied; of the arrangement of the vessels in relation to the various forms of traumatic aneurysm; and of the advantages of suture of vessels.

¹ *On Gunshot Injuries of the Blood Vessels*. By Sir George Henry Makins, G.C.M.G., C.B., F.R.C.S. Bristol: Wright and Sons, Ltd. 1919. (Super roy. 8vo, pp. xii + 251; 60 figures, 4 plates. 21s. net.)

The facts obtained by examination of the peripheral vascular system, by auscultation, and the estimation of blood pressure, their bearing upon and relation to precordial signs, and vasomotor and other neural disturbance, can now be interpreted with more exact reference to the vascular lesion. There is an interesting analysis of various views upon the parts played by ischaemia and neural injury in the production of disorders of function and physical state in the limbs, which suggests that light may be thrown upon similar conditions of quite other origin, but of importance to the community, in reference to industrial incompetence.

The discussion of the mode of conduction of vascular murmurs is not very satisfying, and, indeed, not quite consistent from chapter to chapter, but this is a small matter. Statistics throughout are given with strict reservations and there is, quite properly, no attempt to force deductions from them. The author is of opinion that anaemic gangrene following ligation is more common than was formerly thought. Histological studies prove very interesting, the most important result being the demonstration of the much wider distribution of tissue damage than inspection would suggest.

Immediate transfusion of blood is recommended as the correct treatment of secondary haemorrhage, but its efficacy in the presence of profound septic-intoxication is admitted to be doubtful. The mode of formation of the definitive sac by hollowing out of the primary clot, and the tenuity of the original connexion between the "sac" and the wound in the artery, are interesting observations, as also is the frequency with which the aneurysm itself escapes infection, even when the clot and surrounding tissues are suppurating. In "mixed" injuries the sac is always arterial; the relations of the sac or sacs to artery and vein are now more clearly known, and it is established that arterio-venous aneurysm does not result from complete severance of the vessels. Spontaneous healing of varix, and, in general, cicatrization of untreated vascular wounds, is more clearly proved.

Sir George Makins finds his earlier advice, as to simultaneous ligation of the main vein when tying the artery, confirmed. He discusses at some length the present position of suture of arteries, pointing out that the actual manipulations are not so difficult as is generally supposed, and showing that, notwithstanding final occlusion of the sutured vessel, it is often justified by the postponement of arrest of the chief supply until the collateral circulation is improved. He names the common carotid, the external iliac, and the common femoral as the arteries demanding suture. He commends the use of Tuffier's tubes for reasons similar to those which lead him to advocate suture.

Rather more than half the book is devoted to the study of lesions of individual arteries; it is instructive and of great value for reference. The whole work will doubtless be the foundation of the textbook articles on the subject for years to come.

RADIO-DIAGNOSIS OF CHEST DISEASES.

DR. HONEIJ's translation of Dr. F. BARJON's book on the *Radio-Diagnosis of Pleuro-Pulmonary Affections*² should prove of value to radiologists and physicians alike. It is written by a physician who is an accomplished radiologist, and the subject is discussed in all its bearings from the points of view of the x-ray findings and of the physical signs, and the deductions to be made from the combination of the two. With few exceptions all the conditions—those of everyday work and those of rare occurrence—are discussed; perhaps one of the most notable exceptions is that of the lung conditions due to various industrial employments, of which the author does not appear to have had any personal x-ray experience. His general attitude towards x rays can be deduced from the conclusions he reaches after describing the examination of a normal thorax; after discussing the main facts he says:

Radiography shows only the shadows and light areas which constitute normal and abnormal shadows. All deductions useful in medicine are based on the analysis of these shadows. It cannot be repeated too often that final and complete dia-

gnosis should not be demanded of radiography. That is not within its province; that whilst the radiographic examination can throw great light on difficult problems, the physician must make the final diagnosis.

Admitting the dramatic, unexpected, and final diagnoses not unfrequently made by an x-ray examination alone, these conclusions are in the main perfectly true. One of the most interesting parts of the book is that on collections of fluid, localized or otherwise, in the pleural cavity, together with the diagnosis, and the x-ray signs, of fluid in the interlobar spaces and in the lung roots. Few radiologists would be daring enough to rely solely on the x-ray signs described to make the diagnosis upon which the author ventures when he, with his knowledge of the history and the physical signs, is able to fit the puzzle together and give the true value to all the varying signs. Especially is this the case in the diagnosis of pleurisy of the region of the hilus.

When discussing the production of artificial pneumothorax for the cure of phthisis, it is said that the advice a radiologist must give is of paramount importance, first, from the point of view of the extent of the lesions—whether they are unilateral or bilateral—and secondly, by showing the topography of the pulmonary lesions and furnishing an indication of the probable location of adhesions and their extent. Great stress is laid on the point that after an attempt at an artificial pneumothorax another radioscopic examination is necessary to show whether the attempt has been successful, and whether the treatment ought to be followed up or abandoned. It is laid down very emphatically that the most important part of radiology in this work is the discrimination between those cases in which it should be followed up and those in which it should be abandoned. No other method of examination for the selection of cases is so decisive.

The book opens, after an introduction, with a short account of the methods of examination, and the author deals next with the radiological study of the pleurae; there are chapters on pleurisy of the large cavity, circumscribed and encysted pleurisy, and pneumothorax. This is followed by a study of the bronchi in three chapters—on foreign bodies, on bronchial affections, and on tracheo-bronchial adenopathy respectively. In the section on the lungs we find chapters on vascular processes, acute infectious pulmonary processes, pulmonary tuberculosis, and lung tumours. Finally, penetrating wounds of the thorax caused by war projectiles are discussed. There are numerous illustrations, both typical radiographs and diagrams. Great stress is laid upon the importance of accuracy in screen examinations, and the screen appearances are described in considerable detail, the points to be looked for being plainly indicated. The translation from the original French has evidently been done with care and accuracy, and it is easy to read and understand. This is the best monograph yet published on pleuritic and pulmonary affections as approached from the x-ray standpoint; and without any desire to suggest that it is not suitable for others, there is no doubt but that it should be read by all radiologists, and by all physicians who specialize on the diseases of the chest.

A NEW INTRODUCTION TO PHYSIOLOGY.

THE *Introduction to General Physiology*,³ by Professor BAYLISS, strikes an entirely new and refreshing note. In the past the great majority of the smaller books were merely boiled-down textbooks, accurate and useful enough, but rarely stimulating. Professor Bayliss might well have called his small volume an introduction to physiology for professional physiologists, as the scope is wide and the exposition clear. Indeed the book will probably be of greater value to the trained student, affording as it does a conspectus of the whole field, than to the student who is just beginning his studies.

It goes without saying that most teachers have their own ideas as to the nature of the material to be included in an elementary volume; they gauge their probable audience in the light of their own experience and of the parts of the subject they consider most material. Naturally, in the present volume great attention is given—perhaps,

² *Radio-Diagnosis of Pleuro-Pulmonary Affections*. By Dr. F. Barjon (of Lyons), translated by Dr. Honeij (Yale Medical School). New Haven, U.S.A.: Yale University Press; London: Hamworthy Milford, Oxford University Press, 1918. Original French, 1916. (Med. 8vo, pp. xix + 183; 79 figures. 10s. 6d. net.)

³ *An Introduction to General Physiology*. With practical exercises. By Professor W. M. Bayliss, M.A., D.Sc., F.R.S. London: Longmans, Green, and Co. 1919. (Demy 8vo, pp. xv + 238; 20 figures. 7s. 6d. net.)

considering the modern lines of attack, rightly given—to the consideration of the physico-chemical aspects of physiology and for the most part in simple language. On the other hand—and this is probably due to his own personal experience of students—there are sections in which the most elementary knowledge, knowledge which the average medical student at least ought to have acquired from his botanical and zoological studies, is assumed to be absent.

As regards the matter of the book the text (Part I) is divided into seven chapters headed as follows: Life and Energy; Food—Digestion and Respiration; Work—the muscles; Stimulation—the senses; Adjustment—the nervous system; Transport of Materials—the vascular system; and Growth and Reproduction. Part II is concerned entirely with the experimental work to which allusion has been made in the text. It ranges over a very wide field, illustrating all phases of physiological research. A great deal of the work can be done with a very small outfit, although naturally some experiments are described which require equipment not to be found in every laboratory. A magnificent practical course to replace the current "frog jumping," a course which would be of genuine value to the medical student, could be evolved by using this book and Professor Sherrington's recent publication, *Mammalian Physiology*, as the basis.

The time has surely come when it is advisable, if not indeed necessary, for the various universities to overhaul their practical courses in physiology. No doubt the present experimental classes do teach useful enough principles, but as a rule the students fail to grasp the points, men become bored, and the results obtained in the majority of instances seem to them to be far removed from medical work. Certainly these admirable exercises devised or elaborated by Professor Bayliss give a lead in the right direction.

NOTES ON BOOKS.

*A Manual on Unfit Houses and Unhealthy Areas*¹ (printed, oddly in view of the title, on foolscap paper) has been issued by the Ministry of Health. The first part deals with the general policy to be adopted in regard to unfit houses and unhealthy areas, the second with unfit houses in particular, and the third with the methods of treating unhealthy areas. The first problem, it is stated, will, as a rule in existing circumstances, be that of rendering houses in a bad condition reasonably fit without displacing the tenants. It is added that until more houses are provided great caution should be shown in demolishing existing houses. There is a paragraph enjoining on local authorities the duty of giving special consideration to any building which for historical, aesthetic, or other reasons it may be in the national interest to preserve, and it is stated that the Society for the Protection of Ancient Buildings will be glad to give advice in such cases.

We have received from Dr. Samuel Crawshaw a copy of a small pocket-book, which has been drawn up this year by members of the honorary staff of the Ashton-under-Lyne District Infirmary, for the instruction of sisters and senior nurses. It is entitled *Guide to the Preparation and After-treatment of Operation Cases, with an Appendix on Medical and Surgical Diets, and Methods of Collecting Pathological Specimens*.² The first nine pages give an outline of surgical ward work. The directions are admirably clear, and the notes on dietetics should help nurses to understand the principles upon which a scientific diet is constructed for different classes of disease. Much care has evidently been taken with the choice of words, and the pamphlet is rounded off with a paragraph giving due acknowledgement to the authors whose works have been consulted during its compilation. A better little guide of its kind we have never seen.

A second edition has been published of Colonel R. J. BLACKHAM'S *Pocket Guide to First Aid in Cases of Poisoning*.³ The notes are printed on three sides of a small folding card; they are not intended to replace the services of a medical man, but to be a guide to what should be done while the doctor is being fetched. The information is given in clear and concise form, and the directions generally are such as an intelligent lay person could properly carry out before the arrival of medical aid.

¹ Published by H.M. Stationery Office. To be obtained through any bookseller, price 1s. 6d.

² Printed for private circulation. A few copies can be obtained from the Secretary, Ashton-under-Lyne District Infirmary, price 2s. 6d. each.

³ *Pocket Guide to the First Aid to be Rendered in Cases of Poisoning*. By Colonel R. J. Blackham, C.B., C.M.G., C.I.E., D.S.O., M.D. Pocket First Aid Series, No. 1. Philadelphia: Wiles and Son. (61. net.)

APPLIANCES AND PREPARATIONS.

Motor Accessories.

THE Duco grease injector supplied by Messrs. Brown Brothers is a very simple and effective instrument, which may be used for grease, oil, or petrol. It consists of a solid wooden plunger, which nearly fits the brass cylinder. To the end of the plunger are attached two leather washers working in opposite directions, with the result that the plunger fits closely both when the injector is filled and when it is emptied. There are no caps to be unscrewed before filling. The injector is extremely useful for introducing grease into gear-boxes or into inaccessible parts of the car.

The Igna sparking plug is small and neat in appearance, and is simply constructed. It consists only of the central electrode, the insulation, and the body, and it can be quickly and effectively cleaned by means of the Igna cleaner. It is claimed to be gas-tight. We have found the plug work well, the engine running satisfactorily under varying conditions. The plug is supplied by Messrs. Brown Brothers of Great Eastern Street, E.C.2.

Stainless Steel.

In recent years a large amount of work has been carried out on the effects produced on the rate of corrosion of steel by alloying it with small proportions of other metals, and it has been discovered that several metals, when added to steel in suitable proportions, confer upon it to a marked degree the power of resisting corrosion by moist air and corrosive substances generally. So far as steel used for general purposes is concerned, the particular metal which has been found of most service for this purpose is chromium, and it is interesting to note that so long ago as 1892 Sir Robert Hadfield prepared chromium steel alloys containing about 11 per cent. of chromium, which resisted corrosion by the air so well that after twenty-three years' exposure under ordinary conditions bars of the alloy showed only very slight rusting. The first application of such an alloy commercially, however, consisted in the employment of the non-tarnishing alloy known as "stainless" steel for articles of cutlery, etc. This material is a chromium steel alloy, containing approximately 12½ per cent. of chromium, ½ per cent. of cobalt, traces of manganese and silica and a decidedly low proportion of carbon; it is much superior to ordinary steel in its resistance to corrosion, but its cost is relatively high, principally due to the fact that metallic chromium is still a comparatively expensive substance. In spite of the cost, however, the obvious advantages of a non-tarnishing steel are so great that "stainless" steel is now being used on a comparatively large scale by cutlery manufacturers, and it appears very probable that it and other alloys of a similar type will come into still more extended use for this and other similar purposes in the near future. We have recently received from Messrs. Maw, Son, and Sons a pair of dissecting forceps made of this steel; they are of good pattern and well finished, and will probably prove convenient.

MEDICAL PRACTITIONERS AND INCOME TAX.

The following is a report of the evidence in chief given before the Royal Commission on the Income Tax by Dr. G. E. Haslip on behalf of the British Medical Association on October 9th, 1919.

(1) Innumerable accretions, legislative and administrative, have led to such complication in the return for assessment of income tax that it is almost impossible for the busy medical practitioner to make the return unaided. Form No. 11—itself a four-page document—is accompanied by four closely printed, small type, foolscap pages of explanation.

To fill in the usual claim for exemption, abatement, or reduction of tax: A doctor's professional income must be returned on the average of the three preceding years. His income from any public office must be returned on the actual income of the year. His income from property must be returned at the amount of the Schedule A assessment on the property concerned. His income from occupation of land must be returned at double the annual value of the land. His income from taxed dividends must be returned at the actual income of the year of assessment (an unknown quantity). His income from untaxed dividends and interest must be returned at the amount received in the year preceding the year of assessment. And the charges on his income must be returned at the actual charges for the year of assessment.

(2) Further complication arises from the number of forms which many taxpayers are asked to fill up. Thus many doctors are asked to fill up a Schedule D return, and a Schedule E return, and may be requested to make a

super-tax return; should the doctor be entitled to repayment for any cause, he may be required to fill in many other forms before repayment is obtained. Owing to want of acquaintance with the technicalities of Income Tax law and administration, the returns made by individuals may be erroneous in either direction, leading in the one case to loss of revenue to the Government, and in the other to excessive assessment of the individual.

(3) In practice the complicated procedure leads to inequality of assessment and injustice, and involves many taxpayers in the expense of employing an accountant. In the case of medical practitioners inequalities in assessment arise from:—

(a) The "three years' average" for professional incomes. The inequalities due to different modes of assessment have already been pointed out. The income of the previous year can easily be ascertained; further the year following a year when profits were high is more favourable for the payment of a large income tax, and vice versa.

(b) The "Depreciation" allowances. Schedule D is divided into six cases. Case I refers to profits derived from trade, manufacture, adventure, or concern. Case II relates to profits derived from any profession, employment, or vocation not contained in any other schedule. Thus professional men are assessed under Case II. Rule 6 of Schedule D, Cases I and II of the Income Tax Act, 1918, provides that "in charging the profits or gains of a trade under this schedule, such deduction may be allowed as the commissioners having jurisdiction in the matter may consider just and reasonable, as representing the diminished value by reason of wear and tear during the year of any machinery or plant used for the purpose of the trade, and belonging to the person by whom it is carried on." The Inland Revenue have always held that this rule only applies to Case I, and that it is not applicable to Case II. This is a distinct hardship as between one taxpayer and another, since many professional men now use a considerable amount of machinery, such as motor cars, and x-ray and other costly electrical apparatus. Allowances for renewals and replacements do not meet the case. A man setting up in practice spends a considerable sum on the purchase of a car, on apparatus, and on fittings for his surgery. No allowance can be claimed at a time when he is building up a practice, and requires all the relief and assistance he can obtain. And if for any reason he retires from practice before renewals are necessary—for example, in five years—he obtains no relief whatever for the diminished value of a car by reason of wear and tear over the period. It is submitted that Case II should be treated in the same way as Case I, in this matter of depreciation.

(c) The depreciation of wasting assets. At present there is no provision in income tax law for granting to any taxpayer an allowance in respect of depreciation of wasting assets. This hardship particularly affects doctors who have to pay a heavy premium for their leases, as is the case in certain areas.

(d) The joint assessment of partnerships. Partners are practically compelled to obtain full particulars of the assessment of the partnership from the surveyor, and to ask him to allocate between the partners the net duty charged, according to their individual liability. At the present time, when there are varying rates of tax according to the individual's total income, and various reliefs on each partner's taxed income allowed against the assessment on the firm, each partner is practically compelled to disclose to the other partners full details of his private income, thus doing away more or less with the confidential nature of the return. It would be greatly to the convenience of the taxpayer if each partner were assessed separately.

(e) The deduction of a proportion, not exceeding two-thirds, of the rent of a dwelling house for purposes of business. Inequality arises from the fact that the amount allowed in each area is determined by local commissioners, between whom no common standard exists.

(f) Relief in respect of children. In view of the heavy cost of professional education and training,

considerable extension is needed both in the sum upon which relief is allowed and with regard to the income limit. A professional man who wishes to do justice to his children, and to bring them up in his own station in life is particularly hard hit. The trader has a business, with equipment and stock, etc., to leave for his children; the professional man must invest his savings in their education. A further but subsidiary point in this connexion is that the trader's own business capital yields a rate of interest which forms part of his business profits; the whole of these profits are treated as "earned" income, whereas the professional man's savings being invested *outside* his business are treated as unearned.

(4) The Council of the British Medical Association strongly supports the proposals of the Board of Education with regard to relief in respect of children.

(5) To sum up, the British Medical Association submits the following suggestions:

(i) That the filling up of return forms would be much simplified if the income were returned on the basis of the income received for the year preceding the year of assessment. The basis to be uniform, as far as possible, for all sources of income.

(ii) That one form only should serve for assessment under any schedule, for super-tax and also for repayment where the taxpayer is so entitled.

(iii) That depreciation of machinery—such as motor cars and electrical plant—should be allowed in Case II as in Case I.

(iv) That partners should have the right to be separately assessed.

(v) That there should be uniformity of treatment in the deduction of a proportion of the rent of a dwelling-house used for purposes of business.

(vi) That relief in respect of children should be allowed in the manner recommended by the Board of Education.

Dr. Haslip was examined by various members of the Commission. Asked whether the proposal (3) (a) applied to income or cash receipts, Dr. Haslip said that he preferred to apply it to receipts. Cash receipts were accepted by surveyors of taxes in some districts.

With regard to (3) (b) depreciation allowances, he said, in reply to questions, that allowances for renewals and replacements did not meet the case, taking into account all the elaborate apparatus and machinery now required in doctors' laboratories and surgeries. In the case of a motor car, he said that assuming the car to cost £600, and reckoning £100 a year for depreciation, the doctor received nothing annually for that depreciation, but at the end of six years, when he was taking another car, he was allowed so much for the renewal, less scrap value; the amount was distributed over three years, the average again coming in. One of the members of the Commission pointed out that if the doctor hired a car from someone else who had to stand loss by depreciation, hire would have been included in the professional expenses. The witness acquiesced.

Asked whether the doctor had an allowance for the running and the working of his car, Dr. Haslip said that the allowance was only for the petrol and the cost of working, not for the depreciation of the machine.

Asked whether his suggestion was that depreciation should be allowed on a car in exactly the same way as the machinery of an industry, Dr. Haslip replied in the affirmative.

It was pointed out that in Rule 6, dealing with the profits and gains of a trade, the Commissioners might make an allowance in respect of wear and tear, and the witness was asked if he intended to suggest that the rule, instead of saying "a trade," should say "a trade, profession, or business." The witness replied in the affirmative.

Asked as to the depreciation of wasting assets (3) (c), Dr. Haslip said he was aware that it raised a large economic question. He admitted that it was largely a question between the tenant buying the lease and the lessor. On the other hand, it might be possible for a doctor to practise in certain neighbourhoods without being over-housed. In comparison with other professional men the doctor's expenses were very heavy.

The Commissioners devoted a considerable amount of time to the question of joint assessment of partnerships (3) (d). Asked whether what was wanted was, that each partner should return separately, but that in respect of

that part of the return which affected the partnership profits the present practice should continue, Dr. Haslip replied in the affirmative. In reply to a further question, he said that partners could make separate returns before 1907; the change then made, one of the Commissioners stated, was due to the introduction of graduation. It was pointed out that the partnership paid, being the payer of the tax on the partnership profit. The difficulty was at what rate should the partnership pay? Apart from super-tax it could not pay more than 6s. Mr. Prettyman said that that point was important, but he did not see why a separate return should not be sent in, even with graduation: he illustrated the point as follows:

Take the case of two partners. Let us say one has an outside income and the other has not. The one who has no outside income is entitled to rebate, and the other is not, because his total income is above the rebate limit. They return separately. They have an equal share in the partnership, and they each return £300 as their equal share of a total partnership profit of £600. I do not see why those two returns should not be sent in separately. A. sends his return in £300 from the partnership. B. sends in his return of £1,000, £300 from the partnership and £700 from other sources; and they are assessed accordingly. If the Revenue Department wishes to test the accuracy of that return, all they have to do is to call for the books in respect of the two amounts of £300. When they have called for the books in respect of the two amounts of £300, and have verified that, it seems to me that that is all that is necessary. I do not see why the partner who has only £300 should necessarily have any knowledge of the remaining £700 which belongs to the other partner.

Dr. Haslip said that was his point.

In subsequent discussion it was pointed out that the Rule provided that where a trade or profession was carried on by two or more persons jointly, the tax in respect thereof should be computed jointly and in one sum—that was to say, that tax due from the partnership profit was to be paid. It might be that if the partnership desired to pay a smaller rate than 6s. on its profits, then the question would have to be gone into of what each partner was individually to be rated at in respect of his share. A partner individually entitled to a rebate got it, but it was necessary to ascertain the figure at which the partnership was liable to pay tax upon the partnership income. One partner would have to be responsible for the partnership return of the total partnership profits, and Dr. Haslip said that there would be no objection to accepting this responsibility.

With regard to (3) (c) the witness was asked whether he thought the reduction of a proportion of the rent of a dwelling house used for purposes of business should be a fixed proportion. He said that what was desired was uniformity. The decision should not necessarily be left to the local surveyor. He thought it would be satisfactory if the ex-allowance was left to be determined by the Inland Revenue within a prescribed limit.

With regard to (3) (f) the witness said that if a doctor saved, say £500 and invested it, he was taxed on the yield as unearned income, whereas a business man who put the amount in his business, where it probably earned a larger percentage, would only be taxed at the earned income rate. He did not see how that could be prevented, but the doctor might be helped. To enable a doctor to give his sons a same education as he himself had had, he required the help such as the Board of Education had proposed. The suggestion did not apply to professional men only.

THE proceedings at the National Conference on Infant Welfare, held in London in July last, have been published in a volume by the National League for Health, Maternity, and Child Welfare (4, Tavistock Square, London, W.C.1), price 1s. 6d.

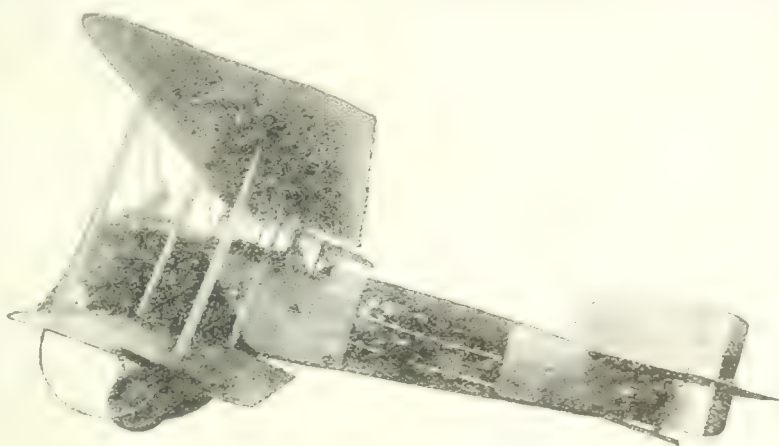
MILITARY MEDICAL AEROPLANES.

FRENCH AEROCHIRS.

M. TUFFIER, whose advice on all surgical subjects has been so highly appreciated by the French War Office throughout the war, related to the Académie de Médecine a short time ago his experiences of a professional visit to see a wounded French general in southern Morocco. He took the occasion to discuss the value of aeroplanes in military surgery, and has been good enough to furnish us with photographs showing the way in which the arrangements for the transport of wounded have been improvised.

The patient M. Tuffier went to see had been brought by aeroplane to Bu-Denib, a point to the south of the Atlas Range in Morocco, where the French have a large military station, with hospitals and an aviation camp. He was a general officer who, on January 15th, received a shell wound in the chest, in the fourth costal space, three centimetres from the left edge of the sternum. He was carried on a stretcher twenty-five kilometres to Kasr-es-Souk, where there was a post. Next day he had fever, difficulty of respiration, and was cyanosed. The regimental surgeon, who had returned so far with him, diagnosed pleural effusion, and telephoned for surgical

assistance; a French army surgeon flew, with one stop, 310 kilometres to Kasr-es-Souk in two hours thirty-five minutes. The aeroplane had to pass over the middle Atlas at an elevation of 4,000 metres, and also over regions occupied by dissidents. On his arrival he met another army surgeon who had flown from Bu-Denib (85 kilometres) in an hour. Next day the patient was worse. As there were no facilities at



Bréguet aeroplane for transport of wounded. 1919 Type. The side panel is open, showing two wounded on stretchers, one above the other.

Kasr-es-Souk for surgical treatment it was decided to take him to Bu-Denib by aeroplane. A Farman was sent for. The great difficulty was to get the stretcher into the aeroplane. An inclined plane was made with sacks of barley, and the patient was lifted on to a mattress in the observer's seat. As he had to travel half sitting he suffered from cold on the way, but his condition next morning was no worse. Radiography showed that the projectile, about the size of a kidney bean, lay some distance behind the heart but moved with it. M. Tuffier, who had been sent for on January 15th, arrived at Bu-Denib on January 25th, travelling by land; he found the patient in a very serious condition, with marked cyanosis, high temperature, congestion of both lungs, and a pleural effusion which had been ascertained to be sero sanguineous. A second puncture of the chest withdrew 750 grams of pure blood. The patient immediately began to improve and was soon out of danger, but it was not considered advisable to attempt to extract the foreign body.

The French army in its operations in the south of Algeria and Morocco, and in the Sahara Desert, has owing to the conditions of the country and the nature of the military operations, been led to make considerable use of aeroplanes for the transport of wounded. They have served well, not only by greatly shortening the time taken in transport from the front to a hospital, but have also made it possible to transport the wounded from outposts over intermediate tracts of country occupied by dissident tribes. Altogether a large number of soldiers wounded in these remote regions have been transported by aeroplane from advanced posts to hospital. In September, 1918, during early operations in the region, fifteen out of sixty wounded were carried by ordinary aeroplanes 110 kilometres in seventy minutes. Early this year a special type of aeroplane, designed by Dr. Chassaing, a member of the

French Parliament, who has taken a great interest in the subject, was stationed at Bu-Denib. M. Tuffier watched one journey it made while he was there. The aeroplane started at 7 a.m., flew sixty-five kilometres, over country occupied by dissidents, to an advanced post, shipped two wounded men (one with a fracture of the femur, and the other with a serious fracture of the arm), and was back again at Bu-Denib at 11 a.m. The aeroplane was of special construction, but was not found very satisfactory, owing chiefly to the difficulty of lifting the wounded men into and out of the fuselage.

At Wargla, in the wild country to the south of Algiers, aeroplanes belonging to a bombing squadron have been used, sometimes to carry surgeons to the place where the wounded man lay, sometimes to transport the man to hospital. A regular route, with five landing places, has been mapped out further into the desert for 597 kilometres. Pilots carrying wounded have covered as much as 800 kilometres in seven hours, making two halts. Communications by land are often cut, but when the road, which is very rough, is open, a motor-car takes seven days, camels or mules twenty-six days. Wounded have also been brought from posts in the Sahara south of Tunis to a hospital 90 kilometres away by ordinary aeroplanes of the Farman type. The various scattered posts, often surrounded by dissident tribes, are kept in communication with head quarters by wireless telegraphy. M. Tuffier heard of no mischance in any case, but owing to the conditions of temperature near the ground flying by day is very difficult, and it is usually necessary to climb 1,500 to 2,000 metres. But this difficulty, it is said, may be avoided by flying in the early morning. The great enemy of the flying man is the sirocco, which may blow with great violence for three, four, and even six days. The clouds of sand it raises not only penetrate to every part of the machinery, but are so dense, so high, and so widespread that the pilots would not be able to find their landing places. During a sirocco, therefore, aerochairs are out of commission.

The French are giving careful study to the designing of aerochairs to afford a convenient method of transporting the wounded, but whatever success is attained, it must often happen in frontier operations such as those in Africa that an aeroplane of the special type will not be available, and improvisation will become necessary. MM. Nemirovsky and Tilmant have devised a flying ambulance to carry, in addition to the pilot, a surgeon and an x-ray operator, together with surgical instruments, sterilizing apparatus, dressings, and x-ray equipment. The total weight carried is, it is stated, about 700 kilos (about 1,500 lb.). The Canadian Army Medical Corps made some experiments in designing an aeroplane for transport of wounded, but a description is not available. A great deal of progress has been made in increasing the carrying power of aeroplanes. The new Handley Page commercial aeroplane, it is said, can carry fifteen to twenty passengers in a saloon 22 ft. long, 4 ft. 6 in. wide, and 6 ft. high.

MOTOR NOTES FOR MEDICAL MEN.

By H. MASSAC BUIST.

THE FUEL PROBLEM.

WHILE the Government inquiry into the alleged profiteering in motor fuel is welcome, the medical man, who stands in sore need of reducing his fuel bill, will be well advised not to take too optimistic a view concerning the practical outcome of the investigation. Undoubtedly there is profiteering afoot; but it is so favoured by a combination of circumstances that it is almost a case of choosing to put up with it or go without the fuel. In the first place, we are at present largely dependent for supplies on the New World, where there is a demand, under equally gainful conditions, for every gallon of fuel shipped to this country. Consequently, if we will not pay the price asked, there is a great

likelihood of our being left without it. The Exchange is strongly against us, and shipping rates are abnormally high, and these two conditions combine to aggravate the situation; while the cost of producing benzol at home under present and immediately prospective conditions will, in any case, prevent the price of the old-established rival form of fuel falling as low as it might, probably for several years. In brief, petrol has not a very close competitor in benzol, though the motoring public is quite satisfied as to the practicability of benzol, a point that has been further demonstrated by the 10,000 miles test undertaken by the standard four cylinder 80 by 150 mm. bore and stroke Sunbeam car.

The bright spot on the horizon is provided by the very rapid rate at which oil working is being developed in British possessions and spheres of influence; but here, too, we have to remember that all new machinery and tankers and transport costs are on a post-war basis. Nevertheless, this is the direction from which relief will come presently. As to supplies from the New World, the only unknown quantity is whether the Americans care to make some concessions in the present to preserve the very valuable goodwill they have established in this country.

THE AUTOMOBILE ASSOCIATION'S BENZOL TEST.

The Automobile Association's test of benzol was over a distance of 10,000 miles with spirit supplied to the National Benzol Association's standard specification by the Gas Light and Coke Company, the Staveley Coal and Iron Company, Messrs. William Butler and Company, the Staffordshire Chemical Company, and Messrs. Bolckow, Vaughan, and Company. In other words, it is presumably of the quality supplied to any motorist who purchases the spirit manufactured by members of the National Benzol Association. The usual systems of observation, including sealed connexions and so forth, were employed. Lodge sparking plugs were used, No. 1 becoming sooted up at 4,152 miles, when it was cleaned and replaced. Otherwise none of the other plugs were cleaned in the course of 10,000 miles, so that this showing is very satisfactory for this class

of engine. Vacuum A lubricating oil was used with complete satisfaction. The consumption of it working out at 1739.13 miles per gallon, which is very economical. From 20 to 25 per cent. of the roads traversed were either in good or fair condition, the rest being either in poor or bad condition. The average mean weight of the car was 1.8 tons, and the average benzol consumption 24.57 miles per gallon, which is an average of 44.22 ton-miles a gallon. Over one stage of 129.9 miles the consumption worked out as high as 18.56 miles per gallon of benzol, or 33.6 ton-miles to the gallon while the most economical fuel consumption was obtained over a 145½ mile stage at 27.71 miles per gallon, otherwise 0.80 ton-miles a gallon. The average estimated speed of the car was 23.46 miles an hour, so that it was running somewhere near its lowest economical speed. Samples of the fuel used were taken and analysed during the test. At approximately the half stage, when the car had run 1,69 miles on benzol, the inlet and exhaust valves and their stems, as well as the valve caps and sparking plugs, were examined; and this was done again at the end of the test, which is the first official one by a recognized motoring organization of commercial benzol. Here the Automobile Association has published a very lengthy and detailed report, which can be had on application to its Fuel Department at the head quarters, Annam House, Whitcomb Street, London, post free for 3s.6d. As a result of this test the public need no longer hesitate to buy benzol according to the National Benzol Association's specification.

RECIPROCITY in medical practice has been established between Japan and Mexico.

THE University of Cincinnati has established a department of industrial medicine and public health.



Bréguet aeroplane for transport of wounded, 1919 type. Panel closed. The patient in the upper berth has raised his head but the capot will be closed before the aeroplane starts.

British Medical Journal.

SATURDAY, DECEMBER 13TH, 1913.

THE LONDON MEDICAL STUDENT.

MEDICAL education in London has entered on a new phase, and since London is still the principal medical school in England what happens there affects a large section of the profession. It therefore seems worth while to review the present situation, without, however, entering into many details, for we will not pretend even briefly to record the history of the agitation for the reform of the University of London which has been on foot for a full half-century.

The present situation is the direct outcome of the recommendations of the Royal Commission on University Education in London, which reported in April, 1913, after sitting for over three years. It was appointed to inquire into the present working and organization of the University of London, and into other facilities for advanced education—general, professional, and technical—which existed in London. Its recommendations throughout presupposed the reorganization of the University of London and were not concerned with proposals for the establishment of another university. More than twenty years earlier another Royal Commission had been appointed, under the chairmanship of the first Lord Selborne, to inquire whether any and what kind of new university or powers should be provided for the advancement of higher education in London. Its appointment was, to quote the words of its successor, "the culmination of a long agitation which arose from several different motives and was supported by different bodies and persons." There was, in the first

place, the dissatisfaction felt by the medical teachers in London at the very small number of university degrees obtained by their pupils in proportion to the large number of students and the opportunities for clinical teaching. This dissatisfaction was the reflex of the discontent of the diplomates of the London Colleges, whose grievances were set out in a cogent report drawn up by the Metropolitan Counties Branch and endorsed by the British Medical Association. One outcome of the action then taken by the London medical teachers was the presentation by the Royal College of Physicians and Surgeons of a petition for a charter empowering them to confer degrees.

On the other hand, the representations of an association promoting a teaching university in London had led to the presentation by University and King's Colleges a petition for the grant of a charter for the establishment of a university, with faculties of arts, science, medicine, and laws, in which examination should be associated with teaching, under the direction of the same authority, and the teachers should have a consultative voice in the government. The Selborne Commission rejected both schemes, but reported the case for a teaching university was made out, and that there should be one university for London, and not two. Three members of the Commission, and not the least influential—Sir William Dawson (afterwards Lord Kelvin), Professor (afterwards Sir) Gabriel Stokes, and Dr. Welldon—set on a minority note their preference for the establishment of a new teaching university for London, and the University of London

untouched. The next chapter in the story was the adoption by the Senate of the university of a scheme of reform which was rejected by Convocation. The proposal of the colleges for what had come to be called "the Gresham Charter" was then revived, and referred in 1861 to what was commonly known as the "Gresham Commission." This Commission found once more in favour of one university in and for London; it advised that a more distinct and important position should be given to teachers in the university organization, and attempted to conciliate the non-collegiate or "external" graduates by recommending that a special board for external students should be appointed by the Senate, with the general instruction to maintain a uniform standard of examination for internal and external students. An Act was passed in 1868 to give effect to the recommendation of the Gresham Commission. The scheme was tried, and failed, as everyone admitted. Thereupon the new Royal Commission, which reported in 1913, was appointed, and made recommendations which, in principle, have been the foundation of recent action by the Board of Education and the medical schools.

The general conclusion of this last Royal Commission with reference to medicine was that the university ought to provide teaching in clinical subjects of university standard. To this end it recommended the organization of several university hospital units, each consisting of "a professor with the control of wards, an out-patient department; assistants nominated by the professor with a view to complementing his own knowledge and affording him the special assistance he requires to carry on research in the direction in which he is interested; and, finally, laboratory accommodation in close proximity to the wards, not only for the service of the wards and the examinations and procedures connected with the diagnosis and treatment of the cases, but also for the purposes of research." This principle has now been accepted, with certain modifications of detail. Thus a hospital teaching unit is now defined as consisting of three "elements"—medicine, surgery, and diseases of women and children—each element possessing a staff and equipment on the scale recommended for a university hospital unit by the Commission. With the assistance of the Board of Education hospital clinical units of the new type are being established in London; no doubt many of the provincial universities will do the same, but we are not now concerned with these. In London, at St. Bartholomew's, the elements in medicine and surgery are established, and steps, we understand, are being taken to organize the third element. A move in the same direction has been made at St. Thomas's, and we believe an announcement may shortly be expected showing that a complete unit has been established at University College Hospital. The London Hospital is understood to be moving in the same direction.

Two things of first-rate importance to medical education in London arise out of the recommendations of the Royal Commission and the action taken thereon. The first is that for the medical student in London there will be provided educational opportunities up to university standard, to be obtained through the organization, probably eventually of not less than four, possibly five, university units, which will set the pace for all the teaching in the schools of which they will form the central nucleus. London therefore seems to be following more or less closely the model of Paris, where the Faculty of Medicine has more than twenty professors, each in charge of a hospital element, which is equipped as it is intended the element of a hospital unit should be equipped in

London and other teaching centres in this country. All the physicians, surgeons, and specialists at the hospitals in Paris are roped in to help in giving practical instruction to students, and the same plan will doubtless be followed here. The second thing that emerges is that the student, having received instruction and training up to university standard, becomes entitled to a university degree.

The two things hang together. Given the condition precedent, the condition subsequent follows as a common right. It has been argued that it is the establishment of a university standard of education that matters, and that a degree is only a hall-mark which does not alter the fineness of the metal. This argument would have been good in Bologna in the eleventh century, where teaching preceded organization of a university, as we understand it to-day, and where in fact the students combined in a "universitas"—what we would now call an "association"—to obtain teaching and to remunerate their teachers. But it will not do to-day when the whole civilized world is covered by universities, and when the evidence of having passed through a university training is known to all men in the degree. It is true that the public indifferently call all practitioners of medicine "doctor," but there are those who, as has been well said, dislike to assume a courtesy title which discourtesy may refuse. The Royal Commissioners of 1913 admitted the grievance of London medical students, but rather shirked an attempt to remedy it. They considered that the proper course for them was to consider what in the medical faculty, as in others, was essential to a real university education and to draft recommendations which would result in adequate provision being made in London to make this education open to all able to profit by it. "The degree," they said, "will follow in the ordinary course and the grievance should naturally disappear." With the institution of hospital clinical units on a university model and giving instruction of university standard, which we may hope to see achieved in London within the next few months, the first condition is fulfilled. But the second must be fulfilled also; the demand will be so well grounded that it cannot in justice be refused.

The hope has long been cherished that the University of London might be so reformed that it would be to London medical students an Alma Mater, and not a stepmother. The failure of half a century of agitation and Royal Commissions and an Act of Parliament to reconcile the needs of higher education in London with the demands of external graduates—and we gather from a recent statement put out by the University of London Graduates' Association that the external graduates are as obdurate as ever—may be taken to have proved that this hope must be abandoned. If now we turn to the other alternative it will be seen that, with four or five hospital units, each having its professors—for they would in fact be professors, though without a university—and their assistant professors, there would be the material for a faculty of medicine in a teaching university. There is substance in the objection to a one-faculty university. Though it is true that in a university of many faculties one faculty often finds the others very tiresome, yet the necessity to convince them tends to encourage a broader outlook. All through the long controversy about the University of London the one clear principle has been that in it teachers should have a predominant influence, and we may ask whether there are not in London ample materials for the constitution of other faculties? As Sir Alfred Keogh pointed out in the address he wrote for the Special Clinical and Scientific Meeting of the

British Medical Association in London last April, there has been produced at the Imperial College of Science and Technology, South Kensington, what is virtually a science and technical university. He claimed that it was in fact a three-faculty university, and he asked whether there was not in the history of the Kensington movement an example which might well be followed by the London medical schools. It may, we think, now be said that the medical schools are moving in the direction indicated. Already there has been concentration—if a word which has aroused so much heated controversy may be used—in preliminary subjects. When the hospital clinical units are in working order there will be in fact if not in name a medical faculty; and that faculty can hardly long rest satisfied with a condition of things under which its pupils, who will have received education of university standard, shall in the majority be denied a university degree. The relation between the University of London and the medical schools is a sham, and the Imperial College has refused to participate in the sham, but it might be induced to look favourably on the proposal to join with the reformed medical schools and (it might be hoped) with some existing faculties of arts, in a teaching university for London.

EARLY MEDICAL MANUSCRIPTS.

THE study of the history of medicine is not only of archaeological interest, but provides some lessons for to-day. It has been much neglected in this country, but there are now evidences of awakening interest. The Section of Medical History of the Royal Society of Medicine, recently founded, does much excellent work, which is published in the *Proceedings of the society*; and the FitzPatrick lectures of the Royal College of Physicians have, during the last sixteen years, led to the presentation every year of a study of some particular period. The Alembic Club Reprints (Edinburgh), of which seventeen numbers have now appeared, contain much medical matter. From the United States we have the *Annals of Medical History*, which is published regularly, and the proceedings of the Charaka Club, which appear occasionally. In France the medical history society has resumed its meetings and will begin to issue its *Bulletin*. From Holland we have *Janus*, a very well edited periodical, but somewhat limited in size. Germany has, or had, one regular publication limited to the history of medicine (*Archiv für Geschichte der Medizin*), various occasional publications, and several periodicals dealing with the history of science. Denmark has one periodical devoted to medical history; Portugal also has one concerned with the history of medicine in that country. Great Britain there is, so far as we are aware, no professorial chair of the history of medicine, although there is a lectureship in the subject at Edinburgh. In Paris M. Letulle is professor of the subject, and there is also a chair of the history of science. Germany there are four professorships—Leipzig, Halle, Freiburg, and Berlin. In Italy there are six or seven. Austria one (Vienna). There are professorships in Denmark, Norway, Switzerland, Portugal, and Canada. In the United States many universities have a lectureship or professorship, and there are the professorships of the first rank—Washington, New York, and Boston. But though this country does rather a poor show, there is growing up, more appropriately at Oxford, a school of medical history under the inspiration of Sir William Osler through the

encyclopaedic researches of Dr. Singer, who has entered upon a study of the subject in the true scientific spirit; in addition to his original researches, he has undertaken to edit a series of classics of medicine in English, and has, moreover, actually in preparation a series of classics of science. That he should be engaged in both tasks illustrates the fact that the early history of medicine is so intermingled with the history of science in general that the investigator necessarily finds himself involved in both.

An illustration of the serious manner in which the researches are being prosecuted is afforded by the Catalogue of Early Scientific Manuscripts in the British Isles on which Dr. and Mrs. Charles Singer have been engaged for some years. It is designed to furnish material for the study of the retrogression and resurrection of science during the thousand years that elapsed between the Greeks and the Renaissance. It was indeed an inglorious period for science, but, as Mrs. Singer suggests, we may learn from evil as from good. The spectacle of the gradual crumbling of the fine structure of Greek science should cause the student of to-day to reflect on the risks the future may have in store, and stimulate us to ask whether our own science is absolutely safe and how we may most surely avoid the pitfalls of our predecessors.

But another aspect of the study of mediaeval writings on science is that they contain the germs of the great developments which have taken place during later centuries. The vast majority of the mediaeval science manuscripts scattered in libraries, large and small, have never been examined, much less printed. Dr. Singer has taken in hand those concerned with anatomy, and is so far advanced in the work that he finds something like a continuous story emerging. Mrs. Singer is engaged in a similar examination of the plague tractates, and Miss Joan Evans is at work on the lapidaries. The various headings of the catalogue make a long list. They have been chosen after experience as best facilitating the classification of the 40,000 entries that have to be handled. It is hoped that ultimately all the important manuscripts in the catalogue will be examined, either directly or by means of the rotograph, which provides fixed negative photographs, facsimile in all but colour, of the original manuscript. They can be examined at leisure, and similar work laid side by side for comparison, a method indispensable to sound scientific inquiry. Mrs. Singer asks for volunteers in the task of reading the manuscripts, either a whole section or a small group, or a single document. She makes the statement, which will be encouraging to such volunteers, that works written before the fifteenth century are usually remarkably clear and legible. Expert palaeographers, she says, support her in assuring the student that a month's work will probably give the mastery of any single style of handwriting (except the worst), while a week's work will seldom fail to put the reader at ease with the work of any one scribe. Excellent dictionaries are published of the abbreviations in common use in mediaeval writings, and Mrs. Singer has herself prepared a small handbook of the most usual abbreviations in medical manuscripts, which she is ready to lend to serious volunteers.

of the Association, 429, Strand, London, W.C.2. The volume contains the address, entitled "The New Birth of Medicine," which the President of the Association, Sir Clifford Allbutt, wrote, and also the text of Sir Cuthbert Wallace's lecture on the rise of the casualty clearing station, in which he gave an account of the way in which this medical military unit developed from relatively small beginnings in August, 1914, to the very complete organization which was in existence in 1918, and made some suggestions for the future. The discussions in the three Sections—Medicine, Surgery, and Preventive Medicine and Pathology—are fully reported in the volume, and it contains also accounts of the numerous demonstrations. In an appendix Colonel Crawford, I.M.S. (ret.), has related the growth of the personnel of the naval and army medical services during the war. This is followed by a list of those who gave their lives. Finally, through the help of Sir Anthony Bowlby, lists are given of medical staffs at head quarters in France, Italy, Salonica, Malta, Mesopotamia, and East Africa, and of the head quarter staffs of the Canadian, the Australian, the New Zealand, and the South African Army Medical Corps. The price of the volume to non-members is 3s.

MEDICAL INSURANCE AGENCY.

At a meeting of the Committee of Management of the Medical Insurance Agency, held on November 26th, the chairman, Dr. G. E. Haslip, presented a report for the nine months ending September 30th, 1919. He recalled how, owing to various circumstances, the earnings of the Agency in 1918 had decreased by some £135, and said that the leeway had been more than made up this year, for in the nine months with which he was dealing some £600 more had been earned than in the corresponding period of 1918. There was evidence that the efforts of the Agency to give unbiassed advice in the matter of life assurance and the selection of an office suitable to the particular needs of the assured were appreciated; during the nine months 44 life policies were completed, as compared with 15 in 1918 and 20 in 1917. Motor car business showed good progress; the policies recommended by the Agency had been found satisfactory, and the Agency was now in a position to state that all claims had been paid not only promptly but on a generous basis. Medical men did not escape when the thefts of motor cars were common some months ago, and several cases of total loss were made good through the Agency. Establishment charges had increased, for the Agency now engaged its own staff; but the total income showed a very considerable increase, as did the net surplus. After referring to rebates made to persons insured through the Agency, the chairman concluded by saying that it would be possible at once to distribute a further sum of £660 out of the surplus funds to medical charities. The committee accepted this recommendation, and allotted the amounts as follows: Royal Medical Benevolent Fund, £200; Royal Medical Benevolent Fund (Guild), £200; Epsom College Benevolent Fund, £210; Royal Medical Benevolent Society of Ireland, £25; Birmingham Medical Benevolent Society, £25. This allotment raises the amount distributed to medical charities during the year to £1,015. The total amount allocated to medical charities by the Agency since its establishment has now reached £5,420. This striking fact is worth bearing in mind, for we understand that at present the Agency has on its books less than 3,000 names; if a larger number of members of the profession resorted to the Agency—which offers not only good terms but good advice in the selection of an insurance office and the adjustment of the terms of a policy—the sums available for medical charities would be correspondingly increased. Anyone who reads the reports we publish from time to time of the cases assisted by the Royal Medical Benevolent Fund, and its auxiliary, the Guild, will know how dire the necessity is. The full details which come before the Distribution Committee of

THE PROCEEDINGS OF THE ASSOCIATION'S APRIL MEETING.

THE volume containing the *Proceedings* of the Special Clinical and Scientific Meeting of the British Medical Association in London last April was published a short time ago, and copies will be supplied to all members of the Association free on application to the Financial Secretary

the Fund are, we are told and can well believe, of the most harrowing kind. Full particulars can be obtained on application to the Medical Insurance Agency, 429, Strand, London, W.C.2.

RENAL DISEASE AND HIGH PROTEIN DIETS.

As the cause of chronic nephritis is so often doubtful, Newburgh¹ carried out several series of experiments on rabbits to determine if the elimination of abnormally large quantities of nitrogenous material by the kidney will cause nephritis. As the results were positive they are of considerable interest and open the way to further investigation. The degree of injury produced by nephrotoxic substances largely depends on their degree of concentration in the blood; thus medicinal doses of mercury are usually harmless, though poisoning by the ingestion of the perchloride in large amounts may produce fatal acute nephritis. Logically the same principle might be applied to nitrogenous substances, the kidneys being able to secrete a certain amount for an indefinite period without injury, but becoming damaged if the quantity of some or of all the nitrogenous bodies secreted be increased and kept at this higher level for some time. In the first instance, rabbits were fed on nothing but the whites of two hard-boiled eggs daily for a week; albuminuria with casts rapidly followed and microscopically the kidneys showed cloudy swelling, casts, and engorgement. By an ingenious method it was proved that the albumin was not directly derived from the diet; intraperitoneal injection of the albuminous urine rendered guinea-pigs hypersensitive to intraperitoneal injection of rabbit's blood serum, but not to that of 2 c.cm. of a 1 in 100 solution of Kaulbaum's white of egg. A further series of experiments showed that when rabbits absorb the digestion products of white of egg in sufficient quantity for a considerable time well marked acute or subacute nephritis may result. In order to decide whether these changes were due to an excessive amount of nitrogenous bodies normally present in the blood in small amounts or whether they were caused by some nephrotoxin peculiar to eggs, rabbits were fed on casein. No renal lesion resulted from the ingestion of 15 grams of casein daily, the nitrogen metabolism being about double the normal; but when 30 grams were taken daily and the nitrogen metabolism was trebled, well marked parenchymatous and other changes were seen in the kidneys of three out of four rabbits, and the thoracic aorta showed endarteritis with fatty degeneration, liquefactive necrosis and cholesterol. Fifteen rabbits fed on an exclusive diet of soy bean, containing 37.8 per cent. of protein, for four and a half to twelve months regularly showed, and often died from, subacute or chronic nephritis due to changes in the convoluted tubes and overgrowth of connective tissue; the lesion was not a primary glomerulonephritis or the result of arterio-sclerosis. The protein metabolism was double the normal, whereas with casein and white of egg the protein metabolism must be trebled to produce nephritis. Soy bean nephritis interferes greatly with renal function, and causes an early and persistent retention of urea in the blood. The renal changes produced by high protein feeding are not due to the passage of an excess of urea through the kidneys, and at present there are not any data to decide whether or not the amino-acids are the responsible factor.

DR. LYMAN SPALDING.

Our issue of July 26th, 1919 (p. 113) contained a short annotation inspired by Dr. H. M. Hurd's historical article on Dr. Lyman Spalding (1775-1821), who originated the first national pharmacopoeia of the United States, and had much to do with the introduction of Jennerian vaccination into that continent. Since then Dr. J. A. Spalding of Portland, Maine, has sent us his life of Dr. Lyman

Spalding,² his grandfather, published in 1916; this is based on a large number of letters from contemporary leaders of medicine in America, and thus gives a graphic description of the conditions of medical practice and thought more than a hundred years ago. The narrative is made specially valuable by numerous biographies of the medical men mentioned; they are for the most part in the form of footnotes, and are laconic—a character apparently inherited—always interesting, and not infrequently with a humorous touch. This pious work is dedicated to the writer's father, "who would have been pleased to know as much about his illustrious Father as Time has at last enabled me to discover." The amount of labour thus involved must have been enormous, but the book does not smell of the lamp, probably because it has been a labour of love, spread over ten years of active practice with its inevitable distractions. Learning also appears to have been inherited, as the grandfather was on this account nicknamed Sangrado. Into his comparatively short life of 46 years the subject of this biography crowded work of the most varied kinds: he played an important part in founding the Dartmouth Medical School, where he lectured on chemistry; he was president and professor of anatomy and surgery in the College of Physicians and Surgeons of the Western District, at Fairfield, New York; he was the first to publish Bills of Mortality (1800-1813) in Portsmouth, New Hampshire, and thus became well known in America; in the last four years of his life he brought out successfully the first national pharmacopoeia of the United States. This he started by reading a paper giving a practical basis for its foundation, and, although a committee was appointed to carry out his ideas, he eventually did nearly all the work. The publication in 1820 of the Pharmacopoeia, which was a book of 274 pages neatly printed on rather porous paper, about 10 by 6 inches in size, with a brief historical introduction, was the culminating point in Dr. Spalding's career, for about this time, while walking in the streets of New York, he was hit on the head by a box of rubbish falling from a second floor window. From this accident he never really recovered, and he died on October 21st, 1821. This biography is in some respects unusual, but it is perhaps on this account the more interesting.

NEUROLOGY IN THE WAR.

PROFESSOR HARVEY CUSHING was recently invited to give an address to the Massachusetts Medical Society on "what neurological surgery has gained from the war." He gave the address, which has now been published,³ but expressed the opinion that we are still too near to the time of fighting to be able to answer the question satisfactorily. Cushing believes that the lay idea that the war has been a harvest of experience for the young surgeon is more false than true. Apart from an extensive experience of sepsis and fractures and a gain in personal confidence he has profited not much. The war-time hospital has not been an ideal training ground; pressure of work has excused much faulty and slapdash technique, the cases have only too often been operated upon and never seen again, and the diseased and infirm call for far more judgement in treatment and more delicate handling than did the soldier who was strong and healthy when "bowled over." Cushing remarks that whilst many, both surgeons and physicians, are capable of gaining experience in a given subject, few are capable of contributing to it. The conjugation of ability and opportunity, rare enough in ordinary times, is still rarer in war. He makes some graceful references to the work carried out in the British army and the efforts at specialization which were made. He expressed regret that the British, in view of their unquestioned leadership in neurology, did not set aside early in the war some special hospital or hospitals where the bulk of the organic neurological cases

² Dr. Lyman Spalding. By his Grandson, Dr. James Alfred Spalding. Boston: W. M. Leonard, 1916, pp. 330.

³ Boston Medical and Surgical Journal, November 6th, 1919.

¹ L. H. Newburgh, *Arch. Intern. Med.*, Chicago, 1919, xxiv, 359-371.

could be congregated and worked over on a large scale by the concentrated efforts of their abler men. As a matter of fact, some such efforts in concentration and specialization were made, amongst others, at No. 21 Casualty Clearing Station and at the 7th and 14th General Hospitals in France, but the efforts at segregation in England were inadequate. Nevertheless, some very valuable contributions to neurology by Englishmen have already come out of the war, and there is plenty of evidence that more are to follow.

THE ANAL PECTEN BAND.

In whatever situation they are found, varicose veins lead to congestion of the surrounding tissues, and as a consequence of this congestion fibrous induration ultimately develops. Such induration following passive congestion is well exemplified in the neighbourhood of a varicose ulcer of the leg. Much the same thing occurs as a result of internal piles. A condition of mild chronic inflammation contributes to the production of the fibrosis in both cases. The branches of the superior haemorrhoidal veins arise in a minute capillary plexus situated in the submucous tissue of the pecten, and when these vessels are varicose this plexus becomes the seat of passive congestion, with the result that a deposit of fibrous tissue occurs in the surrounding tissue. This deposit takes the form of a circular band, varying in thickness and density, completely surrounding the lower part of the anal canal, and situated between the mucous membrane of the pecten and the external sphincter muscle. In well-marked instances the band of fibrous tissue can be distinctly felt, and gives an impression to the examining finger such as would be obtained if a rubber ring had been inserted beneath the skin at the anal margin. This deposit of fibrous tissue has been called "the pecten band" by W. Ernest Miles (*Surg., Gyn., and Obstet.*, November, 1919). It does not exist in the healthy anal canal. It is due to passive congestion brought about either by the varicosity of the superior haemorrhoidal veins, or by an impediment to the venous return resulting from habitual pressure in the chronically constipated. It limits the expansibility of the anal orifice. In nearly all cases of internal piles two characteristic symptoms, due to the presence of the pecten band, manifest themselves. One of these is difficulty in completely emptying the rectum during defaecation, and the other is diminished calibre of the faeces voided. Both these symptoms disappear when the band has been divided. The limiting effect of the pecten band upon the degree of relaxability of the external sphincter muscle is responsible for the straining at stool during the passage of formed motions and also for strangulation of piles when a large mass has become prolapsed through the anal orifice. Such a strangulation is usually said to be due to spasmodic contraction of the internal sphincter muscle under the stimulus of painful protrusion, but as no muscle is capable of keeping up tonic contraction for an indefinite period without relaxation, such an explanation is unsatisfactory. Miles's idea of the pecten band supplies a more probable explanation. It is this band which some operators rupture in their operations on piles when they "forcibly dilate the sphincter." Presumably better results would be obtained if the band were cleanly divided with the scalpel.

PROGRESSIVE LENTICULAR DEGENERATION OR WILSON'S DISEASE.

There is a considerable feeling in this country against applying the describer's name to a disease or syndrome, however desirable it may be to pay due honour. It may be remembered that the name Addison's disease was given by Trousseau, and that the term Barlow's disease (infantile scurvy) was made in Germany. Although cases had been previously described by Homén, Ormerod, Gowers, and Anton, the fullest account and the name "progressive

lenticular degeneration" were given in 1912 by Dr. S. A. K. Wilson to the association of special nervous symptoms with a hobnailed cirrhotic liver and bilateral degeneration of the lenticular nucleus. The application of the title "Wilson's disease" to this condition is a possible source of future confusion, as there has been another Wilson's disease—exfoliative dermatitis, called after the late Erasmus Wilson. There are, it may be noted in passing, more than one Paget's disease (of the nipple, and of bones), and the term von Recklinghausen's disease refers to at least two different conditions (multiple neurofibromatosis and osteitis fibrosa osteoplastica). Campbell Howard and Royce¹ now describe a fresh case of progressive lenticular degeneration with cirrhosis of the liver presenting some special features of interest, and point out that since 1912, when Wilson collected eleven cases, there have been twenty-six fresh examples, of which thirteen have been reported by American neurologists. This patient was a male, aged 22 years, and clinically was thought to be suffering from pluriglandular insufficiency. The disease ran a shorter course than hitherto recorded; redness and oedema of the hands and the phenomenon of perseveration, by which is meant the tendency to grasp various objects spasmodically, were noted, but except in Mills's report these manifestations have not previously been recorded. There was bilateral symmetrical cavitation with atrophy of the lenticular nucleus, involving, though to a less extent, the internal capsule and optic thalamus. Wilson inclined to emphasize the limitation of the change to the putamen and globus pallidus of the lenticular nucleus and to the caudate nucleus, but later reports, like the present, have described involvement of the internal capsule and optic thalamus. The resemblance to the pseudosclerosis described by Westphal and Strümpell is pointed out, and attention drawn to the group of cases of pseudosclerosis with hepatic cirrhosis, annular yellow pigmentation of the cornea, and nervous lesions. In his recent review of the extrapyramidal symptom complex Dr. F. M. R. Walsh covers this ground more fully, and states that Wilson's work on progressive lenticular degeneration has brought out the physiological significance of the group of diseases including (a) juvenile familial forms, pseudosclerosis, progressive lenticular degeneration and juvenile paroxysmal agitations, and (b) non-familial forms occurring in later life, paralysis agitans, and Förster's arteriosclerotic muscular rigidity.

THYROID INACTIVITY IN GIRLS.

Those who are interested in tracing the beginnings of disease will find a subject for observation and meditation in the signs of hypothyroidism or incipient myxoedema which, it is said, are often to be found, if looked for, in girls at or about the period of puberty. It is suggested that variations in the quantity, and possibly in the exact nature, of the thyroid secretion may explain much that seems purely erratic in feminine behaviour, behaviour that led the mediaeval philosopher to remark that "la gente nymphe est fantasque et mobile." At puberty in woman the thyroid gland enlarges and its secretory activity increases. It would appear that the tendency is less often to under-action than to over-action. Determining symptoms of hyperthyroidism are evidenced by extreme impressionability, a full glistening eye, a tendency to attacks of faintness, marked emotivity, and an easily provoked fine tremor. In a certain proportion of subjects the opposite occurs. The thyroid apparatus has fulfilled all requirements up to the age of puberty, but the sudden increased demands on its activity at puberty may determine in the girl more or less obscure signs of thyroid insufficiency, so that instead of the nervous irritability

¹C. P. Howard and C. E. Royce, *Arch. Int. Med.*, Chicago, 1919, xiv, 497.

²F. M. R. Walsh, *Medical Science, Abstracts and Reviews*, 1919, i, 209-15. Published for the Medical Research Committee by Humphrey Milford, Oxford University Press.

characteristic of over-thyroidism, we get the sullen demeanour of incipient myxoedema, and, if prolonged, the tendency to infiltration of the integument, coldness of the extremities, chilblains, and loss of hair. An interesting observation of this condition of hypothyroidism forms the subject of a lecture by Dr. P. Nobécourt,¹ in which he says that the physiological problems of puberty in girls afford a rich field of observation. Double interest attaches to thyroid insufficiency, because the problem is therapeutical as well as pathological, and the shortcoming can be remedied by very simple means. In his opinion, whenever there is an abnormal predisposition to chilblains associated with a loss of intellectual acuity at or about puberty, thyroid insufficiency should be suspected and further evidence looked for.

HOME SERVICE AMBULANCES.

THE Home Service Ambulance Committee of the Joint Committee of the British Red Cross and the Order of St. John has now allotted 300 ambulances to county directors and has been able to deliver 213. Forty-six ambulances are in hand to meet this deficit, and an order has been placed with the Ford Company for 55 chassis; the date of delivery is uncertain, but the work of building ambulance bodies for them is in hand. The Commissioners of Customs and Excise have, in response to the representations of the committee, agreed that the motor spirit used for the ambulances shall be exempt from the payment of duty. The committee has taken out a policy of insurance against the risk arising from accidents to patients or to passengers in the ambulances, and risks to drivers and third parties are provided for by insurance policies taken out by county directors. Satisfactory reports continue to be received as to the working of the ambulances. The last quarterly report shows that 418 patients were carried in 66 ambulances, an average of 21 patients to each ambulance. The average distance covered was 14 miles for each patient.

THE DUM-DUM CHARGES.

DURING the autumn of 1914 the Germans put about a charge against the Allies of using dum-dum—that is, soft-nosed—bullets, but after a month or two this was dropped. An explanation of the circumstances is given in a review of a book by H. Binder, published in the *Times Literary Supplement* of December 4th. Herr Binder was a Bavarian official war correspondent with the German Supreme Command. He says that when the Germans got into Longwy on August 26th, 1914, they found a quantity of small arms ammunition with a cylindrical recess in the nose of the bullet. The Kaiser telegraphed to President Wilson, and the war correspondents who were summoned to see the ammunition set out the accusation in their correspondence. It was soon discovered that the ammunition was made for practice firing on a short range. Major Nikolai, however, the head of the Press Bureau and of the Secret Intelligence Section, refused to admit this, and presently assembled the war correspondents and military attachés to see some English rifles with a special attachment, which, he said, was designed for nipping off the point of the bullet so as to render it flat and disposed to mushroom on impact. It was immediately pointed out by the American Attaché and a German pressman that the so-called nippers were side brackets for a telescopic sight. Major Nikolai would not accept the explanation, and further appeals to the civilized world against the barbarous methods of the Allies were made by the German authorities. It was then ascertained that the only really soft-nosed bullet in use was that of the German army revolver, though the British was also under suspicion, and that only two in 10,000 wounded had wounds which might be due either to soft-nosed bullets or to hits at very close range. "In November, 1914," says Herr Binder, "the war correspondents

received strict orders not to refer to the dum-dum affair again." It appears, therefore, that the German General Staff made their charge through ignorance, but rather than admit a mistake persisted in it for several months. According to the same authority no accurate lists of German casualties were issued after January 11th, 1918; to that date 1,315,728 men, including 42,205 officers, were reported as killed. Down to January 11th, 1917, the lists of wounded totalled 2,291,681, and prisoners 502,676. After the dates mentioned the lists were only calculated by averages, and our contemporary considers that Herr Binder's estimate of 1,600,000 dead is under the mark; in any case it does not include deaths from disease.

MOSQUITOS AND YELLOW FEVER.

WE have given from time to time during the last few months an account of the remarkable researches into the etiology of yellow fever carried out by Noguchi in Guayaquil, Ecuador. In the most recent instalment¹ of the report of his work he describes experiments showing that mosquitos can convey the disease from yellow fever patients to animals and from infected to non-immune animals. The larvae of *Stegomyia calopus* were collected, and the imagines fed on the arm of a yellow fever patient; after an incubation period of twelve days the mosquitos were able to infect animals; whereas mosquitos fed on the infected blood of a guinea-pig were found to be capable of transmitting the disease after an incubation period of eight days; this discrepancy is explained by the fact that there are far more *Leptospirae icteroides* in experimentally infected guinea-pigs than in the blood of yellow fever patients. But transmission of infection often failed, and it appears that in natural circumstances the percentage of mosquitos infected with *Leptospira icteroides* by sucking blood from a yellow fever patient must be very small; a female mosquito takes up 0.01 c.cm. of blood, whereas Reed and Carroll found that to transmit yellow fever from a patient to a non-immune person it is necessary to take from 0.1 c.cm. to 2 c.cm. of blood at the height of the disease. *Leptospira icteroides* is one of the most fragile of all the pathogenic parasites, and cannot survive the concurrence of bacteria; in the comparatively aseptic body cavity of the stegomyia it is safe. Whether or no *Leptospira icteroides* can survive and multiply only in the body of *Stegomyia calopus* has not been determined.

THE SOCIETY OF APOTHECARIES.

THE Society of Apothecaries, famous for its hospitality, held a Lord Mayor's Day dinner on December 9th, after an interval of several years. The Master, Mr. Samuel Osborn, F.R.C.S., was supported by a distinguished gathering of members and guests, including the Lord Mayor and Sheriffs of London, the Presidents of the Royal Colleges of Physicians and Surgeons, the Director-General A.M.S., Sir George Newman, K.C.B., Sir Walter Fletcher, K.B.E., Sir W. Arbuthnot Lane, Bt., and the Masters of several City Companies. The ancient hall of the Company forms a delightful setting for such occasions, and features of the entertainment were the string quartets and quintets, played in the minstrel gallery during dinner, and the subsequent singing of Miss Violet Openshaw and Mr. Ivor Walters. After the loyal toast had been honoured, the Master proposed the health of the Lord Mayor and Sheriffs, recalling to the members that their Society was founded over 300 years ago. The Lord Mayor, in his reply, took pride in being the next best thing to an Apothecary, namely, a Barber, and rounded off his speech with an apt reference to the juryman chemist in *Pickwick*. Colonel B. B. Connolly, C.B., proposed in warm terms the toast of the Navy, Army, and Air Forces. Lieut.-General Sir John Goodwin, K.C.B., in responding, wished to associate himself with the rank and file of the army, who, he said, know and appreciate their debt to the

¹ *Le Monde Médical*, October, 1919.

¹ H. Noguchi, *Journ. Exper. Med.*, Baltimore, 1919, xxx, 401-410.

medical profession during the past five years; the British soldier, he added from lifelong knowledge, is never depressed by adversity beyond the power of recovery. The health of the guests was proposed by the senior warden, Sir Shirley Murphy, K.B.E., F.R.C.S., who reminded his hearers that the Society of Apothecaries is the only medical corporation within the City of London. Looking towards the future, he expressed the hope that City Companies would continue to encourage research and education, and paid a compliment to the epoch-making writings of Sir George Newman and the fruitful investigations carried out under the inspiration of the Medical Research Committee and its secretary. Sir Norman Moore, Bt., P.R.C.P., responded to the toast in his happiest manner, touching on the close relations and good feeling between the Royal College of Physicians and the Society of Apothecaries. Sir Theodore Mayerne, whom he described as the first to write regular clinical notes, and Dr. Henry Atkins, the President of the College, urged upon King James I the foundation of the Society; and so it came about that the Apothecaries parted company with the Grocers, became independent, and have ever since flourished. The toast of "The Society of Apothecaries: root and branch, may it flourish for ever!" was entrusted to the junior warden, Dr. W. F. R. Burgess, who began by claiming that, though born in 1616, their society is as young as ever, and went on to poke fun at some modern innovations that are regarded as evidence of progress. The health of the Master was proposed by Sir George Makins, G.C.M.G., P.R.C.S., who spoke of their long acquaintance since student days, and of Mr. Osborn's pioneer services to the Red Cross, both by teaching and by practice. The Master, in a brief reply, entered a plea for needy ex-service medical officers and their dependants.

THE BELGIAN MEDICAL PROFESSION.

At the Royal Society of Medicine on Monday next, December 15th, Dr. Pechère, President of the Belgian Committee for the assistance of doctors and pharmacists in Belgium during the German occupation, will give an account of the hardships they underwent and of the success of the efforts made to relieve their unhappy condition. The chair will be taken at 5 p.m. by Sir Rickman Godlee, chairman of the Belgian Doctors' and Pharmacists Relief Committee formed in this country in November 1914.

We learn that Sir William Osler, who is suffering from a severe attack of influenza, shows some improvement as compared with last week, but his condition still causes anxiety to the medical colleagues in attendance.

Medical Notes in Parliament.

The Demobilization of Doctors.—Mr. Lyle asked the War Secretary, on December 3rd, what steps his department was taking to replace the older doctors in the Royal Army Medical Corps by younger men who had just left hospital, especially in view of the fact that most of the older men left their practices in order to serve the country for the duration of the war. Mr. Churchill replied: The older doctors who wish to be demobilized are being released as rapidly as possible, as establishments are reduced or substitution by younger men who have signed the new contract is effected. Any newly qualified medical man who desires to serve in the R.A.M.C. is given a six months' commission, provided he is fit for general service and under 45 years of age, but I regret that the number of those electing to serve has not up to the present been as large as was hoped.

The Remuneration of Pensions Medical Officers.—Mr. J. Johnstone asked the Pensions Minister, on December 3rd, whether he was aware that much dissatisfaction existed among the salaried medical officers employed by the Ministry respecting their rates of remuneration; whether medical officers holding administrative positions, such as deputy commissionerships, and other full-time medical officers, were receiving a lower rate of remuneration than the medical officers employed

by the session, and whether he would remedy this state of affairs. Major John Edwards asked whether medical officers on special duties at the Ministry of Pensions Municipal Board had had their rates of pay raised by 50 per cent. since October 6th; whether the Minister was aware of the dissatisfaction felt by the remainder of the medical staff who were employed on other duties on a sessional basis because they had not been given a similar increase in remuneration, and that the salaried whole time officers were thereby put in a position of financial inferiority to those who were working even four days a week on a sessional basis at the revised salaries. Sir L. Worthington-Evans said the medical officers employed by the Ministry might be assured that the matters referred to in the question were receiving consideration.

Pensions Supplementary Estimate.—The House of Commons on December 9th agreed to a supplementary pensions vote of £32,044,000. Sir L. Worthington-Evans said that the increases were in considerable measure due to the fact that the army had been so rapidly demobilized, as thus a larger number of men were coming into pensions within the year. In regard to the medical services he mentioned that there had been an increase in the cost of treatment and allowances to men undergoing treatment amounting to £10,000,000.

The Training of Disabled ex-Service Men.—In answer to questions put by Captain Loseby, on December 3rd, Sir Robert Horne stated that the number of names on the list of disabled ex-service men awaiting training was about 20,000. The object of the training was to enable the men to be absorbed in skilled industries at standard rates of pay. Men who were waiting were entitled to unemployment donations, together with disability pensions. He was not aware that, as a general rule, serious delays now occurred either in giving decisions on applications for training grants or in making payment by monthly instalments of the grants awarded for maintenance.

Mortality Rate from Pulmonary Tuberculosis.—Lord Robert Cecil asked the Minister of Health, on December 8th, what was the mortality rate due to phthisis during the year before the Insurance Act was passed, the year before the war, and last year. Dr. Addison said the rate for England and Wales in the years named was as follows:

Year.	Death Rate.
1910	1.015
1913	1.004
1918	1.343

The figure for 1918 was based upon figures of the civilian deaths and civilian population only; and regard must be had to varied considerations before drawing any inference from it as compared with the figures given for 1913 and 1910.

National Insurance: Medical Benefit.—Lieutenant-Colonel C. Lowther asked the Minister of Health, on December 8th, whether evidence could be produced to show that the panel service had improved the health of the nation. Dr. Addison replied that the working of medical benefits under the Insurance Act had been scarcely eighteen months in existence when war broke out, and the disturbing effects of war conditions which had prevailed over the greater part of the period during which it had been in operation made it impossible to produce concrete evidence which would measure the improvement in the health of the nation due to the Insurance Medical Service. Lieutenant-Colonel Lowther asked whether the Minister of Health could indicate what amount of money was required to give the whole community an efficient medical service. Dr. Addison said that if by that was meant a complete system of medical services of the different kinds needed for the varied requirements of the whole community, he could not at the present moment hazard an estimate of the cost.

National Insurance Amending Bill.—Mr. Kiler asked the Prime Minister, on December 4th, when the bill would be introduced to amend the National Insurance Act. Mr. Lloyd George replied that the question was now under consideration by the Government, and he therefore could not make any statement at present.

Provision for Additional Sanatoriums.—A vote was passed on December 10th for £10,000 for expenditure in respect of employment exchanges in connexion with the Ministry of Labour. Mr. Baldwin, Secretary to the Treasury, explained that the vote came under this heading only in a technical sense, and that it was really to provide additional sanatoriums. Great anxiety had been felt by the Ministry of Health and the Ministry of Pensions as to the position of tuberculous disabled men, for whom the accommodation in the country was insufficient. The sum to be voted was the sum which the Office of Works estimated would have to be spent in making additional sanatoriums between the present time and the end of the current financial year. The whole scheme, which could be discussed later on the vote for the Ministry of Health, would involve an expenditure of something like a quarter of a million; army huts would be used. At the expiration of a period of five years the local sanitary authorities would have the option of taking over the building and equipment on very favourable terms.

Mental Deficiency and Lunacy (Amendment) Bill.—This measure was considered in committee on December 4th, and reported without amendment. It was read a third time on December 5th.

Scotland.

An investiture was held in the throne room of Holyrood Palace, Edinburgh, on December 4th, by Prince Arthur of Connaught, acting as the representative of the King. Three hundred presentations were made.

The Scottish Board of Health held an examination last month for trained sick nurses and fever nurses. The examinations were held at Glasgow, Edinburgh, Dundee, and Aberdeen, and 283 candidates presented themselves. The subjects of examination were elementary anatomy and physiology, hygiene and dietetics, medical and surgical nursing, midwifery (for Poor Law and general trained nurses only), and infectious diseases (for fever trained nurses only). The number of candidates who obtained the certificate in general training was twenty-five, and the number who obtained the certificate in fever training was forty.

An East of Scotland Overseas Medical Club has been formed to encourage friendly intercourse and promote the spirit of comradeship and mutual help amongst medical men who have served on a foreign front during the war. The first general meeting and annual dinner will be held in Edinburgh in January, 1920, when Sir Henry M. W. Gray, K.B.E., C.B., C.M.G., will be in the chair. Application for membership and inquiries should be addressed to the honorary secretary and treasurer, James Young, D.S.O., M.D., 29, Manor Place, Edinburgh.

THE NEW RECTOR AND THE NEW INSTITUTE, ST. ANDREWS.

The students of the University of St. Andrews have elected Sir James Barrie, Bt., to be rector of the university for the next three years. Sir James Barrie was born at Kirriemuir, some fifteen miles north of Dundee, and therefore not far outside the Neuk of Fife. Kirriemuir was doubtless the scene of *A Window in Thrums*, by which he first became well known to the general reader. He received his education at Dumfries Academy and the University of Edinburgh, where he graduated M.A., so that both the West and the East can claim him. He has appointed Dr. William Low to be his assessor on the University Court. Dr. Low, as he said, has now been the representative of three successive rectors—the Marquess of Aberdeen, a distinguished statesman; Earl Haig, a great soldier; and Sir James Barrie, a man of letters. In view of the increased number of medical students, certain alterations at the Bute Medical Buildings, St. Andrews, to provide additional accommodation, have been sanctioned. The Court referred to the *Senatus Academicus* a proposal to establish lectureships in biological chemistry and bacteriology in co-operation with the recently incorporated St. Andrews Institute of Clinical Research. This institute has been founded by Sir James Mackenzie, and we purpose very shortly to publish an address in which he gives an account of its aims. The Court nominated Principal Mackay and Dr. Barrie Dow for appointment as members of the Consultative Councils under the Scottish Board of Health.

THE EDINBURGH OBSTETRICAL SOCIETY.

Dr. William Fordyce has been elected President of the Edinburgh Obstetrical Society. The retiring president, Sir J. Halliday Croom, delivered his valedictory address. He pointed out that though the art of practical obstetrics has made great strides in late years, 3,000 women or more die from the diseases and accidents of childbirth every year in England and Wales. Much of this mortality would be saved if all patients could be treated in lying-in hospitals under an expert. Though this ideal was, meanwhile, unobtainable, it should be kept continually in mind. In addition, there were, he said, some problems in midwifery which await solution—for example, the toxæmias of pregnancy, which are responsible for a large part of the death-rate. The importance of prematernity care was emphasized, and it was urged that the present system, by which a patient was admitted to hospital only after the onset of labour, was bad. The attractiveness and the great value to the community of child welfare work was referred to. Reference was made to the losses the society had sustained by death during the war. Tributes were paid

to Sir A. R. Simpson, Professor Stephenson of Aberdeen, and Dr. E. Scott Carmichael.

THE BELLAHOUSTON HOSPITAL.

The Scottish National Red Cross General Hospital at Bellahouston has been taken over by the Ministry of Pensions. Sir George T. Beatson, who presided at the ceremony, said that the hospital was erected in 1915 by the people of Scotland for the benefit of sick and wounded soldiers. The military authorities having ceased to need it, it had been decided to hand it over to the Ministry of Pensions without fee or reward. Sir James Craig, Parliamentary Secretary to the Ministry of Pensions, said that it was with a grateful heart that the Ministry of Pensions took over from the Red Cross Society what had been described as the most perfect hospital building in the United Kingdom. The task of the Pensions Ministry was gigantic. When the armistice was signed it was at once faced with increased responsibility, owing to the demand for immediate demobilization. Its mail now reached the extraordinary figure of 400,000 letters a week. The pensions of all grades—men, widows, and dependants—numbered over two millions, and the annual cost to the State next year would be something like £105,000,000. He could say with confidence that out of the two million pensioners 1,900,000 were satisfied with their pensions. The proceedings closed with a vote of thanks to Sir James Craig, proposed by Sir Hector Cameron.

TWO JUBILEES.

The medical profession in Inverness and the neighbourhood recently presented illuminated addresses to Dr. Brodie Cruickshank of Nairn and Dr. Duncan Macfadyen of Inverness, congratulating them on the completion of fifty years of practice. The presentation was made at a dinner in Inverness at which Colonel Munro Moir, M.D., presided, and at which the Provosts of Inverness and Nairn were guests. Of Dr. Cruickshank the chairman said that after graduating at Aberdeen he had served at Murthly Asylum and afterwards in the army, and had then settled in Nairn; and of Dr. Macfadyen, that after graduating at Glasgow and practising at Dalnally, Ullapool, and Beaully, he had been a citizen of Inverness for five-and-thirty years. For many years he had been the popular medical officer of the Inverness-shire Militia. The toast to the two recipients was pledged with Highland honours, and acknowledged by them; both referred to the change which had come over surgery through Lister's work. Dr. Macfadyen said that when he was a dresser to Lister in Glasgow he was in the early stage of his experiments, and was treating wounds with a putty composed of whiting, carbolic acid, and oil, which the dressers had to prepare themselves.

THE MEDICAL GUILD.

The annual meeting of the Medical Guild was held in Edinburgh on Saturday, December 6th, with Dr. John Playfair in the chair. In opening a discussion on a State medical service the chairman said that whether they liked it or not there was little doubt but that in the near future the profession would be faced with a State medical service. One of the principles of the guild was that it was willing to accept such a service provided it were limited strictly to necessitous classes. There was a fear, however, that the service proposed by the Government would be of much wider scope than that which they would approve. It might in the end embrace the whole community, including hospitals and all institutions in any way connected with maintaining the health of the people. A sweeping measure of that kind would, among other disadvantages, tend to reduce all professional activities and attainments to a dead level; would emphasize and increase all the weaknesses of the National Insurance Act. Professor William Russell said that the heads of departments were striving for more power and authority. The department which dealt with public health was contemplating bigger schemes than anything they had hitherto had; it was striving to be the bureaucratic autocrat of a servile profession. What right, he asked, had a democratic State to interfere with the relations between man and man, or between the public and the medical profession? Dr. E. Duncan (Glasgow) expressed grave suspicion as to the Government's intentions in the near future. It was high time that the profession of medicine insisted on

having its rights conserved, and resisted in every possible way the institution of a service that would divorce the private practitioner from his patient. The discussion was continued by Dr. A. Blackhall-Morison (London), Dr. A. Thomson (Glasgow), and Mr. J. W. Dowden, Dr. F. Porter, and Dr. J. Stevens.

Ireland.

ULSTER MEDICAL SOCIETY.

At the third meeting of the Ulster Medical Society, on the afternoon of December 4th, when the President, Mr. Andrew Fullerton, C.B., C.M.G., F.R.C.S., was in the chair, the Honorary Secretary read a letter from Sir James Mackenzie thanking the society for his election as an honorary Fellow.

Chronic Intestinal Stasis.

Sir William Arbuthnot Lane then gave an address on "The evolution of disease," founding his remarks upon a condition which he has been studying for many years—"abnormal delay in the passage of intestinal contents." To this condition he first gave the name "chronic constipation," but changed it later to "chronic intestinal stasis," signifying by the latter term the initial constipation, together with the resultant changes in the intestinal tract. He enumerated the changes occurring in the whole length of the alimentary tract owing to a primary accumulation of faecal matter in the lower end of the large bowel; the strain primarily affected the pelvic colon, causing its elongation and the development of kinks at its proximal and distal parts; this affected the passage of faeces along the large intestine, which reacted upon the caecum, appendix, and ileo-caecal junction; inflammation ensued with the development of adhesive bands, "control appendix," and ileal kinks. The mechanical effects of obstructions thus formed reacted upon the duodeno-jejunal junction and duodenum, causing dilatation of the latter, with abrasion and ulceration of its mucous surface and spasm and ulceration of the pylorus, which might ultimately end in cancer; the point of greatest strain in the stomach was next attacked—namely, the mid-point of the lesser curvature, resulting in ulceration, stricture (hour-glass stomach), and possibly cancer. Ulceration of the stomach could produce cardiospasm and disease of the oesophageal wall. The main result of this disastrous sequence was imperfect drainage, which had been proved in the experimental laboratory to end in degeneration and finally death of the tissues.

The lecturer then stated that the delay in the absorption of nutritive material, combined with the decomposition of faecal contents, could affect practically every organ in the body. The principal bacteria found in the faeces were streptococci and colon bacilli; these might first reach the liver and gall bladder through the common bile duct, or the blood stream (portal vein) causing inflammation of the gall bladder, gall stones, etc.

The pancreas was prone to undergo either an acute inflammation, or a more chronic process resulting in the formation of cysts, calculi, or cancer, owing to direct extension along its ducts from the duodenum. After the liver, the kidneys bore the chief stress of the condition, as these organs assisted in the elimination of abnormal toxins or organisms. In some cases the organisms, especially *Bacillus coli*, might be passed without any visible disturbance, but in others various forms of Bright's disease or even acute renal abscesses would result.

The organs of generation were also affected; the ovaries were wasted and shrunken and the uterus small or infantile in type, even in women who had borne children. The thyroid gland showed changes, being at the outset enlarged, but later small and impalpable; in this connexion attention was drawn to the recent researches of Colonel McCarrison on the relation between goitre, Graves's disease, and auto-intoxication from the intestinal tract.

The pituitary and suprarenal glands also underwent degeneration, the pigmentation occurring in advanced cases being evidence of disease of the latter; there might even be symptoms of Addison's disease, which cleared up after colectomy. The breasts also participated in the

changes, becoming hard and knotty and showing small cysts; these degenerated breasts were peculiarly liable to cancerous changes.

The tongue is usually unhealthy, large, flabby, and indented by the teeth. The teeth decayed early, and pyorrhoea might be present. Many changes in the nervous system were ascribed as due to this defective drainage, among them headache, with otherwise unaccountable vomiting, neuralgias, rheumatic pains, bad dreams, insomnia by night but somnolence by day, marked depression amounting almost to melancholia, irritability, fits of violent temper, or marked introspection; when children were the victims, they are usually stupid, dull, and inattentive. Taste and smell were apt to be blunted, and in the eye degeneration of the lens and loss of power in the ciliary muscle might occur. The perspiration might be abundant and offensive, but the temperature was usually subnormal, the ears, finger-tips, and toes being cold and livid, almost resembling Raynaud's disease. There was usually a loss of fat, which might lead to prolapse of the viscera, with all its attendant evils; in the intestine this produced a vicious circle, the prolapse favouring still further stagnation. Both voluntary and involuntary muscles show loss of power, resulting in lateral curvature, flat-foot, the different versions and flexions of the uterus, and degeneration of heart muscle. Many other diseases were enumerated as being the result of chronic intestinal stasis, among them rheumatoid arthritis, Still's disease, angina pectoris, non-syphilitic arteritis obliterans, pernicious anaemia, paralysis agitans, mucous colitis, etc. These diseases, it was held, were due to an infection of the tissues, which could not have gained a foothold in the patient unless the vitality of the tissues had been previously lowered by intestinal stasis.

A hearty vote of thanks to Sir W. Arbuthnot Lane, proposed by Professor Sinclair and seconded by Mr. A. B. Mitchell, was carried unanimously.

Annual Dinner.

The annual dinner of the Society was held on December 3rd in the Medical Institute, Belfast; ninety-four Fellows and Members with their guests were present. The President of the Society acted as host. After the President had given the toast of "The King," he proposed the health of Sir William Arbuthnot Lane, who was introduced as an Irishman by descent, connected with both North and South. Sir Arbuthnot Lane, in reply, thanked the President and members for their cordial welcome. The toast of "The Dublin Medical School" was proposed by Professor Lindsay, M.D., F.R.C.P., who dwelt on the friendly relations which had always existed between the medical schools of Dublin and Belfast. Professor Craig, President of the Royal College of Physicians of Ireland, Mr. Story, President of the Royal College of Surgeons, and Sir Thomas Miles responded. The toast of "The Belfast Medical School" was proposed by Sir William Arbuthnot Lane and acknowledged by Professor Sir John Byers, who gave some interesting facts regarding the growth of the Medical School and the advance of medicine in Belfast. Mr. R. J. Johnstone, F.R.C.S., proposed the health of the President, who, in responding, proposed that of the Honorary Secretary, Dr. C. G. Lowry, F.R.C.S., upon whom the arrangements for the evening had devolved, and congratulated him on the success of his labours.

England and Wales.

TUBERCULOSIS IN WALES.

The King Edward VII Welsh National Memorial Association was founded in 1910 through the munificence of Major David Davies, M.P.; it received a Royal Charter in 1912. In 1910 there were in Wales and Monmouthshire 31 beds reserved for the treatment of tuberculosis. The Memorial Association now owns 976 beds; in addition it controls 107 beds, and rents from other authorities 101 beds. It possesses hospitals and sanatoriums for the treatment of surgical as well as pulmonary tuberculosis. There are fourteen central dispensaries and nineteen visit-stations. The whole-time medical staff numbers twenty-two, and the consulting surgeons are Major-General Sir Robert Jones and Colonel Sir J. Lynn-Thomas. Some 3,000 discharged service men have been

referred to the medical officers of the association and some 2,000 have received institutional treatment; at the present time 200 beds are so occupied. The institutions have been built and equipped out of moneys provided by voluntary gifts, supplemented by grants under the National Insurance Act. The total expenditure on building, etc., has been £220,000, towards which Government grants to the amount of £52,000 have been made.

BRISTOL MEDICAL SCHOOL.

The annual dinner of the Bristol Medical School, which has been in abeyance during the war, was held last week under the presidency of Dr. R. G. Poole Lansdown. About 160 past and present students attended, including ladies for the first time. Sir Anthony Bowlby was the guest of the evening and congratulated the school on its war work and the honours which had been awarded to past students—namely, C.B. to two, C.M.G. to four, C.B.E. to six, D.S.O. to seven, O.B.E. to seven, D.S.C. to one, and M.C. to eleven. The Dean of the Faculty stated that the Bristol Medical School was now one of the largest, if not the largest, of the schools in the provinces.

MEDICAL TREATMENT OF LONDON SCHOOL CHILDREN.

During the current year the London County Council arranged for the treatment of 29,640 cases of eye defects. Increased facilities are to be provided at some of the centres, and four new ophthalmic departments are to be established, bringing the total provision for next year up to 31,645 cases; the provision for treatment of throat defects and defects of ear and nose is to be raised from 14,400 to 15,845 cases. The total provision for dealing with ringworm is at present 2,138 cases; it is to be raised to 2,490 cases, although, since arrangements were made for the treatment of ringworm by x rays in 1911 the number of cases has fallen to less than half the figure at which it stood in that year; the number has, however, slightly increased during 1919. Five new centres for the treatment of minor ailments had been authorized for the present year, but only one has actually been opened. About twelve further centres will be required, but only five of these, in addition to the centres already authorized, will be provided next year. The total provision for minor ailments will be for 45,760 cases. The number of dental cases for which treatment has been provided this year is 96,630; the total provision for next year will be for 113,520 cases. The special remedial exercises centre established in Hampstead has proved to be of considerable value in dealing with special cases of curvature; a second has been organized in Woolwich, and a third is projected in Southwark. In future the Council's school medical officers will pay regular monthly visits to these centres. The cost of all these arrangements for medical and dental treatment will be £71,815, together with £600 for the appointment of additional assistant organizers and £3,000 for the employment of temporary nurses. The allowances granted for the supply of apparatus are also to be increased from 33 to 50 per cent. Arrangements have been made for the medical inspection of all pupils in the Council's secondary schools and of scholarship holders in secondary schools aided by the Council; the question of the treatment of fee-paying pupils is still under consideration.

VENEREAL DISEASES CLINICS IN LONDON.

The number of cases attending the venereal diseases clinics of the London County Council so far during 1919 represents an increase of 50 per cent. on the corresponding period of 1918. It is thought that the increase has been due to the combined influences of demobilization and better public knowledge of the clinics. A communication is to be addressed to the hospitals concerned drawing attention to the importance of making every effort to deal with the pressure by the provision of additional staff, equipment, and accommodation, and informing the authorities that, in the event of satisfactory arrangements being made at the earliest possible moment, the question of additional cost arising therefrom will receive the sympathetic consideration of the Council.

It is stated that Queen's medical faculty, now established at Kingston, Ontario, may be removed to Ottawa owing to lack of hospital facilities.

Correspondence.

TREATMENT OF MALARIA.

SIR,—The discussion on the treatment of malaria held at the Medical Society of London on November 24th and reported in your last issue (p. 743) formed a most interesting and profitable contribution to this difficult subject.

After a very extensive experience of the treatment of a large number of malarial cases during the three years 1916-19 in Mesopotamia as consulting physician to the expeditionary force I formed the following conclusions:

The method of administration of quinine is most important, and from experience of a great number of cases in which the drug was given in various ways I am of opinion that the intravenous method is that by which the greatest therapeutic effect is obtained. Closely following this method is the intramuscular injection and, *longo intervallo*, administration by the mouth and rectum. The therapeutic values of quinine bihydrochloride when given rectally, orally, intramuscularly, or intravenously for a given dose would in my opinion be approximately represented by the figures 1, 2, 20, and 40—for example, 5 grains given intravenously would be equivalent in therapeutic value to 100 grains given by the mouth.

The subcutaneous administration of quinine is liable to be followed by necrosis and suppuration, and should, I think, be avoided.

The choice between intravenous and intramuscular administration would depend in many cases on the presence of easily accessible veins suitable for intravenous injections. If there is difficulty in this respect it is wiser to adopt the intramuscular method.

In tropical countries acute diseases, such as influenza, enteric, typhus, relapsing fever, heat hyperpyrexia, sandfly fever, etc., are very commonly complicated by malaria, the clinical evidence being marked enlargement of the spleen, in addition possibly to a history of malaria. The combination produces an acute and dangerous condition, and in such cases it is most necessary that quinine bihydrochloride should be given intravenously or intramuscularly without delay, since by this means a serious and often fatal complication is quickly abolished.

In cases of malignant malaria and in recurring malaria of the benign tertian or quartan type with splenic enlargement I am strongly of opinion that courses of treatment should commence with from three to six intravenous or intramuscular injections of quinine, and treatment carried on afterwards by oral administration—for example, 10 grains of quinine bihydrochloride in solution three times a day for a fortnight, and then "after-treatment" on the lines laid down in the pamphlet issued by the Ministry of Health, written by Sir Ronald Ross, K.C.B., F.R.S., and Lieut.-Colonel S. P. James, I.M.S. Much better results are obtained by this method and relapses are much less frequent.

In cases of malaria presenting acute cerebral symptoms the administration of quinine intravenously is of as much urgency as is the application of surgical measures in a case of fulminating appendicitis. A delay of a few hours may mean the death of the patient.

As regards the dose for intravenous injection, quantities up to 10 grains of quinine bihydrochloride dissolved in 10 c.cm. of normal saline are most suitable and sufficient. In conditions of collapse it is advisable to use larger quantities of saline—for example, 1 pint.

For intramuscular injections doses of 10 to 15 grains of quinine bihydrochloride in solution of the strength of 15 grains of salt in 2½ c.cm. of sterilized distilled water are best given deeply into the muscles of the buttock at a spot midway between the anterior superior iliac spine and the tip of the natal cleft. I have been much impressed by the toxic effect of quinine in certain patients showing an idiosyncrasy, and have notes of one patient who developed severe amaurosis following a dose of 10 grains of quinine given by the mouth on one day and 15 grains similarly given on the next day. In such cases quinine must be discontinued entirely, since there is risk of fatal blindness. The toxic effects of quinine are, in my experience, more likely to follow large doses by the mouth than those suggested for intravenous or intramuscular injection.

Before administering quinine in large doses the patient should always be questioned as to his susceptibility to toxic symptoms, and if there is any fear of this, or if the patient has not had quinine before, small doses must be given to commence with.—I am, etc.,

London, W., Dec. 8th.

W. H. WILCOX, M.D., F.R.C.P.

A Correction.

SIR,—In the BRITISH MEDICAL JOURNAL of December 6th there is an account of the discussion on the treatment of malaria which took place at the meeting of the Medical Society of London on November 20th, and in which I took part. I see it is stated that I said, "Injections of adrenalin as a means of treatment had nothing to recommend it," but this is not quite correct, for at the moment I was speaking merely of the *provocative* treatment of malaria, which has had such a vogue on the Continent. Injections of adrenalin may of course be of value in algid malaria, which has now been shown to be due to an intense infection of the suprarenals.—I am, etc.,

London, W., Dec. 8th.

ANDREW BALFOUR.

PREVENTION OF VENEREAL DISEASE.

SIR,—In the face of a national menace, such as the present increase of these diseases threatens to be, it is grievous to find people objecting to any procedure calculated to lessen their incidence, and at the same time offering no alternative policy, but splitting straws as to whether personal cleanliness can be acquired after instruction, or requires scientific personal practice, or deprecating the value of prophylaxis. I am content to adopt and advocate any advice or method that will tend to lessen the probability of contracting these diseases. It matters not to me whether the word "prevent" is used in its earlier significance to "hinder," or its present sense of elimination, or that amazement means what your correspondents infer, or as the earlier use at the end of the marriage service, as long as the result is a bettering of existing conditions. Call the methods recommended for the prevention of these diseases what you like—personal hygiene, early treatment, or prophylaxis—so long as the desired end is attained.

I have no doubt but that personal cleanliness, and the use of germicides in lotions and ointments, has materially reduced the incidence of the disease in soldiers, minor or major success being due to the keenness of the medical officer, and his ability to adapt his instruction to the mental powers of his men.

In 1914 I lectured to a number of recently raised units on personal hygiene, using for a base a lecture I had given when A.D.M.S.(T.F.) in the years 1908-12; but I soon realized that the pabulum readily absorbed by the average Territorial of those days was far above quite a third of my then hearers. It was therefore a question of preserving a standard as a lecturer, or coming down to the level of the most ignorant of my hearers. When I became commandant of a military convalescent hospital I decided to go for the lower stratum; both at Alnwick with 2,080 beds, and at Ashton with 1,560, I used frequently to assemble the staff and patients in the camp theatre, and in a conversational manner place before them the danger at all times of infection, the preliminary and later technique of prophylaxis, and the vital importance, if in doubt, of at once consulting the medical officer. The results were excellent—a greater freedom of communication with the medical officer, increased use of the cleansing in the special room, and a general adoption of prophylactic remedies. Out of over 13,000 convalescents at Ashton only 26 acquired venereal disease; of these 4 contracted it from their wives who visited them, and only 2 who had used prophylaxis suffered, and in each instance the infection was contracted when on leave and drunk. In dealing with the cases acquired locally I used every means to get at the woman, and so have the fountain head treated. As to out-of-door conditions, I think your correspondents will admit that if the spots selected are sufficiently protected for the act, they are equally suitable for the prophylaxis. Personally I am of the opinion that the more prolonged coitus of the house is a greater danger for infection than the more expeditious and difficult performance out of doors.—I am, etc.,

Blotchley, Dec. 8th.

P. BROOME GILES.

SIR,—As a member of the Clinical and Statistical Committees of the Society for the Prevention of Venereal Disease, I have read the letter in the BRITISH MEDICAL JOURNAL of December 6th, signed by Miss Sturge and Miss Molloy, with much interest and a certain amount of regret.

The letter is interesting, because it is of the greatest importance that the opinions of lady members of the profession—and Miss Sturge is one of the most distinguished amongst these—should be freely sought and carefully considered. But it is unfortunate that these two ladies should consider it their duty to deride the efforts of a society that desires not only to cure venereal diseases, but also to prevent their spread by methods of disinfection. Our society does not pretend that the methods advocated will suffice to stamp out venereal disease. It is quite aware that in many cases the methods will fail through carelessness, inattention to detail, drunkenness, and other causes. It is also aware that, relying upon preventive measures, some persons may even be induced to take risks that would not otherwise be run. But, in spite of all these admitted drawbacks, it must surely be recognized that preventive measures cannot but be of very great service to the individual and to the community at large. Human nature being what it is, we cannot enforce sexual continence. Why, then, should we not do our utmost to minimize the evil results which so often follow sexual irregularity? Tea-drinking is a bad habit; but must we only treat the consequent indigestion and not advise on the kind of tea and how to take it? Tobacco smoking is a bad habit; but may we not advise upon the kind of pipe to use in order to prevent cancer of the lip? Nobody is compelled to drink tea or to smoke tobacco; but many people take the risk; and, although these instances may seem trifling, the root principle is the same, and sexual irregularities will continue in spite of all exhortations to the contrary. This being so, why should we not face the situation and, whilst condemning the practice, do our best to mitigate the result?

With nineteen years' experience of venereal disease in England, in France, and in the Far East, I can claim to have some knowledge of what I am talking about, and perhaps I am justified in asking these two ladies what experience they have had in the prophylaxis and treatment of these complaints in men? I should imagine that they have chiefly been concerned in the care of their own sex. Now our society has fully recognized that preventive treatment in women is unsatisfactory, and at our last meeting in Harley Street, in November, we had almost decided to issue no instructions to females, recognizing the extreme unreliability of disinfection in their case.

We do, however, maintain that if our procedure is reasonably followed by males of average intelligence it will produce in most cases the desired result. In this opinion we are backed up by irrefutable evidence. Were it otherwise we should not have upon our executive committee the names of many of the most distinguished members of our profession.—I am, etc.,

Manchester, Dec. 8th.

A. C. MAGAN.

SIR,—Two letters appear in the BRITISH MEDICAL JOURNAL of November 29th on the above subject, one signed by the President and Executive Committee of the Society for the Prevention of Venereal Disease, the other by the Honorary Secretary to the National Council for Combating Venereal Diseases. The former has a very simple programme—immediate disinfection, which they claim to be effective and easy, and instruction of the public in the means of applying it. I presume they refer chiefly to men, as in the case of women disinfection in this way is obviously more difficult. Anyhow their aim is definite; they state the means and stick to it. The latter appear to have no policy but that of beating about the bush. They state definitely in (2) that early disinfection diminishes the risk of infection. Apparently afraid of their attitude in (2) they state in (3) the obvious truth that abstinence from exposure to infection is the only certain safeguard against the ordinary risk of disease. Then in (4) they go back to recommending everybody who has indulged in promiscuous intercourse to seek means of cleansing at the earliest moment, and in (5) they supply

the means, including the use of disinfectants. Yet in (8) they state that no one should be urged to arm himself in advance with a prophylactic packet. If not, why not?

It is obvious that the man with the packet is in the best position, even if he does not always make use of it for applying disinfection at the earliest possible moment, which is what the society recommends in (4). Then why not put him into that position? It is apparent that the society is hedging between a deference to sentiment and the *raison d'être* of their existence—namely, combating venereal disease. Unfortunately they cannot have it both ways. If they are out to combat venereal disease, and if they acknowledge that early disinfection diminishes it, then logically their position is to supply every means for the earliest possible disinfection. If they are out for sentiment, then let them stick to (3), and conduct a propaganda on moral grounds only.

The unanswerable argument for taking every possible means, both moral and practical, for diminishing venereal disease is that by it thousands of wholly innocent people suffer, not only those who indulge in promiscuous intercourse.—I am, etc.,

CHARLES P. CHILDE, F.R.C.S.,

Senior Surgeon, Royal Portsmouth Hospital; Chairman of the Health Committee, Portsmouth Town Council.

Southsea, Dec. 7th.

"NEW LAMPS FOR OLD" IN OBSTETRICS.

SIR,—As one of the younger generation, not yet old enough in general practice to allow of its exigencies obscuring my somewhat idealistic view of obstetrics as a science and art rather than a necessary evil, I am tempted by Dr. Mears's letter in to-day's issue to enter the lists as another of the "New Lamps." His view of things raises the fundamental question "*when are we justified in putting on forceps?*" I thought that textbooks and sound teaching had made the answer clear; and if the little word "*justified*" received its proper weight, that answer would assuredly not be in over 50 per cent. of cases. How many labours are instrumental because the medical attendant is pressed for time, or the patient coerces him into "taking the child from her" to escape a little pain? If every medical man attending a confinement weighed carefully the serious question of exposing his patient—whose second stage is, in the majority of cases, progressing normally if slowly—to the risks of haemorrhage, sepsis, or laceration on such justification, whilst leaving minor procedures such as hypnotics, postural treatment, or, if necessary, episiotomy, untried, there would be fewer forceps deliveries and less patching up afterwards for the gynaecologist. Nature intended childbirth to be a gradual process, allowing time for the maternal tissues to stretch; and though help is advisable and legitimate, such interference as your correspondent advocates as a routine measure is utterly subversive of Nature's efforts. Why have a mechanism of labour at all? In any case forceps delivery should be essentially a matter of manipulation and not of force, otherwise the cranioclast would be the better instrument, as sparing the mother at least from mutilation.

Dr. Mears raises a second question in advocating that the placenta be "removed immediately after the birth of the child." Does he consider this, in view of the difficulty of maintaining asepsis in the vast majority of confinements occurring in middle-class practice, to be an advance in technique upon the Credé method combined with a little patience, or an improvement on what Mother Eve had to put up with? De Lee tells us: "Savage tribes and the ancients pulled on the cord, pressed on the belly, gave emetics, or tickled the nose to provoke sneezing, had the woman blow into a gourd or bottle, or into the closed fist, to evoke the abdominal pressure, or even removed the placenta by hand." No wonder that outraged Mother Nature so often retaliates, not on the medical attendant, but, alas! on the unfortunate patient.—I am, etc.,

WILLIAM CORBET,

Late Acting Assistant Master,
National Maternity Hospital, Dublin.

Blackheath, S.E., Dec. 6th.

SIR,—A more appropriate title for Dr. Fairbairn's letter would be "Old Lamps for New in Obstetrics," for what is proposed is the abolition of the existing practice and its

replacement by the venerable system of leaving things to nature, in the expectation that she will prove benevolent.

Normal labour is, we are told, a surgical operation, but operative interference is to be rigidly confined to making the patient surgically clean.

I am at a loss to understand how Dr. Fairbairn proposes to avoid lacerations. Certainly not by limiting the use of forceps, for, if that murderous instrument, the Simpson-Barnes forceps, be never used and modern forceps, such as Wagstaffe's, always employed, lacerations due to the passage of the head *never* occur.

For any damage done by the shoulders nature is alone responsible. Nor is it easy to believe that pain and exhaustion in labour can be abolished or lessened without gross interference with nature.

Why should a man be censured because he uses forceps in 50 per cent. of his cases? If he exercise skill and discretion, who is injured? Not a soul! On the contrary, everybody concerned is enormously benefited, and the presumed intention of capricious nature is fulfilled with perfect safety, ease, and expedition.

It is obvious to anyone with modern experience that the young woman of to-day bears pain badly and children with difficulty. Under the new-old system she is to lie, illuminated by the rays of the new lamps, for hour after hour, enduring the tortures of the damned, until nature makes up her mind to terminate the suffering. Such is modern obstetrical lore acquired during 10,000 years of recorded civilization.—I am, etc.,

London, E., Nov. 30th.

A. CAMPBELL STARK.

CHRONIC PANCREATITIS.

SIR,—I desire to express my appreciation of the value of Dr. Cammidge's work, the results of which I used to demonstrate to my students. When, in my article on "Chronic pancreatitis," in your issue of November 15th, I omitted mention of his urine test, it was because, like others, I had not found it in its present form of practical value. It depends on the presence of dextrines in the urine of pancreatic patients, and Dr. Cammidge himself, in his letter in your issue of December 6th, indicates the difficulties in the way of arriving at a reliable decision in the test. These are that normal urines contain dextrine, the amount of which varies with the diet and with the hour of the day.

The chief point in my article is a plea for the systematic investigation of the pancreas by means of microscopic examination of an excised wedge, in cases in which pancreatitis is suspected. By that means, as in the instance of other viscera, the value of the various tests advocated, including Cammidge's urine test, will be decided.—I am, etc.,

Glasgow, Dec. 8th.

JAS. H. NICOLL.

THE MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

SIR,—The annual meeting of Fellows and Members at the Royal College of Surgeons in Lincoln's Inn Fields on November 27th last was the occasion for oratory of an unusually high order, advocating the claims of Members to some representation on the Council. During my experience of over fifteen years there have been many meetings where one speech—for example, that of the late Sir Victor Horsley—was of pre-eminent merit and the rest of average value. But on this last occasion all the speakers on behalf of the Society of Members reached a high level of eloquence and made out a very strong case for conceding our claims.

The President (Sir George Makins) evaded giving an answer to our third resolution, which had been before his Council since November, 1916. We requested him to give the meeting the present views of his Council on the old suggestion that at least two Members in general practice should join them. It would appear from his reply that even after three years' consideration the Council of the College have formed no views, either for or against the proposal. We expect to wait a year before hearing the result of their consideration of the first and second resolutions passed *nemine contradicente* on November 27th, 1919; so that no one requested Sir George Makins to put a prophet's mantle over his presidential robe.

With reference to the letter from Dr. P. I. Watkin in your last issue, I might point out that on joining our

¹ De Lee, *Principles and Practice of Obstetrics*, 1918, p. 326.

society he will soon learn that there have been many occasions on which the Council (of Fellows) has failed to defend the vital interests of both Fellows and Members who are engaged in general practice. By the Council, general practitioners, whether Fellows or Members, are equally despised and neglected.

My society welcomes new adherents who bring constructive and not disparaging criticism on its past methods. Dr. Watkin—and others like him—can be assured of full consideration of any valuable suggestions he may have to offer.—I am, etc.,

SIDNEY C. LAWRENCE.

Honorary Secretary of the Society of Members of the Royal College of Surgeons of England.

Rush Hill Park, Dec. 8th.

LOCAL CLINICAL LABORATORIES.

SIR,—The correspondents who have been making communications to you under the above heading have not dealt at all with a point in connexion with laboratory work which seems to me to be of greater professional interest than either the size or the location of the laboratory.

The chief aim of all who desire the progress of medicine must be to secure that every patient who might possibly benefit thereby should obtain the advantage of expert laboratory aid in diagnosis or treatment. For this purpose the assistance offered to the medical attendant should be such as to encourage him to make full and frequent use of it. He cannot fail to be discouraged in so doing if he finds that the pathologist whose assistance he seeks is his competitor in medical practice. It is asking too much of human nature in these hard times to expect a general practitioner joyfully to send a patient to a laboratory to have an autogenous vaccine prepared, if he is aware that the head of the laboratory is willing to accept as private patients any of the relatives or friends of such a patient who may subsequently believe themselves to be in need of similar treatment. Apart from the professional detriment that may thus accrue to the practitioner, he may not unnaturally doubt whether the limited clinical experience of his specialist brother, properly devoting most of his time to laboratory duties, will be of advantage to the patients he is thus unwittingly introducing to him.

Whether our ideal should be the local or the central laboratory (and I expect there is ample room for many more of each type), I would urge that as far as possible the specialists working therein should hold whole-time appointments and not be engaged in private practice, or if private practice is permitted or indulged in, that such practice should be of a purely consultative character, no patient being dealt with except in actual co-operation with an attending practitioner.

Working strictly on these lines, I believe that the bacteriologists and pathologists will find ample scope for useful and well remunerated work and that we may be spared unseemly accusations of inefficiency or commercialism.—I am, etc.,

December 1st.

CLINICIAN.

PHYSICAL EDUCATION AND RECREATION.

SIR,—The discussion on this subject, originated by the letter in *The Times*,¹ seems likely to be confused by the want of definition of the terms employed. Physical education of the young, as Dr. Brackenbury pointed out, is an integral part of education, and it is therefore a matter that primarily concerns educational authorities and teachers. But skilled educating and training of the physical and mental powers cannot be secured without medical inspection and supervision. The Minister of Health is made responsible for the control of this "health" aspect of education.

The signatories of *The Times* letter, however, raise the larger question of the adequate provision of the means for the recreation of the people as a whole. I suggest that the term physical recreation should be employed as a general term for all the measures employed or that may be devised for physical exercise of a recreative nature.

The voluntary organization, having for its objects the reviving, originating, developing, and organizing of all

forms of recreation, is already in process of formation—as far, at least, as concerns the periphery. Thus many large employers of labour have formed recreational associations for their employees. These are run on an entirely voluntary basis. One big firm has secured Colonel Wright, late head of the army gymnastic staff, as director of recreation. Again, Montgomeryshire has formed a county association, with Captain Glynn Jones, M.C., a triple blue, as secretary and organizer. A few of us in this area are busy in propaganda with a view to the formation of a similar association for the city of Aberdeen. One ventures to hope that a central council will be formed forthwith, and that it will be able to send out eminent authorities to various parts of the periphery to assist with advice and in propaganda work.

The movement is certain to spread, and it is to be hoped that medical men everywhere will take their natural place as leaders and expert guides.

One further hopes that the Ministry of Health will institute research into problems of the scientific control and adaptation of the rhythm of rest and exercise in the treatment of disablement resulting from disease and injury.

There is surely little need at this date to warn against undue emphasis being put on the value of gymnastic systems of physical culture. The war has demonstrated that the British system by games, sport, and drill is greatly superior to any mechanical system of "movements."—I am, etc.,

C. FORBES, O.B.E., M.B.,
Late Captain R.A.M.C.(T.F.).

Aberdeen, Dec. 1st.

ENGLISH DOCTORS FOR SPAIN.

SIR,—I am at a loss to understand the meaning of an advertisement in the *BRITISH MEDICAL JOURNAL* of last week, addressed to "Doctors and dentists desirous of arranging a practice in a perfect climate"—that is, Spain. As an English doctor who practised in Spain before the war, and who lately spent some months there, I have no hesitation in warning any English doctor against thinking there is any opening in that country for foreign doctors.

In the first place no foreigner can practise without a special licence, which I believe cannot now be obtained. Such a licence would be strongly opposed owing to there being no reciprocity with this country. When I was granted a licence some years ago I was given to understand that it was the last to be given. There are no large communities of British in Spain, and those that exist are a decidedly healthy lot. The fees obtainable are small. There is no demand by the British residents for English doctors, and the Spaniards certainly do not want them. Native-born doctors swarm in Spain. There are over two thousand in Madrid alone. Spain is not a country where invalids go; they would hardly be welcome, and certainly there is no accommodation for them.

Just now there is a rush of our countrymen with hands all over Spain making inquiries about business opportunities, because during the war many commercial men have made fortunes there as in other neutral countries. These flying Britishers do not mean "practices" for British doctors. Their main medical requirements can be obtained at any chemist's in the form of handfuls of sodium bicarbonate to correct the acid wines of the execrable hotels of the country. Spain is not a country for British doctors, and I hope none will allow themselves to seek it as a field for medical practice. Of the dental side of the question I know nothing.—I am, etc.,

Sevenoaks, Dec. 8th.

FREDERIC VICARS, M.D., R.C.S.

GENERAL MEDICAL COUNCIL ELECTION—IRELAND.

SIR,—Will you allow me to thank the 616 Irish doctors who voted for me at the recent election, as well as the many others whose offers of support came too late?—I am, etc.,

Dublin, Dec. 4th.

J. C. McWALTER.

A BILL providing for the establishment of the first board of health in New Mexico was passed during the last session of the State Legislature.

¹ *BRITISH MEDICAL JOURNAL*, November 8th, p. 607.

The Services.

ROYAL ARMY MEDICAL CORPS.

Revised Rates of Specialist and Charge Pay.

THE conditions for the issue of additional pay and charge pay to R.A.M.C. officers have now been revised by Royal Warrant.

Additional pay up to 5s. a day is now issuable to officers not above the rank of Lieutenant-Colonel while acting as specialists in posts considered by the Army Council to merit additional pay. Officers granted temporary higher rank while holding appointments under the Directorates of Hygiene and Pathology will not be eligible for additional pay as specialists while holding such temporary rank.

The following is the new scale of hospital charge pay: For the officer in charge of a hospital, if the number of equipped beds as certified by the D.D.M.S. exceeds 50, 2s. 6d. per diem; 150 beds, 5s.; 300 beds, 7s. 6d.; 500 beds, 10s. The officer in charge of the medical or surgical division of a general hospital with not less than 300 beds will receive half the above rates.

HONOURS.

Foreign Decorations.

THE following decorations have been conferred upon medical officers by the King of the Hellenes, in recognition of distinguished services rendered during the course of the campaign.

Medal for Military Merit.—3rd Class: Lieut.-Colonel and Brevet Colonel (temporary Colonel) William H. S. Nickerson, V.C., C.M.G., R.A.M.C.; Lieut.-Colonel Montagu Marmion Lowlesley, D.S.O., R.A.M.C.; Major (acting Lieut.-Colonel) Osburne Ievers, D.S.O., R.A.M.C.; Captains James Rowland Hill, R.A.M.C., John Patrick, R.A.M.C.(T.F.), temporary Captain (acting Major) William Halliday Welsh, R.A.M.C., 4th Class: Temporary Captain James C. M. Bailey, O.B.E., R.A.M.C.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

At a congregation held on December 6th the following recommendation by the Council of the Senate on memorials concerning the relation of women students to the University was approved without opposition:

That a syndicate be appointed to consider whether women students should be admitted to membership of the University, and, if so, with what limitations, if any; and, alternatively, to consider, if women students are not admitted to membership, by what means the University could co-operate with the women's colleges or other bodies in the conferment of degrees on women students; and that the syndicate report on both these terms of reference before the end of the Easter term, 1920.

The syndicate will consist of the Vice-Chancellor and twelve others.

Approval was given for the proposed institute for parasitological research to be known as the Molteno Institute for Research in Parasitology.

The following medical degrees were conferred:

M.D.—H. J. S. Morton.

M.B., B.Ch.—H. H. Mathias, S. L. Higgs, F. T. Burkitt, N. Rumbold.

M.B.—L. R. Shore, D. V. Pickering.

B.Ch.—T. A. Jones, J. E. Sharp.

* Admitted by proxy.

UNIVERSITY OF LONDON.

A MEETING of the Senate was held on November 19th.

Sir Cooper Perry was appointed as from February 1st, 1920, Principal Officer. The post has been in abeyance since the resignation of Sir Henry Miers in 1915.

Intimation was received of a bequest of approximately £3,000 under the will of the late Mr. T. S. Hughes for the encouragement by scholarships or otherwise of original medical research at the University.

A resolution was adopted expressing appreciation of the generosity of the Worshipful Company of Goldsmiths in presenting to the London Hospital Medical College £15,000 National War Bonds for the endowment of a University chair of bacteriology bearing the name of the Company and tenable at that College.

The following teachers were recognized as teachers of the University in the subjects mentioned at the institutions indicated:—

Guy's Hospital Medical School: Dr. F. E. Shipway (anaesthetics).
University College Hospital Medical School: Dr. H. J. Shirley (anaesthetics).

St. Mary's Hospital Medical School: Dr. E. H. Kettle (pathology).

Hospital for Sick Children: Dr. R. S. Frew (diseases of children); Dr. D. N. Nabarro (bacteriology).

National Hospital for the Paralyzed and Epileptic: Mr. P. W. Saunders (neurology).

Royal London Ophthalmic Hospital: Mr. F. A. Juler.

It was reported that in view of the numbers of entries for the M.B., B.S. in October, 1919, the Vice-Chancellor had appointed Dr. James Calvert and Dr. S. P. Phillips additional examiners in medicine, and Sir A. Pearce Gould, Mr. W. F. Haslam, and Mr. W. Turner as additional examiners in surgery.

Professor R. T. Leiper and Professor Warrington Yorke, or failing him, Dr. John Rennie (ext.), have been appointed examiners in helminthology for the M.Sc. and M.Sc.Econ. examinations for internal students to be held in December, 1919. Dr. P. Manson-Bahr, D.S.O., has been appointed examiner in tropical medicine during the temporary absence of Dr. Daniels.

External students who have been debarred from presenting themselves for examination for medical degrees by service under the War Office, or Admiralty, or by hospital service in connexion with the war, or by other approved service in connexion with national defence will be, until further notice, and provided they comply with the regulations in all other respects:

1. Permitted to enter at the First Examination for Medical Degrees in either (a) Inorganic Chemistry and Physics, or (b) General Biology, subject to the approval of the External Council.

2. Credited with any subject in which they pass at the First Examination for Medical Degrees or Second Examination for Medical Degrees, Part II.

3. Permitted, if they fail in Forensic Medicine only in Group I of the Third Examination for Medical Degrees, to present themselves for re-examination in that subject only in order to complete the examination in Group I.

Sir Seymour Sharkey and Sir David Ferrier, F.R.S., have been elected chairmen of the Graham Legacy Committee and Physiological Laboratory Committee respectively.

Applications for the University chair of physiology tenable at the London Hospital, salary £800 a year, must be received by the Academic Registrar not later than the first post on December 31st. Envelopes should be marked "Chair of Physiology."

UNIVERSITY OF MANCHESTER.

DR. E. M. BROCKBANK, Lecturer on Clinical Medicine in the University, has been elected a member of the Court of Governors.

Dr. C. H. Tattersall, M.O.H. for Salford, has resigned his lectureship in public health administration owing to the increased duties of his position as medical officer of health.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

At a meeting of the College held on December 5th, Mr. John B. Story, President, in the chair, Major-General R. H. Sawyer, C.B., C.M.G., A.M.S., F.R.C.S.I., was unanimously elected a member of the Council in the place of the late Mr. Richard Dancer Purefoy.

Obituary.

JOHN BURDON, L.R.C.P., L.R.C.S.Ed.,

Newcastle-upon-Tyne.

On November 30th, after an illness of three days, during which he was attended by his friend Dr. James J. Campbell, Dr. Burdon passed quietly away in sleep at the age of 75. During the last two or three years he had been in declining health, owing to recurrent attacks of cardiac failure. Not well known to the present generation on account of his retiring disposition, he yet played an unostentatious but interesting part in social and religious life four decades ago. Licensed for the Wesleyan ministry, he left that body, owing to his breadth of views upon the doctrine of "eternal punishment." Finding refuge in at least one other section of Nonconformity, he remained in the ministry until he felt the call to what he regarded as more practical Christian work—first in the slums of East London, where he co-operated with the late Canon Barnett, and latterly in the practice of medicine.

He was of good old Durham stock, and having spent his boyhood in Cleadon near Sunderland, he was educated at the old College of Medicine and the old Newcastle Infirmary, where he was house physician to Sir Thomas Oliver, with whom he remained on terms of the most intimate friendship until the last hours of his life. In whatever company as a student circumstances found him his influence was always for good. He qualified in 1862, and for a few years he practised in Willington Quay; ultimately, as he had a large acquaintance in Newcastle, he removed to that city, where he became a busy and successful medical practitioner; almost every patient became at the same time a friend, for by his quiet, paternal, and sympathetic manner he endeared himself to all. For a period he was assistant physician to the Hospital for Diseases of Children, and surgeon to the Hospital for Diseases of the Throat and Ear. Thirty years ago he was the means of instituting a seaside camp for the poor boys of Tyneside, and by his instrumentality several lads each summer were sent to the huts on the sandy dunes at New Hartley, immediately south of Blyth. Dr. Burdon was, therefore, one of the pioneers of the seaside camps for boys. The good the change to the seaside did to the health and physique of the lads was remarkable,

as the writer can testify, for he acted as medical examiner of the boys before they went into the camp and on their return from it.

The attractiveness of John Burdon lay in his quiet and sympathetic demeanour, absence of malice, and in his thoughtful attitude towards the many-sided problems of life. He was at his best when alone with a friend to whom he could unburden himself of his pent-up thought. His command of language and his catholicity made him a pleasing conversationalist and a brilliant essayist. He wrote several poems, some of them of considerable merit. He was laid to rest in St. Andrew's Cemetery on December 2nd, amid the regrets of many friends. He has left one son; his wife died a few years ago.

WE regret to record the death, on November 6th, at the age of 74, of Dr. ALEXANDER GEORGE DUNCAN of Church End, Finchley. A native of New Pitsligo, Aberdeenshire, he spent the first few years of his professional life near his home, but settled at Stamford Hill in 1881. Here his sterling character and quiet painstaking, laborious, conscientious, and kindly attention to his patients soon gained for him an extensive middle-class practice. He was indeed an excellent family doctor, thoroughly interested in his individual cases, competent and always ready to investigate them, of sound judgement in prognosis, shrewd, experienced, and skilful in routine treatment. A few years ago he retired to Finchley to spend the end of his life near his son, Dr. Norman Duncan, and retain a parting interest in work. He was a man of high personal character, greatly respected by his neighbouring colleagues as a loyal, interesting, and valued friend, always ready to entertain them with fresh Scottish stories, which he told particularly well. He was three times married, his third wife surviving him.

DR. R. RAILSTON RICHARDSON, whose death took place in a nursing home in Edinburgh on November 19th, had been in poor health for some time. He graduated M.B., C.M. Edin. in 1897, after having in the same year obtained the Scottish triple qualification. For many years he acted as senior demonstrator in anatomy at Surgeons' Hall, and was most popular with the undergraduates frequenting the extramural school there. He also had a large practice in Edinburgh, in whose streets his tall slim figure was well known. He was honorary physician to the Princess Louise Argyll and Sutherland Highlanders' Association.

WE have to record with regret the death, on November 30th, of Dr. RICHARD HILL NORRIS of Aston, Birmingham. He was a son of the late Dr. Richard Norris, F.R.S.E., and took the diplomas of L.S.A. in 1875 and of L.R.C.S. Edin. in 1876, and the degree of M.D. Brussels in 1877. He was for a time assistant demonstrator of physiology in Queen's College, Birmingham, and afterwards settled in practice at Aston. He was appointed a magistrate for the county of Warwick in April, 1894, and was for some years a member of the Warwickshire County Council. He was 66 years of age and leaves a widow and a son and daughter.

Medical News.

LORD WALSHINGHAM, who died of pneumonia on December 3rd at the age of 76, was a trustee of the Hunterian Collection of the Royal College of Surgeons of England. He was a Fellow of the Royal Society and had been President of the Entomological Society. He was an authority on the micro-lepidoptera, and the collection of them which he presented to the Natural History Museum is the largest in the world.

IN a recent Chadwick public lecture, Dr. Cates, M.O.H. and school M.O. St. Helens, said that venereal disease was spreading among the civil population, with a consequent increase of ophthalmia in the newborn. In one district with a population of 100,000 persons there had been 70 per cent. more ophthalmia this year than in 1918.

GUY'S HOSPITAL has received from an anonymous benefactor a gift of £20,000.

THE fifth number of the *Bulletin of the League of Red Cross Societies* gives a narrative account by Captain J. T. Marshall of the visit of the medical commission of the League to Poland to investigate typhus and other epidemic

diseases. This supplements the report of the commission, of which we gave an account in the *JOURNAL* of November 1st, p. 565. It is announced that the Swiss and Polish Red Cross Societies have been admitted into membership of the League, and that Lieut.-General Sir David Henderson, the Director-General, is visiting America on business connected with the League.

SURGEON REAR ADMIRAL SIR ROBERT HILL, K.C.M.G., Medical Director-General R.N., has been appointed a Knight of Grace in the Order of St. John of Jerusalem.

THE house and library of the Royal Society of Medicine will be closed from Monday, December 22nd, to Saturday, December 27th, both days inclusive.

Letters, Notes, and Answers.

(CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.)

AUTHORS desiring reprints of their articles published in the *BRITISH MEDICAL JOURNAL* are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the *JOURNAL* be addressed to the Editor at the Office of the *JOURNAL*.

THE postal address of the *BRITISH MEDICAL ASSOCIATION* and *BRITISH MEDICAL JOURNAL* is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the *BRITISH MEDICAL JOURNAL*, *Aitiology*, Westrand, London; telephone, 2631, Gerrard.

2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate*, Westrand, London; telephone, 2630, Gerrard.

3. MEDICAL SECRETARY, *Medisecra*, Westrand, London; telephone, 2634, Gerrard. The address of the Irish Office of the *British Medical Association* is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

W. H. H.—The book on foods and their values most suitable for our correspondent's purpose is *The Elements of the Science of Nutrition*, third edition, by Graham Lusk, Ph.D., Sc.D., F.R.S. (Philadelphia and London: W. B. Saunders Co., 1917. 21s. net).

INCOME TAX.

T. H. C. inquires whether there is any stipulation as to length of service with regard to the "service rate," and, if so, what is its nature?

* * There is a stipulation introduced by the Finance Act of 1916, Section 31, to the effect that the special rate is to apply only where the person charged has within the financial year in question served (a) out of the British islands or (b) for at least one month continuously in the British islands. Consequently our correspondent would not appear to be entitled to the special rate for 1919-20 if his military service terminated before May 5th, 1919.

R. B. F., a civilian medical practitioner holding a full-time appointment on a medical board, asks if his salary is to be taxed at ordinary civilian rates, or whether he can claim to be assessed at the special military rates.

* * We are in the difficulty that, so far, the case of Curtis v. Holdsworth, dealing with the claim to service rates of army paymasters, has not been fully reported. The Board of Inland Revenue admits that the principle of that decision applies to temporary civilian doctors (including women doctors) employed at military hospitals, at any rate on terms implying full-time employment. We can see no distinction between those cases and employment under similar conditions on a medical board, but hesitate to express a definite opinion to that effect before seeing the full report in the Curtis v. Holdsworth case.

ORGANIC EXTRACTS IN DYSMENORRHOEA.

J. T. asks for information regarding the value of treatment for dysmenorrhoea by extracts of endocrine gland.

* * True dysmenorrhoea—that is, menstrual in time, and caused essentially by uterine colic—is due either to underdevelopment of the uterine muscle, or to clotting of the menstrual blood. The former condition may be successfully treated by thyroid extract, provided the treatment is instituted early enough. Ovarian extract may also help to stimulate the proper development of the uterus. When the colic is due to clots, pituitary extract may help by expelling the blood before it has time to clot. Suprarenal extract has also been used to counteract the excess of ovarian secretion to which the congestive condition of the endometrium in some such cases is due. References to the subject will be found in

The Principles of Gynaecology, by W. Blair Bell, B.S., M.D. London: Baillière, Tindall, and Cox. 1919. 38s. net; *Gynaecology*, by William P. Graves, A.B., M.D., F.A.C.S. (Philadelphia and London: W. B. Saunders Co. 1918. 7.75 dols. net); and in the *New System of Gynaecology*, edited by Thomas Watts Eden, M.D., and Cuthbert Lockyer, M.D. (London: Macmillan and Co., Limited. 1917. £6 6s. three volumes).

MARRIAGE OF COUSINS.

"ARIES."—The following paragraph from the third edition of *Heredity*, by Professor J. Arthur Thomson, well states, we believe, the most recent opinion as to the marriage of cousins:

"In regard to cousin marriages in mankind, the family history should be carefully scrutinized. The likelihood of unhealthy offspring will be very great if there are the same hereditary taints in the lineage of both parents. If there is a well defined family predisposition to certain diseases, the fact that the cousins are somatically healthy does not warrant their becoming parents. If two somatically healthy cousins belonging to a tainted family have what is called a single or simplex dose of the taint, the probability is that on the average one-quarter of the children would be unhealthy. On the other hand, if the family history is good on both sides, there is no biological reason why two healthy cousins, who fall in love with one another, should not marry and have children."

"GASSING" AND LIFE ASSURANCE.

DR. E. B. HAZLETON (Sheffield) asks for the experience of others as to the sequelae in the case of a soldier who has been "gassed," particularly as to his liability to bronchitis, or winter bronchitis, and pulmonary tuberculosis. How many years should elapse before he can be considered a first-class life from a life assurance standpoint?

LETTERS, NOTES, ETC.

MINISTRY OF PENSIONS MEDICAL SERVICE.

APPLICATIONS are invited for the appointment of a certain number of trained neurologists, especially those experienced in modern psychotherapy, to hospitals under the Ministry of Pensions. These appointments are resident, and terminable at one month's notice on either side. The salaries for the senior posts are from £600 to £700 a year, with lodging, fuel, and light. Application forms can be obtained from the Director-General of Medical Services (M.S.1 B), Ministry of Pensions, 14, Great Smith Street, Westminster, S.W.1.

THE CARLISLE EXPERIMENT.

J. S." writes to suggest that the results of the Carlisle experiment in liquor control should be submitted to a commission consisting of a lawyer, a statistician, and a member of the medical profession. The inquiry should, he thinks, include a comparison of the results in Carlisle, not with the rest of England, but with an area as nearly as possible resembling the Carlisle area in all respects.

THE MANDRAKE.

X" writes: I was much impressed by the Russian prescription for preserving a youthful appearance quoted by your correspondent last week. Our local chemist could not dispense mandragora, but I took the three glasses of port without it; whereafter I was "exactly the shape of a man sitting," and I am able to state that, although my age is 30, I looked (and felt) like 70 next morning.

A DUTCH MEDICAL CALENDAR.

MEDICAL art calendar has been published for several years at the Hague for the Netherlands Medical Association. We have received the issue for 1920. It is a sumptuous wall calendar and is illustrated by twenty-eight reproductions of photographs of pictures, drawings, and prints by Dutch masters; the title "medical" is justified by the subjects of the pictures selected. Special praise may be given to the portrait of Boerhaave, by Gelder, at the Hague, and to a really brilliant print of the portrait group at Amsterdam representing Fontanus (Johann Fonteyn) giving a demonstration on a skull (1625). A curious drawing after Peter Bruegel (1569) is reproduced, showing a dancing ceremony at Molenbeek on St. John's Day, in which may be seen several portly matrons capering vigorously, encouraged by two bagpipes and restrained by male friends, who appear much perturbed. The other reproductions include pictures, some well known, as, for instance, Rembrandt's lesson in anatomy at the Hague, and others less familiar; among the latter is an eighteenth century picture showing a bedroom, a newborn babe, its parents, nurse, and grandmother, and a nineteenth century painting of the store-room and laboratory of a country apothecary. Both show that the Dutch tradition of brightly lighted interiors was still strong at those dates. Altogether Dr. A. Sikkels, described as the father of the calendar, and the Netherlands Medical Association may be congratulated on the way in which their suggestion has been carried out by the publisher, Mr. J. Philip Kruseman (384, Frankenslag, the Hague). He may be advised to stick to Dutch photographers, who are evidently more skilful than German. Any one wanting a Christmas present a little out of the common might do well to get a copy of this *Geneeskundigen Kunstkalender*. It is supplied for 6s., post free.

AFRICAN EXPLORERS' INSTRUMENTS.

MESSRS. W. B. HILLIARD AND SONS, of Glasgow, write: The description of the historic Livingstone case of instruments on page 754 of your last issue is correct, but the name should be W. Oswell Livingstone, not "Oswald," as he was named after the great traveller's friend and patron, Mr. W. Oswell. We supplied many surgical instruments to Livingstone and the medical missionary stations in which he was interested. Mr. J. B. Hilliard was W. Oswell Livingstone's class-fellow and intimate friend in Glasgow University, groomsmen at his wedding, godfather to his only child, and is now trustee for his widow. We have the great traveller's well-thumbed pocket bible, various instruments, and other mementoes, which have aroused interest in many missionary exhibitions throughout Britain to which they were lent. Mr. Hilliard has visited the Zambesi, the town of Livingstone, and many scenes of the traveller's labours, and has had frequent intimate talks with J. Young of Kelly, Gordon Bennett, and H. M. Stanley in Egypt and at home in connexion with Livingstone and African travel.

DR. J. J. HANLEY (Motherwell) writes: It may be of interest to your readers to know that the barometer (Negretti and Zambra, London) used by Stanley is to be seen at Blackrock College, Dublin. The famous explorer stayed, I believe, for a short time at one of the mission stations of the Holy Ghost Fathers, and gave the mission the barometer above referred to. I had the pleasure of seeing it and the maker's name on it. It seemed to be in good condition though age-worn.

A CASE OF QUADRUPLTS.

DR. J. LIVINGSTONE LONDON, M.O.H. for Hamilton, has been good enough to send us the following particulars relating to the recent birth of quadruplets in that town, obtained from Dr. John Thomson, who was called in after the event, and from Miss A. Melville, the burgh health visitor:

The father, a Scotsman, 27 years of age, is a miner by occupation. The mother is Irish and 28 years of age. They have been married for four years and live in a single apartment. There are two previous children, aged 3 years and 1 year and 10 months respectively. There is no history of multiple pregnancies on either side of the family. The quadruplets consist of three boys and a girl; the weights at birth were 5 lb., 5 lb., 5 lb., and 5 lb. respectively. They were born at 1.10 a.m., 1.40 a.m., 3.40 a.m., and 3.50 a.m. The confinement was at "full term." There were two placentae, one with three cords and one with a single cord. The mother and children are all doing well.

The following vital statistics for the month of October in Hamilton, the town where these children were born, may be of interest, although they have no direct bearing on this remarkable birth: Hamilton is a town of 39,900 inhabitants; the principal industry is coal mining. During October, 1919, the birth rate was 39.6, being the highest in the sixteen principal towns (that is, with a population over 30,000) in Scotland. Perth was lowest with 21.4. For the same period the death rate was 7.7, the lowest in the sixteen principal towns, Edinburgh being highest with 13. The infantile death rate was 43 per 1,000 births, being the second lowest in the sixteen principal towns. Ayr was lowest with 36, and Dundee highest with 140.

Our informant adds that G. Veit, from the records of 13,000,000 births in Prussia, states that twins are born once in every 89 births, triplets once in every 7,910, and quadruplets once in every 371,125 births.

THE price of the second edition of Dr. Cecil Webb-Johnson's book on *Painless Childbirth and Twilight Sleep*, noted in our issue of November 29th, p. 714, is 10s. 6d., and not four rupees as stated.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 68, 71, 72, 73, 74, and 75 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 69 and 70.

THE following vacant appointments for certifying factory surgeons are announced: Derby (Derby), Gosport (Hants), Limerick (Limerick), Lostwithiel (Cornwall), Rotherham (Yorks, West Riding), Southend (Essex).

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.

An Address ON THE EVOLUTION OF THE SURGEON AND ON HIS TRAINING.*

DELIVERED TO THE LIVERPOOL MEDICAL INSTITUTION

BY

W. THELWALL THOMAS, CH.M.LIVERP., F.R.C.S.,

PRESIDENT OF THE INSTITUTION.

PROFESSOR OF REGIONAL SURGERY (IN CHARGE OF THE DEPARTMENT
OF SURGERY), UNIVERSITY OF LIVERPOOL; SURGEON TO THE
ROYAL INFIRMARY, LIVERPOOL.

Last year it was my pleasure to bring before you some observations on "The evolution of the voluntary hospital and its future." To day I hope it may be of interest to spend some minutes in considering the evolution of the surgeon and his training.

Surgical practice, or the craft of surgery, is as old as the human race. There are evidences in the Neolithic period of the highly developed and important operation of trephining, in skulls from which large pieces of bone had been removed by flint instruments; that recovery took place in many cases is evidenced by the rounding off of the edges of bone by the healing process. We have a right to assume that surgical procedures of a lesser degree and the treatment of broken bones must have been of ordinary occurrence.

Coming to newer times, with which archaeological research has made us familiar, we find during the period of Egyptian civilization, which probably dates back 8,000 years, abundant proof of a knowledge of anatomy and a skill in the surgical treatment of fractures by bandaging and splints equaling, if not excelling, as regards bandaging, any reverse or spica seen in the present day. There is not a single form of modern bandaging which was not practised in the wrappings of an Egyptian mummy, and the specimens of well united fractured bones and some unearthed examples of fractures, with their surrounding splints in position, demonstrate methods in use at the present time.

On the walls of the temples may be seen bas-reliefs representing limbs which had been removed by amputation, with instruments portrayed similar to those employed in our time, and it is clear that the art or craft of surgery was well developed in the land and in the time of the Pharaohs. The description of the first operation performed in Mesopotamia, outlined in the second chapter of Genesis, must have been written by someone thoroughly conversant with surgical art, for it draws attention to a degree of anaesthesia necessary for the successful performance of the operation of subperiosteal excision of a rib, without the knowledge of the patient, and we note that the wound healed by immediate union, a lightning variety of what we now aim at and call "first intention." The specimen removed—in its transformed state—is with us to-day, adorning every land.

Racing down the centuries we arrive at the period of Greek civilization, where before the time of Hippocrates (born 460 B.C.) surgical practice was inextricably mixed up with magic, mythology and priestcraft, for it was considered profanation to dissect or mutilate the human corpse. Hippocrates delivered medicine and surgery from the thralldom of superstition and philosophy. He was in all probability the first public teacher of the healing art, the first to disclose the secrets of his art to the world, which hitherto had only been whispered in secret, sacrosanct assemblies. He possessed a wonderful working knowledge of human anatomy, which could only have been acquired by dissection, probably in secret, for it was not until a century after his time that dissections became abundant and open in the Alexandrian School.

Many of the operations described in his works would embellish a modern textbook. To quote from Dr. Adams's *Life of Hippocrates*:

"In Surgery he was a bold operator; he fearlessly, and, as we would now think, in some cases unnecessarily, perforated the skull with the trepan and the trephine in injuries of the head. He opened the chest in empyema and hydrothorax. His extensive practice, and no doubt his great familiarity with the

accidents occurring at the public games of his country, must have furnished him with ample opportunities of becoming acquainted with dislocations and fractures of all kinds, and how well he profited by the opportunities he thus enjoyed every page of his treatises 'On Fractures' and 'On the Articulations' abundantly testify. . . . In his views with regard to the nature of club-foot, it might have been affirmed of him a few years ago that he was twenty-four centuries in advance of his profession when he stated that in this case there is no dislocation but merely a declination of the foot; and that in infancy, by means of methodical bandaging, a cure may in most cases be effected without surgical operation."

Orthopaedic surgery is much older than some have imagined.

Until the eleventh century of our era the works of Hippocrates and of the Romans, Celsus and Galen (who were little better than copyists) were the main sources of all information in medicine and surgery.

In the fifth century commenced the great blank of the dark ages, during which European civilization was overcome by the barbarians from the North and East, and all progress was arrested in the welter, and so remained for over five hundred years. At the end of this time—eleventh century—surgery has been described as in a lower status than it was among the Greeks in the Trojan war. Monasteries became the depositories of manuscripts—in fact, the libraries; the practitioners of medicine and surgery were the monks and vagrant quacks, or locally-styled wise men, who did what they could, and extracted whatever they were able in the way of remuneration for their services. The monks scandalously neglected their religious duties in the more lucrative and versatile calling of perambulating practitioners of medicine and surgery, until it was decreed that no ecclesiastic should be absent for more than two months from his monastery during a year. At this time (1092) monks were forbidden to wear beards, and shaved faces at once became the fashion among the laity; the calling of barbers immediately rose to be remunerative and busy.

The neglect of religious duties by the monks led to many Papal Bulls limiting their outside activities, and the practice by them of surgery was finally placed outside their province by the Council of Tours, 1163, where it was decreed that the Church "abhors the shedding of blood," which was denounced as unfit for the hands of priests and men of learning. Surgery became taboo, and nothing more than a servant to medicine in every sense of the term.

The physician had the sole privilege of prescribing internal medicines and also of judging and directing when surgical procedures were necessary. The inferior being, the surgeon, was only called upon to use his knife when ordered to do so by the exalted physician, and then promptly took leave of the case. Although there had been a development of surgery apart from medicine at the Alexandrian School, it became swamped in the dark ages, but in spite of the derogatory position of the surgeon, there were in these ages a few who held up the torch (or scalpel), but at any one period in the then known world they could be counted on the fingers of one hand.

In the Anglo-Saxon Leech Book compiled about 1100 we first find illustrations of surgical operations, but they do not denote any advance on proceedings described by Hippocrates. The revival of letters and the foundation of universities at this period (Paris 1110, Oxford 1167, Cambridge 1209, to mention a few) improved matters as regards general learning, but the first real attempt to improve the teaching of medicine took place at Salerno (Italy), where the enlightened Roger II of Sicily founded a school of medicine in 1137—to become a university in 1252—but a few years later the general university functions were transferred to Naples, leaving Salerno its medical school, which formulated a definite curriculum and degree. The details read as if the General Medical Council of our time had been consulted in its framing. I give some paragraphs:

No one shall be permitted to study medicine until he has given his attention to logic for 3 years.

In the study of medicine he must spend 5 years, during which period he must also acquire a knowledge of Surgery, for this forms a part of Medicine. After this, but not before, permission may be given to practise, provided that he passes the examination prescribed by the authorities, and at the same time produces a certificate that he has studied for the period required by law.

The teachers must during the period of five years expound in their lectures the genuine writings of Hippocrates and

* The address was illustrated by lantern slides of early surgical operations and instruments.

Galen in the theory and practice of Medicine, but even when the prescribed five years of medical study are passed, the doctor shall not forthwith practise on his own account, but for a full year more he should habitually consult an older, experienced practitioner in the exercise of his profession.

No surgeon shall be allowed to practise until he has submitted certificates in writing of the teachers of the faculty of Medicine that he has spent at least one year in the study of that part of Medical Science which gives skill in the practice of Surgery, that in the colleges he has diligently and especially studied the anatomy of the human body, and is thoroughly experienced in the way in which operations are successfully performed, and healing is brought about afterwards.

It is a curriculum that must excite our admiration and in some respects might be copied to-day; it was a great step forward, and bears the imprint of much thought and appreciation of the learning required for the noble profession, and, as will be noticed, lays special stress on the manual part or craft of surgery. The foundation of the School of Salerno was on so lavish a scale that at a much later period it was averred that there were as many professors as students.

A century later we have an interesting work in manuscript by Guy de Chauliac (born 1300) with illustrations (better executed and more artistic than in the Anglo-Saxon Leech Book), giving a much better impression of the performance of several operations. This became the classical work for succeeding centuries.

Confining our attention to England, we find that the barbers had developed minor surgery, forming themselves into a Guild of Barber-Surgeons, and becoming in 1462 a City Company—with a Royal Charter, and a system of apprenticeship; the liverymen were entitled to four apprentices and the freemen to three; they had ordinances controlling the training and admission by examination to their company—thus granting a licence to practise—with severe restrictions, under pains and penalties, for irregular practice on the part of quacks.

There was also an independent Guild of Surgeons; the members were probably few in number, and they were extremely jealous of the power of the Barbers, and managed to secure a charter thirty years later (1492), and, twenty years afterwards, were instrumental in bringing about the passage of an Act of Parliament (1511) providing that no one should practise medicine or surgery in London, or seven miles around, without being first examined, approved and admitted by four doctors or expert surgeons acting under the Bishop of London or the Dean of St. Paul's, and beyond that seven miles, approved by similar bodies under a bishop or vicar-general. Thus we find two corporations having much the same sort of power, but the confusion and competition were finally done away when, in 1540, they were merged by Act of Parliament into the United Barber-Surgeons' Company, perpetuated in art by the magnificent picture—considered the finest example of Holbein's work—still in the Barber-Surgeons' Hall. The artist, by artistic licence, has placed a charter and seal in the hand of Henry the Eighth instead of an Act of Parliament, usually represented by a scroll; an Act, of course, was never presented to any corporation!

It is interesting to find from time to time in the *Annals of the Barber-Surgeons* the names of examiners in surgery; attendance in lectures and demonstrations was compulsory, and absence had to be explained. The universities took hardly any interest in surgery, being devoted to the humanities and physic. For two centuries this arrangement continued. Much progress can be observed in important directions during this period throughout Europe, as illustrations in the works of Scultetus, Paré, and Heister show.

With the advent of the eighteenth century came the great development of voluntary hospitals, providing special opportunities for the practice of surgery. This century produced Cheselden (1683-1752), Pott (1713-1788), John Hunter (1728-1793), Abernethy (1764-1831), Astley Cooper (1763-1841) in London, and in the provinces Park and Alanson, in Liverpool, and others who distinguished themselves in many provincial towns. John Hunter by his researches was bringing into existence the science of modern surgery, and he has been styled the greatest man who ever adorned the profession previous to Lister.

The surgeons dissociated themselves from the barbers in 1745, becoming the Masters and Governors and Commonalty of the Art and Science of Surgery. In 1800 they obtained a charter for the Royal College of Surgeons

of London—changed later (1843) to the Royal College of Surgeons of England—when it was enacted a penal offence for anyone to practise surgery in London or seven miles around without being examined and licensed by ten of them.

Progress was rapid in this century, being synchronous with, and largely the result of, the great increase in number of the voluntary hospitals, enabling the enthusiast quickly to put into practice the developments of the science of surgery, for hitherto the practice of surgery had been little more than a skilled handicraft. When we read the works published during this period and on into the middle of the nineteenth century, before the introduction of general anaesthesia, it is difficult to know which to admire the more—the courage, dexterity, and celerity of the operator, or the tough fibre and dogged stoicism of the patient. To try to picture the performance of amputations, excision of joints, or the ligation of arteries without general anaesthesia makes one shudder, and it is no wonder that great surgeons were few in number. The art of surgery had reached a very high level in the hands of real masters. All through the ages instruments were devised and many of them have not yet been improved upon, and I should advise anyone desirous of inventing some new instrument to consult old surgical works—lest he find his idea anticipated by centuries.

The combination of many qualities essential to a surgeon (in the days before chloroform) was met with in few individuals only, and although the pathology of wound infection and treatment were imperfectly understood, awaiting the development of the microscope and bacteriology, the results were in many instances marvellous. I mentioned last year a series of amputations by Alanson, with recovery in all in a few weeks without complications, and Hunter tied the femoral artery in a long series of cases with success in the cure of popliteal aneurysm.

A complete mastery of the craft was essential—a sureness, a boldness, and a fearlessness, with complete control of the instruments used, were especially necessary, for we can imagine the difficulties due to the movements of the patient and too often the disturbing effect of his moans and cries.

The introduction of general anaesthesia in 1846 threw wide the possibilities of surgical interference in all classes of patients, but, unfortunately, at the same time allowed all and sundry, many with little training, to try their prentice hands on the unfortunate sufferer. The need for quick, clean, bold strokes became less urgent, and I am of opinion that the craft deteriorated as a consequence; operations increased in frequency, and the death rate from shock, haemorrhage, and sepsis became very high, and many of us can recall the horror that existed in our student days in the minds of the public at the very thought of a surgical operation.

The great modern advance in the science of surgery dates from Lister. Antiseptic surgery was very tardily accepted after a tempestuous period of acrimonious discussions, comparable only to theological disputations, which were certainly entertaining to us students; and I well remember in the hospital where Lister carried out his pioneer work and demonstrated his control over sepsis and abolished hospital gangrene and pyaemia from his wards, that the surgical staff had some members in 1883 who could not (or would not) take advantage of the principles, but whose wards were quite readily diagnosed by their smell. The genesis and development of bacteriology has been so rapid that it is hard to realize that as students we were shown a few "germs" as a special treat through the only high-power lens then in Liverpool, and that the outstanding feature of the British Medical Association Meeting in Liverpool in 1883 was the demonstration of micro-organisms under microscopes.

The great development of the science of surgery, based on advances in collateral subjects, has taken place within a generation, and it may astonish some members of my audience to learn that during my house-surgeoncy the abdominal cavity was not opened, except for the removal of a cystic ovary so large as to cry out for release.

The teaching of the sciences pertaining to surgery has taken up more and more time, and has overshadowed the training in the art, and this address is really intended as an appeal for more attention to the manual side or craft of surgery. Instruction given to students is too much

interfered with by examinations, and these have been so divided and subdivided that the aspirant seems to be continually reading for some portion or snippet of information. In spite of the lengthening of the curriculum to five years some time ago, the period devoted to the manual or clinical side of general surgery (and medicine) is encroached upon by the demand for attention to all sorts of side shows.

The training in surgery needs serious modification, for under present requirements for the final examination too little evidence of familiarity with the art is asked for, and it is possible for a medical student to obtain a degree or diploma without having performed a single operation on the living person or having set a single fracture, yet the day following, he is competent by law to undertake any surgical investigation into any cavity that his courage and enterprise may prompt him to explore. If he aspires to an accepted special diploma in surgery, evidence is not demanded of any real training in the technical side of surgery. He need neither have held a house-surgeoncy nor have performed a single operation on the living. His acquaintance with operations need only have been obtained as a student in the class of operative surgery, and those of us who have conducted such a class know how unsatisfactory the material often is, and how limited and inefficient the training must be, except possibly in the grosser operations on the extremities—rare in real life. The principal proceedings on the abdominal viscera cannot be satisfactorily carried out, and layer suturing on the stomach and intestine in the cadaver is almost valueless.

Examination methods are no different from what they were thirty years ago, in spite of the enormous advance in surgical operations alone; the occasion of judging technique being operations on the cadaver, when vessels do not bleed and muscles do not retract.

Having received this super-qualification, the so-called surgeon, if lucky enough, may succeed in obtaining an appointment as an assistant surgeon to a hospital, and he now begins to practise the Art of Surgery and endeavours to become proficient, entirely on his own resources, without the guidance or criticism of any one. He does his best, and in time may become a skilled surgeon—but at what cost to the public? The phrase "that an oculist ruined a hatful of eyes before performing his first successful cataract operation," although an exaggeration, forcibly drew attention to our deficiency in technical education.

The time has arrived when reorganization in the teaching of practical surgery must take place if we wish to retain our position in the surgical world. It could be arranged that students in their final year should be appointed as assistant house-surgeons or clinical assistants in the out-patient or casualty departments, under a special surgical officer or assistant surgeon, and there taught to perform minor operations under careful supervision; for although as dressers they may have learnt details of aseptic surgery, it is only by practising them that they can acquire a thorough and practical knowledge, and they are as important in minor as in major operations. It should be a requirement of the universities and qualifying corporations to demand certified evidence of definite operations creditably performed, so that we may feel assured that the student when successful is not only able to pass the written and *viva voce* parts of examinations, but that he has been efficiently trained in the manual portion of his profession, that he is really fit to be let loose on the public as a skilled practitioner as well as a scientific one.

The suggestion is nothing more nor less than true apprenticeship.

The acquiring of good aseptic methods entails much time and trouble on the part of teachers and taught, and it may even become necessary to formulate a standard, in order to prevent deterioration, and minimize a tendency to degeneration into mere ritual.

The demands of modern surgery are great, and the public have a right to know that when a student becomes qualified as a surgeon he will prove a real help, and not a possible danger.

During the war we had, of necessity, to appoint senior students as casualty assistants and house-surgeons, and we were allowed the great advantage of diminishing the large number of lectures still demanded by examining bodies, a relic of the ages when textbooks were non-existent, and it was gratifying to notice how the men (and women) rejoiced in being trained in the practical side of

their work. They were brought into intimate contact with diseases and accidents, and the keen interest awakened by this relation was pleasant to see. They acquired aptness in minor surgery and in the after-treatment of cases that showed itself in the improved results in the practical and clinical parts of their final examinations.

To carry out such a scheme additional teachers, prepared to devote sufficient time to ensure thoroughness, must be found. The work in a good surgical clinic of the present day is so great that I am sure it can, with advantage, be modified and improved at the same time by providing the requisite help to supervise and instruct students.

If the higher degrees in surgery required a candidate to present evidence of having been a house-surgeon, and later an assistant for a few years to an acknowledged surgeon, preferably in a teaching hospital, we should have at once the material at hand to inaugurate the change. Under the "chief" would be graded assistants occupying posts for a few years, responsible to him for allotted cases, their elucidation, treatment, and after-care; and promotion to the more serious work should be by merit. Full notes of a number of cases that had been under his care should be presented, as evidence of his proficiency in the art and science of surgery, before a candidate could appear for his final examination. The occupants of these posts would assist in teaching students, and should be remunerated to prevent the undue handicapping of anyone not endowed with a private income.

Looking into the future, it is clear to me that increased provision must be made for dealing with surgical work throughout the country, and we shall see the day when every county and small borough hospital must possess on its staff a fully trained surgeon (or surgeons) devoted to the practice of surgery in the institution and the surrounding neighbourhood. The work is already overwhelming, as the long waiting lists of patients for the large institutions testify. It is not ideal to expect practitioners of medicine, without special training in surgery, to be responsible for dealing with grave surgical emergencies, or major surgery generally; it is not just to their reputations, nor is it in the best interest of the community. Under such a scheme as is outlined above, there would in a few years be men available for such positions.

It is interesting to find that our American and Canadian friends have realized the weakness of the position, and in founding the American College of Surgeons have insisted on efficient training. I will quote only some of their regulations for the Fellowship, received a few days ago from the secretary. They are confirmatory of my thesis.

He (the candidate) shall give evidence that he has served at least one year as intern in a creditable hospital and two years as a surgical assistant, or he shall give evidence of an apprenticeship of equivalent value. Five to eight years, after graduation in medicine, and devoted to special training and to practice, are normally the time requirement for eligibility to Fellowship, and the examination in the art and technique of surgery consists of, first, fifty complete case records to be submitted by the candidate of his own work performed by himself; secondly, fifty cases in brief abstract of major work for which he was responsible, or in which he acted as assistant. . . .

The professional activity of the candidate shall be limited to the study, diagnosis, and operative work in such specialty or specialties of surgery as the candidate may himself designate as follows: First, if the candidate resides in a city of less than fifty thousand inhabitants, at least 50 per cent. of his professional activity shall be limited to the study, diagnosis, and operative work in such specialty or specialties as stated. Secondly, in cities of over fifty thousand inhabitants, at least 80 per cent. of the professional activity of the candidate shall be so limited.

It will thus be noticed that after a careful training for three years evidence of a further period devoted to practice of surgery, and including fifty complete case records or major work performed by himself, are essential.

The American and Canadian public can rest assured that a Fellow of the American College of Surgeons is a trained and efficient surgeon.

The performance of a surgical operation requires, in addition to a knowledge of the science of surgery, minute attention to many details and a skilled use of instruments only obtainable by long training, and every surgeon should aim at producing, each time he operates, a perfect work of art, just as much as a true artist is always endeavouring to create a masterpiece by his brush and pigments, his chisel or his pen. He who approaches the ideal treats

tissues with gentleness, yet firmness, neither scratching like a domestic fowl on a dust-heap nor mangling anatomy like the carnivora.

I trust that these few remarks may help forward the plea, not for less science, but for a more thorough training in the art of surgery.

CHRONIC INTESTINAL STASIS IN CHILDREN.*

BY

GODFREY TAUNTON, M.R.C.S., L.R.C.P.,

SURGEON, ST. BARTHOLOMEW'S HOSPITAL, CHATHAM.

CHRONIC intestinal stasis is apt to be regarded as a condition affecting maturity because it is generally after this stage of life has been reached that patients present themselves for treatment, but only a few, if carefully questioned, fail to give a history which leads to the suspicion that their condition started in childhood or early infancy.

Chronic intestinal stasis in children produces ill effects in several ways. In the first place, from autointoxication—the introduction of poisons into the blood stream through the intestinal mucous membrane affecting harmfully all the tissues of the body. These toxins are produced normally during digestion by the micro-organisms naturally present in the lumen of the bowel, and often in addition by other micro-organisms which are able to establish themselves only in the presence of stasis. The mucous membrane of the intestine loses its function of absorbing only those products of digestion needed by the body and allows the absorption of these poisons, which in the natural state are prevented from passing through. In the second place, it produces ill effects by bringing about a condition that leads frequently to infection of the sterile gall bladder and pancreas, and of the appendix, which cannot be claimed to be sterile. In the third place, it produces ill effects in the bowel itself.

The portion of the intestine in which stasis occurs is dilated, and from the constant weight of its contents that part of its mesentery is lengthened, and a loop is formed which tends to gravitate towards the pelvis. Ulcerative processes, often tuberculous, are common, and by many cancer of the bowel is regarded as the end result of stasis.

So great is the misery produced in later life that if, as a result of its study in children, the condition can in some cases be prevented, in some cured, and in others improved, a great advance will be made, and we shall see fewer of those chronic invalids—dyspeptic, neurasthenic, incapable of performing useful work or enjoying active pleasures, with a distaste for food and an abhorrence of sexual intercourse. The earlier this condition is recognized the easier it is to effect a cure, and in some cases in which an operation is called for it is one of less severity than in later years; in far the greater number of cases at an early age an operation is not necessary—other treatment will prevent the progress of stasis and ultimately overcome it.

At no age than that at which the tissues are developing is it more important that they should be supplied with blood free from contamination with these toxins, which are probably absorbed where the stasis occurs in the bowel; the part where absorption is most evident is in the last foot or so of the small intestine. It is usually held that the function of the large intestine is the absorption of water from our digested food, and is purposely designed to promote a certain delay to allow time for this purpose. A great deal of support is given to this by those cases in women where the bowels only act once in every two or three weeks, and in cases of megacolon (Hirschsprung's disease), in neither of which are any symptoms of auto-intoxication similar to those of chronic intestinal stasis found. It is certainly often the case that controls in the large bowel may lead to back pressure in the small, either causing the ileo-caecal valve to be incompetent, or by producing a kink in this position by the drag of a caecum which has descended into the pelvis; in these cases the stasis in the ileum is secondary and not primary.

Chronic intestinal stasis may be classified as:

1. Congenital.

At some point in the bowel there is a shortness of mesentery relative to the rest, producing a kink most marked in the upright position, that portion of bowel being held up by this short mesentery at a higher level than the rest. This kink forms a control to the easy passage of intestinal contents. These congenital cases are most frequently caused by the mesentery of the appendix taking its origin higher up, and preventing the full descent of the caecum from its position under the liver in early life; they may also be due to the mesentery of the appendix arising from an attachment more towards the middle line and controlling the last few inches of the ileum.

2. Acquired.

The kink here producing the control is caused by the formation of bands or membranes. These acquired bands are often developed in conjunction with the congenital variety.

3. Neuropathic.

As this condition does not come within the scope of this paper a short reference to it only is necessary. It is marked by great lengthening of the mesentery and dropping of the bowel, the transverse colon often lying in the pelvis. The length of the transverse and the pelvic colon is increased. Its cause is probably some faulty development of the nerve supply, probably at the point where the splanchnic gives place to the systemic. These cases are those in which the large bowel is functionless, and often calls for colectomy.

In acquired chronic intestinal stasis and in many cases of congenital there are to be found certain bands or membranes connecting the parietal peritoneum which lines the abdominal wall with the visceral peritoneum covering the bowel and its mesentery. These have been described by Lane and attributed to the crystallization of lines of resistance to downward displacement, and at first they perform a useful function by the support they give to the bowel; but later, by the contraction to which all fibrous tissue is prone, they produce a harmful effect by kinking and obstructing the lumen of the bowel. These bands are to be found connecting the parietal to the visceral peritoneum in the following positions: On the outside surface of the caecum, ascending colon, hepatic and splenic flexures, and descending colon; on the under surface of duodeno-jejunal junction, terminal loop of ileum, transverse colon, and sigmoid, and binding together the proximal and distal arms of the hepatic and splenic flexures.

In appearance and consistency they vary; the band may be a thin, transparent, colourless membrane like the areolar tissue found in suet, and, when divided, leave the two surfaces of peritoneum unaltered in appearance and free from bleeding; or it may be a more opaque fibrous membrane with small capillary vessels ramifying in its substance, which on division shows the peritoneum to have lost some of its glistening polish with a few points oozing a small drop of blood; later the bands may contain vessels which require ligature on division.

The formation of these membranes and bands leads first to an obliteration of the original angle at the deflection of the peritoneum from the abdominal wall to the base of the mesentery, until gradually the whole surface of the mesentery and the posterior wall of bowel becomes attached to the posterior abdominal wall, and later this attachment creeps up the side of the bowel until that part which is opposite to its mesentery becomes fixed. At this stage a half-torsion of the bowel is produced. The kinking is thus due to the descent, when in the upright position, of the bowel, which at this point is held up by the shortening of its mesentery and the half-torsion just referred to.

In well advanced cases the extent to which the intestine can be drawn up to an incision through the anterior abdominal wall is dependent on the amount of mobility allowed by the subperitoneal fat to the parietal peritoneum of the posterior abdominal wall and the white line of peritoneal demarcation is seen close to or attached to the wall of the bowel. Careful division of the attaching membrane at this line of demarcation allows this fold of peritoneum, which seemingly is mesentery itself, to retract, and the true mesentery may be dissected out to its original length. The loop of the bowel, which could

* A paper read at the annual meeting of the Kent Branch of the British Medical Association.

only be brought up to the operation wound, may now be drawn several inches out of that wound.

In the under surface of the mesentery of the last few inches of the ileum, and in the same position at the sigmoid flexure, are often to be found in relation to those bands and membranes two conditions which I have not observed in other positions: (1) The controlling membrane near its centre has a flat mass of white fibrous tissue irregularly stellate in shape, with fibrous lines radiating from its many processes in the substance of the more transparent membrane; (2) often when dividing the controlling membrane distinct spaces lined with peritoneum are to be seen sometimes communicating with the general peritoneal cavity by a small opening like a diminutive lesser peritoneal sac, and in some cases a closed space and no communication can be demonstrated. These two conditions, unlike the bands elsewhere, do not lend themselves to the explanation that they are formed by the crystallization of lines of force to prevent descent. They are not to be found in every case—either or both may be present, and always in conjunction with bands as originally described.

The function of a serous membrane is to allow movement between two surfaces and to reduce friction to a minimum. If for any reason the function of a tissue is not performed, atrophy of that tissue occurs and fibrous tissue takes its place. In the case of the peritoneum, the endothelium is lost, and its place is taken by fibrous tissue, and when peritoneum is in contact with peritoneum without movement between its apposed surfaces, fibrous tissues will bridge the potential space.

The functions of the peritoneum are brought into action by the respiratory movements, movement of the bowel by its own muscular action, and movement of the body itself.

Respiratory movements are continuous, and for this reason the most important for our consideration. In inspiration the upper half of the abdominal cavity is increased in cubic capacity, because the downward obliquity of the ribs is diminished and they assume a more horizontal direction; the lower half of the abdomen is correspondingly diminished, the anterior muscular wall below the umbilicus becoming less prominent. The diminishing effect to this increase in the upper half produced by the diaphragm assuming a flatter line during inspiration is relatively small. In every complete inspiration the movable small and large intestine is displaced upwards, and in expiration moves down again. In diaphragmatic breathing pure and simple, without any costal breathing, the opposite occurs. During inspiration the upper half of the abdomen is diminished in size from descent of the diaphragm, and the lower half increases owing to the muscular wall being pushed out, and there is in inspiration a downward movement of intestine, with a slight tendency to an upward movement in expiration. The result is that those segments of bowel lying in contact with the floor and sides of the false pelvis lie stagnant. It is here that these two conditions of stellate fibrous patches and enclosed peritoneal spaces are found.

In a large proportion of cases of chronic intestinal stasis in children it will be observed that their carriage of body is that which is so aptly described by Lane as the symmetrical posture of rest. It is the attitude assumed during temporary tiredness or loss of tone. The lumbar curve is diminished and the dorsal increased. The lower ribs are less prominent and their downward obliquity is so pronounced that laterally the rib margins approach the iliac crests and the xiphisternal notch is narrow and long. The upper half of the abdomen is constricted and the lower protuberant. During rest breathing is to all intents and purposes diaphragmatic, and only during exertion does costal breathing come into action to a small extent.

I feel sure that the assumption of this attitude in infancy or childhood lays the foundation of the conditions found causing chronic intestinal stasis, and that its course is progressive, unless means are taken to rectify the faulty posture. Assuming the adoption of this attitude in a child for any appreciable length of time, the intestines, large and small, tend to lie at the lowest point possible, pushed down by the descent of the diaphragm to the extent allowed by the stretching of the lower abdominal wall, and returning on relaxation of the diaphragm by the elasticity of that wall. They lack the greater range of movement imparted upwards by the suction force produced by costal inspiration and downwards by the impulse

of the muscles attached to the ribs during expiration. The effect of this is that the bowel tends to be continually forced down and to drag on its mesentery; where the lines of force are produced, fibrous bands are formed, and in those places where two peritoneal layers are deprived of movement between their apposed surfaces—namely, the under surface of the mesentery of the terminal loop of the ileum with the parietal peritoneum covering the iliacus and psoas muscle on the right side and the under surface of the mesentery of the sigmoid and corresponding peritoneum on the left side—there the peritoneal endothelium will atrophy from disuse of its function and will be replaced by fibrous tissue which will bridge the potential space between the two layers of peritoneum and account for the two conditions—stellate glistening patches and trapped peritoneal spaces.

The difference between nasal and oral breathing is simply one of resistance. If a child breathing through the nose be watched it will be noticed that the chest expands during inspiration by the action of the muscles attached to the chest wall and the abdomen retracts in its lower part. When a child is breathing through its open mouth the chest does not expand, or very slightly, but assumes the position of full expiration. The abdomen protrudes during inspiration as the diaphragm contracts and in expiration retracts. The alteration in the shape of the abdominal cavity and the change in position of its freely movable contents are reversed in the two forms of breathing. This is due to the resistance to the passage of air through the nasal passage being cut out in oral breathing; the action of the diaphragm by itself is sufficient to overcome the lessened resistance. Strictly speaking, costal breathing is always accompanied by diaphragmatic, but the range of movement of the former is so much larger that the latter exerts little diminishing effect. Diaphragmatic breathing may exist without costal.

Mouth breathing in children seems to have a considerable influence in the formation of the controlling bands and membranes of stasis. Nasal obstruction from such causes as hypertrophy of the tonsils, post-nasal adenoids, deflected nasal septum, and syphilitic necrosis, are the most common causes. Of these, enlarged tonsils (with which adenoid growths are generally associated) far outnumber the latter two, and I am strongly of the opinion that they in the first place are not the causes of mouth-breathing, but are themselves caused by mouth-breathing.

Perhaps the earliest cause in a child's life is the use of handkerchiefs for the purpose of cleanliness. A young baby with his first cold in the head fights bravely to keep breathing through his nose, and even when cyanosed from deficient aeration does not adopt the easy alternative of breathing through his mouth. His nose is roughly seized in a handkerchief and squeezed with the object of expelling the mucus, to his great discomfort and annoyance. A little later, when he is beginning to understand things, and put two and two together, another cold in the head comes; again the handkerchief and antagonism. He then learns that mucus expelled by his natural efforts means physical discomfort by its being wiped away with a handkerchief, and learns to retain the mucus by the simple means of breathing through his mouth and allowing the nasal passages to fill up.

Loss of muscular tone is certainly a frequent cause of mouth-breathing, and occurs after some acute febrile illness, rapid growth, and the result of sitting in faulty positions for long periods during lessons, etc. Rickets, anaemia, and similar conditions also produce the same effect. When muscular tone is lowered the muscles of the trunk which actuate chest breathing are tired, and not only does the child hold himself badly, but he learns that it requires less effort to breathe through the mouth.

The tonsils are probably designed to deal with micro-organisms in the mouth, and not with those borne by the air. Their follicles become infected when constantly subjected to infections from the air and hypertrophy follows, pushing up the soft palate and obstructing the posterior nares. Adenoid growth develops when the normal ventilation of the nasal passages is lacking, and infection from the tonsils spreads to the posterior nares.

The symptoms of chronic intestinal stasis are many and varied in different individuals. This is not surprising when we consider that the symptoms are due to auto-intoxication, and that the toxins formed in digestion probably differ somewhat in individuals, not only from the

class of food eaten, but according to the length of delay in the bowel proximal to the controls, allowing fermentative changes to proceed to a further stage. Also in others, owing to the delay in the effluent, micro-organisms other than those usually found are enabled to flourish. The site of absorption may exert an influence on the nature of the toxin. With evidence that the toxin absorbed differs, it follows that the symptoms will vary according to the tissue most affected by the particular toxin absorbed. There is one type of individual markedly tolerant to the action of intestinal poisons, and in whom a great degree of auto-intoxication may exist without any of the cardinal symptoms being apparent. These people have red or fair hair, and in them the loss of fat, the skin changes, and the mental disturbances are slight, but the circulatory are in evidence. Persons with dark hair go to the other extreme and exhibit little resistance to this toxæmia.

By far the greatest number of symptoms are due to the auto-intoxication, and the first four mentioned below are so generally found together that they may almost be called the cardinal manifestations of intestinal poisoning.

1. Skin Changes.

Generally the skin will be found to be thin, loose, and to have lost its elasticity; when two points are approximated by pressure between the finger and thumb a peculiar morocco-leather-like wrinkling is produced. There is pigmentation, especially of the exposed face and neck, and on the body most marked where pigmentation is natural. There is often a noticeable growth of down-like hair over the whole surface of the body. The skin is often clammy, and the sweat offensive and objectionable in odour.

2. Loss of Fat.

There is a great deficiency of fat in the whole body. This is especially marked in children and in women. The subcutaneous fat may even be non-existent, and that in the position of the buttocks, breasts, and pubis very deficient. The peritoneal, mesenteric, and pelvic fat disappears and allows the kidneys, intestines, and pelvic organs to be displaced downwards, the intestinal displacement accentuating any kinks existing.

3. Impairment of Circulation.

There seem to be two types corresponding to the effect the toxæmia has produced in the muscular wall of the heart: in the one the hands and feet are cold and white, and the pulse is high tension; in the other the hands and feet are livid and blue, and the pulse tension low. In the latter case there is cyanosis, produced by the breaking down of the red blood corpuscles. Periods of clamminess often supervene. Chilblains are common.

4. Nervous Manifestations.

In children there are periods of moodiness or depression, when they often avoid the society of other children, alternating with excitability; the child is said to be highly strung. Headaches in the form of migraine with vomiting are common. The children are bad sleepers and when they sleep soundly always wake the worse of it. Later in life the diagnosis generally made is "neurasthenia." The depression takes the form of the feeling that everything must go wrong in the future, and becomes melancholia; suicidal mania and imbecility may supervene.

The effect of auto-intoxication on the muscular tissues is that the muscles are soft and flabby and there is a feeling of tiredness and disinclination for any exertion. It is due to this that the symmetrical posture of rest is assumed, which very likely later may become asymmetrical owing to lateral curvatures, etc. As a result of muscular weakness there is produced a condition of loose joints, the range of movements of joints being greater than normal; this is very noticeable in hyperextension of the elbow and lateral flexion of the knees. In children the heart muscle is soft and flabby and the pulse tension low. Slight exertion induces breathlessness and palpitation with irregular heart-beat. Later in life this condition is more confined to women; in men hypertrophy of the heart muscles with high tension pulse is found. The thyroid gland is affected in adults, and probably in children also; this is shown by the deficiency in growth so often met with.

Another set of symptoms is due to the mechanical effect of the stasis itself. The common forms of indigestion—

flatulence, heartburn, hiccough, pain—are all due to retention of food in the stomach and duodenum, consequent on their refusing to pass their contents on before the small intestine has emptied itself. The constant retention of food in the duodenum leads to dilatation, and large congestive hæmorrhages occur. Haematemesis of large amount is nearly always a congestive hæmorrhage and not due to duodenal or gastric ulcer.

Frequency of micturition is a common symptom in children, and is, I think, due to the terminal loop of ileum sagging into the pelvis behind the bladder; the repeated peristaltic waves of this congested portion of bowel endeavouring to empty its contents into the caecum cause a sympathetic contraction of the bladder. These are the cases in which there is no evidence of cystitis.

Complications.

Complications are produced by the spread or advent of micro-organisms to different parts of the body, either due directly to the stasis or to the lowering of resistance caused by the auto-intoxication.

Pyorrhoea.—It is very doubtful if this can exist except as the result of stasis, and when we consider how a single indigestible meal will be the cause of a dirty tongue and foul mouth it is not surprising that a condition like stasis will cause this micro-organismal invasion between the gums and alveolar processes. By removal of the affected teeth a secondary source of infection is removed and the balance may be restored, a great improvement in health taking place, but the primary condition of stasis remains to break down the restored balance later.

Infection of the gall bladder and its duct, leading later to gall stones. In children this is generally termed catarrhal jaundice.

Infection of the pancreas probably occurs and gives rise to its particular symptoms of indigestion.

Infection of the appendix is perhaps the commonest. First, catarrhal attacks (appendical colic), and later spread of infection to the muscular wall and covering peritoneum (true appendicitis). The majority of cases of appendicitis are associated with stasis and may arise in one of several ways: As a result of a spread of infection to its lumen in the presence of stasis, or the entrance of a foreign body or faecal matter into a patulous appendix produced by such infection. As a result of a kink in the appendix owing to its mesentery being so attached that should any enteroptosis develop a flexure is formed in the appendix by suspension on its tight mesentery, the distal part of the appendix becomes filled with its secretion, which leads first to catarrhal changes, and later to more deep-seated inflammation. Torsion of the mesentery of the appendix may produce gangrene from interference with its blood vessels in much the same condition of mesenteric attachment as the former. In the last two conditions, the short appendical mesentery associated with enteroptosis will have also formed a control in the last few inches of the ileum. The removal of an appendix without recognizing that the appendicitis is but a secondary condition, although one of immediate danger to life, often saves life, which is at the best one of misery, whereas attention at the same time to the primary condition would have rectified this.

Mucous colitis is a very common complication in children.

Another group of complications arises from the resistance of the body being lowered to other infectious micro-organisms, such as staphylococcal infections of the skin in boils and acne; infection by *Staphylococcus citreus* in Still's disease; osteo-arthritis of the joints; tuberculous lesions of every form; infections of kidney and bladder by *Bacillus coli*.

Diagnosis.

Inspection of the abdomen in typical cases will show that it is narrow, flat above and protuberant in its lower part. One or two permanent transverse wrinkles of the skin above the umbilicus are often to be seen, and one, rarely two, half-moon shaped wrinkles, with the concavity looking upwards, below the umbilicus. I have seen these wrinkles in a few cases of cystitis, and their formation is doubtless due to a tonic contraction of the muscles of the anterior abdominal wall, due to some constant tenderness of the intestine or bladder, such as the congested loop in stasis, or the tender bladder in cystitis. The contraction of the anterior muscular wall lessens the distance between

the lower ribs and pubis, and the skin is thus thrown into transverse folds.

The right side of the abdomen is more resistant than the left, and there is some muscular rigidity in the right iliac fossa guarding the tender appendix and terminal loop of the ileum. There will be marked tenderness on deep pressure one or two inches below and internal to MacBurney's point over the congested loop of ileum, and, if the appendix be inflamed, also at MacBurney's point. There is often tenderness over the duodenum.

There is one method of examination by which not only can the existence of stasis be confirmed, but the period of time occupied by the passage of food through any particular portion of the bowel ascertained, together with a good deal of information concerning the condition of the appendix and amount of fixation of the intestines at the kink, and also the state of the mucous membrane and patency of the ileo-caecal valve to backward pressure. This is by means of a bismuth or barium meal with x-ray examination.

Treatment.

In children prevention should be our first aim. The maintenance of the correct posture comes before all else. Should there be at any time from any cause a tendency for the symmetrical posture of rest to be assumed it must be checked. Rest, physical exercises, tonics, change of air, must all have their appropriate use. It is important to impress on the child's mind how to hold himself properly; it is not sufficient to tell him to sit up straight or to put his shoulders back, because in attempting to follow either of these two instructions his mind will be concentrated on one action which does not necessarily produce the correct balance of the trunk. If, however, he be taught to hold the lower rib margins prominent to such a degree that if he accidentally collides with a half-open door that is the part he strikes and not his head, the natural curves of the spine are assumed and everything falls into line. Any sign of mouth-breathing should be investigated and the cause removed, as by enucleation of tonsils and removal of adenoids.

When stasis already exists, and the symptoms of auto-intoxication are recognized, should careful examination point to a congenital cause, such as an appendical control, an operation is called for. The appendix should be removed with its mesentery in such a way that the control is relieved. There should be no delay; the earlier it is done the less will development be interfered with by the toxæmia, the less risk will there be of an acute attack of appendicitis intervening prior to the operation, the more easy will it be to break the habit of absorbing poison which the bowel has acquired, and the fewer adventitious bands and membranes will have formed in conjunction with this form of control.

In the acquired form operative interference should be avoided if possible, but each case must be judged on its merits. There is no disease in which vicious circles within vicious circles are more evident, and the problem of the correct point at which the circle should be broken is not always an easy one. Perhaps the original cause of one case was the loss of muscular tone produced by some acute specific fever which led to the child adopting mouth-breathing and using the diaphragm only; infection of the follicles of the tonsils from air-borne micro-organisms followed, causing hypertrophy of those organs, and post-nasal adenoids, which in their turn permanently established the mouth-breathing. This state existing over a length of time leads to adventitious bands and membranes, producing kinks in the intestine directly producing stasis and auto-intoxication. The auto-intoxication produces certain muscular degenerations which set the seal on the chance of recovery of the muscular tone. It is not sufficient here to break the circle at one place and remedy the stasis; the obstruction to nasal breathing must be relieved as well.

Nasal obstruction must be dealt with, and a free airway established through the nose. Liquid paraffin should be given before each meal to act as a lubricant and render the passage of the food more easy. Opening medicine, in the form of aperients, purgatives, cathartics, etc., should be avoided, except in the form of an occasional dose for some special reason. Their action in stasis is like flogging a tired horse—the loop is stimulated by irritation to a special effort, and left more paralysed than it was before.

The objections raised to paraffin are the frequent actions sometimes produced, the leakage of oil by itself soiling the clothes, and the flatulence provoked. It is as well to impress on the parents that frequency of action due to paraffin does not weaken like diarrhoea, and that the remedy for all these discomforts is to increase the amount or number of doses. Two big loose motions a day should be aimed at, one in the morning, and one towards evening.

Agar-agar mixed with semi-solid food is useful when the point of stasis originates at the sigmoid, and is most marked there. It acts by its affinity for water producing a jelly which, intimately mixed with the faeces, forms a bulky soft motion easily passed through the large bowel.

An abdominal support which keeps out of the pelvis the sagged portions of the bowel in which stasis exists is of the greatest use. Most children themselves recognize its value, and refuse to be without it once they have learned to put it on properly, and even face the ridicule of their schoolfellows rather than give it up.

An hour's rest in the recumbent position in the middle of the day will often help in a wonderful manner. A kink is always accentuated in the upright position, and lying down in the middle of the day breaks the long day in which the trunk is vertical and allows the loop to empty its contents, whereas in the ordinary routine the loop would not empty itself until the recumbent position was resumed at night, and many hours of absorption are thus prevented.

Should these means fail or not suffice after due trial, operative measures will be necessary. The abdomen should be opened and the condition dealt with as found. In dealing with and removing the cause of the kinking, the experience, knowledge, and adaptability of the surgeon becomes the main factor, and it is useless to attempt to describe any set operation for this. The onset of any complication, such as arthritis, tuberculosis, bacilluria, jaundice, is generally an indication for operative measures.

It should be very clearly understood that after an operation for stasis has been performed, however successfully the bowel has been freed from all controls, means must be taken to prevent the original cause or causes from becoming operative again.

Attention must be paid to the non-operative treatment where indicated, and always paraffin should be given for six months to a year. Those portions of the bowel where stasis existed will tolerate delay from custom, and, having acquired the habit of absorption, both the custom and the habit have to be broken; in the same way after the enucleation of tonsils and removal of adenoids, it is necessary to break the habit of mouth-breathing, and unless that is done nasal breathing will not be resumed although the airway is patent.

HEALTH RESORTS FOR THE DIAGNOSIS AND TREATMENT OF CHRONIC AND FUNCTIONAL DISEASES.

BY

F. PARKES WEBER, M.A., M.D., F.R.C.P.

In discussing the function of health resorts there is both their use for the poorer classes and their use for the well-to-do and leisured classes to be considered. Whether there should or should not be any differences in the employment of health resorts for the two classes I cannot discuss here; the differences exist, and must be accepted for practical purposes. I shall deal with the subject only in respect of the well-to-do classes, and as far as possible I will avoid discussing the important points clearly and ably put forward by Dr. C. W. Buckley in his paper before this Society on March 6th of the present year.* Some of my ideas may perhaps be at once relegated by my colleagues to the realm of any good or bad "Utopé"† or "Utopia."

* A paper read before the Balneological and Climatological Section of the Royal Society of Medicine.

† An "Utopé," or, as the learned Erasmus suggested, an "Oudé-poté," means a Never-Never Land, practically, of course, the same as a *Nochase Land*, that is, "Utopia" of Sir Thomas More, "Erewhon" of Samuel Butler.

A. Ordinary Uses of Health Resorts.

An almost endless amount has been written concerning the natural indications for the various climatic and mineral water health resorts in different diseases and morbid conditions. It would be waste of time to go over all this again here; there are many textbooks which constitute a storehouse of information on the subject. But what classes of cases are specially attracted to any particular health resort will, I believe, in the future still largely depend on the local doctors. It is the doctor that knows most about the class of case in question (including the natural course of the disorder and its symptoms), who can likewise make use of the special local resources of the health resort to the best advantage for the individual patient. Naturally, therefore, in my opinion, the progressive part which can be played by health resorts in the future in the social life of a great country will depend largely on the general and special medical ability and experience of the local doctors.

B. Health Resorts as Places of Prolonged or Permanent Residence for Invalids.

In pulmonary tuberculosis health resorts are often used as places of residence for the patients, and so also in the case of scrofulous children. Health resorts should also more frequently serve as places of residence for chronic bronchitis, the subjects of chronic rheumatoid arthritis, and chronic invalids of various other categories. Not only will most chronic invalids, if my ideas of future development are correct, be better off, from the medical point of view, at suitable health resorts, where they could always be under the supervision of doctors specially adapted for helping them, but London and other large cities would probably be benefited by their absence. Some chronic invalids might have even two or more health resort homes, residing at one during one season of the year and at another during another season.

Someone may object that chronic invalids often "love to be in London" and that what I advocate would "break up family ties." If health resorts develop in the direction which I indicate, invalids (those who cannot help being invalids) will prefer them to London. At health resorts, more than at any other places, invalids ought to be able to live the fullest life of which they are capable, and I do not forget their mental life. Many invalids are mentally gifted beyond the average. There would be literary, artistic, and scientific "circles," and doubtless cultivated ladies would be found willing to hold salons, at which the members of such circles would be specially welcomed. The transactions of the local societies would often rival those of the learned academies of large cities.

But not all at such health resorts would be invalids. The sons and daughters and other healthy relatives and friends would frequently pay visits to the invalid colony, and many healthy persons, apart from doctors and those connected with local business and trade, would carry on the main work of their life there, attracted either by the beauty of the surroundings or wishing to live near invalid relatives or friends. Such places would also always remain suitable resorts for healthy recreation, and would be visited by the young, middle-aged, and old, in need of relaxation and a holiday. For the young and the healthy there would be abundant opportunities for open-air games and sport, as well as for intellectual entertainments, but for mere "loafing" there would be no more encouragement than at any other places.

Members of the learned professions, especially law and medicine, might well spend ample holidays at such places before it becomes too late for them. I feel convinced that many lawyers, physicians, and surgeons die indirectly from overwork. They say that they "cannot" go for a long holiday because their "practice would suffer." It might diminish to some extent, but they are often quite rich enough to afford it; even if some of their clients desert them and their professional rivals become the gainers, the maintenance of their health is much more important to them than such losses. The very clients most dependent on them ought to prefer to lose them for a time than lose them altogether. There are some, I believe, who do not admit that long-continued excess of exciting professional brain work is often a cause of relatively premature death, and I am not aware of the existence of any good statistical inquiry on the subject—for instance, a comparison of the

average duration of life in doctors who have been known to take regular holidays with that in doctors (in the same kind of practice) who have practically taken no holidays at all. The latter is, I hope, numerically a fast diminishing class.

C. Health Resorts as Places for the Diagnosis of Chronic and Functional Diseases.

As the doctors at different health resorts would have extraordinary facilities for the observation of different classes of cases, certain health resorts should become admirable places for the diagnosis of special diseases. In this the doctors would naturally have all the modern laboratory and other aids to diagnosis at their service, including all methods of blood examination, Roentgen-ray apparatus, methods for the examination of the circulatory organs, for the examination of the digestive organs, and so on. At some health resorts there would be special facilities for the investigation and treatment (including psycho-analytical methods) of functional disorders of the nervous system. The psychic factor in the treatment of ordinary cases at health resorts is often large, as has been pointed out and explained by various writers time after time, so that the acquisition of extra psycho-therapeutic knowledge by the local physicians would not be at all out of place.

People, when not obliged to live in them, will, I hope, become gradually more and more inclined to avoid great cities. Holidays will be largely spent at health resorts; and when one member of a family has a troublesome and somewhat obscure chronic or functional disorder, a health resort for the family holiday will be selected at which the local doctors have a great reputation for their correct diagnoses and successful therapeutical plans for the class of disorders in question.

The health resorts visited during the holidays by families will often be those in which special facilities exist for testing the physical and mental abilities of the younger members. There such questions will be answered as the following: "Is he able to play cricket and ordinary games like other boys?" "Will rowing in a race be dangerous for him?" "Is he mentally able to hold his own amongst other children of the same age?" "Ought he to be educated separately or at a special institution, or can he be sent to school with other boys?" "Ought one to take special care in regard to his heart?" "Is the albuminuria in this case merely orthostatic, and, if so, is the boy or girl in other respects sound and of average physical capability?" "Is he physically up to the standard for the army or navy or Indian Civil Service?" At some resorts the effects of various kinds of violent physical effort would be watched by medical experts capable of coming to a correct conclusion as to whether the exertion is too much or dangerous.

If progress were made in the direction I indicate, chronic dyspeptic symptoms and disorders of the digestive system could be thoroughly investigated at nearly all health resorts, because such troubles are very frequent and troublesome, though often not "dangerous." "What's wrong with this youth? Though tall and rather lanky, he is fairly strong in an ordinary kind of way. But he says he cannot play football in the afternoon like other boys, or only if he goes without his midday meal or the portion of it that he most enjoys (the fruit-pie or pudding). When he plays soon after an ordinary meal, a thin tasteless fluid, like warm water, begins to pour into his mouth (reflex salivation) so quickly that he can hardly swallow it; he has a choking feeling in his throat, and he begins to belch up wind like a neurotic subject of aerophagy. He has himself found out that if he then lies down flat on his back all his discomfort rapidly disappears." Such a case could be investigated during holidays at health resorts. The Roentgen ray skiagrams would probably reveal considerable gastropnoia; owing to the gastropnoia more or less obstruction to the exit of food, together with reflex salivation, may be produced by playing football not long after a fairly copious meal.

I am afraid that these somewhat disjointed remarks form a very inadequate substitute for the address which the President has been unfortunately prevented from giving owing to illness.

REFERENCE.

1 C. W. Buckley: The Health Resorts and the State, *BRITISH MEDICAL JOURNAL*, 1919, vol. i, p. 517.

TICK FEVER IN PALESTINE.

BY

F. D. NICHOLSON, M.D. CANTAB.,

LATE CAPTAIN R.A.M.C. (T.C.).

SPIROCHAETOSIS conveyed by ticks has been recognized in Africa since 1904 owing to the researches of Ross, Dutton, and others, who incriminated the tick *Ornithodoros moubata*; similarly, Miana fever in Persia was found by Balfour to be a form of relapsing fever transmitted by *Argas persicus*. I do not think that the relapsing fever which occurs in Palestine has previously been traced to infection by ticks, and the following notes may therefore have some interest.

The advanced troops on that front were infested with lice owing to the rapid advance after the fall of Gaza in November, 1917, and to the impossibility of getting transport for the numerous Thresh disinfectors which had been left behind. Relapsing fever was, in consequence, very rife, and, although rather outside the scope of this note, it may here be mentioned that its clinical characters did not by any means bear out the textbook description.

The parasite measured about 8μ in length, and had a great tendency to form loops, thus conforming to the *Spirillum recurrentis* rather than the longer *S. duttoni* of Africa. The initial fever lasted almost invariably seven days, but the subsequent paroxysms were very irregular in their duration and occurrence; frequently a second or third rise of temperature would only last one or two days, and there were instances of apyretic intervals lasting a month, while three or four relapses were fairly common. In its course the fever thus resembled a hybrid of the European and African varieties. Amongst the white troops the parasite was usually very difficult to find; many fields under the microscope had to be searched, and not infrequently recourse had to be made to the "thick drop" method: in the imported Egyptian Labour Corps, which suffered very badly, the parasite was usually demonstrable in large numbers. The severity of the symptoms did not seem to bear any relation to the number of spirochaetes in the blood. In the worst cases severe epistaxis was a troublesome and alarming complication, but amongst several hundred cases I only saw one death—namely, in a Maori who collapsed directly after his first crisis, although the paroxysm had been unusually mild.

On March 20th, 1918, eight men of the — Suffolks were admitted to hospital suffering from relapsing fever; as it was very unusual to get so many patients from one source at a time, inquiries were made, and it was found that they all belonged to one company of about 250 men, stationed for several days at Ras-el-Ain Castle (mentioned in Acts xxiii, 32, as Antipatris), which was then one of our advanced posts. They further gave the interesting information that they had been bitten by some animals "like sheep ticks, oval in shape and having several legs, which crawled slowly and sucked blood, becoming red." One man had watched two or three feed on his arm, and had then squashed them. Another had shaken several from beneath his trousers in the morning; these were seen to crawl slowly away by several witnesses. They declared they were not lice, with which they were well acquainted, and, finally, they unhesitatingly identified *Argas persicus* from pictures of ticks. The diary of the movements of these men is instructive. They were bathed and their clothes fumigated at Mulebbis on March 10th, 1918. They went to Ras-el-Ain Castle on March 12th, where they remained four days and three nights. They returned to Mulebbis on March 15th, and were bathed and fumigated a second time on March 16th. The initial symptoms appeared on March 19th and 20th.

Four of the patients had shared the same bivouac, the pegs of which were fastened to the outer wall of the castle; a ditch or drain ran under the wall and traversed the floor of the tent. One man occupied the tent next door, and the remaining three slept in an outhouse within the castle walls. Spirochaetes indistinguishable from the parasite met hitherto were found in the blood of all the patients; the clinical symptoms were distinctly modified in comparison with the loose-infected cases, for the men were quite cheerful throughout the paroxysm, and looked at papers on each day of the illness—a very different picture from the ordinary individual, who lay like a log, with eyes suffused, intense headache and backache,

backing cough due to congestion of the bases of the lungs, and complete anorexia. The temperature charts of these tick-infected men were very atypical: several showed a maximum of 102° to 103° , four had a crisis on the fourth day, three reached normal on the fifth day, and one came down by lysis.

The — Suffolks had been relieved by the — Norfolks on March 15th, and a watch was kept for cases of relapsing fever amongst the latter. Six appeared on March 23rd, giving the same history of having been bathed and fumigated before going to the castle, and of having been bitten whilst there by "tick-like insects." By that time a report had been sent to the A.D.M.S., who caused the bivouac to be shifted thirty yards from the walls, and it is significant that, though troops continuously occupied this spot for the next five months, no further ticks were seen and no other cases of relapsing fever occurred. It will be noticed that the incubation period of the second series of cases was the same as that of the Suffolks—namely, seven or eight days.

Analysis of Patients Admitted to Hospital.

The following is a tabulation of the cases admitted from all companies of the Suffolk and Norfolk Regiments between February 20th and April 12th, 1918 (eight weeks):

	Suffolks.	Norfolks.
Surgical ...	10	0
Medical ...	17	18
Relapsing fever ...	8	6

(a) Relapsing fever was rigidly excluded from all the medical cases by repeated examination of their blood.

(b) No case of relapsing fever occurred in either regiment, except during the period covered by their stay at the castle.

(c) No case of relapsing fever occurred in those companies of the two regiments which did not visit the castle.

The Tick.

Unfortunately it was very difficult to get to the castle owing to its exposed position, but by the kindness of the A.D.M.S. I was enabled to make two or three visits for the purpose of obtaining specimens of the ticks. Scratching and scraping in the interstices of the ancient walls proved of no avail; a puppy was tied up to the walls for several nights but only secured a *Rhipicephalus*. Two fowls were next immured against the wall, and a specimen of *Argas* was obtained the next morning; by mischance the birds were left in the sun and died of heatstroke. They were replaced by another fowl, on whom next morning six hexapod larval forms of *Argas persicus* were found and identified by Dr. Woodcock of the 4th Military Laboratory, whose report on the first specimen is as follows:

One specimen only of the tick has been submitted for identification and examination. This was a young female ("nymph") belonging to the genus *Argas*, most probably *A. persicus*, but as the specimen was not adult the species could not be absolutely determined. The tick contained traces of digested blood, but no evidence of the presence of spirochaetes could be found.

A transfer to India put an end to my investigation. Another tick-infested spot was discovered later in three small caves a few miles from the castle. These caves became part of our front line after an engagement in May, and were used by stretcher-bearers of the — Field Ambulance as shelter during the subsequent shelling; a crop of cases of relapsing fever suddenly occurred about that period and were all traced to the caves, whose occupants had been bitten by ticks; no member of the field ambulance who had not been in the caves developed spirochaetosis.

ERYTHEMA NODOSUM AND TUBERCULOSIS.

E. WARD, M.D. CANTAB., F.R.C.S. ENG.,

TUBER CLOSING OFFICER FOR SOUTH DEVON.

APART from the mere coincidental occurrence of erythema nodosum and tuberculosis, the condition has been recorded following an injection of tuberculin, and under other circumstances in tuberculous patients. I have also noticed erythema nodosum in tuberculosis when for some reason a chronic condition becomes more acute, or at the time when symptoms of tuberculosis first become noticeable in a patient under observation as a contact.

CASE I.

Miss H., a girl clerk, aged 20, developed a cough about February, 1916, but continued at work, and during the summer her cough improved. Early in 1917 the cough returned, with

pyrexia, and after some days a typical eruption of erythema nodosum appeared on the legs. This disappeared in about three weeks, but pyrexia continued for some five weeks, and then gradually subsided. Tuberculosis was suspected, but the patient returned to work later in the year, still in indifferent health. In August, 1918, there was an attack of pleurisy, pyrexia recurred, and continued until her death from pulmonary tuberculosis in March, 1919. When seen, early in February this year, there were extensive physical signs of phthisis, with cavitation and fibrosis on both sides.

The eruption of erythema nodosum in this case coincided with the outbreak of a previously smouldering pulmonary tuberculosis, and could reasonably be attributed to that cause.

CASE II.

Mrs. H., 44, the mother of the girl whose history has just been narrated, had never been very strong, and months spent in nursing her daughter broke down her health. Early in April, 1919, an eruption of erythema nodosum appeared on the forearms and dorsum of the hands, on the legs and feet; at the same time a cough commenced, and pyrexia, reaching to 102° in the evenings. There were also night sweats and progressive emaciation. When seen early in May this year the marks of fading erythema nodosum were visible on the arms and legs. In the chest there were physical signs suggestive of somewhat extensive arrested tuberculosis on the right side, and some signs at the left apex also. The disease quieted down again in a few months.

Here the eruption coincided apparently with the recrudescence of an arrested lesion. It is interesting that a similar condition occurred in mother and daughter.

CASE III.

M. H., a married woman aged 27, was run down and anaemic early in 1913. In April there was an attack of pyrexia and pleurisy, accompanied by a typical eruption of erythema nodosum. Tuberculosis was diagnosed; bacilli were found in the sputum, and the patient was for some months an inmate of Winsley Sanatorium. After this she remained well until August, 1915, when pleurisy recurred, and an exacerbation of tuberculosis, but this time there was no erythema nodosum. In July, 1916, when last seen, the patient was well in health, but there were a few physical signs at both apices.

CASE IV.

In July, 1916, W., the two-year-old daughter of the above patient, had an attack of unexplained pyrexia, accompanied by erythema nodosum. In a month she was well again. No physical signs were detected in the chest, but the child was of a tuberculous type, and had a slight general enlargement of the cervical glands. The probabilities are, therefore, that this attack, which would have to be classified as that type of erythema nodosum which is accompanied by prolonged pyrexia, was due to tuberculosis.

Here also mother and daughter were both affected.

CASE V.

Miss G. is now 27 years old. Her father died of phthisis at 43, and one brother died at 16 of the same disease. At the age of 16 she first became ill with erythema nodosum and pyrexia, and from that time to the present she has been under treatment, intermittently, for pulmonary or glandular tuberculosis. This year she developed a typical erythema induratum on the legs, which is still under treatment.

In this case erythema nodosum and erythema induratum occurred in the same patient after an interval of ten years.

Discussion.

It is not for a moment suggested that tuberculosis is the only cause of erythema nodosum, but merely that a similar cutaneous manifestation may be due to many different poisons, one of which is that of tuberculosis. Moreover, the constitutional peculiarity which gives rise to this skin reaction seems to be inherited, as are other peculiarities—such, for instance, as the well known disposition to epidermolysis bullosa after slight injuries. We find instances of a similar reaction to different poisons in other structures besides the skin. In joints, for example, we may see an identical clinical picture due to different causes, and the same is true of the kidneys, the heart, and the lungs.

Out of 4,000 cases of tuberculosis and contacts under annual observation I have not yet noticed any other skin condition (apart from the well recognized tuberculides) which is definitely connected with tuberculosis. It has been stated that lupus erythematosus is attributable to tuberculosis, and I have seen a few cases of this disease, but not more than would be accounted for by coincidence; not more, for instance, than the cases of lichen ruber planus, which no one suggests is due to tuberculosis.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

X RAYS IN THE TREATMENT OF TUBERCULOUS ADENITIS.

I WAS interested to read in the BRITISH MEDICAL JOURNAL of November 29th an article by Mr. E. S. Molyneux on the use of radium in tuberculous glands of the neck.

The results of unaided surgery in such cases can hardly be considered good; recently I came across a case on which fourteen operations had been performed within six years, and a fifteenth was in contemplation. This may be an exception, but half a dozen operations are quite usual, and the cosmetic results leave much to be desired.

The effects of treatment by radium on early cases are no doubt excellent, but the point I wish to make here is that eminently satisfactory results may be attained by x rays, which are, as a rule, more readily available than radium. While x-ray treatment alone will cure the very early case, it is, in my experience, usually desirable to call in a surgeon when all the periglandular inflammation has subsided, and the glands can only be detected on careful palpation. An operation at this stage—which is usually reached after about six to eight weeks of x-ray therapy—is a very simple matter, and the scar should be practically invisible. If the operation be not done, a considerable number of apparent cures will relapse, and do not a second time yield so easily to treatment. Pre-operative treatment, if given with proper dosage and filtration, does not in any way unfit the skin to withstand surgical trauma.

A case in which softening is already present should be dealt with at once surgically, but should be treated by x rays very soon after the operation. If this is done, discharging sinuses will heal in a few weeks, instead of taking months, as is sometimes the case if they are left to themselves.

London, W.

FRANCIS HEERNAMAN-JOHNSON.

A RARE CASE OF LEFT INGUINAL HERNIA.

THE following case is of sufficient rarity and interest to warrant a brief report. Within a left inguinal hernial sac were contained (1) the pyloric end of the stomach; (2) several feet of small intestine; (3) the caecum and appendix.

The patient, a man aged 54, was admitted to the General Hospital, Wolverhampton, on November 12th, 1919, as a case of strangulated inguinal hernia. He had suffered with this hernia for eighteen years, during which time he had had occasional vomiting. This had been almost constant for the week preceding admission, and was accompanied by scrotal pain. On admission he was very ill, indeed almost moribund, and stated that he had been losing weight for two years. He was incessantly vomiting typical dilated-stomach contents. He had a left inguinal hernia the size of an adult head, and this was easily reducible in part. The abdomen was greatly distended and universally hyper-resonant. A distended stomach, probably due to a pyloric cancer, was diagnosed. Under a general anaesthetic the abdomen was opened above the umbilicus. An enormously distended stomach was discovered which occupied almost the entire abdominal cavity. It was incised, and three pints of liquid contents escaped together with a great quantity of gas; even then the pyloric end of the stomach could not be drawn into the wound, but on introducing the left arm into the abdominal cavity the stomach was easily traced into the inguinal hernia, from which it was withdrawn in company with the caecum and appendix, and a great length of small intestine and mesentery. The laparotomy wound was rapidly sewn up, and a radical cure of the 4-in. hernial opening completed. The distal end of the stomach showed a marked constriction corresponding to the level at which the neck of the hernial sac had gripped it.

The patient died within twenty hours. *Post mortem* the stomach was found to be two feet in length, and easily to contain thirteen pints of water. The ascending colon was constricted just distally to the imprisoned caecum. A few proximal feet of the small intestine were distended, the rest collapsed. The mesenteries were very greatly elongated, and the entire colon was pelvic in position. There was no visceroptosis present apart from that of the alimentary canal.

Thanks are due to Mr. Deanesly, under whom the patient was admitted, for permission to publish these notes.

C. A. STIDSTON, M.D., B.S. Lond.,

Honorary Assistant Surgeon, General Hospital,
Wolverhampton.

Reports of Societies.

THE TEACHING OF OBSTETRICS AND GYNAECOLOGY.

(Concluded from page 778.)

IN the Section of Obstetrics and Gynaecology at the Royal Society of Medicine, on December 4th, with Mr. J. D. MALCOLM, the president, in the chair, a discussion took place on the report on the teaching of obstetrics and gynaecology in London, recently made by a committee appointed by the council of the section. In our last issue a full account was given of the opening statement by Dr. T. W. Eden, chairman of the Committee, and we printed the criticism of the report, drawn up by Dr. Herbert Spencer, Lady Barrett, and Dr. Herbert Williamson, together with the remarks contributed to the discussion by Dr. Spencer.

Dr. H. RUSSELL ANDREWS read a communication on the subject. He said that the old system of midwifery training had turned out a certain number of fully qualified medical practitioners who were nothing less than a danger to the state. Those cases in which skilled help was not called in until brute force had done its worst were some of the most painful he had seen. In some cases irreparable damage was done to the mother before she was sent to the hospital. In some poor-class practices examination before the onset of labour was seldom carried out. It was impossible to believe that these obstetric tragedies could occur more than very rarely in the practice of a man who had as a student spent three or four months in an obstetrical atmosphere. Most obstetric operations were carried out only nominally by members of the visiting staff, and were really performed by the residents. The obstetric physician, who had to manage the out-patient department, give certain lectures and classes, and perform a certain number of gynaecological operations, besides earning his own living, could not go down to the hospital at night and spend a long time over a midwifery case. The midwife had learned the virtue of patience, and of giving the natural forces a fair chance, and the doctor must learn this too. There must be on the spot in the teaching institution a man, senior to the ordinary hospital resident, who had had a thorough training in midwifery, to deal with a certain proportion of the normal cases, and, in the absence of the seniors, with the abnormal cases. There must be more beds, even if in some cases the advantage of being in close touch with specialists of every kind were to be forfeited.

Dr. HENRY BRIGGS (Liverpool) said he was much struck by the candour of the report. He thought that London could not have given out its failings more fully. The failings were so frankly confessed as to disarm criticism. In Liverpool they were in such a position that their difficulties were not so great. He would like to see the general hospitals with their properly equipped obstetric and gynaecological wards. He thought that Dr. Addison would soon settle Dr. Eden's "centres" for him, as a result of popular pressure, by determining to train midwives there.

Dr. J. S. FAIRBAIRN wished to say a few words more in destructive criticism of the alternative report. He considered it really a barren report, because it took them no further than the best of the schools had got. If the best were taken as the model, a little paint and polish would result in the scheme outlined in the criticism. He himself had worked such a clinic as the one the three signatories described, and an account of it would be found in the *BRITISH MEDICAL JOURNAL* in 1912; yet now Dr. Spencer produced this as something they had got to look forward to. It was a back number even now! The department of sixty beds which the critics of the report suggested was to have the same staff as the one elaborated in the main report, with the addition, however, of a £500-a-year board-and-lodging man of the status of a resident assistant surgeon or physician. The speaker did not know where they were going to find the work for this official. For his own part he went into this Committee convinced that the system recommended in the alternative report was the best, but he modified his view on further consideration of the facts presented.

Lady BARRETT said that, while Dr. Fairbairn had given destructive criticism of the minority report, Dr. Eden had shown a better way—he had illustrated how it was possible to see agreements. The report, which represented certain views that three of them held rather differently from the rest of the Committee, was not published as a full exposition of the whole subject on the part of the three signatories; that would have been unnecessary because they were so largely in agreement with the original report. But the immense importance of the undergraduate students doing their midwifery and gynaecology in the general hospital needed insistence, and she was glad that Dr. Fairbairn fully agreed with the very great importance of that. Post-graduate teaching also was needed, and there were all the new demands for hospital accommodation in the outlying parts of great cities and in country districts. Dr. Eden represented sympathetically the needs of the patients as well as the desires of the teaching schools. Even now, she supposed, it was becoming pretty certain that the provisions of the Insurance Act would be enlarged to meet the demand by general practitioners for hospital-like institutions where consultations could be provided, as well as beds in necessary cases, for all their patients. Here was the weakest point of the Committee's report; the Committee tried to put slender threads between the existing teaching schools in the centre of London, and then vaguely talked of hospitals growing up around. In the near future large institutions would be needed to provide all general practitioners in difficulty with places of consultation on all subjects; and just those districts needing beds for gynaecology and obstetrics needed also beds and consultants for all the other subjects. Therefore she and her co-signatories thought first of all, looking at the matter from the public point of view, that institutions for every branch of medicine would be needed for these outlying districts. Their plan did not differ so greatly as Dr. Fairbairn appeared to think from what Dr. Eden and his colleagues had outlined. But Dr. Eden had rather vaguely collected the general hospital around the obstetric hospital. It would be better to see at once the need for the whole and build the whole institution in the outlying districts, leaving the medical schools who needed it to make the first claim upon it.

Dr. W. S. A. GRIFFITH doubted whether Dr. Eden had ever given a more logical, clearly thought out, and perfect exposition than he had done that evening. He thought also that if those who felt rather strong objections to the criticism from one side or the other tried to follow his lead, they would go some way towards getting rid of their differences and meeting on common ground. If they could arrive at a unanimous conclusion they would have far greater weight in carrying the reforms which they all recognized as necessary. The essential difference between the two parties was the question, on the one hand, of adding maternity wards to the hospitals that had not got them, and enlarging the maternity wards of those that had them; or, on the other hand, if this was found impracticable, of having separate centres. Neither of those who had spoken thus far on the minority report had given any hint as to how the hospitals without maternity wards could provide them. It seemed to him that the minority people were suggesting a scheme which was impracticable. He thought also that it was important if a definite centre was to be formed that it should be done at once or without much delay. He hoped that as a result of that meeting they might still hear from general practitioners who had suffered at their hands as teachers of the points on which they themselves (the practitioners) thought that teaching methods might be improved.

Dr. HERBERT WILLIAMSON, in a written communication, read for him in his absence by Dr. FARNHAM, said that efficiency in teaching was possible in a general hospital which was out of the question in a special institution. The enlightened policy of the Board of Education had made combined research possible, but this would be largely frustrated if the different branches of medicine were cut off from intercommunication. Hence, for the cause of the science and art of practice, the study of obstetrics and gynaecology should be preserved in a general hospital. It was Simpson the obstetrician who gave surgeons the gift of chloroform, and surgeons had given much in return to the obstetrician. If obstetrics and gynaecology were isolated the sense of unity would be imperilled. The post-

graduate might be encouraged to work in these special institutions, but the undergraduates should not be sent there for part of their general education. It was not the function of the senior teacher to guide the hands of the student in a series of labours, but to lay down the routine and found the traditions of his work; while the senior assistants instilled into him by example and precept what he had to do. The scheme foreshadowed in the report which he with two others had signed presupposed that a larger number of hours would be devoted to the work by senior teachers, and that their remuneration would be increased. Good laboratory facilities were essential, and the services of experts in biochemistry, morbid anatomy, and other specialities must be available for consultation.

SIR ROBERT MORANT remarked that in the survey which the main Committee made on this question in framing their report no mention was made of the possibilities of the Poor Law institutions. This appeared to have been overlooked or deliberately set aside when the Committee started to look round to see what material was available. A good deal of the discussion that evening had been devoted to the kind of hospitals that should be developed and on what lines. Much thought was being given in the Ministry of Health to this very serious and urgent problem. The actual provision of hospitals of whatever kind—maternity or anything else—was at present entirely haphazard. It had been nobody's business to survey the ground. Systematic provision presupposed a systematic survey, taking account of all that was on the ground. If the Poor Law was going to be reformed, the existing institutions, losing all their stigma, and the infectious diseases hospitals maintained by the Metropolitan Asylums Board, would all be brought into survey. No one bit of hospital provision could wisely be considered by itself. Those present were looking at the matter from the teaching point of view; but presumably the whole hospital question was to be analysed. It was complicated at once by this new development of clinics which were, so to speak, out-patient departments dotted about in different places, seldom under the same roof as the hospital; and also the maternity centres which were springing up. He had been amazed at the statement that it would be difficult to get material. At the Ministry of Health they were getting applications from all sorts of people to get their sanction for places with, say, twenty maternity beds, just for normal cases. The question rather was, How was all this material to be dealt with? Those present had got to get their minds on to that. Furthermore, the advice to be given to a central department which had to disburse considerable sums of public money must be advice which was agreed on. Some main lines ought to be unanimously accepted. It would be waste of money and would not be tolerated to spend public funds on pressing forward schemes which could not be shown to be in direct relation to other necessities of bed provision for the metropolis. A careful and scientific hospital survey seemed therefore to be most disastrously overdue. Might he suggest that the obstetricians should urge representatives of other branches of medicine to collaborate with them in order to see how all should fit together? If the profession was not going to be alive and awake to see the problem which was upon them, the Ministry of Health would be prevented from doing for the profession the right thing. The Ministry ought to be provided with a map of a given area to show the different things that should be included. London offered the worst problem of any city in the kingdom because of the multiplicity of authorities. The Ministry was only there to dispense public money; in this country the determining thing was the local authority. The survey must be as inclusive as possible. He urged them to try for an agreed scheme on this question of midwifery and gynaecology, but also to get it related with hospital provision as a whole.

DR. AMAND ROUTH welcomed Sir Robert Morant's reference to the Poor Law possibilities in connexion with this scheme. He had himself suggested that the infirmaries of the twenty-nine Poor Law institutions of London might be brought in, but Dr. Eden had not thought this practicable. At the same time he himself saw no reason why these Poor Law infirmaries, which were general hospitals on a small scale, should not form the beginning of some of the centres which had been spoken about. If that was what Sir Robert Morant was alluding to it would be very useful to know how that could be managed.

DR. GORDON LEY dealt with the objection to the Committee's scheme that the provision of the teaching centre would involve large classes. He did not think trouble on this score was likely to arise if, for example, there were four centres, one for each quarter of London. With regard to plenitude of material, he was himself only acquainted with two lying-in centres. One of them was almost reduced to the floor, and the other was always full. It was never suggested that the director of the centre would be able to do ordinary midwifery practice; he was only to be available for consulting work. The enormous population of London was not really appreciated; it had a population greater than that of Ireland, and while the population of Ireland was receding, that of London was increasing. It seemed to him that they required much more space for beds than was actually available, and that they would go on requiring it.

DR. GEORGE BLACKER said there were two main points to be considered—namely, how could they best increase the accommodation for lying-in women in London, and then how best could they increase the facilities for teaching students? The present provision of lying-in beds was a scandal. There could be no difficulty in filling four of these institutions. There was ample material for any midwifery institution they liked to put up. At the present moment there were large areas where there were no lying-in hospitals of any sort, and there were other areas where, although there were such hospitals, the number of beds was totally inadequate. The provision of sufficient lying-in accommodation was not a matter for them, but for the authorities and the Government. Then how could they best take advantage of this accommodation when provided? They all agreed—both the majority and the minority—that the present teaching of students was utterly bad. Nobody had attempted to deny it. The student had not the same opportunities as in medicine and surgery. Teaching, he maintained, should be done by the staff, never by registrars. He considered that essentially there was very little difference between the two reports.

ANAESTHETICS.

A MEETING of the Scottish Society of Anaesthetists was held in the hall of the Faculty of Physicians and Surgeons, Glasgow, on November 29th, with Dr. PATON BOYD, President, in the chair.

THE PRESIDENT read his inaugural address upon "The value of chloroform as an anaesthetic." He desired to bring the subject before the meeting owing to the extreme attitude taken up by the American school of anaesthetists. In the report of the Committee on Anaesthesia of the American Medical Association, in 1912, it was stated:

(1) That the use of chloroform as an anaesthetic for major operations was no longer justifiable owing to the danger of delayed chloroform poisoning; (2) that for minor operations also the use of chloroform should cease, nitrous oxide and oxygen taking its place; (3) that chloroform was sometimes convenient for inducing anaesthesia in alcoholic or other difficult subjects.

While giving all credit to the American school for their valuable work, Dr. Boyd considered this attitude was extreme, if not absurd. There was a period in Scotland extending over sixty years when chloroform was administered almost exclusively, and yet the surgical results obtained compared favourably with any country in the world. From this fact it was plain that post-operative acidosis could not be the ever-present danger suggested by the Americans. Furthermore, there were many cases to whom it was impossible to administer ether, particularly certain abdominal cases where the necessary relaxation could only be obtained by chloroform. He agreed, however, that it was safer to initiate anaesthesia with nitrous oxide and ether, or ethyl chloride and ether, and that it was really undesirable to use chloroform for short cases where nitrous oxide and oxygen would suffice. Ready-made mixtures of chloroform and ether he did not use; if he desired to exhibit both drugs together, he allowed them to mix only upon the mask. He was a believer in Levy's dictum that in giving chloroform the first principles are to keep the patient fully anaesthetized, and to make the administration continuous. Above all, he considered the safety of anaesthetics depended more upon the man who was giving them than upon the exact drug or method chosen.

In the discussion that followed, the general opinion seemed to be that chloroform should not be administered unless really necessary, but that it often was necessary and might then be given with very reasonable safety so long as sound principles were followed.

The Teaching of Anaesthetics.

Dr. J. S. ROSS opened a discussion upon the teaching of anaesthetics. He pointed out that the subject of anaesthetics had in the last ten to fifteen years made great strides. New methods, such as open ether, vapour and rectal oil ether, gas oxygen in its modern developments, and the intratracheal method, had all proved their value, and the whole subject of anaesthetics had been illuminated by the work of Crile upon anaesthesia. The increased knowledge should lead to a higher general level of anaesthetizing, but he was not sure that it had done so to the extent which it ought. The special anaesthetist in many schools had not been given the status necessary to enable him to influence work done in the institution, all of which was not necessarily under his own eye. With regard to when and how the subject should be taught, he favoured simple lectures, given to the student as soon as he began his practical surgical work. The practical supervision of administration could not, unfortunately, always be done by a specialist. Since it seemed to be impossible that the specialist should personally teach every student, he ought to concentrate upon teaching a limited number of students very thoroughly, the students selected for this advanced training being those who were in the running for resident posts. No man should become a resident house-surgeon who had not a certificate for advanced anaesthetics. Since so much of the teaching was given in the surgical charges, where most of the operations were of a major nature, minor anaesthetics—that is, short anaesthetics for minor operations—were not as well taught as they should be. The surgical out-patient department should be furnished with several senior students or junior residents who had had an advanced course in anaesthesia.

In the discussion the PRESIDENT approved of the suggestion for an advanced course of anaesthetics for future residents, which Dr. LAMB stated was practically the principle followed in the Victoria Hospital, Glasgow. Drs. JOHNSTON and OGSTON explained the principles upon which the work was done at Aberdeen, where, throughout the summer session, a course of lectures was given, one every week, and every student had to receive practical instruction from one of the anaesthetists to the institution, a special fee being charged. The anaesthetists ranked with the honorary staff.

During the time allotted to unnotified short communications Dr. TORRANCE THOMPSON reported a recent fatality under anaesthesia in a man of 68 with enlarged prostate. He was given closed ether, preceded by a small dose of ethyl chloride. All went well until the gland had just been enucleated, when the patient died suddenly from syncope.

The PRESIDENT described a case which he had had that morning, an apparently healthy woman anaesthetized, also by closed ether, for the removal of a small section of the breast. Almost immediately after the first incision she gave a deep gasp and ceased breathing; the pupils dilated almost to the rim. Both he and the surgeon considered the case very grave, but artificial respiration succeeded after a few minutes. He remarked that this would be a case parallel to that of Dr. Torrance Thompson, in that it was one of reflex syncope with closed ether, undoubtedly a very rare event.

Dr. J. H. GRIBB described an unusual case of pronounced cyanosis in a man aged 25, operated on for double atrial disease, under ethyl chloride and ether, preceded by atropine and heroin, and followed by C_2E_2 from a Junker.

ECLAMPSIA.

At a meeting of the Section of Obstetrics of the Royal Academy of Medicine in Ireland, held on November 7th, Professor HASTINGS TWEEDY, in the course of his presidential address, said that the cause of eclampsia was no longer a mystery. It arose from an overwhelming of the blood food ferments (antibodies) in the following manner: Food antibodies developed shortly after birth in response to an antigen richly present in colostrum and the early

food of infants. They were, as a rule, ample for normal requirements, but not unlimited in amount. This was shown by such illnesses as migraine and the drunkard's headache. In pregnancy they had to deal not only with food particles, but also with the albuminous exudate constantly flowing into the blood from the ovum.

For graphic illustration, the President went on, let it be supposed that a woman's blood contains ten antibodies, five of which are required for food digestion, and four are used up by the fetal protein; one remains and all is well. Increase of food will require seven antibodies, and an insufficiency of the latter arises, with consequent toxæmia. Similarly, the ovum may absorb seven, with equally bad results. Milk (which requires three antibodies) is substituted for full diet, and an improvement follows; or, better still, starvation is adopted with complete cure. In rare instances the ovum poison is in such excess that a chronic condition of ill health persists in spite of abstinence from food, then immediate delivery will cure. Caesarean section and induction of labour are both uncertain in their effect unless the patient has previously starved. The poison, consisting as it does of more or less normal protein, cannot be sweated through the skin or excreted through normal kidneys. Blood letting will remove it, together with antibodies, and the good effect of one becomes neutralized by the bad effect of the other. Fits which start after birth are always the result of the ingestion of milk or other food. The epidemic incidence of eclampsia can best be accounted for by a general increase of appetite owing to change of weather.

In conclusion, Dr. Tweedy claimed that the food origin of eclampsia was beyond controversy; in certain German statistics recently published it was noted that eclampsia was the only disease which had become rarer during the war period, and whilst the population suffered from semi-starvation.

Dr. BETHEL SOLOMONS said that the intestinal toxæmic theory as outlined by Dr. Tweedy was proved by practical experience, but he hoped a real scientific value would soon be attached to the theory. He suggested that knowledge might be gained by a series of examinations of the faeces of the eclamptic as compared with the faeces of the non-eclamptic pregnant woman. He looked on thorough intestinal lavage as the pre-eminent feature in treatment, and he cited a series of thirty successive cures of severe eclampsia which had occurred when he was assistant to Dr. Tweedy as bearing out the intestinal theory. The difficulty in treating the pre-eclamptic patient was sometimes great. The physician had two courses open to him: (1) Keeping the patient for an indefinite time on a water diet; (2) inducing labour. He (Dr. Solomons) favoured the latter course when the patient was away from skilled attendance, for he thought the danger attendant on the departure from the water diet was greater than the possible danger of fits occurring as a direct cause of the induction. Where the patient could be watched carefully the water treatment could be carried out in most cases; in some, however, induction was necessary, while Caesarean section was a last resort.

Sir WILLIAM SMYLY said that the theory propounded by Dr. Tweedy was consistent with and elucidated more of the ascertained facts connected with eclampsia than any of those which preceded it, and its application in practice had given the best results. It was well known, for example, that fragments of syncytium, and, no doubt, other substances derived from the ovum, entered the mother's blood during pregnancy and were digested there, probably by the action of antibodies or ferments. In some cases, however, it would seem that these ferments were not present in sufficient quantity to digest the foreign matter poured into the circulation both from the ovum and intestine, though quite competent to deal with either alone; and that would explain why these cases are benefited by starvation. He had frequently seen serious aggravation in the patient's condition follow the ingestion of even small quantities of food. In a case which he had seen in consultation with Dr. Katherine Maguire the convulsions, which had completely ceased for a week whilst the patient was restricted to water, returned after taking quite a small quantity of milk. Nor was this by any means an isolated case, for he had observed in others, especially in those in the pre-eclamptic condition, an improvement whilst restricted to water, and a deterioration whenever food, even milk, was taken.

Dr. ROWLETTE said that whether Dr. Tweedy's teaching could be supported by experimental work or not, it had in its favour the great test of success in its working, and success in working was the chief test of truth. Dr. Tweedy had, by his method of treatment, reduced the mortality of eclampsia to a negligible figure. It had surprised him (the speaker) to find how slow obstetricians and teachers in other centres had been to recognize the advance that had been made. In some of the London hospitals they were still content with a mortality of 50 per cent., and they did not, in their reports, think it worth while to state whether they fed eclamptic patients or not. He regarded Dr. Tweedy's discovery as to the treatment of eclampsia as the most important advance in medicine that had been made by the Dublin school in the past quarter of a century.

IRRITANT POISON GAS.

At a meeting of the Glasgow Medico-Chirurgical Society, held on December 5th, the Vice-President, Dr. DOUGLAS RUSSELL, being in the chair, Dr. J. W. McNEE read a short paper and gave a microscopical demonstration on the pathology of irritant gas poisoning. After pointing out that during the war a much larger number of gases had been employed by the Germans than was generally believed, Dr. McNEE described three main forms of gas poisoning.

1. *Chlorine*.—This was the original drift gas used by the Germans, and was dangerous only where troops were quite unprotected, as in the first attack. It acted as a direct irritant of the pulmonary system, causing intense oedema of the mucosa, and, by the coughing and spluttering set up, a disruptive emphysema, with, in addition, a devitalizing effect on the lung tissue. Many of those attacked died in two days practically drowned by the oedema. Those who recovered suffered from acute bronchitis.

2. *Phosgene*.—This was used first as a drift gas and later in shells. It was not irrespirable, and, indeed, might be inhaled in some quantity before its presence was recognized. It was extremely poisonous, causing death in one minute when inhaled in concentrated form. It did not greatly damage the bronchial mucous membrane, but produced an intense oedema of the lung. Two types of cases were observed: (a) Men who reacted and displayed a purple lividity; these recovered if well bled, so as to relieve engorgement of the right heart. (b) Men who were pale and cyanosed; these died practically at once. Among remoter effects were emphysema and a hyaline thrombosis of the capillaries in many parts of the body—for example, in the walls of the lung alveoli, in the renal glomeruli, and in the brain, where they caused the so-called ring haemorrhages.

3. *Dichlorethylsulphide* (or mustard gas).—This was the best gas from the German point of view, as, though not so fatal, it caused more casualties than all the others put together. The actual substance was a greenish-brown fluid, with a boiling point of 217° C., so that when deposited anywhere it was not easily volatilized, but remained poisonous for five, six, or seven days. Its primary effects were on the bronchial tree—namely, intense inflammation, with necrosis of the mucous membrane and the pouring out of a false membrane like that of diphtheria. This formed a pabulum for micro-organisms, which, growing there, set up bronchopneumonia and abscess of the lung. Among other effects were acute dermatitis and severe conjunctivitis characterized by swelling and oedema, temporary blindness, and, in some cases, opacities of the cornea, which might last for months.

A knowledge of these effects of poison gas was of importance to medical men both in practice and in pensions work, as many of the results were permanent, such as bronchitis (often becoming chronic), asthmatic conditions, fibrosis of the lung (particularly after chlorine or phosgene), and thrombosis or ring haemorrhages in the brain.

Peptic Ulcer.

Dr. JAMES CARSLAW and Dr. JOHN COWAN made a communication on the fatality of peptic ulcer and the importance of early diagnosis.

In a series of 112 cases treated in Glasgow Royal Infirmary during the years 1906-16, 14 patients died as the result of ulceration—a mortality of 12.5 per cent. A similar mortality had been reported by several authors, though figures ranged from 2 per cent. (Leube) to 18 per cent. (Bulstrode). Such figures might not, however, represent the true mortality, as some patients died from causes other than ulcer, and some of the 14 cases referred to might have died after leaving hospital, either from ulcer or from causes indirectly associated with it. Post-mortem evidence showed that ulcer was much more common than was appreciated clinically, and that while clinically the majority of cases occurred in women, post mortem the majority occurred in men.

In a contrasted series of 30 cases (soldiers) treated in the 3rd Scottish General Hospital from 1914 to 1919, one patient died during his residence, having been admitted with recurrence of haemorrhage and too ill for operation. Of 4 patients submitted to operation, 3 appeared likely to benefit permanently by it, and one unlikely, as widespread adhesions prevented the performance of gastro-enterostomy. Nine patients improved under treatment, but relapsed on ordinary diet and had to be invalided out of the service.

No fewer than 15 of the patients without any serious gastric symptoms showed occult blood in the stools, some for even long periods. Most of these were relieved from their symptoms after a few days in hospital, and all were dismissed "well." These were nearly all young men and suffered from a type of ulceration not likely to be seen in civil hospitals or to receive serious consideration from private doctors. Such cases probably supplied a number of those tragic incidents of sudden severe haemorrhage or perforation, without warning, which every one at times met with, and warranted a plea for special care in the examination of patients suffering from "dyspepsia," and in particular for the examination of the stools for occult blood.

Mr. HENRY RUTHERFORD exhibited illustrations, including skiagrams, of diseases and injuries of the neck of the femur. He showed also a lad of 17, with extreme development of coxa vara. This was said by the patient to have followed a kick from a horse on the left hip, received seventeen months ago, but the more probable etiological factor was an acute osteomyelitis of the right tibia which had occurred about two and a half years earlier. The case illustrated how an osteomyelitis might be followed by a mitigated form of the disease, without pus formation or necrosis, but with softening of the bone.

CONGENITAL OCCLUSION OF BOWEL.

At a meeting of the Section of Pathology of the Royal Society of Medicine, held on December 2nd, the President, Professor W. BULLOCK, being in the chair, Dr. F. A. TEAL read a paper on the relation of the antitryptic titre of the blood to bacterial infection anaphylaxis.

Dr. B. H. SPILSBURY showed the abdominal viscera of an infant who died three days after birth. There was a congenital defect of the large intestine, which was completely occluded at the splenic flexure. Behind the occlusion the large intestine was distended with thick meconium and its wall was hypertrophied. The upper part of the small intestine was distended with similar material. Beyond the occlusion the large intestine was of normal development and contained a little colourless mucus. The normal bowel was adherent to the occluded end. The specimen showed also general antenatal peritonitis, with partial organization, and with fine but fairly firm adhesions between the viscera. In the midst of the adhesions were found masses of dry, yellow, cheesy material, which was gritty from commencing calcification. The masses consisted of altered meconium, and they pointed to an antenatal perforation of the distended intestine as the cause of the peritonitis, with subsequent closure of the perforation. There was no indication in the wall of the bowel of the site of the perforation. The liver and spleen were covered with a layer of organizing lymph, and a microscopical specimen was shown of the liver in which a group of simple glands lined with goblet cells and resembling the normal glands of the large intestine were seen on the surface of the lymph. It was suggested that these glands had developed from the intestinal epithelium, which had escaped with the meconium into the peritoneal cavity, and, becoming transplanted upon the developing granulation tissue, had reproduced the intestinal glands in that situation.

Microscopical preparations were also shown of peritoneal nodules obtained from two cases of mucocele of the vermiform appendix. The nodules consisted chiefly of mucin containing columnar epithelial cells arranged regularly in rows and exhibiting a tendency towards the formation of glands. The mucin was surrounded and penetrated by a vascular and cellular stroma. It was suggested that the nodules were produced by the transplantation on the peritoneum of intestinal epithelium which had escaped owing to the rupture of the mucocele in each case. A specimen was also shown of a mucocele of the vermiform appendix with a recent perforation at its base; the patient died during the operation for its removal.

DURING the past month there have been three meetings of the Harrogate Medical Society, Dr. BERTRAM WATSON, the President, being in the chair on each occasion. At the first meeting Dr. EDGECOMBE read a paper on the "Modern conception of heart disease." This paper gave a comprehensive survey of the diagnosis, treatment, and prognosis of cardiac disease by modern methods, and was largely based on the author's own experience gained as officer in charge of a section of the Northern Command Cardiac Centre. The two following meetings were devoted to a discussion on "Chronic arthritis," the subject being dealt with under six headings, each of which was introduced by a paper as follows: Etiology by Dr. R. J. Morris, Morbid Anatomy and Nomenclature by Dr. Kerr Pringle, Radiography by Dr. Claud Saberton (illustrated by lantern slides), Bacteriology by Dr. Sinclair Miller, Surgery by Mr. Herbert Frankling, Therapeutics by Dr. Lionel Calthrop. An interesting discussion followed, in which many members took part.

Rebielus.

DENTAL SURGERY AND PATHOLOGY.

IN many respects the short preface to Mr. J. F. COLYER's fourth edition of his *Dental Surgery and Pathology*¹ is the most important chapter of his book. He makes a protest against the "constant performance of dental operations which tend to increase the liability to sepsis." His attainments and reputation as a dental surgeon will ensure that this protest shall not be neglected, and many medical men will be able, from their own experience, to confirm his opinion when he adds: "So-called 'conservative' dentistry aims at the retention of teeth irrespective of whether they are, or may become, a source of sepsis, and is heedless of the prospective danger to the individual which their retention implies."

While the general character of the book remains the same, some parts have been much revised, especially the chapter on irregularities of the teeth, and with the happiest results. Of especial interest is the chapter on the bacteriology of the mouth, written by Dr. N. Mutch. He says:

Of swallowed organisms only those which come to rest in suitable surroundings survive in the bowel. Chronic infections of the mouth help to evolve races fitted for life in the intestines. Probably the most important instance is that of the infective organism *Streptococcus longus*. Imagine, as often happens, that the gum around a focus of food stagnation becomes infected with this coccus. The bacteria on the surface are repeatedly placed in contact with impacted carbohydrate. Lived in a sugary medium, successive generations slowly acquire the power of preying upon this substrate, and a strain is developed which, although retaining its infectivity, can live freely and multiply rapidly amongst inert carbohydrate residues. At the same time its ability to form acid from the sugar is greatly increased, and by means of this weapon it can destroy a large number of rivals, including *B. coli communis*. Such an organism is especially adapted for the production of chronic infection wherever carbohydrate stagnates in the bowel.

This is a striking passage, giving a reasoned basis for the contention that oral sepsis is the prime cause of many intestinal infections. Perhaps the author will allow us to ask for simpler language.

Throughout the book is well written and well illustrated, but Mr. Colyer seems to have lost himself in subdivision on pp. 137-8-9, while the expression "the defects of septic processes in connexion with the teeth" is not particularly lucid. Fig. 641, purporting to be a section of a chronic abscess, looks to us more like a section of a small suppurative dental cyst. The statement that the inflammatory reaction started by the toxic products of bacteria invariably ends in suppuration (p. 471) seems open to doubt, and the attempt to distinguish between rheumatoid arthritis and osteo-arthritis does not carry conviction. Such defects, however, are quite overshadowed by the general excellence of the book, which can be strongly recommended both to students and practitioners of dentistry, while medical practitioners will find it an excellent work for reference.

WOUNDS OF THE HEAD AND NECK.

IN his book, *Injuries to the Head and Neck*,² Mr. H. LAWSON WHALE has made a very useful contribution to the war literature of surgery. Though primarily the work of a specialist for specialists in this region, it should be read with pleasure and profit by the general surgeon. The fourteen chapters cover the war surgery of the thr at, nose, ear, face, and jaw; injuries to the brain and eye are only mentioned when one or other overlaps the regions of which the text treats.

Both at Boulogne and at the Queen's Hospital, Sidcup, the author has had a very large experience of the war injuries on which he writes, and on this mass of material he has based many sound rules. His observations on the danger of opening up cervical fascial planes unnecessarily, and on that rare condition vagitis, are of considerable interest, as are those on the accessory sinuses. He lays great stress on the need of thoroughly cleansing these sinuses at the earliest possible date, for cicatricial contraction may later make this very difficult or impossible, and thus greatly hinder subsequent plastic work for which asepsis is essential.

The war has opened up many little-trodden paths in surgery, and in none has it been more productive of progress than in plastic work on the face and jaws. The last few chapters of Mr. Whale's book are devoted to this branch of reconstructive surgery. The book is well illustrated, both by photographs illustrating the progressive stages of "flesh sculpture" and by x-ray plates.

CHEMISTRY.

MEDICAL men and others interested in the progress of chemical science cannot do better than read Mr. A. W. STEWART'S *Recent Advances in Physical and Inorganic Chemistry*,³ the third edition of which has recently appeared. The book contains twenty chapters, each dealing with some special branch of physics or chemistry; the spectroscope, recent advances in our knowledge of the rarer metals, x rays, and radio-activity are among the subjects dealt with. It is necessary that the reader should have some knowledge of physics and chemistry before attacking the book; it is full of interest, clearly written, and should appeal to a wide circle. The same may be said of the third edition of the same author's *Recent Advances in Organic Chemistry*,⁴ which consists of some fourteen essays dealing with the most interesting of the recent advances made by that science, and with the problems before it in most urgent need of solution. The book is clearly and simply written, and may be read with ease by anybody possessing a quite moderate knowledge of organic chemistry. At the same time it contains enough information to deserve the attention of all serious students of chemistry. Dr. Stewart writes with a soundly critical pen; the fact that his two books have reached a third edition in ten years is a good proof of their utility.

The Physical Chemistry of the Proteins,⁵ by Professor T. B. ROBERTSON of California, provides the reader with a complete and intelligible account of the properties of a very important group of substances. The author refines upon the description of proteins in the lump as "colloids," and maintains that the laws applying to the crystalloids are also to a large extent applicable to many of the colloids, some of the proteins forming molecularly dispersed solutions, others yielding only suspensions or emulsions. The book is one for chemists and physiologists, and has the great advantage of not demanding any great knowledge of mathematics for its comprehension; it contains full references to the literature of the subject.

¹ *Injuries to the Head and Neck*. By H. Lawson Whale, M.D. Cambr., F.R.C.S. Eng., Captain R.A.M.C. (T.F.), with preface by Colonel F. F. Burghard, C.B., M.D., M.S., F.R.C.S. London: Baillière, Tindall, and Cox. 1919. (Demy 8vo, pp. xii+323; 130 figures. 15s. net.)

² *Recent Advances in Physical and Inorganic Chemistry*. By Alfred W. Stewart, D.Sc. Third edition. London: Longmans, Green and Co. 1919. (Demy 8vo, pp. xv+284; 23 figures. 12s. 6d. net.)

³ *Recent Advances in Organic Chemistry*. By Alfred W. Stewart, D.Sc. With an introduction by J. Norman Collie, F.R.S. Third edition. London: Longmans, Green and Co. 1918. (Demy 8vo, pp. xix+350. 14s. net.)

⁴ *The Physical Chemistry of the Proteins*. By T. B. Robertson, Ph.D., D.Sc., Professor of Biochemistry and Pharmacology in the University of California. London: Longmans, Green and Co. 1918. (Demy 8vo, pp. xv+483. 25s. net.)

⁵ *Dental Surgery and Pathology*. By J. F. Colyer, F.R.C.S., L.D.S. Fourth edition. London: Longmans, Green and Co. 1919. (Demy 8vo, pp. xiv+899; 920 figures. 32s. net.)

The first edition of Professor WALKER'S *Organic Chemistry for Students of Medicine*⁶ came out in 1913. The second edition now before us, having on its back the alternative title "Medical Organic Chemistry," is a clearly written, well-considered volume in which the medical student will find an account of all the organic chemistry he is likely to want to learn about during his medical training. The text is not designed, therefore, to fit into the schedule of any particular examination, but deals rather with the general principles of the science and with the particular compounds or classes of compounds of interest to students of medicine. The treatment strikes us as adequate without being too technical.

The seventh edition of the late Dr. WITTHAUS'S *Textbook of Chemistry*,⁷ revised by Dr. SCOTT, presents students of medicine and biology with a fairly comprehensive account of inorganic and organic chemistry, together with notes on substances of importance to the toxicologist. The style is simple and straightforward, and the ground is adequately covered; a feature of the text is the free use of equations to show the course of chemical reactions. The book may be recommended to those in search of a textbook of chemistry that goes beyond the requirements of the elementary student, but falls short of what the advanced student needs.

Mr. F. P. SARGEANT'S *Elementary Organic Chemistry*⁸ is a little textbook designed for the use of pharmaceutical and medical students. It presupposes a knowledge of physical and inorganic chemistry in its readers, and in the course of ten chapters goes through the main classes of compounds with which students are expected to be familiar. The word "mercaptan," it may be noted, is derived from the Latin *mercurium captans*, not *mercurius* (page 22). The text is clearly written, and the book should be of service to those for whom it is designed.

The third edition of Dr. H. CARLTON SMITH'S *Lecture-Notes on Chemistry for Dental Students*⁹ is a large and handsomely appointed volume dealing with such portions of chemical science as have a direct bearing on the subject of dentistry. Particular attention is paid to the metallic salts and to dental metallurgy in the book, which is clearly written and not unduly long. It may be commended to the attention of those for whom it has been written.

The eleventh edition of Professor JAMES WALKER'S *Inorganic Chemistry*,¹⁰ revised and enlarged, is a standard work for the use of elementary students of the subject in schools and colleges, and written on the classical lines. It is the work of an experienced teacher, and, although perhaps a little formal to read, it contains a good presentation and selection of elementary chemical knowledge.

NOTES ON BOOKS.

THE eleventh edition of DORLAND'S useful *Pocket Medical Dictionary*,¹¹ giving the pronunciation and definition of all the principal terms used in medicine and the kindred sciences, including dentistry and veterinary medicine, may be recommended with confidence to practitioners and

students needing a medical lexicon of small size. The present edition contains a few more pages than the ninth, which was noticed in our columns four years ago; space has thus been found for several hundred new definitions of medical and scientific terms, and the book shows signs of careful revision throughout. It is well printed, and considering its size remarkably complete. The popularity of the work may be gauged from the fact that since it first appeared—twenty-one years ago—185,000 copies have been sold. The brief anatomical tables are probably found of service by students in brushing up their knowledge before examination.

Bodily Deformities,¹² Part I, by E. J. CHANCE, F.R.C.S., was published in 1862. A second edition, edited by Mr. JOHN POLAND, F.R.C.S., was reviewed in our columns on July 28th, 1906, p. 404. The second volume of this edition is now before us. The long interval between the dates of publication is, no doubt, partly to be explained by the years of war. Much blood has flowed under the scalpel since the lectures here reprinted were delivered in and after 1852, and, although the accomplished editor has added a number of notes, he must have found it impossible to modernize the work without emasculating it. Yet although Mr. Chance's pathology has been discredited by the progress of knowledge and his treatment much improved upon since the dawn of the Listerian era, such an acute observer as he was, with such exceptionally long experience at the City Orthopaedic Hospital, could not fail to have something to say that is yet worth hearing. The book is, for this reason, still of some interest to orthopaedic surgeons. Mr. John Poland has added to Mr. Chance's lectures reprints of some which he himself has delivered on the treatment of talipes equino-varus. These cannot but be instructive and therefore useful.

Mr. G. E. BARTON'S little book on *Teaching the Sick*¹³ is a short and sensible contribution to the problems of occupational therapy and re-education presented to the community by cripples of every sort, whether crippled in the war or no. He takes the robust and practical view that nowadays suitable work and suitable education can be found for all, crippled or sound, if they have the will to learn and to work. He describes in detail how the crippled may be interested in such things as geometrical drawing (which is always valuable to the craftsman or worker), chip carving, modelling, wood working, and poultry farming. The secret of success, as Mr. Barton shows, is to interest the patient, and to give him short periods of work alternating with short rests. We recommend the book to the attention of everybody who is interested in the training or re-education of the crippled.

Dr. WIENER'S book on the symptoms and treatment of malaria¹⁴ contains a commonplace and superficial account of the subject, written from the point of view of a dependant of the Central Powers. The author frequently quotes the names of German writers on malaria, but shows a surprising ignorance of the literature that has appeared in other countries dealing with every aspect of the disease.

THE *Hygiene of Town Planning and Vegetation*¹⁵ is a booklet of quotations and generalities dealing with the importance of adequate town planning from the point of view of public health. It is designed to meet the needs of the general reader.

Dr. ESKUCHEN'S book on lumbar puncture¹⁶ gives a dogmatic account of the employment of this operative procedure in the diagnosis and treatment of disease, with details of the many special reactions and abnormal constituents that may be looked for in the cerebro-spinal fluid withdrawn by its means.

⁶ *Organic Chemistry for Students of Medicine*. By James Walker, I.L.D., F.R.S. Second edition. London: Gurney and Jackson; Edinburgh: Oliver and Boyd, 1919. (Demy 8vo, pp. xi + 352; 22 figures. 10s. 6d. net.)

⁷ *Textbook of Chemistry: Inorganic and Organic, with Toxicology*. For Students of Medicine, Pharmacy, Dentistry, and Biology. By R. A. Witthaus, A.M., M.D., late Professor of Chemistry, Physics, and Toxicology in Cornell University. Seventh revised edition by R. J. E. Scott, M.A., B.C.L., M.D., Fellow of the New York Academy of Medicine, etc. London: John Bale, Sons, and Danielsson, Ltd. 1919. (Med. 8vo, pp. xii + 477; 18 figures. 20s. net.)

⁸ *Elementary Organic Chemistry*. Adapted for the use of Pharmaceutical and Medical Students. By F. Pilkington Sargeant, Ph.C., F.C.S. Second edition. London: H. K. Lewis and Co., Ltd. 1919. (Cr. 8vo, pp. vii + 100; 4s. net.)

⁹ *Lecture-Notes on Chemistry for Dental Students*. By H. Carlton Smith, Ph.G., Lecturer on Physiological and Dental Chemistry at Harvard University Dental School, etc. Third edition, revised and enlarged. London: John Wiley and Sons, Inc. London: Chapman and Hall, Ltd. 1917. (Med. 8vo, pp. xi + 455; 38 figures. 13s. 6d. net.)

¹⁰ *Inorganic Chemistry*. By James Walker, I.L.D., F.R.S. Eleventh edition, revised and enlarged. London: G. Bell and Sons, Limited. 1919. (Cr. 8vo, pp. viii + 326; 49 figures. 5s. net.)

¹¹ *American Pocket Medical Dictionary*. Edited by W. A. Newman Dorland, A.M., M.D. Eleventh edition, revised. Philadelphia and London: W. B. Saunders Co., Ltd. 1919. (Fcap. 8vo, pp. 717. 7s. 6d. With thumb index. 8s. 6d.)

¹² *On the Nature, Causes, Variety, and Treatment of Bodily Deformities*. A Series of Lectures by the late E. J. Chance, F.R.C.S. Edited by John Poland, F.R.C.S. Vol. II. London: John Murray, 1919. (Crown 8vo, pp. viii + 338; 141 figures. 18s. net.)

¹³ *Teaching the Sick. A Manual of Occupational Therapy and Re-education*. By George Edward Barton, A.I.A., Director of Consolation House and President Consolation House Convalescent Club, Inc., Philadelphia and London: W. B. Saunders Co., Limited. 1919. (Post 8vo, pp. 163; illustrated. 6s. 6d. net.)

¹⁴ *Klinik und Therapie der Malaria*. By Dr. Emmerich Wiener (Budapest). Berlin and Vienna: Urban and Schwarzenberg. 1918. (Sup. roy. 8vo, pp. 125; 34 charts. M 7.)

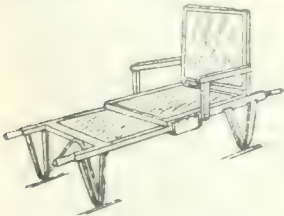
¹⁵ *Hygiene of Town Planning and Vegetation*. By P. S. G. Dubash, D.Sc., etc. London: G. Bell and Sons, Limited. 1919. (Cr. 8vo, pp. 130. 3s. net.)

¹⁶ *Die Lumbalpunktion*. By Dr. Karl Eskuchen, München-Schwabing. Berlin and Vienna: Urban and Schwarzenberg. 1919. (Med. 8vo, pp. 188; 21 figures, 2 plates. M 8.)

APPLIANCES AND PREPARATIONS.

An Invalid Carrying Chair.

AN invalid carrying chair devised by Mr. Campbell Higher, M.B., C.M., Medical Officer Berks 13 V.A.D., is the outcome of war needs while engaged on convoy duty. It is intended for the carriage, in a sitting position, of invalids unable to walk. The chair consists of three strong but light wood frames, filled in with canvas, the side parts of the seat and leg rest being continued to form the rear and front handles. The leg rest, shown extended in the drawing, is held in place by an angle bracket at each side attached to the seat frame, and allowing free out and in movement. Bent steel supports, strengthened by steel struts, are attached to these frames, raising the chair one foot from the floor. The back, with arm rests attached, can be folded flat upon the seat when the chair is not in use. When shortened, the chair measures 4 ft., and when fully extended, 5 ft. 9 in., the width over all being 1 ft. 8 in. These dimensions allow it to go into a corridor or compartment of a railway train, and it can be carried up and down stairways and along cramped passages unsuitable for a stretcher. It has been found useful in private houses, convalescent homes and sanatoriums. The chair has been tested and approved by the Medical Department of the War Office, being "especially recommended for chest and leg cases, and for transport by trains." It has been for some time in use in the British Red Cross Hospital, Netley; Reading War Hospital; No. 3 General War Hospital, Glasgow; the V.A.D. Hospital, Worcester, etc. It was exhibited at the London Medical Exhibition in October, 1919. A specimen chair will be exhibited in the Red Cross Section of the Imperial War Museum at the Crystal Palace, London, to be opened in 1920. The makers are Messrs. S. Maw, Son, and Sons, Limited, 7 to 12, Aldersgate Street, London.



Fully extended, length 5 ft. 9 in.,
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ROYAL MEDICAL BENEVOLENT FUND.

At the last meeting of the Committee, held on December 9th, 1919, twenty-seven cases were considered and £343 voted to twenty-three of the applicants. The following is a summary of some of the cases relieved:

Widow, aged 77, of M.R.C.S.Eng. who died in 1891. Only income an annuity of £56 8s. 8d. She pays £16 a year rent. Now unable to do any work owing to loss of eyesight. Voted £12 in twelve instalments.

M.D.Lond., married. Now entirely incapacitated and bed-ridden. Wife earns £2 2s. a week as a clerk, and obtains a little by selling personal belongings. Rent, £1 1s. a week for six rooms, three of which are given to a man and his wife in return for wife's services during the day, when she looks after the applicant. Voted £26.

Daughter, aged 67, of F.R.C.S.Eng. who died in 1887. Receives £25 from another charity, and lives in a home where she has three rooms and receives £25 a year. Cannot manage owing to the high cost of living. Voted £12 in twelve instalments.

Daughter, aged 55, of M.R.C.S.Eng. who died in 1898. Receives £25 from dividends and £13 from sister. Rent £44 for three rooms, shared by sister. Unable to earn own living owing to ill health. Cannot manage owing to the high cost of living. Voted £5.

Daughter, aged 46, of M.R.C.S.Eng. who died in 1881. Receives £43 from other charities, and £10 from dividends. Used to be a hospital nurse, but now unable to work. She boards with her half-brother. Suffers from ill health. Relieved once, £10. Voted £10.

Daughter, aged 41, of M.R.C.S.Eng. who died in 1914. Only income £20 a year left by grandfather. Lives with mother who is an invalid. Applicant suffers from ill health. Mother receives help from the Fund. Relieved five times, £25. Voted £5.

Daughter, aged 62, of L.R.C.P.Lond. who died in 1872. Only income £26 from another charity, and £6 from friends. Pays £13 a year for a furnished room. Relieved twelve times, £96. Voted £18 in twelve instalments.

Subscriptions may be sent to the Acting Honorary Treasurer, Dr. Samuel West, at 11, Chandos Street, Cavendish Square, London, W.1.

The Royal Medical Benevolent Fund Guild is overwhelmed, in these days of exorbitant prices for clothing and household necessities, with applications for coats and

skirts for ladies and girls holding secretarial posts, and suits for working boys. The Guild appeals for second-hand clothes and household articles for the benefit of the widows and children who, in happier times, would not have needed assistance. The gifts should be sent to the Secretary of the Guild, 43, Bolsover Street, W.1.

THE VOLUNTARY HOSPITALS.

PAYMENT FOR DISABLED PENSIONERS IN VOLUNTARY HOSPITALS.

A DEPUTATION from the British Hospitals Association recently had an interview with the Ministry of Pensions to represent that the existing rates of payment for the treatment of war pensioners at or in hospitals do not now meet the full cost of treatment. The Ministry of Pensions has agreed, subject to the approval of the Treasury, upon the following rates, to come into force from January 1st, 1920:

Rates of Payment by the Ministry of Pensions.

1. The rates of payment shall cover the whole cost of treatment (subject to paragraphs 2 and 3 below) so that no portion of it shall fall or be a charge on the charitable funds of hospitals which undertake the work of treatment of disabled sailors and soldiers. The cost of medical services shall be included in the whole cost. (Provision is taken in the new rates for payment of medical services by the hospitals concerned of an amount not exceeding 25 per cent. of the total gross receipts from the Ministry.)

2. *In-patients.*—There shall be a sliding scale of pay at an increased rate, varying according to the circumstances of the hospital and its cost of maintenance, up to but not exceeding a maximum rate of 11s. per day.

3. *Out-patients.*—For out-patient treatment the existing flat rate of 2s. per attendance shall be continued; and, in order to encourage the institution of evening clinics, the Ministry of Pensions will guarantee a minimum total payment of £2 2s. per session per clinic, irrespective of the number of attendances. In the case of aural or ophthalmic clinics, at which the peculiar nature of the ailment or disability requires active attention and treatment by the doctor personally on each occasion of the patient's attendance, the rate of pay shall be 5s. per attendance as long as the number is below twelve; and for any number above twelve payment shall be at the rate of 3s. per attendance, and the Ministry will guarantee a minimum total payment of £3 3s. per session per clinic.

4. Hospitals which desire increase in the present rates of payment shall be required to provide reasonable evidence in support of their claims; and, in order to minimize the clerical work in this connexion, the Ministry will, on application, provide a form to be filled up.

Applications must be made by hospitals to the Ministry of Pensions on official forms not later than January 1st, 1920. It is recognized that full details cannot be given by that date, but the application must be lodged by then, otherwise the increased rates when granted will not be retrospective to January 1st.

General Financial Position of Hospitals.

The British Hospitals Association has arranged to hold a conference on January 15th to discuss the general financial position of hospitals in various parts of the country and the possibilities of relief of the present difficulties.

King Edward's Hospital Fund for London.

The League of Mercy, which received its charter in 1899, has recently communicated to King Edward's Hospital Fund for London a resolution in which it inquired what action the Fund proposed to take with a view to preserving the London hospitals as voluntary institutions, and expressed its readiness to co-operate in any proper and constitutional action with that object. The following reply, addressed to the Secretary of the League of Mercy, has been received:

Dear Madam,

The Resolution of the Executive Council of the League of Mercy, passed at their meeting on the 20th November, and communicated to the Fund in your letter of November 24th, received the careful consideration of the Executive Committee of this Fund at their meeting on the 1st instant, and I am directed to say that while the Committee fully recognize the special difficulties of the Voluntary Hospitals at the present time, they recall the words, of His late Majesty King Edward VII, in the letter in which he inaugurated the Fund—namely:

Public opinion has shown itself upon more than one occasion, as I think wisely, in favour of the maintenance of the voluntary system for support of our hospitals, combined with an adequate system of

representation of the body of subscribers in their control and management. It is obvious, however, that if these institutions are to be saved from State or parochial aid, their financial condition must be secured.

The judgement thus expressed by King Edward formed the basis upon which he founded King Edward's Hospital Fund, and the success hitherto obtained both by the Fund and by the League of Mercy bears witness to its soundness.

In the opinion of the Executive Committee King Edward's words are equally applicable to the present circumstances, and they consider that the most effective way in which both the Fund and the League of Mercy can assist in maintaining the voluntary system is to continue, on their present lines, the work of raising money for the support of the hospitals and of distributing it in such a way as to secure that the greatest possible value is obtained from it both in quantity and quality of benefit for the sick and injured, and in so doing to draw public attention to the needs of the voluntary hospitals and to increase public confidence in their work.

Yours faithfully,

(Signed) H. R. MAYNARD.

Secretary.

THE PEACE LESSONS OF WAR SURGERY.

MITCHELL BANKS MEMORIAL LECTURE BY
PROFESSOR A. DEPAGE.

PROFESSOR DEPAGE of Brussels delivered the Mitchell Banks Memorial Lecture before the University of Liverpool on December 12th.

Before proceeding to the subject of his lecture, Professor Depage said that his selection to give the lecture this year was a proof not only of personal esteem for him, but of sympathy and attachment to the Belgian people. Belgium, he said, would never forget that England took up arms to defend her and preserve her liberty. She would retain vivid memories of the welcome given to Belgian people on British soil when, hard pressed by the Germans, they were compelled to leave their native country, and would always remember the first aid given by the British nation, through whose help Belgium was enabled to erect, behind her lines, hospitals which would bear comparison with those of the other allied armies. British contribution had made it possible to erect the hospital at La Paille, in which British nurses had devotedly attended Belgian wounded.

Control of Wound Infection.

Turning then to the subject of his lecture, he said that the treatment of wounds, made by the surgeon himself, had been established by Lister in 1868, and since that date there had been no change except in matters of detail. The wounds of war were already infected when the patient reached the surgeon, so that his task was not to protect the wound from external microbes, but to destroy those already there. Wounds seen in the early days of the war suppurated and healed as a rule by second intention. Two men of superior mind sought to remedy the ignorance which prevailed among surgeons at the beginning of the war. Sir Almroth Wright studied the organic reactions of the infected tissues and strove to increase their microbicidal power, and founded a physiological method of treatment. Dr. Alexis Carrel's ideal was first to sterilize the wound by chemical means—he used a solution of sodium hypochlorite, the formula for which was worked out by the English chemist, Dr. Dakin—and afterwards to suture the wound.

These two methods, and others which were devised, did not, it was found, give the desired results unless the wound was opened up and the damaged tissues excised. To attain success it was necessary to observe certain rules: (1) The evolution of the infection in the wound should be followed by daily bacteriological examination, the results being plotted on a curve; (2) suture should be practised early to prevent secondary infections and to obviate retraction of tissues; (3) in selecting the time of suture the surgeon should be guided by the results of bacteriological examination; it was dangerous to suture when *B. perfringens* was found in the exudation; it usually disappeared in a week or a fortnight. The presence of streptococci contra-indicated suture, and *B. coli* were to be feared. The importance of the Friedländer bacillus and staphylococci depended upon the numbers in which they were present. Uninfected wounds or wounds infected by a non-pathogenic microbe gave 100 per cent. success; those slightly infected by staphylococci gave 95 per cent. success; those infected

by *B. coli* 75 per cent., whereas those infected by streptococci gave no more than 7 per cent. success.

Such results showed the importance of laboratory investigations and the necessity of having a clinical laboratory as a part of the equipment of a hospital. Carrel's method had been sometimes improperly applied. The indications for it were limited, but its efficacy in recent infected wounds had been abundantly proved. The method could be applied to industrial accidents; but for this complete equipment, such as the military hospital eventually possessed, must be provided. Great advantages would follow from bringing industrial cases needing careful surgical treatment of this nature into large hospitals where the therapeutic methods which had been found satisfactory in war could be rigorously applied. Two conditions were essential in the application of Carrel's method and could be fulfilled only in a hospital; the first was that Dakin's solution should be prepared in large quantities and used when fresh; the second that the microbe curve should be studied in order to determine the most favourable moment for suture. The treatment of wounds in civil life needed reorganization; such complicating infections as tetanus and septicæmia could always be more efficiently treated in a hospital than in a private house.

Treatment of Fractures.

Great progress had been made during the war in the efficient treatment of compound fractures. Down to 1915 the results of treatment of fractures had been bad; as had been the case in civil practice suppuration was the rule, and very often the patient's strength was undermined by septicæmia. Cases of compound fracture of the thigh, for example, did not recover in less than six months, usually not under a year, and frequently long immobility determined ankylosis of joints and sclerosis of muscles. After 1915 excision and the application of Carrel's or some other method made it possible to sterilize the wound and to suture it early, an open being thus transformed into a closed fracture. Great improvements in the mechanical treatment of fractures so as to bring the fragments into the best position for consolidation had been achieved during the war, and in both respects civil surgery should benefit. At the beginning of the war surgeons hesitated whether to prefer simple immobilization or immobilization with continuous extension; the question had now been decided in favour of the latter method. There was, Professor Depage said, no doubt that the apparatus of Thomas, Robert Jones, Blake, Delbet, Alquier, Finochietto, and others, would soon definitely replace plaster-of-Paris splints in civil practice.

Wounds of Joints.

Progress had also been made in the treatment of traumatic lesions of the articulations; this was due to the adoption of certain methods: (1) Wide aseptic arthrotomy with excision of the track of the projectile, thorough clearing of the cavity, scraping of the injured bony surfaces, and immediate suture in all recent wounds of the articulations threatened with infection; (2) the application of Carrel's treatment where wide lesions of the soft tissues made suture impossible; and (3) active mobilization in purulent arthritis, as suggested by Dr. Willems of Ghent. Movements of the joint made by the patient himself were not painful and the results were remarkable; suppuration diminished rapidly, infection disappeared, and the movement of the joint was preserved, even in cases with deep infection and relatively serious bone lesions.

Chest Wounds.

The treatment of abdominal injuries had not been influenced by the war, though the statistics improved, owing to early operation, made possible by the establishment of advanced posts. On the other hand, surgery of the chest had been notably advanced—rendered simpler and more precise. Surgeons now opened the chest with as much confidence as they opened the abdomen, and a foreign body could be extracted from the lungs as certainly as from the muscles of the thigh. Great progress had been made also in the treatment of purulent infections of the pleura. Operations requiring resection of the walls of the chest had been abandoned for simple closing of the fistula after sterilization of the pleural cavity by Carrel's method.

Peripheral Nerves.

Not much advance had been made in the treatment of wounds of the central nervous system, but much had been achieved in those of the peripheral nerves. The experience gained, the importance of technique, and the observations made in the laboratory had been of so much advantage that suture of the peripheral nerves marked one of the greatest advances realized by surgeons during the war.

Wounds of the Face.

In the treatment of wounds of the face the chief advance had been in relation to fracture of the lower jaw. The results now obtained by collaboration with the dental specialist were incomparably better than those previously obtained.

Artificial Limbs.

Great advance had been made also in the construction of artificial limbs. Makers previously had not studied sufficiently the normal balance of the body, and the result was a fault in the parallelism of the amputated and the sound limb. Research workshops were established, and with the co-operation of the surgeons the construction of artificial limbs had been placed on a physiological basis.

Conclusion.

In conclusion, Professor Depage touched briefly on certain other points. He mentioned the improvements introduced into radiography, especially in respect of the localization of foreign bodies; the addition of curative to preventive treatment of tetanus by serum; the increase in knowledge of the pathology of shock; the treatment of septicaemia, especially streptococcic septicaemia, by injections of peptone by Nolf's method, which would, no doubt, have many applications in civil life; and finally, the establishment of the value of the transfusion of blood in traumatic anaemias and the method by which it should be performed.

Altogether much progress had been made in surgery during the war, and British surgeons and men of science had largely contributed to it. The advance had made it possible to save the lives of a great number of men during the war, and it was to be hoped that through it many more would be saved in time of peace; that would afford some consolation for the sacrifices imposed upon the world.

THE MEDICAL BENEFIT REGULATIONS.

CONFERENCE AT STEINWAY HALL.

A CONFERENCE convened by the Federation of Medical and Allied Societies was held at the Steinway Hall, London, W., on December 12th, to consider the National Insurance Medical Benefit Regulations for 1920, in order to determine whether, in view of certain clauses contained therein, those Regulations as a whole were framed in the best interests of the community and of those who were asked to accept and work under them. Sir MALCOLM MORRIS, who was in the chair, said that the present scheme of insurance was not the best that could be devised, and expressed the view that a committee or Royal Commission should be appointed to devise something better for the public, whose interests were those of the medical profession. He read a letter from Sir Watson Cheyne, suggesting that the decisions of the conference should be sent to the medical members of Parliament; and another from Captain Guest, stating that the Prime Minister would be ready to give sympathetic consideration to the subject.

Dr. E. H. STANCOMB said that the public medical service formed by medical men in Southampton was a success. If that example were followed in other places the doctors would then be able to go to the Government with their own scheme and ask for its support. The profession wanted freedom, especially freedom of choice between doctor and patient. The panel doctor felt more and more that he was a bureaucratic slave and could not therefore give willing service. Local autonomy was, he said, essential to success, and the time was not ripe for a State whole-time medical service.

Dr. GORDON DILL spoke on the effect of the new Regulations upon the whole profession in view of the possible extensions of medical services to the community by the

State. He urged that the matter should be discussed on higher grounds than mere pounds, shillings and pence.

Dr. F. COKE, endorsed the remarks made by Dr. Stancomb. Mr. ROWSELL, speaking as a pharmacist, said the question of finance was hampering the working of the Insurance Act. Many appliances which ought to be at the disposal of medical men for insured persons were wanting.

Sir BERTRAND DAWSON, who said he appeared at the meeting in his private capacity, and not in a representative capacity, urged the necessity of the profession becoming united. It must be clearly admitted that the organization of the profession was inadequate to present needs. The Insurance Act had defects, but could it be said that some system of insurance was not essential? What it was necessary to do now was to convert the present system into a better system. The profession did not want a full-time medical service; it wanted adequate provision for good work. So far as he came in contact with the present Ministry of Health there was a general desire to meet the medical profession in a sympathetic spirit. For many years there had been a tendency on the part of the profession to adopt an attitude of suspicion towards the authorities, but on this particular occasion he thought they would be justified in assuming that there was a desire to meet the profession. The spirit of the old Insurance Act was quite dead, and the proposals about to be made were quite different. That alteration in attitude was shown by the setting up of the Consultative Council. It was an entirely new departure for the Government to set up such a body of medical men to give advice from the point of view of those practising medicine, and every endeavour had been made that it should represent knowledge and experience. He thought the profession might be well advised to take the Consultative Council as a model and ask for it to be imitated in various parts of the country. The first reference which the Government made to the Consultative Council was that it should consider, study, and report upon the best method of systematized medical service for this country. The Council would report to the Minister, and an authoritative statement would, he hoped, shortly be issued for the constructive criticism of the profession.

Dr. LATHAM said that the new Regulations had been framed without reference to the great advances made during the war. Medicine could give more to the community than was asked for under the Regulations.

Dr. H. J. CARDALE contended that the Insurance Act worked well in certain poor districts. In Bermondsey, for instance, conditions were much better. He felt confident that the Act would form the basis of a satisfactory service. Dr. RICHMOND expressed a similar opinion.

After some further discussion the following motion by Dr. STANCOMB was carried:

That in the opinion of this conference of medical and allied organizations the draft Regulations for 1920 proposed to be made by the Minister of Health with respect to the administration of the National Health medical benefit are not adapted to secure the most efficient service from the medical profession nor adequate results to the community.

It was resolved also:

That the authorities be asked to appoint a committee of inquiry empowered to take evidence on the panel system and on any alternative proposals.

Finally, it was agreed to ask the Prime Minister to receive a deputation the composition of which was left in the hands of the executive committee.

THE annual report of Livingstone College for 1918-19 deals with a year that was full of change. For forty months during the war the college was converted into an auxiliary hospital for convalescent soldiers. This function came to an end with the close of 1918. Since then the college has returned to its proper work of giving training in elementary medicine, surgery, and hygiene to missionaries going to spheres of work abroad far from medical aid. The ordinary session begins each year in October and lasts nine months; there is accommodation for twenty-three resident students. The college is not intended to train men as medical missionaries, and those who enter are required to sign a declaration that they will not adopt this title or otherwise assume the position of a qualified doctor.

British Medical Journal.

SATURDAY, DECEMBER 20TH, 1919.

THE TEACHING OF OBSTETRICS AND GYNAECOLOGY IN LONDON.

THE vexed question of how obstetrics and gynaecology ought to be taught has been very fully discussed during the last few months by the Section of Obstetrics and Gynaecology of the Royal Society of Medicine. It appointed last March a special committee to inquire into the subject; its report was published in our columns on August 30th, p. 277, and September 13th, p. 347. Subsequently a minority report was presented, and published in full in our issue of last week (p. 778). It was read to the Section during the discussion: our account of this, begun last week, is completed at p. 813. We have already drawn particular attention to the majority report because, while it refers primarily and solely to the London schools, the general principles and considerations are applicable everywhere.

A notable feature both of the report and of the discussion was the unanimity of opinion as to the badness of the present position in London. It was only in regard to the remedy that there was some divergence of views, and it is not unlikely that time and a farther exploration of the actual possibilities of the situation will prove these divergencies to be more apparent than real. In the first place it is emphatically maintained, and no one with any knowledge of the facts will dispute it, that more beds are required for the teaching of both obstetrics and gynaecology to medical students in London. In the second place it is unanimously claimed by all the teachers that more time ought to be devoted by the student to these subjects. Four months of the student's whole time is claimed as a necessary minimum. This period does not appear to be an excessive proportion of the curriculum, when there is kept in mind the extent to which midwifery bulks in most general practices, and its importance to the State and the individual alike. The claim to the student's whole time is, however, a new departure, and one which will require to be carefully thought over before it is adopted. No doubt it is ideal from the point of view of the teacher to have his pupils living in a mental atmosphere saturated with the subjects taught, but it seems open to question whether such exclusive study over such a period will not directly foster the idea that the subjects of midwifery and gynaecology are detached from general surgery and medicine. As has been repeatedly pointed out recently, and is wisely emphasized in the minority report, there is already too strong a tendency in this direction, and it is urgently desirable not only to prevent it, but actually to encourage the growth in the student's mind of a broad and balanced conception of the essential unity of medicine, surgery, and midwifery. There was, in the third place, a general consensus of opinion that the two subjects should be taught by the same teachers and in the same institution. It seems unlikely that there will be any serious disagreement with this contention on theoretical grounds. It embodies what will be generally accepted as an ideal to be attained wherever possible. Both in teaching and in practice the two subjects are so intimately

related, and have so much in common, that they naturally form a single, if cojoined, department of surgery.

These, then, are the desiderata agreed upon by all the members of the special committee and by all the speakers in the discussion. When we pass to the question of ways and means we discover a cleavage of opinion. It will be recollected that the majority of the committee reported in favour of the establishment, in the congested outlying districts of London, of maternity and gynaecological hospitals or "centres" with some 200 beds each, each centre to be under the charge of a resident director of the standing of an obstetric physician at a teaching hospital. On the other hand the minority report recommends the development in connexion with the existing general hospitals of really adequate "departments" for midwifery and gynaecology. They draw particular attention to the importance of the student's being taught these subjects as part of the work of the one general hospital, and maintain that anything in the nature of geographical separation must lead to that detachment of the subjects from general medicine and surgery which all unite to condemn. With this point of view there will be considerable sympathy, although we need not accept the view of one contributor to the discussion who is reported to have asserted that efficiency in teaching is possible in a general hospital which is out of the question in a special institution. The examples of the great schools of Edinburgh, Dublin, Manchester, and Glasgow where the teaching of midwifery is second to none, and where it is carried out in special institutions, clearly prove the error of such an assertion. At the same time it is probably true that equal efficiency in teaching may be attained with less effort to all concerned and with greater economy of time and work in a general hospital. The minority point of view seems to us to be merely the logical complement of that ideal unity of midwifery and gynaecology which both parties acclaim, and of that greater essential unity in the conception and presentation of all the specialized branches of medical learning which is one of the fundamental necessities of a really good medical education.

Sir Robert Morant was able from his wide administrative experience to lead the discussion more into the realm of possibly practical politics. As he indicated, there are really two questions involved—namely, the teaching of students, and, secondly, the increased provision of maternity and gynaecological beds in London; and while the two questions are intimately inter-related, more progress towards a solution is likely to be made if the dual nature of the problem is kept clearly in mind. The question of hospital provision is one which involves a host of other considerations besides teaching, and, as Sir Robert Morant pointed out, no one bit of the question can wisely be considered by itself. In this very connexion our readers may recall what appeared in these columns last week regarding the establishment in London of "university hospital units," each offering adequate teaching in medicine, in surgery, and in midwifery and gynaecology. This movement would obviously fit in with the minority report, and an economy of effort be thereby achieved. On the other hand it may be doubted whether a sufficiently large number of beds could be provided in this way—either for the needs of the student or for the needs of the population. For, under the conditions of the future, increasing accommodation for normal labours will have to be made in institutions, as women in ever-increasing numbers will claim their right to be confined under conditions of the greatest safety. The maternity

hospital of the future will be less a hospital for dystocia than a lying-in institution for eutocia, in which preventive measures will be more in demand than curative methods.

Is there any real reason why the "centres" scheme should be adopted to the exclusion of the "department" scheme, or vice versa? It seems to us that there is not only room but need for both. But it is probably better policy to begin with the scheme which admits of the prospect of earlier progress. From what has been said in the last paragraph, that would appear to be the "departments" scheme. But by itself this scheme will not be adequate, and in the meantime there is much work to be done in the fuller exploration of the ground in connexion with the possible establishment of women's hospitals of the new type.

POST-GRADUATE CENTRES IN LONDON.

WE gather that since the amalgamation of the Fellowship of Medicine and the London Post-Graduate Association progress has been made towards the elaboration of a permanent scheme for submission to the medical schools and hospitals which will be concerned. There is no doubt about the success of the courses arranged by the Fellowship of Medicine to meet the special conditions existing early this year, when so many temporary medical officers in the various medical services of the British Empire and of the medical corps of the United States of America were in this country. The success of the emergency course was due to the enthusiastic co-operation of the medical schools and hospitals in London, but the medical schools are now more fully occupied in the teaching of students, and opinion seems hardening in favour of a scheme providing that one or more hospitals in London should be entirely devoted to post-graduate work, in association with special courses in special hospitals.

Evidence of this movement of opinion is afforded by a letter published in *The Times* of December 13th, in which the present position and the aspirations of the medical profession are presented to the public. The letter is signed by Sir Clifford Allbutt (President of the British Medical Association and Regius Professor of Physic at Cambridge), Sir William Osler (Regius Professor of Medicine at Oxford), by Sir George Makins (President of the Royal College of Surgeons of England), Sir Bertrand Dawson (Dean of the Faculty of Medicine of the University of London), Dr. J. G. Adams (Vice-Chancellor of the University of Liverpool and until recently a member of the head quarter staff of the Canadian Army Medical Corps in this country), and by Sir Humphry Rolleston (President of the Royal Society of Medicine). The writers hold it clear that to ensure the success of any comprehensive scheme in London it will be necessary to have one or more post-graduate teaching hospitals, adequately provided in all departments, and including laboratories for clinical investigation and pathological research. Time, they say, will not permit of the building and equipment of a new hospital for the purpose. Under present conditions, before it could be finished the post-graduate students for whom provision should be made in this country will have wandered elsewhere in search of what they need; so that the chances are that before London could be ready thousands of them would again have found their way to Teutonic centres, for there can be no doubt that the Central Powers will make frantic efforts to regain what they have lost in this respect. An appeal therefore is made to the Government to help one or

more large general hospitals in London to equip themselves exclusively for post-graduate work, and that these should, by co-operation with other medical schools, provide themselves with such a teaching staff as would be second to none, if not superior to any other throughout the world.

The proposal as it stands is in accord with the opinion of the Royal Commission on University Education in London, which spoke of the propriety of organizing, after the university hospital units for students had been established, a hospital as a post-graduate school for the reception partly of graduates from abroad and the colonies, partly of students from other university hospitals who desired to pursue their studies further. Sir George Newman, in his memorandum to the President of the Board of Education on Medical Education in England,¹ has more recently pointed out that for the proper organization of the study of medicine after graduation one of the necessities was to devise a scheme for an imperial post-graduate teaching school in London or elsewhere for foreign and colonial graduates, who formerly repaired to such centres in Germany and Austria, and which would serve both as a teaching school and as a clearing house and central bureau to advise appropriate courses of study and facilitate their provision. Again, in his Memorandum on Preventive Medicine addressed to the Minister of Health,² he recurred to the subject, pointing out that post-graduate courses should be comprehensive and well arranged, and of a quality to reach university standard in respect of the teaching staff, the syllabus, and the sustained character and homogeneity of the treatment of the subject.

There is no doubt—as is indeed indicated in these memorandums—that all post-graduates do not want the same thing: some wish to revise or review their general knowledge, some to take a higher degree or diplomas, some to study special subjects. The task before the combined London association is one of no little complexity and magnitude. We agree with the distinguished writers of the letter from which we have quoted that the project is one of imperial significance, but one which the medical profession and the staffs of the teaching schools cannot expect to accomplish without substantial help. As we have attempted to show, there is good reason to hope that any well-considered scheme will have the sympathy and support of the Board of Education, and at least the sympathy of the Ministry of Health; but it is well that the views of the profession should be placed before the general public. As Bacon said, "the ripeness or unripeness of the occasion must ever be well weighed; and generally it is good to commit the beginnings of all great actions to Argus with his hundred eyes."

EPSOM COLLEGE IN THE WAR.

THE Old Epsomians dined together on December 11th under the chairmanship of Mr. Maynard Smith, C.B., who won an Epsom Scholarship in Natural Science in 1893. No similar meeting has been held since the war began, and there was a good attendance. In giving the toast "Floreat Epsomia" the chairman referred to the record of Epsom College in the war. Of the large number who served 133 had laid down their lives. Among them was Brigadier-General R. B. Bradford, V.C., who had attained that rank at a very early age and was killed when only 25. The D.S.O. was won thirteen times, and Captain H. L. G. Hughes, received two bars and Lieut.-Colonel L. L. C. Reynolds one. The M.C. was won sixty times, including

¹ H.M. Stationery Office. (Cd. 2123.) Through any bookseller, 9d. net.
² H.M. Stationery Office. (Cmd. 363.) Through any bookseller, 6d. net.

three bars, the D.S.C. twice, the D.F.C. twice; the C.B., was received by three old Epsomians, the C.M.G. by three, and the military O.B.E. by eleven. The Croix de Guerre was conferred four times and other foreign decorations eight times. Brevet rank was granted to five, and old Epsomians were mentioned seventy-three times in dispatches, several of them more than once, Captain S. A. Gabb, M.C., six times. The head master, the Rev. Walter J. Barton, in acknowledging the toast, said that the school was in a flourishing condition, the number of boys this term being 309—as many as the school could hold—and it had been necessary to refuse a large number of applications. Many additions and improvements in the building had been made in recent times, but the college chapel was as yet incomplete. The chancel was erected in 1906, and it was now proposed to rebuild the nave in conformity with it as a war memorial. A large sum of money was still required, but he had received a promise of £1,000 on condition that a like sum was subscribed within a limited period. The chairman afterwards referred with regret to the resignation of the honorary secretaryship of the club, which Sir Henry Morris had insisted should be accepted, and sketched briefly the great services Sir Henry Morris had rendered to the school, and proposed his health. Sir Henry Morris, in reply, said that he was among the boys who went to the school in its first term, and that he had been one of the founders in 1871 of the Old Epsomian Club. While his interest in the club had in no way decreased he felt that the time had come when the secretaryship should be in the hands of a younger man, who would be better acquainted with the members of recent generations at the school. Major-General S. Guise Moores, C.B., C.M.G., who was for some time D.M.S. of the Second Army in France, in responding for the guests, spoke of the important services rendered by Colonel Maynard Smith while occupying the position of consulting surgeon with the armies in France.

THE NAVAL MEDICAL SERVICE.

NAVAL members of the Association will recollect that the Naval and Military Committee recently instructed its Naval Medical Service Subcommittee to examine and report on the new regulations for pay and retirement of naval medical officers. The most urgent matter to which the attention of the Subcommittee has been called by correspondents is the position in which certain senior surgeon commanders find themselves under the new scheme as promulgated in Admiralty Orders. It would appear from the report of the Jerram Halsey Committee that its intention was to give a substantial rise in pension to all officers on retirement. The increase of pension, however, allowed by the new regulations to senior surgeon commanders is, in fact, less than 10 per cent. on the old rate, which was fixed over forty years ago. This increase, moreover, is in certain contingencies subject to a deduction of 20 per cent., the net result of which would be a final reduction of pension by about 10 per cent. Again, representations have been made to the Admiralty with regard to the new ages for compulsory retirement and the consequent loss of full pay service and chances of promotion to higher rank. It has been asked that steps should be taken to reduce the hardship which certain individual officers who are near the top of the list will suffer. This subject therefore formed the basis of an interim report to the Naval and Military Committee at its meeting on November 21st. The Committee instructed the Medical Secretary to send a letter to the Admiralty, based on this report, pointing out how senior surgeon commanders are adversely affected by these regulations. This letter was sent in on December 2nd and was acknowledged. The Subcommittee is fully alive to the fact that whatever is done in this matter must be done quickly, and the attention of the Admiralty has

again been called to the urgency of this question, and a request has been made that a reply be given at an early date.

CONJUNCTIVITIS DUE TO FOOD ANAPHYLAXIS.

F. A. CONLON records cases¹ which show that recurring conjunctivitis, unaccompanied by any other manifestation, may be produced by the proteins of commonly used foods which hitherto have not been recognized as causes of this disease. These attacks recur year after year, or at a particular season of the year; when this happens some offending article of food, either vegetable or animal, should be suspected. In the cases given the offending foods were proved to be strawberries, tomatoes, eggs, and flounders. The protein skin test of Walker was used for diagnostic purposes. This test consists in making in the arm small incisions an eighth of an inch long, not deep enough to draw blood, applying the suspected protein, and adding a drop of decinormal sodium hydroxide solution to dissolve the protein and permit of its rapid absorption. At the end of half an hour the incisions are washed and examined. A positive reaction consists of a white wheal surrounding the cut of not less than 0.5 cm. in diameter. This test should be made during the attack of conjunctivitis, for in some persons anaphylactic reaction disappears after the patient has abstained from the particular noxious food for any length of time, to reappear on eating it again. One of Conlon's patients definitely proved to Conlon and himself that his conjunctivitis was due to eating strawberries or tomatoes; he actually produced "sore eyes" in a day by this means after a period of abstinence and freedom from conjunctivitis. It is of course essential to correct any ametropia that may be present.

MENINGOCOCCIC PNEUMONIA.

Just as the war took surgeons "back to Lister" so the influenza pandemic turned the thoughts of some epidemiologists to Sydenham. Dr. M. Greenwood's attractive notes on the doctrine of epidemic constitutions are specially interesting in connexion with the change of type that has been so prominent of late in influenza. Dr. Hamer has ingeniously, if not convincingly, argued that influenza, cerebro-spinal fever, acute poliomyelitis, and other acute diseases, are variants of the same morbid process under special conditions. From a bacteriological point of view, mixed meningococcic and influenzal infections and meningococcic pneumonia have been recognized, and the varying nature—pneumococcic, streptococcic, staphylococcic, and meningococcic—of post-influenzal pulmonary complications have been ascribed to the endemic or epidemic distribution of micro organisms in the throat. The results of an investigation into the cases of post-influenzal pneumonia in which the meningococcus was isolated, at Camp Coetquidon of the American Expeditionary Force, France, have recently been published by Holm and Davison.² Before the influenza epidemic, which lasted from September 1st, 1918, to February 15th, 1919, there had not been any cases of meningococcic meningitis; but many of the men had come from a camp in America where meningitis had been prevalent during the previous winter. On September 3rd a pure growth of the meningococcus was obtained from the lungs of a pneumonic case; on September 20th the carrier rate was high, 16 per cent.; and subsequently 22 cases of meningococcic meningitis occurred. Out of 1,510 cases of influenza admitted to hospital 403 had pneumonia, with 78, or 19 per cent., deaths, and among the 78 necropsies 23, or 29 per cent., showed the meningococcus, 7 in pure and 16 in mixed culture. Altogether meningococci were found in the sputum of 85 cases. The lung changes were usually bronchopneumonic,

¹ *Amer. Journ. of Ophthalmol.*, July, 1919, p. 485.

² M. L. Holm and W. C. Davison, *Johns Hopkins Hosp. Bull.*, Baltimore, 1919, xxx, 324-329.

with numerous points in the consolidated areas that exuded purulent fluid on pressure, but six were lobar. On section the consolidated areas had a peculiar pale violet colour that appeared to be almost characteristic of meningococcic pneumonia. Cultures from the pleurae, the pericardium, and the accessory nasal sinuses were negative. Endocarditis was present in more than half of the cases; but, during life, blood cultures were sterile. The leucocyte count was normal or diminished until at a later stage the consolidation diminished and the bronchioles filled with thick muco-purulent secretion. The urine contained albumin and casts, usually early in the course of the disease. The meningococci in the lungs were essentially of the same type as those in the cerebro spinal fluid of cases of meningococcic meningitis.

NITROGEN EXCRETION IN A HOT CLIMATE.

ALTHOUGH a good deal of research has been devoted to diet and nutrition in the tropics, the only detailed work on the partition of the nitrogen in the urine is that of Young, showing that the protein metabolism of the white races in tropical Queensland does not present any well marked variations from that observed in temperate climates. Dr. J. Argyll Campbell,¹ who has for five years been professor of physiology in the Singapore Medical School, publishes further results of analyses of the urine of nine individuals, including a Brahmin, a Chinese, a Tamil, a European, a Malay, a Hindu, a Eurasian, a Bengali, and a Sikh, all attending the Singapore Medical School, who were under observation for two years or more. Race had no influence on the nitrogen partition, the figures for the various races resembling one another fairly closely after making due allowance for the differences in the diets, which were in some vegetarian, in others mixed. The absolute quantities of total nitrogen, of urea nitrogen, and of uric acid nitrogen were much lower than the standard figures for Europe, but the percentages of urea nitrogen and uric acid nitrogen did not differ materially from the standard. In all the cases the percentage of ammonia nitrogen was increased, and often absolutely increased. The diet and water are not responsible for this acidosis, which is tentatively ascribed to the climate of Singapore, where there is no cool season and the temperature averages 80° F. all the year round. Professor Campbell finds that the hot, moist, and still air of Singapore causes great discomfort and a rise in the body temperature; and, as fever is a well recognized cause of acidosis, he regards this acidosis as febrile. The influence of climate on health—an undoubted but often unexplained phenomenon—here receives an explanation which may very possibly be of more than local application. The amount of creatinine nitrogen is slightly lower than the European standard, but the percentage is higher—in some cases much higher—because the reduction in the creatinine nitrogen is much less than the reduction in the total nitrogen. This supports the view that creatinine is mainly of endogenous origin and is not much lowered by reducing the protein intake. The creatinine coefficient (that is, milligrams of creatinine per kilogram of body weight) for Singapore resembles very closely that for Europe.

ANCIENT MEDICAL SCHOOLS OF CHINA.

A STATE medical service existed in China as early as the tenth century B.C., and the doctors were divided into four groups—the physicians dealt with internal complaints, the surgeons treated external diseases, wounds, fractures, ulcers, etc., and the dietist looked after food and drink and general hygiene; the veterinary surgeons formed the fourth group. At the end of each year the practitioner had to submit his work to an examining superintendent, who fixed the salary according to the results shown. The

lower the death rate, the higher was the pay. The history of the medical schools, which were established in the reign of Sheng Tsung in 1063 A.D., is briefly set forth in an article by Dr. K. C. Wong in the *National Medical Journal of China* (June, 1919). The subjects taught were medicine, surgery, and acupuncture; there were famous lecturers and famous textbooks. All candidates were examined theoretically, orally, and clinically. In the first examination an essay was set, the subject matter of which was from the "Canon of Medicine." The student was required to possess a knowledge of the structure of the human body, the functions of the various organs, the nature and cause of diseases, and the different methods of treatment, such as the use of antipyretics, emetics, purgatives, diuretics, and tonics. In the oral examinations questions were asked from Sheng Nung's "Materia Medica," "Typhoid Fever," and "The Gold Chamber"; the action of drugs, prescription writing, the modes of infection, and the causes of diseases, had to be known. For the clinical examination the candidate was required to produce the results in patients under his treatment and to state the reasons for the measures he had adopted. In the examination six questions were set, one from each of the following subjects: The principles of medicine and surgery, anatomy and physiology, differential diagnosis by the pulse, prescriptions and therapeutics, clinical medicine and surgery, and the influence of the air and the stars. From the results the candidates were classified into four grades: the best were given official appointments or ordered to compile medical books or engaged as teachers; the second were given a licence to practise; those who were not satisfactory had to resume their studies; and those who failed were ordered to seek another profession. A collection of these examination papers is still preserved. Truly the sun shone in China while Europe still slumbered in darkness. Women were first admitted to the practice of medicine in the fourteenth century.

We are glad to learn that there has been a decided improvement in Sir William Osler's condition during the last week.

THE General Medical Council at its last meeting, as reported in the SUPPLEMENT of December 6th, p. 151, decided that the examinations of the universities and corporations for diplomas in public health and State medicine should be inspected during the next two years. Dr. R. Bruce Low, C.B., D.P.H., has been appointed the Council's inspector for this purpose.

OWING to the approach of Christmas and the requirements of the machine printers, the present issue of the JOURNAL goes to press a day earlier than usual, and we are compelled to hold over a number of communications received this week from readers. Our next number will go to press two days earlier than usual in order that printing may be complete before the Christmas holiday.

Medical Notes in Parliament.

Veneral Diseases.—In the House of Lords, on December 10th, Lord Willoughby de Broke raised a debate on the prevention of venereal disease, which, he said, had increased, was and ought to be diminished. Lord Sutherland, the incidence of the disease amongst soldiers, expressed the policy of recommending disinfection might succeed, but care must be taken that any announcement made could not be misunderstood by the public. The Archbishop of Canterbury agreed that people should know and realize the gravity of the evil and the necessity of combating infection, but he protested against statements made by some of the supporters of the Society for the Prevention of Venereal Disease, that a section of the so-called religious public actually desired to maintain the disease in order that punishment might follow

¹ J. A. Campbell, *Biochem. Journ.*, 1919, xii, 239-247.

the offence. On the other hand, he believed that the danger of promising men supposed security against venereal disease had been underrated. The Earl of Clarendon said that, judging from the evidence it had been one of his duties to collect during the war, he believed that the measures taken to prevent venereal disease in the army had been very effective. Viscount Sandhurst, replying for the Government, said that after information as to disinfection had been disseminated in the army and a system had been put to an increasing degree in operation a large number of cases continued to occur. There could be no doubt that the method would be still less efficacious in a civilian population. Even in circumstances specially favourable to instruction, the risk of infection by venereal disease was by no means certainly avoided by the system advocated. The Ministry was not prepared to recommend any specific disinfectant, but was ready to issue advice to the effect that those who had exposed themselves to infection had incurred grave risk, and could diminish that risk to some extent by cleansing themselves immediately and watching carefully for several weeks. He promised to lay on the table of the House papers and figures, together with statistical explanations.

Nurses' Registration.—The Government bill for the registration of nurses (No. 2 Bill) was considered on December 8th on amendments from Standing Committee and was read a third time and passed. The bill was read a second time in the House of Lords on December 15th, on the motion of Lord Sandhurst (Lord Chamberlain), who acts for the Ministry of Health in that Chamber. Lord Amthill supported it. Lord Knutsford, whilst not opposing the measure, regarded it as inadequate. In fact, he thought that it would not be of use to nurses, as those of inferior training would in the first instance be herded with nurses belonging to the good schools of training. He regretted also that the registration was to be voluntary. There would be nothing to prevent a woman from calling herself a nurse; all that she would be prevented from doing would be to call herself a registered nurse. In his view no woman should be allowed to nurse for gain whose name was not on the register, and no nurse should be put on the register who had not passed an examination after hospital training.

The Notification of Measles.—Dr. McDonald asked the Minister of Health, on December 11th, if he would reconsider his decision to abolish compulsory notification of measles in consideration of the fact that the nation had not yet fully recognized the grave complications resulting from this malady. Dr. Addison said that the effect of the recent circular and order of the Ministry was not quite that which was stated in the question. Any local authority which thought it expedient and made effective provision to meet the circumstances could continue, or adopt, notification; but experience had shown that a universally enforced arrangement had not any sufficiently beneficial result, in the absence of such provision, to justify the great expense entailed. The change was adopted after full consideration, and consultation with persons of wide experience of the problem, and he was satisfied that the steps indicated in the circular would be more effective than the alternative suggested.

Staff of the Ministry of Health.—Dr. Addison stated, on December 10th, in answer to Colonel Gretton, that there were at the Ministry of Health one Parliamentary Secretary, a first and a second secretary, and eleven assistant secretaries. The number and grades of other posts were shown in the estimate. The total number of persons employed in any capacity at the Ministry, including the temporary staff, was 3,411; this figure excluded the staff of the Welsh Board, but included the staff employed by the Ministry in all parts of England.

The Maintenance of Public Hospitals.—Brigadier-General Coldin asked, on December 11th, whether the Government intended to take over the maintenance and administration of public hospitals, and whether, in the event of their doing so, cottage hospitals would be excluded. Dr. Addison replied that the answer to both parts of the question was in the negative.

Insurance Medical Service.—Lieut.-Colonel C. Lowther asked, on December 10th, in what way the medical benefit regulations for 1920 were intended to give an efficient medical service to the insured population, and whether the Minister of Health had considered the effect of restricting the freedom of the panel doctor upon the production of a more efficient service. Dr. Addison replied: The limits of an answer to a question do not permit of the various ways being set forth in which it is confidently believed that the new Regulations will fulfil the object with which they were framed, of improving the efficiency of the insurance medical service. In answer to the second paragraph of the question, I would say that the general approval of the Regulations recently expressed by the Conference of Panel Committees, in a resolution to which there were only three dissentients out of 147 representatives present, affords evidence that this result has been attained without undue restriction on the freedom of the insurance practitioner.

National Insurance (Cost of Administration).—Replying to Mr. Hinds, on December 10th, Dr. Addison said that the ratio of the total cost of administration (local and central) of National Insurance to the total revenue varied very slightly from year to year. The figure for England and Wales for the year 1918 was 1½ per cent. He would produce the separate figures for England and Wales.

Exchequer Grant for Milk Supply.—Dr. Addison said that the provisional estimate of Exchequer contributions for the current year towards the supply of milk to necessitous mothers and children was £50,000; but it was possible that this would be exceeded in consequence of the rise in the price of milk.

National League of the Blind.—In reply to Lieut.-Colonel A. Murray, on December 11th, Dr. Addison said that the Government intended at an early date to introduce legislation which would, amongst other things, include provisions for the amelioration of the condition of the blind; he was consulting the Advisory Committee on the Welfare of the Blind, on which were representatives of the National League of the Blind. He hoped that legislation would be introduced early next session.

MEDICAL RELIEF IN BELGIUM.

A MEETING of the constituents of the Belgian Doctors' and Pharmacists' Relief Fund was held at the Royal Society of Medicine on December 15th, with Sir RICKMAN GODLEE in the chair, to hear the report of work done in Belgium by the Belgian Committee for the assistance of doctors and pharmacists in Belgium. The CHAIRMAN, in introducing Dr. V. Pechère, President of the Belgian Committee, felt sure that everyone would be glad to hear what had been done in Belgium, for, although a number of very detailed accounts of the expenditure had been received from time to time, none had got through for the last eighteen months of the war—a fact which seriously militated against an even flow of contributions to the fund, as subscribers were naturally anxious to know that their money reached the Belgians. He was glad to be able to say that all such subscriptions had been duly received by the Belgian Committee, and that no German benefited by them at all. Lastly, the thanks of the British Committee were due to Mr. Hoover for the splendid way in which he had helped them.

Dr. PECHÈRE began by apologizing for his English, but consoled himself by the thought that the language of the heart was understood by all. His dream had come true—to cross to England and thank the whole British nation for what they had done for the Belgians, both for the soldiers who came over to England and for the civilians who stayed behind. As a representative of the Belgian doctors and pharmacists he wished to thank in their name the President and the members of the Relief Committee. He thought it most remarkable that so much money had been collected, seeing that the Committee here knew very little of what was being done by the Committee in Belgium. The latter had, indeed, made every endeavour to get its reports to England, but too often their attempts were frustrated by the Germans. It was also extremely difficult for the Belgian Committee to get to know what was going on in Belgium, because all communication between towns was stopped, and only Red Cross cars were allowed to travel about, and these only after much formality in the way of special permits. Communication between destroyed towns and Brussels was absolutely prohibited, and it was only at a much later date that the true state of affairs in these towns was known. In Belgium itself some £4,500 had been collected, and £4,000 had been received from other places on the Continent. England had sent between £26,000 and £27,000. In all, about 400 persons had been helped. Five doctors had been murdered by the enemy, and eight pharmacists; about eighty doctors and pharmacists were wounded; a still greater number had been plundered of their all, their houses sacked and burnt, so that they were reduced to the direst extremity. They could not leave the neighbourhood, because the population was dependent on them for all medical service. They could not beg, although they were as badly off as the poorest to whom they ministered. In addition to the material discomforts from which they suffered, they had to put up with mental and moral stress. Separated from their families—for in many cases they had sent these away—they lived in uncertainty as to the fate of their loved ones. The lack of drugs, instruments, and appliances of all kinds was a sore trial, but perhaps the hardest trial of all was having to live under the heel of the hated Prussian. To give an example of the effect of privation on the civilian population Dr. Pechère cited the fact that in 1916 the mortality from tuberculosis had risen from 16 to 34 per 1,000. He could assure all present that he and the people whom he represented, in fact all Belgians, would never forget their debt to England.

A vote of thanks to the speaker was then proposed by Dr. S. SQUIRE SPRIGER, seconded by Dr. H. A. DES Vœux, and carried with acclamation. After replying to this, Dr. PECHÈRE announced that his committee still had a little money in hand, which was being gradually expended in relieving cases of need, especially those of widows and orphans, until the Belgian Government had had time to deal with the question of reparation.

Dr. ALFRED COX proposed a vote of thanks to Sir Rickman Godlee for presiding, and added that the Fund owed a deep debt to the chairman of its committee for his energy and sagacity in the conduct of its business. This having been seconded by Dr. F. DE HAVILLAND HALL, the meeting terminated.

HONOURS.

A SPECIAL Supplement to the *London Gazette*, issued on December 12th, contains a further list of awards in connexion with the war, which includes the following medical officers. The fields of operations are indicated.

C.B.

Black Sea.

Lieut.-Colonel and Brevet Colonel (temporary Colonel) William Henry Snyder Nickerson, V.C., C.M.G., R.A.M.C.

For Services Rendered in Connexion with the War.

Colonels: Oliver Long Robinson, C.M.G., K.H.P., late R.A.M.C.; Harry Alexander Hinge, C.M.G., D.S.O., late R.A.M.C.; Herbert John Martin Buist, C.M.G., D.S.O., late R.A.M.C.

C.M.G.

Egypt and Palestine.

Lieut.-Colonel (acting Colonel) Cathcart Garner, C.B.E., ret. pay, late R.A.M.C.; Lieut.-Colonel Percy Samuel Lelean, C.B., R.A.M.C.

For Services Rendered in Connexion with the War.

Colonel Denis Joseph Collins, late R.A.M.C.

D.S.O.

Egypt and Palestine.

Lieut.-Colonels: Robert McNeil Beith, A.A.M.C., attached 2nd Light Horse Field Ambulance; Meylies Wyamarus Cave, A.A.M.C., attached 1st Light Horse Field Ambulance.

C.B.E. (MILITARY).

France and Flanders.

Temporary Lieut.-Colonel Charles Samuel Myers, F.R.S., R.A.M.C.

Egypt and Palestine.

Lieut.-Colonel Robert Henry Walton, N.Z.M.C.

Balkans and the Black Sea.

Mrs. Agnes Moore Livingstone-Learmonth, M.B., R.A.M.C.

For Services in Connexion with the War.

Colonels: Bernard James Newmarch, C.M.G., A.A.M.C.; Russell Tracy-Inglis, N.Z.M.C.

Lieut.-Colonels: (temporary Colonel) Samuel Roy Burston, D.S.O., A.A.M.C.; John Mitchell Young Stewart, D.S.O., A.A.M.C.

Lieut.-Colonels and Brevet Colonels: Samuel John Thomson, C.I.E., I.M.S., Holburt Jacob Waring, R.A.M.C. (T.F.).

Lieut.-Colonels: Monckton O'Dell Braddell, R.A.M.C., Herbert George Cook, R.A.M.C., George Home, O.B.E., N.Z.M.C., Henry Simpson Newland, D.S.O., A.A.M.C.

Temporary Lieutenant-Colonels: James Vincent Blachford, R.A.M.C., Edwin Goodall, R.A.M.C., William Harding, R.A.M.C., John Keav, R.A.M.C., Harold Andrew Kidd, R.A.M.C., Alexander Simpson, R.A.M.C., William James Nathaniel Vincent, R.A.M.C., Arthur Blackwood Ward, D.S.O., S.A.M.C.

Major and Brevet Lieut.-Colonel Alfred Wright, ret. pay, R.A.M.C.

*Major (temporary Lieut.-Colonel) Arthur Briton Smallman, D.S.O., R.A.M.C.

Majors: James William Beeman Hodsdon, R.A.M.C. (T.F.), Thomas McKibbin, O.B.E., N.Z.M.C., Arthur William Ormond, R.A.M.C. (T.F.).

Temporary Major Harold Delf Gillies, R.A.M.C.

O.B.E. (MILITARY).

France and Flanders.

Major (acting Lieut.-Colonel) Harry Christopher Sidgwick, R.A.M.C. Major John Herbert Gurley, R.A.M.C.

*Captains (acting Lieut.-Colonels): Oswald William McSheehy, D.S.O., R.A.M.C., Henry Charles Deans Rankin, R.A.M.C.,

James Chambers Sproule, R.A.M.C. Captains: Charles Sefton O'Neill, R.A.M.C., Robert Williamson Asher Salmon, R.A.M.C. (T.F.), Donald Charles Scott, R.A.M.C.

Egypt and Palestine.

Captain (temporary Major) Harvey Sutton, A.A.M.C. Captain (acting Major) Arthur Eaton Richmond, R.A.M.C. Captain Francis Aloysius Comins, A.A.M.C. Temporary Captains: Graham Colville Ramsey, R.A.M.C., Percy Peter James Stewart, R.A.M.C.

Balkans and Black Sea.

Captain (acting Major) Bernard Langridge Davis, R.A.M.C. (T.F.).

Temporary Captain (acting Major) Francis Robert Brown, R.A.M.C.

Miss Edith Blake Hollway, M.B., R.A.M.C.

East Africa.

Lieut.-Colonel Robert Milner-Smyth, S.A.M.C.

For Services in Connexion with the War.

Temporary Lieut.-Colonels: Michael Abdy Collins, R.A.M.C., Samuel Charles Elgee, R.A.M.C., Thomas Saxty Good, R.A.M.C., Alexander Canning Saffern, R.A.M.C.

Major (temporary Lieut.-Colonel) Henry Meredith Buchanan, N.Z.M.C.

Majors: Thomas Lynewolde Anderson, A.A.M.C., Joseph Patrick Fogarty, M.C., A.A.M.C., William Murray MacKay, R.A.M.C., Charles Alexander Morton, R.A.M.C. (T.F.), Robert William Murray, R.A.M.C. (T.F.), William Cochran Murray, R.A.M.C. (T.F.), Frederick John Oxley, R.A.M.C., George Watson Robertson, S.A.M.C., Thomas Duncan McGregor Stout, D.S.O., N.Z.M.C., Charles Herbert Terry, A.A.M.C.

Temporary Majors: Robert Atwood Beaver, Arthur John Cleveland, Reginald Laidlaw Davies, Charles D'Oyly Grange, David Barty King, Hector Duncan MacPhail, Thomas Ricketts Morse, Charles Noon, Arthur O'Neill, John Robert Parry Phillips, Norcliffe Roberts, Henry Robinson, Frederick Millar Rodgers, Stanley Alwyn Smyth, D.S.O., and Frederick Joshua Stuart, R.A.M.C.

Captain (acting Lieut.-Colonel) William Porter MacArthur, D.S.O., R.A.M.C.

Captains (temporary Majors): John Falconer Brown, N.Z.M.C., John Herald Balfour Brown, M.C., A.A.M.C., Frank Arthur Hepworth, R.A.M.C. (T.F.), Kenneth Edwin Tapper, N.Z.M.C.

Captains (acting Majors): Richard Eager, R.A.M.C. (T.F.), Dalziel Buchanan McGregor, R.A.M.C., Walwyn Thomas S.A.M.C.

Captains: John Starling Arthur, R.A.M.C. (T.F.), Henry Edmund Gaskin Boyle, R.A.M.C. (T.F.), George Finlay, A.A.M.C., Gerald Alfred Child, R.A.M.C. (T.F.), Sidney Herbert Daukes, R.A.M.C. (T.F.), William Lennox Gordon, S.A.M.C., William John More Slowman, R.A.M.C. (T.F.), Horace George Turney, R.A.M.C. (T.F.).

Temporary Captains (acting Majors): Charles Calthorp de Burgh Daly, R.A.M.C., Henry Robert Mullins, S.A.M.C., Horace Bagster Wilson, R.A.M.C. Temporary Captains: William Leigh Maule Day, R.A.M.C., Henry Devine, R.A.M.C., Alexander William Hendry, R.A.M.C., Charles Ravenscroft Stewart, R.A.M.C.

M.B.E. (MILITARY).

Egypt and Palestine.

Temporary Mulazim Awad Salama Yusef Effendi El, Egyptian A.M.C.

For Services in Connexion with the War.

Major Arthur Hosking, N.Z.M.C.

Captains: Innes Wares Brebner, S.A.M.C., Percy Chisholm, N.Z.M.C., Sydney Hartley Hay, N.Z.M.C., Henry Echley Herbert Oakeley, S.A.M.C., Henry Caldwell Tait, N.Z.M.C.

Temporary Captain George Edward Kinnersley, R.A.M.C.

MILITARY CROSS.

Egypt and Palestine.

Captains: John Graham Gow, N.Z.M.C., attached Wellington Mounted Rifle Regiment, Thomas Pollock Inglis, R.A.M.C. (S.R.).

Balkans and Black Sea.

Captain George Mundell Hetherington, R.A.M.C. (S.R.). Temporary Captains: James Ernest Finlay, R.A.M.C., Harold Ernest Henpy, R.A.M.C.

TO BE BREVET LIEUTENANT-COLONEL.

Balkans and Black Sea.

Major (acting Lieut.-Colonel) O. Ievers, D.S.O., R.A.M.C.

For Services in Connexion with the War.

Major H. F. Horne, F.D., West Riding Divisional Sanitary Section, R.A.M.C. (T.F.).

TO BE BREVET LIEUTENANT-COLONEL ON PROMOTION TO SUBSTANTIVE MAJOR.

For Services in Connexion with the War.

Captain A. R. Wright, D.S.O., R.A.M.C.

TO BE BREVET MAJOR.

For Services in Connexion with the War.

Temporary Captain E. A. Aldridge, M.C., R.A.M.C.

* Substituted for announcement in the *London Gazette*, June 3rd, 1919.

The following are the statements of gallant and devoted services for which the decorations announced in the *London Gazette* of April 2nd, 1919, were conferred:

Distinguished Service Order.

Captain (acting Major) William Barnsley Allen, V.C., M.C., R.A.M.C., attached 1/3rd (West Riding) Field Ambulance, R.A.M.C.(T.F.).

For conspicuous gallantry and devotion to duty during the fighting west of Saulzoir for the Selle River line between October 11th and 15th, 1918. He showed a very high degree of fearless initiative in organizing the collection of wounded from ground under continuous hostile shell fire, and by his inspiring example, untiring energy, and contempt of danger, he was able to move large numbers of helpless wounded from positions of danger before he was himself gassed.

Major Archibald Craig Amy, R.A.M.C., attached 2/1st (Highland) Field Ambulance, R.A.M.C.(T.F.).

For conspicuous gallantry and devotion to duty on October 24th, 1918, at Douchy, when in charge of the advanced dressing station there. The town was shelled with high velocity guns for four hours, many shells bursting in the vicinity of the advanced dressing station, one shell causing twenty-one casualties. A large number of wounded were brought in, and by his coolness and energy he prevented any confusion resulting, and cleared his advanced dressing station successfully.

Major John Freeman Blair, Canadian Army Dental Corps, attached 4th Field Ambulance, O.A.M.C.

For conspicuous gallantry and devotion to duty from November 5th to 11th, 1918, in the Valenciennes-Mons area, as liaison officer between regimental aid posts and forward collecting posts. Keeping in close touch with the rapidly advancing infantry, he was continuously under fire, but ensured the rapid evacuation of the wounded. On several occasions he dressed the wounded in the open under fire, remaining to superintend their removal on the arrival of the stretcher-bearers.

Temporary Captain (acting Major) Ronald Campbell Cooke, M.C., 134th Field Ambulance, R.A.M.C.

He was always equal to the occasion when, owing to considerable advances made by our troops, fresh organization and alteration of schemes of evacuation were demanded to meet the conditions, and his unit was short-handed. His skill and fine devotion to duty over a difficult period were admirable.

Major Burnet Elmer Kelly, 9th Field Ambulance, C.A.M.C.

For conspicuous gallantry and devotion to duty from October 22nd to 30th, 1918, between Ralsmes and Bruay. In charge of the evacuation of wounded of the 9th Canadian Infantry Brigade, he personally went over the field, night and day, with his stretcher-bearers, collecting wounded, most of the time under machine-gun and shell fire. His energy was an outstanding example to all ranks.

Temporary Captain John Hay Moir, M.C., R.A.M.C., attached 17th Battalion Royal Fusiliers.

For conspicuous gallantry and devotion to duty on September 17th, 28th, and 29th, 1918, near Noyelles. On the 27th, while a stretcher party moving to the rear received a direct hit, he rushed out to its assistance and attended to the survivors under intense shell fire, carrying them to a place of safety. On the 28th he worked his aid post under concentrated fire, dressing the wounded in the open after the cellar was full. He was very badly shaken by a shell burst, but carried on his work into the night, and assisted to pick up wounded in a counter-attack. Although utterly exhausted, on the 29th he continued attending the wounded with energy and determination.

Major George Willard Treleaven, M.C., 4th Field Ambulance, C.A.M.C.

For conspicuous gallantry and devotion to duty from November 5th to 10th, 1918, in the Valenciennes-Mons area, in charge of the evacuation of casualties from the forward area of the division. For five days he was continuously under fire in the open, selecting aid posts, and superintending the evacuation of the wounded. He frequently led stretcher parties forward across open ground fully exposed to enemy fire, and his disregard of danger was a splendid example to all ranks.

Second Bar to the Military Cross.

Captain Robert Bell Stewart, M.C., R.A.M.C.(S.R.), attached 65th Field Ambulance.

For conspicuous gallantry near Preux aux Bois and Heqon on November 4th, 1918. He was in charge of a division of stretcher-bearers when, finding the attack held up, he went forward alone to reconnoitre. He organized the evacuation of wounded under heavy fire, and pushed on into the Forest de Mormal to reconnoitre roads for the purpose of getting wounded back. Throughout that day by his energy and devotion to duty all casualties were expeditiously got away. (M.C. gazetted January 14th, 1916; first bar gazetted January 18th, 1918.)

Bar to the Military Cross.

Captain (acting Major) Joseph Herbert Bayley, M.C., R.A.M.C.(S.R.), attached 76th Field Ambulance.

For conspicuous gallantry and devotion to duty near Landrecies on November 3rd, 4th, and 5th, 1918. Throughout this period he worked without rest, personally visiting regimental aid posts and relay posts under heavy fire. The fine example he set inspired all who worked under him, and his efforts ensured the rapid evacuation of all the casualties of the division. (M.C. gazetted June 4th, 1917.)

Temporary Captain Eric Biddle, M.C., 91st Field Ambulance, R.A.M.C.

During the recent operations in the neighbourhood of Happegarde-Ors and the crossing of the Oise-Sambre Canal he was continuously in charge of the R.A.M.C. bearers. On November 2nd, 3rd, and 4th, 1918, his brigade attacked each day with many casualties. Throughout this time he kept in touch with all the regimental medical officers of his brigade, visiting them frequently, though the roads were continuously under heavy shell and machine-gun fire, and by his energy and disregard of danger effected rapid evacuation. (M.C. gazetted June 18th, 1917.)

Captain (acting Major) Thomas William Clarke, M.C., R.A.M.C.(S.R.), attached 148th Field Ambulance.

For conspicuous gallantry and devotion to duty at the Canal du Nord in front of Moenvres on September 27th, 1918, when in charge of the evacuation of wounded of an Infantry brigade. He took the bearers across the canal immediately behind the infantry, the while exposed to heavy machine-gun fire from an exposed flank. He was successful in relaying the wounded from the regimental aid post to the canal bank, and so enabling the wounded to be cleared from the field rapidly. (M.C. gazetted March 27th, 1915.)

Captain (acting Major) Henry Norman Goode, M.C., 1/1st (West Riding) Field Ambulance, R.A.M.C.(T.F.).

From October 29th, 1918, till the morning of November 3rd, 1918, he was in command of the bearers clearing the divisional front. He was under shell fire daily, and was buried by a shell on October 30th. Throughout the whole time he worked day and night with short intervals for rest, setting a fine example of fearless devotion to duty. (M.C. gazetted September 16th, 1918.)

Temporary Captain (acting Major) Charles Hope Haddow, M.C., 77th Field Ambulance, R.A.M.C.

For conspicuous gallantry near Basuel, on October 23rd, 1918, when he repeatedly brought up his bearers to the regimental aid post in face of very heavy shell fire, and managed to get away the wounded lying there. It was entirely due to his untiring efforts that the wounded of the brigade were cleared from the battle front. His fine work enabled many lives to be saved. (M.C. gazetted September 16th, 1918.)

Temporary Surgeon Charles Edward Leake, M.C., R.N., attached "Hawke" Battalion R.N.D., R.N.V.R.

During the operations of September 27th-29th, 1918, he carried out his duties with untiring energy and total disregard for personal safety. On many occasions he displayed admirable coolness under heavy fire, and succeeded in establishing his regimental aid post in the most advanced positions, where he attended the wounded of all battalions. His work throughout was of the highest order. (M.C. gazetted January 11th, 1919.)

Captain (acting Major) Clark Nicholson, M.C., R.A.M.C.(S.R.), attached 49th Field Ambulance.

For conspicuous gallantry and devotion at Neuville and Ghisincies on October 24th, 1918. Early in the morning he made his way through the counter-barrage to reconnoitre and establish relay posts, and throughout the day he worked unceasingly under fire, superintending evacuation, and at night he personally took the ambulance cars along the shelled routes, dressing the wounded himself. It was due to his unremitting exertions, great courage, and fine example that the evacuation of the wounded was successfully carried out. (M.C. gazetted January 1st, 1919.)

Temporary Lieutenant Thomas Gordon Playford, M.C., R.A.M.C., attached 1/1st (Northumbrian) Field Ambulance, R.A.M.C.(T.F.).

On November 7th, 1918, he was at St. Remy Chaussee in command of bearers. Hearing that there was a large number of wounded in an aid post, he took two ambulance cars to the place, making three journeys in all, under heavy machine-gun and shell fire, and eventually cleared some thirty wounded. On the following night he again took cars and cleared seven loads of patients. As the aid posts were only three or four hundred yards from the front line, he showed great courage and devotion to duty. (M.C. gazetted September 24th, 1918.)

Temporary Captain (acting Major) Arthur Richmond, M.C., 19th Field Ambulance, R.A.M.C.

For conspicuous gallantry and devotion to duty near St. Aubin during operations on November 7th and 8th, 1918. Hearing that another medical officer had become a casualty and that nearly seventy other casualties had occurred in the battalion, he led a party of stretcher-bearers through heavy shell fire and direct machine gun fire to succour and remove them to a place of safety. Through his indefatigable efforts all casualties were brought back. (M.C. gazetted January 1st, 1917.)

Captain (acting Major) Arthur Leonard Shearwood, M.C., R.A.M.C.(S.R.), attached 33rd Field Ambulance.

For conspicuous gallantry and initiative when in charge of the evacuation of the wounded during the operations carried out between November 3rd and 11th, 1918. During this period he worked day and night, frequently under shell fire, and by his energy and devotion to duty saved many lives. (M.C. gazetted February 15th, 1919.)

Captain George Alexander Smith, M.C., 13th Field Ambulance, C.A.M.C.

For conspicuous gallantry and devotion to duty in the operations south of Valenciennes on November 1st and 2nd, 1918. Through heavy gas-shell and machine-gun fire he supervised the clearing of the battlefield, and much of the success of the rapid evacuation of the wounded was directly due to him. He showed a total disregard of personal danger and splendid energy, and was a magnificent example to all men under him. (M.C. gazetted February 15th, 1919.)

Captain (acting Major) Robert Alexander Stark, M.C., 1/3rd (West Riding) Field Ambulance, R.A.M.C.(T.F.).

For conspicuous gallantry and devotion to duty during the fighting west of Saulzoir for the Selle River, north-east of Cambrai, between October 11th and 14th, 1918. He was charged with clearing the wounded from ground newly won, and the object of a heavy counter-attack by the enemy. As a result of his devotion and total disregard of personal risk, it was possible to clear numbers of helpless wounded from positions of great danger, and he was directly responsible for saving many lives. He set a magnificent example to all ranks with him. (M.C. gazetted September 26th, 1917.)

Captain Richard Chapman Weldon, M.C., C.A.M.C., attached 2nd Motor Brigade, C.M.G.C.

While in action at Naves, on October 10th, 1918, he had command of the regimental aid post established just west of the village. When a motor-cycle scout had his legs blown off and was wounded in the chest on the road east of Naves, he went forward under heavy fire, dressed his wounds, and had him taken back in his car, thus undoubtedly saving his life. He has consistently shown marked devotion to duty. (M.C. gazetted February 15th, 1919.)

Temporary Captain (acting Major) Ivan Stuart Wilson, M.C., 9th Field Ambulance, R.A.M.C.

For conspicuous gallantry and resource on November 4th, 5th, 6th, and 7th, 1918, between Ruesnos and La Longueville. He helped to organize the evacuation of all wounded from the divisional front. Though frequently exposed to heavy shell fire, and at times under machine-gun fire, his perseverance and initiative contributed largely to the quick evacuation of all wounded. (M.C. gazetted January 1st, 1917.)

(To be continued.)

England and Wales.

LIVERPOOL MEDICAL INSTITUTION.

THE annual dinner of the Liverpool Medical Institution, which had not been held during the war, took place on December 15th. The president, Mr. Thelwall Thomas, was in the chair, and a large number of members of the institution and representatives of the civic life of Liverpool were present. The speeches of Lord Russell and the Vice-Chancellor of the University, Dr. Adami, bore testimony to the progress of education in the city, and especially of medical education during the last fifty years. In promoting such efforts it was said the Liverpool Medical Institution had always played a conspicuous part, and the university owed its conception to leading citizens and medical men connected with the School of Medicine. Dr. Adami expressed the hope that in the near future the Liverpool Medical Faculty, by means of a thoroughly well equipped staff of post-graduate teachers, would make Liverpool a medical Mecca, and attract medical men from the Dominions over the seas and the United States by giving opportunities for research and study. He mentioned the School of Tropical Medicine as showing that Liverpool had the material and the opportunity. Among the guests were Dr. Depage and Dr. Pechère, who took the opportunity of thanking the medical profession of Liverpool and its environs for the handsome contribution to the Belgian Doctors' and Pharmacists' Fund. Dr. Pechère assured his hearers that it would be difficult to express in words the terrible distress his colleagues had suffered from the invasion of the *barbares*. Major-General Sir Robert Jones, in proposing the health of the guests, mentioned the presence of Dr. W. T. Grenfell of Labrador, whose medical work among deep sea fishermen was so well known, and of Mr. Joseph Conrad, the greatest living artist in words.

THE MITCHELL BANKS MEMORIAL LECTURE.

The Vice-Chancellor of the University of Liverpool, Dr. Adami, occupied the chair at the meeting to which Professor Depage delivered the lecture, a report of which is published at p. 820. After the lecture, which was given in the surgical theatre of the University, Mr. Thelwall Thomas proposed a vote of thanks to Dr. Depage and expressed the pleasure with which those present had listened to his address.

CLINICAL INSTRUCTION AT THE MAUDSLEY HOSPITAL, LONDON.

A systematic course of teaching in psychiatry at Maudsley Hospital has been arranged under the direction of Sir Frederick Mott. It is designed for post-graduates who intend to specialize in mental disease, and will consist of lectures on physiology, pathology, and psychology in their application to the study of mental diseases; and clinical lectures and demonstrations. Among those who have promised to give lectures are Dr. C. H. Bond, Sir Bryan Donkin, Sir William McDougall, Dr. F. L. Golla, Dr. Bernard Hart, and Captain Mapother, R.A.M.C. The fee for the whole course is 15 guineas, for separate sectional courses 3 to 5 guineas, and for clinical instruction only 3 guineas for three months and 5 guineas for six months. Facilities are to be given to medical officers in the service of the London County Council to attend the courses, and half fees only will be charged them.

SCARLET FEVER AND DIPHTHERIA IN LONDON.

In view of the somewhat alarmist statements that have lately appeared in certain lay periodicals with regard to the prevalence of scarlet fever and diphtheria in London, it may be well to give the figures of notifications and deaths during the eight weekly periods between October 11th and December 6th. The numbers of notifications are

those given in the weekly extracts published by the Metropolitan Asylums Board. The numbers of deaths are those given weekly under the heading "London" in the return issued by the Registrar-General. The following figures include those given in the last published returns:

Week ending -	Notifications		Deaths.	
	Scarlet Fever.	Diphtheria.	Scarlet Fever.	Diphtheria.
October 18th	449	249	3	15
October 25th	481	247	5	21
November 1st	444	257	-	13
November 8th	453	204	2	17
November 15th	438	236	2	24
November 22nd	467	266	2	21
November 29th	515	305	2	25
December 6th	503	269	6	28

Sydney.

SOCIETY OF RETURNED MEDICAL OFFICERS OF NEW SOUTH WALES.

A MEETING of medical officers who had served abroad in the war was recently held in the British Medical Association Library. Between eighty and a hundred medical officers attended. Dr. Scot Skirving was asked to preside, and in the course of his opening remarks said that he hoped that the association which was to be formed would be not for offensive or aggressive purposes, but that the objects would include a mild form of defence for a body of men who had sacrificed much. It was eventually resolved to form an association among medical officers returned from service overseas and among medical students who had interrupted their courses and had graduated after return from active service. The association is to be called "The Society of Returned Medical Officers of New South Wales." After full discussion the following statement of the objects of the society was approved:

1. To promote social intercourse among members and to maintain service traditions and friendships.
2. To ensure assistance, as far as possible, to New South Wales medical officers disabled by their services and to the dependants of those officers who had died on service.
3. To promote the interests and to forward the welfare of members.

The entrance fee is five shillings and the annual subscription the same amount.

The following were elected office-bearers and members of the committee:

President: Major-General Sir Neville Howse, V.C., K.C.B., K.C.M.G. Vice-Presidents: Colonel Sir Alexander MacCormick, Major R. Scot Skirving, Colonel T. H. Fiaschi, D.S.O., V.D., Colonel R. E. Roth, C.M.G., D.S.O., V.D., Colonel T. Morgan Martin, C.M.G. Honorary Secretaries: Lieut.-Colonel H. R. G. Poate and Lieut.-Colonel C. E. Wassell, D.S.O. Honorary Treasurer: Major Wilfred Vickers, D.S.O. Members of Committee: Surgeon Commander H. J. D. Brennan, R.A.N., Lieut.-Colonel C. B. Blackburn, O.B.E., Lieut.-Colonel A. H. Tebbutt, D.S.O., Lieut.-Colonel C. W. Thompson, M.C., D.S.O., Major A. J. Aspinall, Major R. I. Furber, D.S.O. Country Members: Colonel J. L. Beeston, C.M.G., V.D., Major E. H. Burkitt.

BEQUEST TO THE UNIVERSITY OF SYDNEY.

Sir Samuel McCaughey, a wealthy grazier, who died recently in this State, left many handsome bequests to various educational and charitable institutions. He has bequeathed a sum of £465,000 to the University of Sydney and £200,000 to the University of Queensland. It is understood that this sum is to be expended not upon new buildings, but in establishing new chairs and other teaching appointments. The Senate of the University of Sydney had already decided to establish a chair of medicine, and applications are now being invited from candidates for this position. A salary of £900 a year is offered, with a right to such consulting practice as, in the opinion of the Senate, will not interfere with the due performance of the duties of the chair. The selected candidate will be an honorary physician to the Royal Prince Alfred Hospital, and he is not to be a candidate for Parliament, either State or Federal. Owing to the great increase in the number of students the accommodation in the various

class-rooms is much overtaxed, and in view of the large new endowment extra buildings are absolutely necessary in practically all the departments of the university.

THE TEACHING OF SCIENCE.

The Minister of Education recently addressed a conference convened to consider the question of stimulating the study of science. He expressed the opinion that every school should possess a laboratory and a science workroom. Although the cost might preclude this for a time, he hoped that in the early future that difficulty would be overcome. Professor T. E. David, F.R.S., emphasized the need for more room at the University for the accommodation of the students. As a great believer in open-air study he favoured the teaching of botany, zoology, and geology to all students in public schools, and particularly to those in the country districts. He also advocated the constitution of an advisory board to assist the department in its new movement for the stimulation of the study of science. Professor Carslaw, professor of mathematics in the University, referred to the difficulties under which the university authorities labour owing to lack of buildings suitable for research work. He declared that the University in this respect was quite unable to carry out its functions.

WOMEN'S COLLEGE EXTENSION.

Miss Louisa Macdonald, M.A.Lond., who has held the position of Principal of the Women's College in the University of Sydney for the past twenty-seven years, retired recently, and has left for England. To commemorate her long and valuable services at the College it has been decided to establish a fund, with the object of extending the present building. The College is now so crowded that its work is seriously hampered. The original plan of the building shows accommodation for 150 students, but only the first section, with bedroom space for 26, has been completed. Additions of a temporary nature have been made, so that 45 students can be accommodated, but with difficulty. A sum of £5,000 is asked for, and this with a Government subsidy of £5,000 will, it is thought, be sufficient to meet the present most pressing needs of the College.

India.

PASTEUR INSTITUTE OF SOUTHERN INDIA.

The report of the director (Lieut.-Colonel J. W. Cornwall, I.M.S.) of the Pasteur Institute of Southern India, Coonoor (Madras), for the year ending February 23rd, 1919, states that 2,825 Asiatics and 150 Europeans and Eurasians were treated during the year. This shows an increase of 691 among the former and a decrease of 112 among the latter. Six patients died during the course of treatment (4 from hydrophobia, 1 from cholera, and 1 from small-pox). Four died less than fifteen days from the date of the completion of treatment, and 22 fifteen or more days from the completion of treatment. The latter are classed as failures (0.74 per cent.). Including the cases which died less than fifteen days after the completion of treatment the percentage of deaths was 1.05. The bites in most cases (95.6 per cent.) were inflicted by dogs; jackals were responsible for 2.09 per cent. It is stated in the report that when a person is bitten by an unknown dog without provocation, rabies should be suspected and treatment applied for at Coonoor. In a circular giving advice with regard to the immediate treatment of a bite by a dog, the value of the early application of the actual cautery or caustic agents is insisted upon. A superficial wound without pockets can, it is said, easily be sterilized by nitric acid, hydrochloric acid, glacial acetic acid, or undiluted formalin. In a lacerated wound the whole of the exposed tissues should be destroyed by liquid caustic or the actual cautery. A punctured wound should be treated by introducing the caustic into the depths with a glass pipette. The skin should be previously greased to avoid injury to it, and the excess acid may be sucked out of the puncture after about thirty seconds. In both cases it is good surgical practice to excise the whole of the necrosed surfaces a few minutes after the acid application and to sew up the wound in the expectation of obtaining healing by first intention.

THE VICTORIA MEMORIAL SCHOLARSHIP FUND.

This fund was instituted twelve years ago for the purpose of educating and training Indian hereditary *dhaïs* (midwives) and supervising their work thereafter. It is affiliated with the Countess of Dufferin's fund, but possesses a separate organization and function. The report for the year 1918 indicates that the efforts of the fund are, in future, to be strictly limited to the hereditary *dhaïs*—teaching them better methods than this class has hitherto practised, and instructing and guiding them as regards the best means of saving the life of mothers and infants by the adoption of the most advanced practices in conducting maternity cases during and after labour. Accordingly the arrangements and resources of the association have been readjusted to the fulfilment of the following purposes—namely: (1) the employment of midwife inspectors; (2) the opening of a school for the training of health visitors and midwife supervisors; (3) the preparation and distribution of maternity packets, and *dhaïs* outfits for antiseptic purposes; and (4) the provision of lectures, models, illustrations, etc. Measures have also been taken to inform the public regarding the objects and importance of these proceedings. The amount of work that has already been done throughout the Indian Empire is very considerable. Twenty centres have been established and 39 local branches opened. During the year 93 *dhaïs* have been under instruction for periods ranging from three months to two years, and since the commencement of the undertaking 1,739 women have been taught and trained. The visits of the secretary and reports of branches give evidence of good work and promising results. Financially the fund is in a sound position. The year opened with a credit balance of Rs. 15,747-12-1 and closed with a credit balance of Rs. 33,138-4-10. The interest on investments amounted to Rs. 35,568-2-1. Altogether this report reveals a most desirable enterprise, and much enthusiasm and energy in promoting its very important objects.

THE HEALTH OF CALCUTTA.

The story of the health of Calcutta in the year 1918 is, the health officer remarks, a sad record compared with 1917. The deaths during the year numbered 31,371, compared with 21,360 in the previous year, or 35 per mille, against 23.8. The principal cause of this heavy mortality was influenza, which broke out in epidemic form in June, 1918, and again with increased virulence in September. There were large increases in the mortality from other diseases, and this was attributed to the fact that an attack of influenza lowers the resisting power of the system against other infections which may or may not be lying dormant in the system.

The death rate among females was 44.1 per mille—a figure which is stigmatized as “a standing disgrace to the city,” and the health officer adds: “Whilst poverty, overcrowding, and insanitary conditions all play an important part, child marriage, the untrained *dhaï* and the purdah system have much to answer for.” The infantile mortality rate of the city was 203 per mille registered births. The report gives the rate in each of the various wards, the highest being returned by Jorabagan and Bura Bazar, where the mortality reached the appalling figures of 581 and 473 per mille respectively.

INDIAN MEDICAL PRACTITIONERS.

At a public meeting held recently in Calcutta resolutions were adopted protesting against unfair reference made by public men in England to Indian medical graduates, against the failure of the Government of India to take the public into its confidence in connexion with the action proposed to give effect to the recommendations of the Medical Services Committee urging the creation of a new Civil Indian Medical Service and the restriction of the Indian Medical Service to military work; against the proposal to differentiate between the pay of Indian and European members of the Indian Medical Service; and urging that permanent commissions should be immediately conferred on select persons who have served as temporary officers.

LEPERS IN INDIA.

Increased interest is being displayed by Indians in the grave problem of the treatment of lepers. At a recent public meeting at Viceregal Lodge, Simla, it was urged

that the creation of a number of agricultural and industrial leper colonies, made attractive to the unfortunate people concerned, and affording facilities for obtaining the latest scientific treatment, would have far-reaching effect in reducing the prevalence of the disease.

Correspondence.

AN APPEAL.

SIR.—The Royal Medical Benevolent Fund has hitherto been able to send a Christmas gift of £1 to those who have received grants during the year. There are 120 of these deserving people, and I shall be glad to receive contributions.—I am, etc.,

CHARLES J. SYMONDS,
Honorary Treasurer.

11, Chandos Street, Cavendish Square, W.,
Dec. 13th.

PYLORIC ULCER.

SIR,—In the article on gastric ulcer by Sir Berkeley Moynihan, appearing in your issue of December 13th, he classifies these ulcers as either gastric or duodenal, and defines them thus:

An ulcer occurring on the proximal side of this vein is a "gastric ulcer"; an ulcer occurring $\frac{1}{2}$ in. or $\frac{1}{4}$ in. or more beyond it is a "duodenal ulcer."

The vein referred to is the pyloric. He makes no mention of pyloric ulcers, by which I mean ulcers occurring over the pyloric sphincter or in close proximity to it, in the area of $\frac{1}{2}$ in. or $\frac{1}{4}$ in. referred to in the quotation as dividing gastric from duodenal ulcers. In this classification he is, I think, supported by the majority of writers and textbooks. Personally I have observed, when operating for perforation, a considerable and increasing number of cases during the past eight or nine years, in which the ulcer was in the pyloric region, frequently being situated exactly over and involving the sphincter, and I would suggest that pyloric ulcer is of sufficiently frequent occurrence to deserve inclusion in our classifications.

The position of these ulcers has a distinct bearing on treatment, as, if merely stitched, pyloric stenosis is likely to follow. I have been in the habit, where the patient was not critically ill, of excising the ulcer by means of an oval longitudinal incision, and then performing pyloroplasty by changing the axis of the incision from the horizontal to the vertical, in the usual manner. The operation is only lengthened by some five minutes, and the patient recovers with an efficient pylorus.

Another point which might with advantage be emphasized is the entire absence of any history of previous gastric disturbance or pain in a large number of cases of perforating pyloric ulcers. Many patients have assured me, when questioned during convalescence, that they never had any trouble with the stomach; that they never had pain, but were vigorous and successful eaters until seized with violent pain and collapse at the time of perforation. The same is true of some perforating duodenal ulcers.—I am, etc.,

Glasgow, Dec. 15th.

JOHN A. C. MAEWEEN.

HYPERPYREXIAL HEAT-STROKE.

SIR.—Regarding Captain Sinderson's letter (BRITISH MEDICAL JOURNAL, November 29th) I would point out that the ship referred to in my letter (BRITISH MEDICAL JOURNAL, August 9th) during her voyage from England to the Persian Gulf called at Capetown and Durban only, and, as these two stoppages were made in the (Southern) midwinter—July 16th to 18th and 21st to 30th respectively—it would be impossible for the ship's cargo and stores to have been infected with sandflies while in these ports. I doubt if sandflies exist at Capetown or Durban even in midsummer.

The extensive outbreak of heat-stroke that occurred at the termination of this voyage affords clear and conclusive proof that this disease is not simply an exaggerated form of sandfly fever.—I am, etc.,

Hull, Dec. 13th

K. G. HEARNE.

PREVENTION OF VENEREAL DISEASE.

SIR.—Our letter, published on December 6th, was designed to point out that any society which appeals to the public as audience and for support has a very serious duty to perform in the way of supplying that public with full and basal facts. We complained because the Society for the Prevention of Venereal Disease was failing to bring forward even such an essential fact as that in women (who, after all, are a fair proportion of the population), owing to their physical conformation and the size of the area requiring treatment, self-disinfection is and must remain absolutely unsatisfactory.

Dr. Magian in his letter now admits this to be the case. Would it not have been fairer to the public to state these limitations when saying that "such diseases are very easily prevented"? Another fact which is owing to the public is the following:

That from 1870 to 1913, under pre-war conditions and with no systems of prophylaxis or self-disinfection, the army figures for venereal disease show a steady drop from 201 per 1,000 to 50.9; and, indeed, in 1916, were as low as 38 per 1,000. Prophylactic measures were introduced that year, but were not widely taken up until the middle of 1918. In May, 1919, the venereal disease rate was 39 per 1,000, showing that in spite of the efforts made in the direction of disinfection there was no fall in the venereal disease incidence in the home army, although under military encouragement such disinfection is more easy to carry out than it would be in the case of the civil population.

We argue:

1. That inasmuch as self-disinfection, even under army discipline and supervision, has not apparently succeeded in reducing the percentage of infection, what promise can be made that the method would succeed when handed out broadcast to an unsupervised public?

2. That since—as shown in the army—venereal disease is capable of being markedly diminished by introducing wider human interests, recreations, etc., why not push these successful methods further amongst the general public rather than resort to plans that are open to many objections?

We dread the psychological and social effect on young men and women, and even on girls and boys, during the impressionable time of youth, of any printed matter suggesting that fornication is condoned by responsible persons either lay or medical. For fornication (even camouflaged under the more graceful title of sexual irregularity) is anti-social. It tends to prevent the normal formation of homes, and tends to break up homes when these exist, and finally, it is, of course, the main cause of venereal disease.

According to Dr. Magian's letter the policy of his society is wholly based on the assumption that the normal man is, and will be, immoral—and that therefore you are not weakening his morale by handing him pamphlets on the technique of the safe (so-called) indulgence in sex licence. Once more, what are the facts? Our male population, in the experience of every one at all acquainted with these matters, can be grouped as follows:

- (a) Those who decline to be immoral.
- (b) Those who go wrong sexually almost from the first.
- (c) Those who are easily swayed one way or the other by public opinion and by example.

The Society for the Prevention of Venereal Disease ignores the claims of the whole of this last large class, and, indeed, would, by its propaganda and its condoning of moral obliquity, sway them to join that group whose sexual instincts are so abnormally strong as to be uncontrollable by the restraints which public opinion and moral and social guidance could and might provide.

Since it is now an accepted medical dictum that the sowing of "wild oats" is not needful to health, surely we doctors shall be serving our country better by promulgating this truth, which leads to self-control, vigour of life, and honest healthy parenthood, rather than by lending our names to such schemes as tend to over-development of the sex appetite, which—as is well known—becomes more dominant by indulgence.—We are, etc.,

MARY D. STURGE.

ROSE LYNCH MOLLOY (Mrs.).

Birmingham, Dec. 14th.

SIR.—In your issue of December 6th is a letter under the above heading from Drs. Mary D. Sturge and Rose Lynch Molloy of Birmingham, expressing their extreme amazement (repeatedly) at the letter of the Executive Committee

of the Society for the Prevention of Venereal Disease in your issue of November 29th.

I wonder what their experience is. Here is mine. I have preached and provided prophylaxis for thousands of men for the past twelve years—in fact, since Metchnikoff's articles on the subject, and as a result of my experience I am tempted to lay down the following axioms:

1. I have never known a case of venereal disease follow prophylaxis properly applied. (I except chancres on the scrotum, abdomen, lip, and other places not usually protected.) This is supported by other medical officers of wide experience.

2. Unless carefully taught prophylaxis is more or less useless, hence its frequent failures.

3. Immediate self-disinfection, although desirable, is not absolutely necessary. Metchnikoff himself gave eighteen hours as the limit of safety. I advise as soon after risk as possible, but up to twelve hours with every prospect of success. Even if drunk at the time of risk, or "under out-of-door conditions" (I quote your correspondent's letter), there is no excuse for not using prophylaxis when sober, under the former conditions, or subsequently under the latter.

The failures in the army cause me no surprise. There are plenty in the navy. The medical officers in both services have during the war largely been drawn from civil life. Among them are certainly many who, like your correspondents, have little faith from lack of experience, others who consider the "punishment fits the crime," others who have conscientious objections to lecturing on the subject, and still others too tired to do so. It is such as they who damn what I and others consider the incalculable and almost certain benefit of prophylaxis.

I am referring solely to the nargol (silver nucleinate) and mercury ointment prophylaxis: I have as yet had little experience of the more recent prophylactic outfit of mercury ointment only. Also I have no experience of prophylaxis in women, but the elimination of venereal disease in men (which I believe is possible with an infinity of trouble) would gradually lead to its elimination in women. A Utopian dream, perhaps, but not impossible if all had the same faith gathered from experience.

Thank Heaven prophylaxis is coming into the light of day. For years such as I have worked by stealth. Now it is supported by "eminent men" publicly. I am not eminent, and only the indignation aroused by such a letter as your correspondents' (founded, as I believe, on inexperience) causes me to seek the hospitality of your columns.—I am, etc.,

December 9th.

SURGEON COMMANDER R.N.

DEMENTIA PRAECOX.

SIR,—The leading article on dementia praecox in the JOURNAL of December 6th, emphasizing the importance of Sir F. W. Mott's study of the subject has some suggestive points; for instance, that patients after exhibiting profound dementia for years, eventually recover. In such cases it cannot have been the nerve centre that had been at fault, but something acting upon the nerve centre, from the periphery—in other words, it was not an *organic* but a *functional* disease. We know that over-stimulation of a nerve causes paralysis, and we know how intimately all our organs are connected through the nervous system, so that we need not wonder that over-stimulation of the sexual organs gives rise to mental symptoms at puberty, by reflex action, or that the change of life, as it is called, both in men and women, is attended with such symptoms.

It is the same with regard to the digestive organs. Over-stimulation with one kind of food gives rise to Bright's disease, with another to diabetes, through reflex action also; but when any disease, either of the digestive organs or of the central nervous system, comes on, it is a sign that the way in which the patient had been living was at fault, and until that is put right the symptoms will persist, and a mere functional affection may in time become organic. Hysterical affections tend to become organic if proper treatment is not carried out, and hysteria is seldom met with in those who lead an active out-of-door life; hence the importance of outside work in the treatment of all nervous affections. Whatever the symptoms may be—and in what is called neurasthenia they are legion—outside work will remove them. Work is so beneficial in nervous affections because it excites interest, which to the mind is like hunger to the body. Asylum statistics have improved since the inmates were made to work; and, if my theory that food is the chief cause of disease is correct, with work outside and a proper dietary

our asylums might soon be emptied. The late Dr. Mercier's long list of cases with symptoms of insanity which got well by a mere change of diet confirms that view; hence the importance of the study of dietetics in the treatment of mental as well as bodily disease.—I am, etc.,

Denholm, Hawick, Dec. 9th.

JOHN HADDON, M.D.

EXPERIMENTS ON THE DESTRUCTION OF NITS AND LICE.

SIR,—In the issue for November 29th of your ably conducted JOURNAL there are three papers which I believe together throw important light upon this perennial topic for investigation and discussion: (1) Sir F. W. Mott's paper, wherein he shows the importance of the adrenal cortex as a storage for lipid elements; (2) experiments by Messrs. Bacot and Lloyd (Captain R.A.M.C.T.) on various methods for destroying the parasites in clothing and elsewhere; (3) a paragraph in the EPITOME which quotes G. Bergmark as stating that benzene is very poisonous. This latter statement I can fully believe.

When a student at Cambridge and whilst a dresser to Sir George Murray Humphry I belonged to an entomological society. The members at the week's end frequently walked to the woods on the Gog-Magog hills and netted butterflies and other insects, which were duly added to our collection. Now and then it happened that a valuable specimen went wrong. Damp would make it mouldy, or mites ("wingless flies," as the vice-chancellor informed me that they ought to be named) laid their eggs in it. One of our members—I think it was Davies-Colley, subsequently on the staff of Guy's—told me that for the removal of all such evils "butterfly flesh is heir to" there was nothing like benzene. When a drop or two of the liquid is placed on a moth, for instance, either living or dead, it immediately becomes semitranslucent and if alive succumbs at once. Now this sudden demise proves the poisonous qualities of the liquid. It also throws a sidelight upon the way the poison acts. Benzene has a great partiality for fat. That important element is at once attacked. No animals can survive if we put their lipoids out of action. The translucent tissues are the result. So soon as the benzene has evaporated the insect resumes its normal appearance.

At the risk of being prolix (many elderly people become so without knowing it) I shall now venture to describe a personal experience of its value; it happened once or twice whilst dressing the out-patients. At the time I recall there was an epidemic among the country folk of a disease, named by them "Scotch fiddle." In my youthful zeal as a skin healer—'twas before antiseptics were introduced—I caught the contagion on more than one occasion; also as I was a member of a musical society and the owner of a very valuable Amati cello, I did not wish to infect the bass viol; nor did I wish any member of the orchestra to say aloud: "Thoo't Scotch fiddle atween thli fingers, mon." So I bethought me of benzene and its "happy despatch" of little bugs. I smeared a little benzene "atween my fingers"; the result was excellent. One application cured the incipient disease. The nits and lice exposed to its action would undoubtedly share the fate of other living creatures.—I am, etc.,

Hove, Dec. 2nd.

W. AINSLIE HOLLIS.

THE SAFETY OF ETHYL CHLORIDE.

SIR,—My previous letter was simply a statement of my own experience, and I must plead guilty to not having looked up the literature of the subject, but I do not believe that the statistics quoted by Dr. Dudley Buxton give a correct estimate of the mortality from ethyl chloride. Dr. McCardie himself agrees that they require revision.

Since 1905 ethyl chloride has been used over 27,000 times at the Birmingham Ear and Throat Hospital; 6,225 times in six years at the Throat Clinic; and 6,789 times in two and a half years at one of the school dental clinics—40,000 cases of which I have actual knowledge without a death. It has also been used extensively at the Birmingham Dental Hospital, and there are five other school dental clinics from which I have not the figures. These taken with the other hospitals would add a large number to the administrations in Birmingham during the last fifteen years.

H.M. Coroner for the City has very kindly gone through his records with me. There was one death from ethyl chloride in 1904; the patient was a man of 67 suffering from chronic Bright's disease, emphysema, etc. There was another death in 1912, in which case ethyl chloride was followed by ether for the operation of incising a mammary abscess. A case in which it was followed by C_2E_6 cannot, I think, fairly be counted.

I think these figures are large enough to prove that ethyl chloride, in the limited class of cases for which it is suitable, is a very safe anaesthetic. I do not of course advocate its indiscriminate use; as to experience, this can only come from use.—I am, etc.,

Birmingham, Dec. 8th.

C. B. DALE.

THE R.A.M.C. AS A CAREER.

SIR.—The letter in your issue of November 22nd from "W. M. S." of Cardiff, in which he uses expressions like "the great Whitehall red-tape machine," "soulless machine," "burden of honours," "ineptitude of officials," indicates surely that "W. M. S." is indulging himself in a "grouse" against the medical organization for war, and that he is nursing a grievance—possibly imaginary—against someone in authority whom he has run up against. If this is so, as "W. M. S." takes it upon himself to give counsel to would-be entrants to the R.A.M.C., it will be seen that his advice may not altogether be free from prejudice.

"W. M. S." would do well to remember that most of those who are not in the R.A.M.C. are about to become to a much greater degree subject to the regulations of a Government department—witness the recent "instructions" from the Ministry of Health.

As we cannot all become consulting physicians, most of us will soon be subject to regulations which—together with night calls, midwifery, evening work, on duty day and night, Sundays not excepted, and such-like trifles—may make us sorry that we did not elect to go into the R.A.M.C. as a career.

As to his expression "part doctor, part soldier, but chiefly clerk," it is to be hoped that "W. M. S." keeps a few records.

As to doing good work in the services, the large number of distinguished investigators who have adorned these is ample evidence that good work can be done there as elsewhere.—I am, etc.,

December 7th.

ONE WHO HAS TRIED BOTH.

THE APHORISMS OF JOHANNES DAMASCENUS.

SIR,—As I am engaged in editing a seventeenth century Irish version of the Aphorisms of Johannes Damascenus, I should be greatly indebted to any reader of the BRITISH MEDICAL JOURNAL who can give me information concerning the identity of this medical writer. According to Lindenius, he was a Benedictine monk who flourished circa 791 A.D. The Catholic Cyclopaedia gives his obit as 875 A.D., while another authority states that he flourished circa 1158 A.D. What are the accurate biographical facts? The Aphorisms are said to have been published in 1497 at Venice (with the works of Rhazes); in 1489 at Boulogne (in folio); and at Basle (*apud Henricum Petri*) in 1579 (in octavo). The loan for a few days of a copy of any printed edition would greatly expedite my task as editor, as it would enable me to fill some lacunae in the MS., which is much worn; or, if the volume is too precious to entrust to the post, I would forward my typed transcript of the Latin to any correspondent who would be kind enough to compare it with the printed copy.—I am, etc.,

(Rev.) F. W. O'CONNELL, D.Litt.

Queen's University, Belfast, Nov. 30th.

THE GENERAL MEDICAL COUNCIL ELECTION—ENGLAND AND WALES.

SIR,—Will you allow me to express my sincere thanks to the 1,636 doctors who voted for me? The result far exceeded my expectations. I had no committee, nor funds to circularize all the electors.—I am, etc.,

Blackpool, Dec. 14th.

JNO. BROWN, M.D.

Medico-Legal.

RITTER v. GODFREY.

JUDGEMENT was given, on December 11th, in the Court of Appeal, on an appeal by Dr. T. H. Godfrey, of Finchley, from a judgement of Mr. Justice McCardie. It may be remembered that in May last an action was tried by Mr. Justice McCardie, sitting without a jury, in which a Mr. Ritter and his wife sought to recover damages against Dr. Godfrey in respect of the alleged negligent conduct of the latter in his attendance upon Mrs. Ritter during her confinement, whereby the child was born dead. After the birth the doctor had been dismissed from further attendance on the case, and correspondence had taken place between Mr. Ritter and the doctor upon the way in which he had treated Mrs. Ritter.

Mr. Justice McCardie found that there was no evidence of negligence on the part of Dr. Godfrey, and gave judgement for him, but reserved the question of costs for further consideration. On further consideration, on June 2nd, the judge, after hearing argument, said that he felt that the correspondence from the doctor's side was unsatisfactory, that one letter in particular was regrettable, and certain paragraphs of it unjustifiable. Having regard to all the facts of the case, he felt it to be his duty to deprive the doctor of his costs. From this order Dr. Godfrey appealed to the Court of Appeal, and conducted his case in person.

The Court of Appeal, composed of the Master of the Rolls (Lord Sterndale), Lord Justice Atkin, and Mr. Justice Eve, after reserving judgement, granted the appeal with costs, and in giving judgement the Master of the Rolls said that the real ground on which Mr. Justice McCardie had deprived the doctor of his costs was the attitude the doctor had taken up in the correspondence with Mr. Ritter before the latter brought his action. He pointed out that in an action tried without a jury the successful party has technically no right to his costs in the absence of an order by the judge granting him his costs, but that in practice a successful party in an action tried by a judge alone was always given his costs unless in the exercise of his judicial discretion the judge considered that there were grounds for depriving him of the costs to which he was otherwise as a matter of regular practice entitled. One ground on which a successful defendant might be deprived of his costs was where he had been guilty of conduct which had encouraged the plaintiff to believe that he had a good case, and it had been argued by counsel for the respondent that the spirit of levity in the doctor's letters after the confinement was such as reasonably to induce Mr. Ritter to believe that the doctor had been negligent in his attendance on Mrs. Ritter. Whilst he accepted the principle of law, he had grave doubts as to whether this inference could be drawn from the correspondence in question; and as his colleagues Lord Justice Atkin and Mr. Justice Eve were clear in their opinion that the letters were not open to this construction, the appeal would be allowed with costs.

LUNATICS IN WORKHOUSES.

A CORRESPONDENT raises a question as to the position under the Lunacy Act, 1890, of persons who are received into workhouses under Section 20 of that Act. The section is as follows:

If a constable, relieving officer, or overseer is satisfied that it is necessary for the public safety or the welfare of an alleged lunatic with regard to whom it is his duty to take any proceedings under this Act, that the alleged lunatic should, before any such proceedings can be taken, be placed under care and control, the constable, relieving officer, or overseer may remove the alleged lunatic to the workhouse of the union in which the alleged lunatic is, and the master of the workhouse shall, unless there be no proper accommodation in the workhouse for the alleged lunatic, receive and relieve and detain the alleged lunatic therein; but no person shall be so detained for more than three days, and before the expiration of that time the constable, relieving officer, or overseer shall take such proceedings with regard to the alleged lunatic as are required by this Act.

It will be observed that the power conferred by this section is designed to meet cases of emergency, and in those cases the detention actually precedes both the medical examination and the proceedings before the magistrate.

The section therefore limits the time during which the alleged lunatic may be detained in this way to a period of three days, and during this time the official responsible for the removal of the alleged lunatic into the workhouse

must take the necessary steps to obtain a reception order in the usual way. In other words, he must convert the "alleged lunatic" into a "lunatic."

In these proceedings the justice may, if satisfied that the case is one for reception in a workhouse and that the workhouse is provided with proper accommodation for the reception of the lunatic, order the lunatic to be received into the workhouse as a lunatic.

If, however, for any reason the official who brought the alleged lunatic to the workhouse omits to carry out his duty to obtain a reception order within the three days so that there is a danger of a man, who in fact ought to be under restraint, being able to get out free of control, it is open to the medical officer of the workhouse, under Section 24 of the Act, to issue a certificate:

1. That the man is a lunatic, giving the grounds for his opinion.
2. That he is a proper person to be allowed to remain in a workhouse as a lunatic; and
3. That the accommodation at the workhouse is sufficient for his proper care and treatment, and having regard to the presence of other inmates in the workhouse.

On this certificate the lunatic may be detained for a further period of fourteen days, at the end of which time, unless a reception order has been made in the interval in the ordinary way, he must be released.

PROSECUTION FOR FAILURE TO PROVIDE SPECTACLES.

In the *Bootle Times* for November 14th, 1919, an account is given of the prosecution of a parent for neglect to provide spectacles necessary for his child. The prosecution was undertaken by the National Society for the Prevention of Cruelty to Children. It was stated that the child's eyes had been found to be defective on medical examination, the parent had been urged to provide glasses, but had declined to do so. It was for the court to decide whether the child should have glasses or not. Dr. R. E. Harcourt said he had examined the child and found it short-sighted. Glasses were ordered, but were not provided. The neglect had undoubtedly caused the child suffering. She would be unable to see the blackboard without straining her eyes, and in trying to do so might suffer from headaches and pain in the eyes. Defendant said that the child's eyes were as good as his own. Defendant was fined 40s., and directed to pay the costs of the society and of the summons.

The primitive objection to the use of glasses by children dies hard, probably by reason of the dislike on the part of parents to be told that their children are not such perfect products as they would wish to believe. But the necessity for prosecution to convince refractory parents that their neglect means a real injury in respect to the child is getting rarer as the benefit to the child of comfortable eyes, even though with glasses, is appreciated.

Universities and Colleges.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

An ordinary council was held on December 11th, when Sir George Makins, President, was in the chair.

Primary Fellowship.—At the recent examination in Anatomy and Physiology 141 candidates were examined; of these, 53 were admitted under the special war conditions, and of them 37 were successful; 88 were admitted under the ordinary conditions, and of these 30 were successful. It was decided that a special examination be held in November, 1920, in addition to the special examination to be held in May, 1920.

Diploma of Fellow.—The diplomas of Fellow were conferred upon the following candidates who were successful at the recent final examination:

A. W. Adams, G. V. W. Anderson, Margaret M. Basfen, Rustam Nusservanji Cooper, A. G. T. Fisher, M.C., W. A. Hailes, R. T. Jones, T. Julian, R. Kennon, F. B. McCarter, F. A. Maguire, E. T. C. Milligan, C. M. Ockwell, M. H. Oldershaw, A. B. P. Smith, W. A. Pocock, A. Radford, Tribhuvandas Oghaddar Shah, S. C. Shaw, Paganath Dadoba Shirwalkar, A. J. Trinca.

Diploma of Member.—The diplomas of member were conferred upon the following, who have now complied with the by-laws:

G. Perkins, H. H. Perry.

Dental Surgery.—At the recent examination 44 candidates qualified for the Licence in Dental Surgery.

Court of Examiners.—Mr. H. S. Pendlebury was elected a member of the Court of Examiners, and Mr. John Murray a member of the Board of Examiners in Dental Surgery.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

At the annual meeting of the Royal College of Physicians of Edinburgh, on November 27th, the following officers were elected: **President**, Sir Robert Philip; **Vice-President**, Dr. A. H. Freeland Barbour; **Treasurer**, Dr. Norman Walker; **Secretary and Registrar**, Dr. J. S. Fowler; **Librarian**, Dr. D. Berry Hart; **Curator of Research Laboratory**, Dr. J. J. Graham Brown; **Members of Council**, Dr. F. D. Boyd, Dr. G. M. Robertson, Dr. Robert Thin, Dr. Lamond Lackie, Dr. Harry Rainy.

Dr. Jonathan Campbell Meakins has been admitted to Membership of the College.

The following distinguished and representative men, having accepted the offer of honorary fellowship, have been unanimously elected honorary Fellows of the College: Professor Hermann M. Biggs, M.D., M. Georges Clemenceau, Professor Kitasato.

Obituary.

WE have to record with regret the death, on November 28th, of Dr. ROBERT McKELVIE, of Brundall, Norfolk, at the age of 78. He was born in Whithorn, Wigtonshire, and graduated M.D. Edinburgh in 1865. He first settled in Cromer, where he became surgeon to the cottage hospital. After leaving Cromer he went first to London and then to Scotland. He finally settled at Brundall, where he won many friends. Dr. Michael Beverley, in a tribute to the memory of Dr. McKelvie, says: "He was brought up in the old school of medicine, and was wedded to much of its style and methods, but kept himself well up to date. He was a keen reader of recent medical publications and journals, and followed with great interest the fresh developments of medical science. Although greatly inclined to give free play to the *vis medicatrix naturae*, he was a great believer in the efficacy of drugs, and his patients, especially the poor, never suffered for the want of them. In consultation with his professional brethren, whilst holding with characteristic tenacity to his own opinion, he was always open to conviction. In the days of long ago, when I so frequently met him in consultation in the cottage homes of the Cromer and Sheringham fishermen, I was struck with the confidence they reposed in his judgement and the friendship between them. This applied equally to his more wealthy patients. He had an extensive practice amongst all classes, and his departure from Cromer was much regretted. Although coming to Blofield and Brundall comparatively late in life, Dr. McKelvie soon secured the confidence of a new clientele of patients, and the estimation of a large circle of friends."

The death took place recently, at Coventry, of Dr. ARTHUR ORTON, at the age of 71. He was the third son of John Orton, M.R.C.S. All three sons became doctors, and continued their father's practice at Bedsworth, near Foleshill, Coventry. Dr. Arthur Orton and his brothers represented the sixth generation of medical practitioners, the family having been established in practice at Earl Shilton, Leicestershire, until the death of Arthur Orton's grandfather, John Orton, who was killed by a fall from his horse. The practice was then sold, and Arthur Orton went to Australia about twenty-six years ago, and began medical work at Stanthorpe, Queensland. He acquired there a large practice over a wide area, visiting on horseback small isolated towns at regular intervals. He became a justice of the peace, and amassed a competency, which enabled him to return to this country several years ago; unfortunately his health failed soon after his return. Dr. Orton leaves six nephews in the medical profession, including Dr. L. E. Orton, of Bedsworth, and Dr. John Orton, chairman of the Coventry Division of the British Medical Association. He obtained the L.S.A. diploma in 1880, and the M.R.C.S. two years later.

LIEUT.-COLONEL ROBERT WILSON, C.A.M.C., died recently at Toronto at the age of 53, after undergoing an operation on the previous day. After graduating M.D. at McGill University, Montreal, he commenced practice in Point St. Charles, and was for some years superintendent of the Western Hospital, Montreal. He was greatly interested in x-ray work, and built the first static x-ray machine used in Montreal. He came overseas with the first Canadian contingent, and was attached to the 1st Canadian General Hospital in France; later he was attached to the Granville Canadian Special Hospital at Ramsgate, and was subsequently transferred to London, and given charge of the x-ray work and equipment in all the Canadian hospitals overseas. When this work had been thoroughly organized he was ordered back to Canada, where he was appointed consulting surgeon in electro hydrotherapy to the Canadian military hospitals.

CAPTAIN H. J. ANDREWS is reported in a casualty list published on November 24th to have been killed in action. He took a temporary commission as lieutenant in the I.M.S. on June 30th, 1917, and was promoted to captain on completion of one year's service. He received the M.B.E. on June 3rd, 1918.

CAPTAIN GEORGE HENDERSON BAIRD, R.A.M.C., died at Sandymount, Dublin, on November 9th. He was the son of the late James Baird, C.E., of Usher's Island, Dublin, and was educated at the Carmichael College, Dublin, and at St. Mary's Hospital, taking the L.S.A. in 1892 and the M.D. Brussels in 1898. After acting as resident assistant at the Jervis Street Hospital, Dublin, he went into practice at Woolwich, where he held the appointments of medical officer to H.M.S. *Monarch* and the Cable Department, Woolwich, to the Post Office and to the Linen and Woollen Drapers' Institute. He took a temporary commission as lieutenant in the R.A.M.C. on August 10th, 1916, and was promoted to captain after a year's service.

Medical News.

MR. A. A. LIPSCOMB, on retiring from practice after nearly thirty years' work in the Wrotham District of Kent, was presented by his patients and friends with an illuminated address and a very handsome cheque.

THE Great Priory of the Order of the Temple of England and Wales has contributed £1,657 13s. 8d. to the fund for reinstating and endowing the British Ophthalmic Hospital at Jerusalem, destroyed by the Turks when they evacuated the city.

MR. H. C. NANCE, F.R.C.S. Eng., was presented with a gold watch, a chiming clock, and a gold and pearl scarf pin on his retirement from practice in Norwich from "a few of his grateful patients." He also received a silver centrepiece from his late partners, Messrs. Hugh Whitwell and Bernard B. Riviere.

AT a general meeting of the local medical profession held at Limerick, on October 23rd, it was unanimously resolved that the scale of fees for life assurance should be as follows: Up to and including £500, a guinea; above £500 and less than £1,000, a guinea and a half; £1,000 or any higher sum, two guineas. This scale to take effect on and after January 1st, 1920.

A PAPER dealing with the recent experimental researches on alcohol and alcoholic intoxication will be read by Dr. Edward Mellanby at a meeting of the Society for the Study of Inebriety at the house of the Medical Society of London on Tuesday, January 13th, at 4 p.m.

A COURSE of lectures on mental deficiency and the care of defectives for health visitors and teachers has been arranged by the Central Association for the Care of the Mentally Defective (Queen Anne's Chambers, Tottill Street, S.W.1). The lectures will be given at the Fabian Hall, Westminster, during January, February, and March. The lectures will be given by Dr. Letitia Fairfield, Mr. Kenneth Richmond, and Miss Lucy Fildes, a research student at the Psychological Laboratory, Cambridge.

A SUCCESSFUL and largely-attended festival dinner was held at the Connaught Rooms, London, on December 12th, in aid of the progress fund of the Great Northern Central Hospital. The chair was taken by the President, H.R.H. the Prince of Wales, who was supported by many distinguished guests and friends of the institution, including (besides the speakers) the Duke of Argyll, the Duke and Duchess of Somerset, the Marquess of Dufferin, the President of the Royal College of Surgeons, the President of the Royal Academy, Lieut.-General Sir Arthur Sloggett, and Mr. G. Lawson Johnston. The toast of "The Imperial Forces" was proposed by Sir James Crichton-Browne, and supported by Mr. Horatio Bottomley, M.P., who each took the opportunity of saying something in support of the hospital's appeal, while Admiral Sir Doveton Sturdee and General Lord Rawlinson, in replying, paid tributes to the work of the medical profession with the armed forces. The toast of "The Great Northern Hospital Progress Fund" was given by the Chairman, who showed interest in the work of the institution and knowledge of its needs. Lord Northampton, chairman of the hospital, and the Right Hon. H. J. Tennant, vice-chairman, responded. After "The Health of the Prince of Wales" had been honoured with enthusiasm, on the proposal of Lord

Northampton and Lord Camden, and acknowledged with modesty by the Prince, Mr. Gilbert Panter, the secretary, read out the list of donations promised that evening, amounting to some £25,000.

WE are informed that, under the auspices of Johannesburg University College the new building for the University of South Africa Medical School has been commenced. It is situated close to the Johannesburg Hospital and to the South African Institute for Medical Research, with which institutions its work will be intimately associated. The departments of anatomy and physiology are already working, and it is expected that the present first-year students—twenty-five in number—will be able to complete their education in Johannesburg and graduate M.B., B.Ch. in the University of South Africa. The curriculum is the result of much painstaking work on the part of the leading medical men of the city, who have co-operated with the staff of the University College. It occupies six years, and meets the requirements of the local medical councils, and, being modelled on the curricula of the English and Scottish universities, it is hoped that the General Medical Council will in due course recognize the South African medical degree.

THE discussion on some aspects of the tuberculosis problem in life assurance, opened at the meeting of the Assurance Medical Society on November 5th by Dr. Otto May (BRITISH MEDICAL JOURNAL, November 8th, p. 537), will be resumed at the house of the Medical Society of London on Wednesday, January 7th, at 5.30 p.m. A special meeting of the society will be held half an hour earlier to consider the question of incorporation with the Royal Society of Medicine. If the proposal is accepted the society will become a section of the Royal Society of Medicine, and the reports of papers and discussions would appear in the *Proceedings* of the Royal Society of Medicine, and members of the Assurance Medical Society would receive the proceedings of the section as they appeared from time to time.

THE arrangements of the Royal Institution of Great Britain for the period before Easter include a course of three lectures by Professor G. Elliot Smith, F.R.S., on the evolution of man and the early history of civilization. The first, on January 27th, will deal with man's origin; the second, on February 3rd, with elephants and ethnologists; and the third, on February 10th, with the search for gold. In March Professor Arthur Keith, F.R.S., will give a course of four lectures on British ethnology and the invaders of England. The Friday evening discourses will be given this session at 9 p.m., the first, by Sir James Dewar on low temperature studies, on January 16th. Among other evening discourses is one on the volume of the blood and its significance, by Professor W. M. Bayliss, F.R.S., which will be given on February 13th.

ON December 12th, in the physiotherapy department of St. Thomas's Hospital, a demonstration was given of the methods employed in training wearers of artificial limbs in the use of them, so that they may reap the greatest possible advantage from their prostheses and walk with the best obtainable gait. Miss Randell, the sister in charge, who is to be warmly congratulated on the excellence of the training, demonstrated to a number of interested visitors what surprising feats may be performed by a one-legged man even when blindfold. This blindfolding is more than an exhibition trick. By its adoption in training, the patient is led to develop, so to speak, a muscular sense, or, at least, a consciousness of the situation of his artificial foot and leg, much sooner than he would by the ordinary daily use of the limb. The demonstration concerned an officer with a short thigh stump, who, besides going through the special exercises, climbed a ladder, skipped, and walked along a narrow beam. It must, however, be admitted that when not using a stick he walked with a very notable limp, so that in his case the subsidiary object of the training, which we understand to be the concealment of mutilation, had not been perfectly attained.

A COMPANY has been formed for the purpose of continuing the *Review of the Foreign Press*, which was, during the war, published under the auspices of the Government, and appeared to meet a want felt for some time in political, financial, and commercial circles. The paper will be edited and managed by Captain W. E. Barber (who edited it for the War Office) with the assistance of many of the former staff, and under the general guidance of an editorial advisory council. Two publications will in future be issued weekly—the *Economic Review* and the *Political Review*.

THE boats of the Royal Mail Steam Packet Company will next month resume regular calls at Madeira and St. Vincent, Cape Verde.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL. *Aitiology, Westrand, London*; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.). *Articulate, Westrand, London*; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY. *Medisecra, Westrand, London*; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

QUERIES AND ANSWERS.

INCOME TAX.

F. L. O. joined a practitioner in partnership in October, 1919. The surveyor refuses to admit any claim to an adjustment of the existing assessment on the ground that from that date two surgeries are maintained for the purposes of the practice instead of one. Is this correct?

* * Yes; but our correspondent has a right to have the assessment of the profits of the practice adjusted at the end of the year, if the result of the additional professional expenditure now incurred is to reduce the earnings of the practice to an amount less than the assessment (Income Tax Act, 1918, Schedule D, Cases I and II, Rule 11). The existing assessment is presumably based on the average profits of the years 1916, 1917, and 1918, and it should be borne in mind that the receipts will apparently increase as a result of F. L. O.'s work, so that the earnings of the practice for the six months to March 31st, 1920, may very well exceed one-half of the previous average in spite of the additional expenditure incurred.

TESTING COLOUR VISION.

J. A. M.—The method now employed by the Admiralty in testing candidates for the navy is that advocated and arranged by Dr. Edridge-Green—a lantern in which various colours—violet, blue, green, orange, and red—can be exposed to view under conditions that imitate those under which signal lights will be seen at sea. The depth of the colours may be varied, fog and rain effects may be superposed, and the size of the light may be diminished to represent a light at different distances. The lantern is of simple construction and quite easy to work. It can be obtained from any good instrument maker—for example, John Weiss and Son, Oxford Street. The essential difference between this test and such a test as the Holmgren does not lie so much in the manner of the exhibition of the colours as in the manner of the response of the candidate. He is required to name the colour shown to him. Only one colour is shown at a time, so there is no possibility of comparison; the colour has to be judged and named from its quality alone. The test is severe, but it corresponds with the conditions of practical life. Objection has been raised to the possible inability of candidates to name a colour correctly seen. The objection is academic rather than real, and in any case a candidate who did not know the common colour names of red and green would be an unsuitable person for any position of responsibility. Even the South Sea Islanders are recorded to have distinguished between "blood" colour and "sea" colour.

LETTERS, NOTES, ETC.

ANONYMOUS COMMUNICATIONS.

IT appears to be necessary to remind correspondents that no notice can be taken of anonymous communications unverified by the author's name. The writer must furnish his name to the editor, though not necessarily for publication.

AN IMBECILE'S MEMORY.

DR. CLAUDE A. P. THUMAN (Exeter) writes: If Dr. Pereira Gray will consult Hudson's *Psychic Phenomena*, or his *Scientific Demonstration of a Future Life*, I think he will find an explanation of the case mentioned in the JOURNAL of December 6th, p. 762.

TREATMENT OF MALARIA.

LIEUT.-COLONEL F. W. COTTON, R.A.M.C. (Oswestry), writes with reference to the discussion on malaria (BRITISH MEDICAL JOURNAL, December 6th, 1919, p. 743), dissenting from the view that the noxious effects of quinine have been too much emphasized. Before statements to this effect are made, he says, further evidence is needed as to how much post-malarial mental depression, dyspepsia, etc., are due to quinine and how much to malaria. Little or nothing was said concerning the effects of alcohol and gastritis in producing relapses of the disease, and yet it is plainly evident that unless the body is in the best state to deal with disease-producing organisms, those organisms must gain the upper hand and thrive. One can generally cure malaria by giving quinine by the mouth, timed to the attack, in benign and quartan infections, and by any other route than the mouth in malignant malaria, one dose daily during the febrile and a few days after the febrile stages, and then follow up with a mixture of iron, arsenic, and calcium, with the most rigid attention to diet, open-air exercise and amusement; to eat, unless hungry, should be forbidden, and alcohol also should be strictly forbidden.

TEMPORARY R.A.M.C. OFFICERS IN THE E.E.F.

"TEMPORARY CAPTAIN" writes from Egypt: I should be grateful if you will grant me a short space in the JOURNAL to draw notice again to the position of temporary R.A.M.C. officers in this force. Many are being compulsorily retained here, though eligible for demobilization. A large number have been away from home for three or four years, and have had no U.K. leave, and are naturally anxious to return to their practices—if there is anything left to return to—or to try and learn something of their profession.

Applications to the higher medical authorities here are met with by the answer: "Vide my memo. No. —," or "This officer will be released as soon as he can be spared." My work since January of this year has averaged about fifteen minutes a day, and there are other officers who have even less to do. Regulars, both I.M.S. and R.A.M.C., are getting leave home; we are refused it unless we have signed for the Army of Occupation. The absolute indifference of the medical authorities here to our position is an additional cause of our discontent.

INTOLERANCE OF HUMAN MILK.

A FEW exceptional infants manifest a curious intolerance of human milk, which determines toxic symptoms of a character it is customary to describe as anaphylactic. They comprise sickness, acute stomach-ache immediately after the feed, urticarial manifestations, restlessness, and insomnia. It has been shown by Professor Weiss of Lyons that it is possible to protect the infant against the consequences of this morbid sensitiveness by subcutaneous injections of the very milk that causes the mischief. He injects from 5 to 15 c.cm. under the skin of the abdomen, and, except for a little local oedema, no reaction takes place. Cow's milk, on the contrary, containing a foreign albumin, determines a rise of temperature lasting twenty-four hours or so, but is not otherwise injurious. Should it be thought desirable to repeat the injection it is advised that the quantity should be given in divided doses as in reinjections of any kind of serum. The results are stated to be uniformly satisfactory, and the mechanism of the treatment suggests the possibility of extending its protecting influence to other forms of alimentary intoxication.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 33, 35, 36, 37, and 38 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 34 and 35.

THE following vacant appointments of certifying factory surgeons are announced: Catrine (Ayr), Ketton (Rutland), Market Harborough (Leicester), Shardlow (Derby), Totnes (Devon).

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

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Seven lines and under	...	0 6 0
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An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *posteo restante* letters addressed either in initials or numbers.

An Address

ON

SOME WAR DISEASES.

DELIVERED TO THE

DEVON AND EXETER MEDICO-CHIRURGICAL SOCIETY.

BY

SIR HENRY DAVY, K.B.E., C.B., M.D., F.R.C.P.,
PHYSICIAN, DEVON AND EXETER HOSPITAL.

WITH the exception of trench fever, which is dependent on the louse, I think we may say that no new disease has been discovered during the war, but, as might be expected, since all the best medical science and talent in the world has been focussed on these old diseases, an immense amount of knowledge has been gained as to their history and treatment.

Psychoneuroses.

It is true that most of us considered that we had to deal with a perfectly new condition of nerve disease when the first weird and bizarre cases came under our observation labelled "shell shock." Very early in the war Mott and others pointed out that the effect of poisonous gases from shells "was to produce military punctiform haemorrhages in the brain the result of inflammatory stasis and thrombosis of the small arteries"; in other cases it was found that the actual concussion produced by high explosives was "to cause the brain to be extremely congested with a number of minute punctiform haemorrhages at the terminations of the smallest vessels on the surface of the brain, but with no intracerebral haemorrhages."

Many of us, including myself, did not realize that we had seen or read of these conditions in connexion with poisoning by carbon monoxide and ordinary cases of concussion of the brain and spinal cord in any surgical treatise on the subject. In fact, if you read "Concussion of the Brain" in Bryant's *System of Surgery*, published in 1876, you will get a very good description of many of the cases of so-called "shell shock" as we first met them. Shortly, it was recognized that these war neuroses were the same as those previously known to us in civil practice, the difference being one of frequency rather than kind; finally, these neuroses were all more or less classified under the headings of neurasthenia, hysteria, and psychasthenia, and possibly the tendency has been too much to ignore the organic injuries to the brain which it was well recognized occurred occasionally in the history of civil cases of concussion of the brain, and in some few cases were never entirely cured. But it is certain that one undoubtedly saw the same weird and bizarre symptoms in men from camps on Salisbury Plain, and other camps in the Command, who had never been away from these camps, and had hardly, if ever, heard a gun fired or a shell burst. This was especially the case after conscription had come into force, and when the attempt was being made to make soldiers out of numbers of men who from family history, temperament, or physical condition, were totally unfit for active service.

It is a great pity that the term "shell shock" was ever invented. The men supposed to be suffering from it often seemed proud of the term, and to be as pleased with themselves as if they were wounded heroes. Worse still, it excited far too much pity and sympathy for them with everyone with whom they came into contact, including the nurses and even the doctors. In civil practice everyone realized that pity and sympathy were fatal to the successful treatment of these nervous conditions, and in all my experience in the numerous small hospitals I visited I cannot recollect a single bad case of so-called "shell shock" that made a good recovery. They stayed in hospital month after month, or went from hospital to hospital, with possibly short returns to their dépôts, and were useless for all fighting purposes. The worst case of this lingering in hospital I noted was a man with neurosis of his stomach, who had been in the army nineteen months, fourteen of which he had spent in various hospitals before I recommended his discharge from the army.

In the early days of the war the whole profession was divided as to the best treatment of these conditions. Some eminent authorities advised rest cures, massage, and electricity, and others psycho-analysis, while one well known authority said that they would do best if mixed up with jovial lightly wounded sailors who would cheer them

up and cure them by taking their thoughts off their ailments. It was quite late in the day that the best treatment for them was worked out to be:

1. To place them together in suitable institutions where the atmosphere was one of expectant cure.
2. Suggestion, usually without any hypnotic suggestion.
3. Graduated employment and re-education.
4. Stay in these institutions sufficiently long to stabilize their nervous systems.
5. Recognition that after a decided nerve breakdown they would never again be fit for the front line.

Very soon after my appointment as consulting physician in the command I was struck with the great benefit of rest, suggestion, and employment. Many of my hearers will remember Colonel Corkery, who, after being at the Devon Dépôt as medical officer in charge, took an appointment as school medical officer under the Devon County Council. At the commencement of the war he returned to the army. Shortly after my appointment in August, 1915, he asked me to visit his camp at Maker, near Plymouth. He had here a fair number of so-called shell shock cases. His treatment was rest, sea bathing, graduated walks, and finally trench digging. This treatment was so successful, and struck me so much that I made a special report on it to Surgeon-General Bedford, the D.D.M.S., who made Maker what was then known as a treatment centre, and subsequently I reported to the Director-General, Sir Alfred Keogh, who was much interested in the report. Unluckily, a few months after the report, Maker as a treatment centre for military purposes was closed, and Colonel Corkery was assigned other duties, so the experiment ceased.

It was not until 1917 that the principles I have enumerated were fully formulated at a meeting of the leading neurologists called by Sir Alfred Keogh in London, at which I was allowed to be present; it was, however, not until 1918 that institutions similar to the Seale Hayne were started—at any rate, in this Command. At the Seale Hayne War Hospital some extraordinarily rapid cures were effected, many of them very remarkable. I am not sure that for many of these cases I do not prefer the slower but equally good cures which were effected at the New Zealand Hospital for these psychoneuroses at Brockenhurst under Lieut.-Colonel Macdonald and his assistants. Here these cases were together in a hospital, the whole atmosphere of which was expectant cure. They were surrounded by patients—many of them cured, many of them in process of cure. Suggestion was carried out in so far as every one led them to expect they would soon get well; they had graduated exercise and employment, but no one bothered them to get well at once; no one worried whether they got well to-morrow, or next week, or the week after. But they got well just the same, and without that very great strain on their doctors which, I am sure, must be caused by the energy expended in producing the "lightning cures" to which we were accustomed at the Seale Hayne. After all, it does not much matter whether one of these patients is cured with great rapidity or more slowly, since, for the cure to be satisfactory, he has to remain in the institution for some time, so that his nervous system may become more stable.

Hours could be spent in describing points of interest in these cases of psychoneurosis, but I have dwelt long enough for my purpose, which is simply to call attention to their proper treatment. These nerve conditions have always been and will always be with us in civilian practice, and their treatment has always been most unsatisfactory. If a case of psychoneurosis came before me in private to-morrow, I should not know how to get him the best up-to-date treatment which I have seen lead to such successful results at the Seale Hayne, Netley, Brockenhurst, and other military institutions.

I would suggest to the Minister of Health that it is worth his while to start some institutions on these lines. There must be numbers of cases of psychoneurosis among insured persons, who would be so much more quickly cured in such institutions that large sums of money might be saved to the nation by that rapid cure. In such institutions accommodation might be found for paying patients, just as some of the public asylums have wards for private patients. I would suggest also that the question is worth the consideration of a few capitalists. One or two institutions on the lines of Seale Hayne or Brockenhurst, under suitable, firm, medical men experienced in the proper lines

of treatment, would make a good financial success, just as has Baulf House in another line of disease; it would be a great boon both to patients and the medical profession if a few up-to-date institutions were available for the treatment of these cases.

Disordered Action of the Heart.

Another old condition which came to us under a new name were the numerous cases sent to us from the front labelled "Disordered action of the heart."

It would be interesting could we decide what proportion of these cases was caused by cigarette smoking, and what proportion was a pure neurosis brought on by other causes. I do not wonder at the excessive cigarette smoking of the men at the front. Had I been waiting about in the trenches or anywhere near the front line I am sure I should have done as they did, and smoked all the time as long as I could obtain a cigarette by any process whatever, but none the less I am sure that a large proportion of the D.A.H. cases were due to tobacco and were only cured when the cigarettes were left off or strictly limited. For the rest, numerous cases were pure neurosis, only to be cured in the same way as were the other neuroses, which we have before discussed.

It is easy to be wise after the event, but considering how much had been written by Oertel and the brothers Schott of Nauheim and various English physicians as to the value of graduated exercises in heart disease, especially those of nervous origin, it is strange that this method of treatment was not more generally applied much earlier in the war than it was. I do not remember when these exercises were first applied on anything like a large scale, but I believe it was in 1917 that I first went to the Mount Vernon Hospital, Hampstead, to study their effect in Dr. Lewis's clinic there. I met there Captain Scott, one of the officers sent from Netley to study the system thoroughly before introducing it there. Subsequently I was able to watch the cases under his care, and to note the benefit which followed the treatment in a very good proportion of the cases. But these exercises have to be very carefully graduated and arranged in progressive order of intensity, and must be watched by a medical man; for if the right exercises are not adopted and watched in their execution, as much or more harm than good results from their use. On more than one occasion when exercises were introduced to a hospital or command dépôt I found it necessary to advise the officer in command to send a special officer to the heart centre established later on at Colchester to study the system there and alter the exercises in use. It was found also that the good of these exercises depended greatly on the instructor, so that he also required special instruction if the system was to be properly carried out. Hence the same remarks apply to this mode of treatment as to the psychoneuroses, and we must have special institutions to which these cases can be sent.

But I hope that the treatment by graduated exercises for heart conditions of all sorts will be much more recognized by the profession in the future than in the past. Rest, and rest in bed, is very frequently necessary in all sorts of heart conditions, but in the future it ought not to be the chief and only remedy to be thought of. After a sufficient, often only a short, rest the medical attendant wants to find out exactly what amount of exercise his heart patient can take. Oertel originally gave his patients graduated exercises by making them do a definite amount of gentle walking. Some of his patients walked along the level, others up hills of varying incline, some walked for a little while with frequent rests, others for longer, some once a day, some oftener. Hence, by varying the details, and at the same time carefully examining the patient, any and every medical man can give his patients the graduated exercise required. Many a time for years past I have used the flat and the undulating parts of Exeter according to Oertel's method, and always with marked benefit to the patient. Nearly every medical man has in his neighbourhood flat and rising ground which he can utilize in the same way. If you could all have seen the heart cases at Netley remaining stationary in the wards and corridors of the hospital, and seen the same men after a course of graduated exercises, you would, like me, be thoroughly impressed with the benefit regulated exercise does to quite a large proportion of heart cases.

Diseases of the Lungs.

Nothing so much altered my views on any class of disease as did my experience of various lung cases among the military hospitals. Not only were these cases carefully nursed and recorded, but the bacteriology of their conditions was most carefully worked out, sometimes by the ablest and best bacteriologists in England.

One fact very fixed in my mind is that the physical signs in a chest need not settle the nature or danger of the disease from which the patient is suffering. We were, or at least I will say I was, before the war far too ready to consider a well marked consolidation of one of the apices of the lung to mean tubercle and nothing else. If a report on the sputum said that no tubercle bacilli could be found, one talked of the difficulty of always finding them, and one shrugged one's shoulders and stuck to the diagnosis. But there are quite a number of various bacilli which may cause consolidation of an apex, with exactly the same physical signs as are produced by the tubercle bacillus. Let me give some examples:

1. A young soldier, after influenza, developed consolidation of the right apex, with dullness, bronchial breathing, intensification of voice sounds, and some moist sounds for three finger-breadths below the clavicle. Several examinations of the sputum revealed no tubercle bacilli, but it was found full of pneumococci. With fresh air and tonic treatment he made a complete recovery in three months, and a year after was quite well.

2. A V.A. nurse was taken ill with high temperature and cough. She had also a large painful boil on the forehead. After a short time she developed typical consolidation of the left apex. Shortly after this she developed dullness over the left base. A hypodermic syringe plunged into the area of dullness drew out about a quarter of a syringe of pus, but no more. Bacteriological examination revealed pure cultures of *Staphylococcus aureus* in the sputum, in the pus from the syringe, and in pus from the boil. After the use of an autogenous vaccine she quickly began to improve and recovered entirely.

3. An army chaplain was referred to me from France, said to be in a very advanced stage of phthisis. He was very ill indeed, and both lungs showed advanced signs of breaking down in parts, with patches of moist râles, dullness, and all the usual signs of tubercle. But he told me that although his sputum had been examined several times no tubercle bacilli could be found. I only saw him once, as he was going to friends at a distance. I, however, wrote to his doctor and asked him to have the sputum thoroughly examined by a bacteriologist to see what bacilli were present, and, if anything definite was to be found, to obtain and use an autogenous vaccine. Bacteriological examination of the sputum showed pure cultures of one of the streptococci. He died, and when the lungs were examined *post mortem* only the streptococci could be found. This was important, as it proved that his illness was contracted during his work in France, so that his widow will have a pension.

I could bring forward many other similar cases, but these are sufficient. In future I certainly shall not settle my diagnosis of similar cases on physical signs. I shall want the sputum reported on most carefully. If tubercle bacilli are found there is an end of the matter; but if not, and the disease seems due to some other bacillus, then vaccine treatment is indicated, and will be very often successful.

Equally interesting were some of the lung conditions associated with the pandemic of influenza in the late summer and autumn of 1918 and the early months of 1919. I spent many days during this time visiting the various camps and hospitals in which influenza was rampant, and in which various lung complications were most prevalent, and was in constant consultation with various bacteriologists. I was much struck with the varying reports as to the bacteria which were found, and with the comparative paucity of the reports in which the influenza bacillus was recognized. The same was true of the epidemic in France, yet it seemed most probable that the widespread pandemic which was going through the world had its primary origin in one common cause of infection. The truth seems to be that the influenza bacillus is difficult to find, and requires very particular media for its growth. This was brought home to me at Tidworth during a particularly dangerous and fatal epidemic of purulent bronchitis. These cases had been examined by two very good bacteriologists, but neither had found the influenza bacillus in any considerable proportion of the cases, although streptococci and various other bacilli had been found in all the cases examined. In many of these cases streptococci had been found in the blood, and the patients were evidently dying of septicaemia. A few days later I met Colonel French and Dr. Eyre from

Guy's. The latter brought with him his special media, and in by far the larger proportion of the cases he examined with this media he cultivated the bacillus of influenza. The truth seems to be that "the essential feature of this pandemic was an infection by the *Bacillus influenzae*, and that the lung complications were due to a secondary infection by some other organism." The secondary organisms in question which were recognized were the pneumococcus, *Streptococcus pyogenes longus*, and a diplo-streptococcus, the virulence of which appears to be exalted by the initial influenza infection. The septicæmic type of influenza differs much from ordinary influenza, even when this is complicated by lung symptoms. "The characteristic features of this septicæmia type of case are variable lung symptoms, varying from a slight bronchitis to a lobar pneumonia, very characteristic heliotrope lividity, dyspnoea, and very rarely orthopnoea. These, with other so-called complications of influenza, such as pleurisy, nephritis, and others of lesser import, are evidence of the septicæmia or toxæmia referred to."

During the time I was visiting the camps and hospitals I was, when occasionally at home, called into consultation by medical friends in Exeter and the neighbourhood, and it was interesting sometimes to find in isolated farmhouses and in isolated country districts cases presenting all the characteristic symptoms of this septicæmia with its typical heliotrope colour, whilst all the other cases in the house or neighbourhood presented the characteristic symptoms of ordinary more or less severe influenza. The influenza bacillus had prepared the way, and the septicæmia depended on infection by a secondary organism which was present in the patient or his surroundings, either one of those mentioned above, or possibly some other, which had not up to this time been described.

Nephritis as a complication of this septicæmic type was not, I think, a feature of any diagnostic value, for one of the peculiarities of this pandemic was the frequency with which albumin, often to a large amount, was found in the urine, in cases with lung complications. Some of these cases of albuminuria were doubtless cases of true nephritis, but in many under my observation the albumin disappeared so quickly and completely under treatment that I think it most probable that the albuminuria was due to a temporary congestion of the kidneys, often associated with all forms of pneumonia, and not to true nephritis.

Captain C. J. Symonds, in a paper in the *Lancet* for November 16th, 1918, has carefully analysed 22 cases, in which the presence of well-marked nephritis was associated with bronchopneumonia. Many, though thought to be healthy, were cases of latent nephritis, the microscopic examination proving the existence of old renal disease. Captain Symonds points out that these cases did not present a clinical picture typical of nephritis, and in most cases this would not have been suspected without an examination of the urine. As he rightly remarks, "delirium and collapse were the outstanding symptoms of the patient whose nervous centres and renal epithelium alike were overwhelmed by toxins absorbed from his pus-sodden lungs."

I quite agree with Captain Symonds that the symptoms of pneumonia are very much altered by failure of the kidneys to do their work, whether this failure be due to an old nephritis or to a quite temporary severe congestion of the organs.

Both in military hospitals and among private patients I have seen cases of pneumonia whose urgent symptoms I thought looked more like uræmia than anything else; in six or eight we found the urine scanty, and loaded with albumin, often one-third to a half. Some of these cases died, some recovered, and the albumin entirely disappeared within a very few days, leaving not a trace. I treated all these cases with caffeine, digitalis, and potassium citrate, but I do not think that they would have recovered so quickly from such simple treatment had any true nephritis been present.

War Nephritis.

As on the Consultants' Council there were few physicians, I had a great deal to do with the framing of the Army Council Instructions on this subject; the two issued first were very obscure and unsatisfactory, but I think the third, simply founded on experience and a careful analysis, was quite good. Really these Army Council Instructions reflected the knowledge which was possessed

at various times on the subject. I studied most of the literature on war nephritis which came out both in our own medical journals and in that most valuable *Review of the Foreign Press* compiled by the Medical Research Committee, and took more trouble in trying to gain some knowledge of this war disease than of any other. But in the end I came to the conclusion that no one had any real knowledge about it. Whether it was due to bacillary infection or to cold and exposure seemed uncertain, and whether the patients were best treated with drugs or without seemed doubtful. Some authorities recommended milk and a total deprivation of salt, whilst one authority—a German, of course—found that a cold infusion of raw chopped up pig's kidney was excellent treatment.

My own view is that many various causes contributed to produce war nephritis; that some cases were bacillary and their origin sometimes traceable to the *Bacillus coli*; that some were due to cold, while some of the cases which in the hurry and hustle of the casualty clearing stations were sent over to England as war nephritis were cases of temporary albuminuria due to fatigue and over-exertion.

I am not certain that war nephritis differs much either in its origin or treatment from the acute nephritis we find in civil practice. Rest in bed on a diet of milk and farinaceous food, especially rice, modified and increased as the symptoms improve and the albumin lessens, are as much needed in the one case as in the other, while drug treatment must be varied as the symptoms vary. Many authorities agree that hot packs are not beneficial in war nephritis, and I doubt their utility in the ordinary nephritis of civil life. Certainly they are not good where there is a tendency to convulsions. If given while the convulsions are in progress the temperature of the patient may rise very greatly, as it did in the following case of war nephritis.

A patient with constant convulsions was in a hot pack; his temperature was 107° F., and he seemed on the point of death. After copious bleeding from the arm, injection of morphine, and removal from the hot pack, the temperature speedily returned to normal, the convulsions ceased, and he recovered.

If I want to make a patient sweat I prefer an injection of one-third of a grain of pilocarpine to any other remedy, and I have seen much benefit from its use in many cases of uræmia.

Lethargic Encephalitis.

I was fortunate enough to see several cases of lethargic encephalitis very shortly after the disease appeared in England, and before much was written about it. There had been a small outbreak of 18 or 19 cases, mostly under Major Barnes of Birmingham, who is one of the best neurologists I know. I was visiting his nerve cases in the Highbury Military Hospital, and he took me to see the 4 or 5 cases still under him, and gave me an admirable clinical lecture on all that was then known about them. This disease, like every other disease, is very easy to diagnose when all or most of its classical symptoms are present. But often these classical symptoms are rather late in development, and then the condition is very puzzling.

The characteristic lethargy, drowsiness, or pathological sleepiness may not be sufficiently marked at first to excite special attention, although, if carefully looked for, it can usually be observed; when marked it is very significant of the diagnosis. With the drowsiness there is the very remarkable feature that however much the drowsiness is developed the patient's response to requests in act and word is surprisingly accurate. I cannot say that this accuracy of response is present in all cases, but when it is present it, I think, marks off this lethargy from every other kind of drowsiness or stupor with which I am acquainted. One case made a great impression on me.

I received an urgent telegram to see an officer at Portsmouth, and I visited him five hours later. In the meantime he had become much worse. When I saw him one knee-jerk was lost, he had a squint, and his pupils were dilated and fixed. He was extremely drowsy, and I appeared almost comatose. But when roused he answered all my questions accurately, and moved his hands and legs and put out his tongue when requested, returning to his lethargic condition and apparently going off to sleep after each request.

For the rest the symptoms may vary very much; headache or dizziness with or without sickness; some rise of temperature or none at all; some paralysis of limbs or alteration in the reflexes; or the limbs may be unaffected and the reflexes normal. But usually the eyes sooner or

later show evidence of the disease. Ophthalmoplegia or ptosis may be present, the pupils show something abnormal, either dilated or contracted, possibly fixed and insensitive to light. But above all the patient is unusually lethargic and drowsy, but answers questions rationally when roused.

It was fortunate that I saw these cases at Birmingham, for afterwards I was called to cases at various military hospitals and in the neighbourhood of Exeter. In every case I have seen the early diagnosis has been very difficult, although later the symptoms were quite diagnostic.

When I was in France in July, 1918, the disease was attracting a good deal of interest, as it was said that a special organism had been found which had reproduced the disease in monkeys. I have not, however, noticed that these observations have been confirmed. Often when I have seen one case, I have seen one shortly after, either in the same town, or in a neighbouring district; it has not, however, been possible to trace any connexion between the cases. I saw two cases at Portsmouth within a few weeks of one another, and about six or eight weeks ago I saw a case at Chagford, one at South Molton, and one at Aylesbeare in one week, but there seemed to be no connexion whatever between the cases, and I know nothing as to the cause of the disease.

Convalescent Dépôts in France.

In France I was much interested in the convalescent dépôts for tired and convalescent soldiers. I visited four or five, and spent the whole afternoon at No. 10, at Ecault, near Boulogne, studying the organization. They were of two grades. In Grade I a certain amount of treatment and the special exercises for heart cases, etc., were carried out. In Grade II no treatment was given. No. 10 Convalescent Dépôt at Ecault was Grade II. Here there were between 1,900 and 2,000 men, all employed. Gardening was a great feature, and here I saw some of the best flowers and finest vegetables I have ever seen. At this dépôt all the men, except those with special employment, took part in parades twice a day, about 500 in each. The men remained there from seven to fourteen days, and a few for a month, before returning to their duties. I watched the 2 p.m. parades.

(a) Five hundred paraded for games; watching them afterwards, I saw some excellent boxing, hockey, and football. All of the men were engaged in these games; it was not a question of a few players and the rest looking on.

(b) Five hundred men had a route march of one and a half hours.

(c) Five hundred men paraded for bathing.

Each parade had its own band, which played at the head of a parade, and, although the personnel was always changing, the bands were very good.

Prizes were given for company matches and competitions, and the prize team walked off parade first.

The whole organization was arranged to keep up the mentality of the men, and I never saw men more keen or in such good condition; the contrast with the men staying about in our small convalescent homes at home was remarkable.

These convalescent dépôts impressed me enormously. As a profession we hardly realize how much the mentality of a patient helps or retards his cure. Hurst and others have pointed out how much the suggestion unintentionally conveyed by the questions of the medical attendant may have to do with producing the symptoms in hysteria. He has also shown how many of the symptoms observed in organic disease, especially of the nervous system, are functional, being grafted on to the true organic symptoms. Every one recognizes what an important part suggestion plays in the cure of the functional conditions, but until I studied these most admirable convalescent dépôts, where fagged out soldiers and convalescents were, so to speak, resuscitated in two or three weeks and made fit to return to duty, I had never realized how necessary it is to keep up the mentality of a sick man, and to keep him employed, interested, and amused if he is to be restored to health as quickly as possible.

Army Sanitation.

One of my most pleasant experiences was when I joined the medical head quarters of the Fourth Army in France, and found there our old friend, Major Leonard Tosswill of Exeter, occupying the important position of Chief Sanitary Officer of that army. We English are inclined to grumble, and to decry and underestimate our achievements, but we

may well be proud of the achievements of our Royal Army Medical Corps in the face of all their difficulties in the field; difficulties of which their stay-at-home critics have not the faintest conception; and most especially may we be proud of the sanitation of our armies under the direction and supervision of men like Major Tosswill. With him I visited the St. Requier School of Sanitation for the Fourth Army, where forty men at a time were put through a course of sanitation, and taught to make all kinds of sanitary appliances out of old biscuit and petrol tins. From these they will produce pipes to be used as chimneys, stoves without solder, field kitchen ranges and de-lousing pits. They learn to make bricks by pressure, and how to construct latrines, etc.; how to purify water; and the part which flies and lice exercise in the production of disease, and how to destroy them.

With Major Tosswill I visited Amiens, then a deserted desolate bombed city, for the sanitation of which he was responsible. With him I saw the way in which the horse manure was prevented from breeding flies, and visited several of the baths established for the men at the front and for providing them with lice-free fresh clothes. In fact, he showed me the numerous details which went to make up the more or less perfect sanitation of our army, which, considering the difficulties of a fighting army constantly on the move, were really admirable. The question arises, What is to become of the well trained sanitarians of St. Requier, and of the schools of sanitation belonging to the other armies? What is to be done with the splendidly trained sanitary officers who have all this war experience? In the future are the small towns in England, at the cost of a few pounds, going to have public disinfecting chambers on the principle of the de-lousing pits, and will the huts recently used throughout France as hospital wards be erected at little cost as isolation hospitals? Or are we going to forget all that the war has taught us, as in so many directions we seem already to have forgotten? Time will show. But it is to the younger men of the nation who have gone through this war that we must look if all this experience is not to be lost.

In conclusion, I should like to say how pleased I have been to be associated with the regular R.A.M.C., some of whom have done scientific work of great value, while many of the higher officers in the service are wonderful organizers who have done grand work throughout the war. With them have been associated some of the best men in England, who, like myself, have been temporary officers, and I am pleased to think that, while our medical knowledge has been greatly advanced, our sick and wounded have been cared for as they never have been in any previous war.

Observations

ON

MITRAL STENOSIS IN SOLDIERS.

BY

THOMAS F. COTTON, M.D.

(A Report to the Medical Research Committee.)

WHEN the authorities at the War Office decided to establish a special hospital at Hampstead, and later at Colchester, for the treatment of soldiers invalided with affections of the cardio-vascular system, an unrivalled opportunity was given for the study of heart disease in these men. During the past three years there have been under observation more than 800 patients with clear signs of structural heart disease. The majority of these were young men, with little or no disability before enlistment; they were passed as fit for military service, the greater number had seen active service abroad, and in only a very few were there signs of heart failure while in hospital.

In the wards of the public hospitals there are always patients with advanced heart disease; clinical observations made by able observers, and accurate pathological studies by careful laboratory workers have led to a sound understanding of diagnosis and treatment in these cases. At no time in the past has it been possible to observe in the wards of a hospital such a large number of patients with early organic heart affections. The opportunity seemed a favourable one to study the symptoms and

signs in these men, with the view of explaining the significance of the symptoms and the relation they bear to the signs of organic disease of the heart during the early stages of its development. With this purpose in mind I have chosen mitral stenosis in soldiers as a subject for investigation. My reason for doing so is, that this type of valvular disease, whether early or developed, always means a structural lesion of the heart, and it is a valvular defect which develops slowly, and so allows one to correlate in a definite manner symptoms and structural disease.

During the past winter I had under observation at the Sobraon Military Hospital, Colchester, 75 patients with signs of mitral stenosis. I have analysed the histories in 50 of these and determined the exercise tolerance in all. It is on the results obtained from the clinical observations in these men, their symptoms and signs, and physical endurance, that I am led to draw certain conclusions, which in my opinion offer a satisfactory explanation for the physical condition of the soldier with mitral stenosis as we have seen him in the army or at the pension board.

Their average age was 29 years, and the average period of military service three years and one month, including one year and nine months' foreign service. The average duration of symptoms in 40 was one year and three months, and of these a few had been in perfect health one month before admission to hospital. Of 8 others with symptoms before enlistment, one had been unfit for three years, one for eight years, and six since childhood. The civil occupation had been heavy in 22, moderately heavy in 15, and light or sedentary in 12; 34 had played games, such as football, tennis, and cricket, up to the date of enlistment; 11, from lack of interest or physical incapacity, played no games. In the army, the military service had been heavy in 25, and light in 19. The onset of symptoms occurred after an acute infection in 26, or 52 per cent.; after a severe physical effort in 8, or 16 per cent.; and after gassing in 4. In 10 the symptoms developed gradually, and no cause could be found to explain them. A history of one or more attacks of rheumatic fever was present in 22, and of these 13 dated their symptoms from this infection. There was no enlargement of the heart in 30; in 15 the cardiac impulse was palpable just outside the nipple line, and in 5 there was moderate enlargement.

The exercise tolerance was determined in 17 by submitting them to graded exercises and observing their response to these exercises. The exercises were those used at the hospital for sorting and treating D.A.H. cases. In all (75) the capacity to bear a physical strain was determined by giving them a simple exercise test, consisting of a brisk walk up and down twenty steps twice. Symptoms of distress were noted, when present, and the pulse rate was taken before the effort, immediately after, and at the end of two minutes. The exercise tolerance in 50 was gauged by the degree of distress, the rise of the pulse rate, and the length of time required for the heart to return to the pre-exercise rate. In 25 the exercise tolerance was determined by the symptoms alone after the exercise test: the pulse rate was recorded with the Mackenzie polygraph for five minutes before the exercise, with the patient sitting, immediately after, and at the end of two minutes.

Of the group of 50, 25 presented early signs of mitral stenosis, and 25 signs of developed stenosis of this valve. Of the early cases, 15 had good exercise tolerance and 10 poor exercise tolerance; of the later cases, 14 had good exercise tolerance and 11 poor exercise tolerance. The average pulse rate in those with early signs with good exercise tolerance was 90 before exercise, 142 immediately after, and 84 at the end of two minutes. In those with poor exercise tolerance the average pulse rates were 99, 162, 114. Of those with developed signs of mitral stenosis with good exercise tolerance, the average pulse rates were 93, 153, 82; of those with poor exercise tolerance, the rates were 86, 166, 100.

It will be seen from these figures that in the early cases with poor exercise tolerance the pre-exercise rate is slightly higher than in those with good exercise tolerance, an increase of 9; that the rate after exercise is distinctly higher, an increase of 20; and that at the end of two minutes the heart has not returned to the pre-exercise rate—114 as compared with 99 before exercise, a difference of 15, or, when compared with the pulse rate at the end of two minutes, in those with good exercise tolerance, a difference of 30.

In the other group, with developed signs of stenosis, if a similar comparison is made, it will be seen that in those with poor exercise tolerance the pre-exercise rate is slightly lower, a difference of 7, the rate immediately after exercise is higher by 13, and at the end of two minutes the rate is 100 as compared with 86 before exercise, or 82 at the end of two minutes in those with good exercise tolerance.

If these figures are represented diagrammatically—(Diagram 1)—it will be seen that in those with poor exercise tolerance the pulse rate reaches a higher

level immediately after exercise than in those with good exercise tolerance, that this level is approximately the same whether the signs of mitral stenosis are early or developed, and that the pulse rate does not return to the pre-exercise rate at the end of two minutes. In those with good exercise tolerance the pulse rate is higher when the signs are developed, and after two minutes has returned to the pre-exercise rate. It may, then, be concluded from these figures that the increase in pulse rate is a useful sign in estimating exercise tolerance in patients with mitral stenosis, but it is not a guide in distinguishing between early and developed signs of mitral stenosis.

In the average the exercise tolerance in patients with early mitral stenosis is better than in the D.A.H. cases. The exercise tolerance was determined in 75 with mitral stenosis, and of these, 48, or 64 per cent., had good exercise tolerance, and 27, or 36 per cent., had poor exercise tolerance. In 50 with D.A.H., 24, or 48 per cent., had good exercise tolerance and 26, or 52 per cent., had poor exercise tolerance. The difference in the exercise tolerance in the cases tested is probably due to the fact that those with mitral stenosis were sometimes invalidated because they had signs of structural heart disease, while those with D.A.H. were more often admitted into hospital because of symptoms after effort.

Forty-two men were admitted into hospital with unmistakable signs of mitral stenosis. They had no symptoms before enlistment; a large majority played games and worked hard; they experienced no difficulty with the military training, and during two years of active service 25 carried on as fit men. Their physical endurance equalled that of healthy men. Some, after three years' military service, with two years in France, had no symptoms three months before admission to hospital. The pathological changes in and about the mitral valve, leading to a narrowing of the auriculo-ventricular orifice, develop slowly. The signs by which mitral stenosis is diagnosed are signs of organic valvular disease. It is inconceivable that symptoms of such recent origin coincided with the development of disease in this valve. It is certain that mitral stenosis existed in many if not all these men throughout the whole period of their military service. From the histories obtained in these patients, and from the signs which they presented while under observation in hospital, I am led to conclude that mitral stenosis is compatible with a state in which there are no symptoms, and that this type of valvular disease is consistent with good exercise tolerance.

A patient with mitral stenosis and definite signs of cardiac failure will always show a poor exercise tolerance, and symptoms are always complained of. Breathlessness after effort is a conspicuous feature during this stage of the disease. Palpitation, giddiness, precordial pain, exhaustion, and lassitude are other symptoms. But cardiac failure is not the only cause of such symptoms in mitral stenosis. There is in patients with heart failure a breathlessness due to deficient aëration of the lungs, associated with signs of venous engorgement and pulmonary congestion, enlargement of the liver and dropsy. There is another type of respiratory distress which is caused by an acidosis or diminished alkalinity of the blood; it is paroxysmal in character, not necessarily accompanied by cyanosis, and is seen in patients with cardio-renal disease. The patient with early pulmonary tuberculosis is unduly breathless on exertion. Breathlessness may be observed in healthy men after a severe effort, or in unfit men in whom there are no signs of structural disease after moderate exercise. Clearly heart failure is not the only cause of breathlessness. Pain that is referred to the heart, and anginal in its distribution, is a symptom of heart failure, and may be associated with signs of heart failure. But precordial pain is not always substernal; all of the distinctive qualities of angina pectoris may be absent. Patients without signs of structural heart disease may complain after exertion or at rest of a sharp cutting or even boring pain felt in the region of the heart. Pain of this sort is a frequent complaint in the D.A.H. patient in whom there are no signs of cardiac failure. Palpitation, giddiness, and exhaustion are symptoms often observed in the D.A.H. case. The point which I desire to make is that symptoms associated with heart failure may be observed in patients presenting no signs of structural disease of the heart, such as cardiac enlargement, valvular disease, or venous engorgement.



DIAGRAMS SHOWING PULSE RATES BEFORE EXERCISE; IMMEDIATELY AFTER; AND AT THE END OF TWO MINUTES.

I. Continuous line = early signs of mitral stenosis; broken line = developed signs of mitral stenosis. II. Tolerance determined by symptoms and pulse rate. III. Tolerance determined by symptoms alone. IV. Diagrams II and III combined. In each diagram the two low summits are those with good exercise tolerance; the two high summits those with poor tolerance. (In II, III, and IV, continuous line = mitral stenosis; broken line = D.A.H.)

Now a patient with mitral stenosis and no signs of cardiac failure may have a poor exercise tolerance, with such symptoms as breathlessness, palpitation, giddiness, and precordial pain after effort. If a comparison is made of the histories of soldiers with mitral stenosis, and no signs of venous engorgement, and no material enlargement of the heart, with an equal number of unselected D.A.H. cases, it will be found that the symptoms in the two groups are similar in every respect, and indistinguishable the one from the other. Breathlessness is present in all, and is provoked by an effort which would not be complained of in a healthy subject. Sometimes it is felt at night—sudden in its onset and of short duration. Palpitation is complained of by many. It is felt after an effort, and is then associated with an over-acting heart. Emotional stimuli produce it, and sometimes it is a distressing symptom in bed at night. Pain in the region of the heart is a common complaint; it occurs after an effort, and it may be felt at rest. It is not always limited to the precordium. Sometimes it is confined to a small area about the left costal border, or near the angle of the scapula. It is usually described as a sharp, cutting, stabbing pain, not to be distinguished from a stitch. Rarely there is skin hyperaesthesia over the heart and tenderness of the left pectoral muscle. Giddiness after effort or on change of posture is a frequent complaint. Exhaustion after an effort, a feeling of lassitude in the morning, tired out before the day's work has begun, mental depression or irritability of temper, flushing of the face, cold or clammy hands, sometimes tremulous and sweating axillae—these symptoms complete the picture of the effort syndrome in patients with D.A.H. or early mitral stenosis.

They date their symptoms from the same causes. A history of symptoms occurring after an acute infection, after gas poisoning, severe physical strain or shell shock, is as frequent in the patient with early mitral stenosis as in the D.A.H. case. With the exception of rheumatic fever, which is higher in mitral stenosis, the incidence of infections is the same in the two groups. In both the symptoms may be sufficiently severe to incapacitate them for work. They may both have an exercise tolerance so poor that the slightest effort causes distress. In some moderate exercise is tolerated, in others the physical capacity for work is reduced only slightly less than that of a healthy individual. Further, these symptoms may entirely disappear and a normal exercise tolerance may return, with the signs of mitral stenosis remaining unaltered by the improved condition of the patient.

In the presence of signs of mitral stenosis it is natural to ascribe the symptoms observed after effort to cardiac weakness. The breathlessness, the precordial pain, the over-acting heart, are all symptoms which have long been associated with organic heart disease. But it is known that such symptoms may be absent in patients with mitral stenosis, and we have abundant evidence that these symptoms may be present in the absence of any evidence of structural heart disease. Can we not say that the symptoms in patients with early mitral stenosis and D.A.H. are due to the same cause, and that in the state of our present knowledge there are no symptoms which we can definitely attribute to this type of valvular disease during the early stages of its development? One test of this is a comparison of the pulse rates after exercise.

The pulse rates of 41 patients with early mitral stenosis were taken before and after a simple test exercise, and symptoms of distress, if any, were observed and noted. The physical exertion required of these men was a brisk walk up and down twenty steps twice. The pulse rates were counted, with the patient standing, before the exercise, immediately after, and at the end of two minutes. The exercise tolerance was determined more by the appearance of the patients than by the pulse rate. Where there was any doubt in estimating the degree of fitness, a high pulse rate after the exercise and a slow return to normal was considered a sign of poor exercise tolerance. A moderate increase in rate, with a quick return to the pre-exercise rate, was looked upon as a sign of good exercise tolerance. A group of 25 unselected D.A.H. cases were submitted to the same exercise, and their tolerance was determined in the same way.

Of those with mitral stenosis, 24 had good exercise tolerance, and the pulse rates averaged 91 before exercise, 147 immediately after, and 83 at the end of two minutes; 17 had poor exercise tolerance, and the pulse rates were 90 before, 165 immediately after, and 105 at the end of two minutes; 13 of the D.A.H. cases had good exercise tolerance, and the pulse rates were 96, 146, 91; 12 had poor exercise tolerance, and the figures were 112, 159, 106.

When the exercise tolerance is good, in those with mitral stenosis, the increase in pulse rate is 56, as compared with 50 in those with D.A.H. When the exercise tolerance is poor in the former, the increase is 75, as compared with 47 in the latter. This wide difference in the increase in the pulse rate, when the exercise tolerance is poor, may be explained by the high pre-exercise rate in the D.A.H. patients—112 as compared with 90, a difference of 22.

In 25 patients with mitral stenosis, and an equal number with D.A.H., the exercise tolerance was determined by the symptoms alone after the test exercise. The pulse rates were

recorded with a Mackenzie polygraph, and the pre-exercise rate was the average for five minutes, with the patient sitting. The pulse rates in 19 with mitral stenosis, and good exercise tolerance, were 78, 123, 81, an increase of 45; in 6 with poor exercise tolerance they were 101, 144, 98, an increase of 43. In those with D.A.H., 11 had good exercise tolerance, and the rates were 93, 126, 97; 14 had poor exercise tolerance, and the rates were 106, 161, 115, an increase of 55.

The pulse rates in those with good exercise tolerance are approximately the same after exercise; the higher pre-exercise rate in those with D.A.H. will explain the greater increase in those with mitral stenosis.

When the exercise tolerance is poor the pulse rate is higher in the D.A.H. cases; but only 6 with mitral stenosis were tested, as compared to 14 with D.A.H., so that I do not attach much importance to these figures.

Now if the pulse rates are compared in all, those in whom the tolerance was tested by the symptoms and pulse rates, and by the symptoms alone, we will be dealing with a larger group of men, and a fairer comparison can be made.

The pulse rates of 43, with mitral stenosis and good exercise tolerance, were 85, 136, 82, an increase of 51; in 24, with D.A.H. and good tolerance, 94, 137, 95, an increase of 43. The rates after exercise are the same, and the difference in the increase is equal to the difference in the pre-exercise rates. In 22, with mitral stenosis and a poor exercise tolerance, the rates were 95, 140, 104, an increase of 45; in 26, with D.A.H., 108, 160, 111, an increase of 52. The rate after exercise is the same, and the difference in the increase equals the difference in the pre-exercise rate.

These figures will be more easily read if presented in a diagrammatic form. In the diagrams the dotted lines represent the pulse rates in the D.A.H. cases before exercise, immediately after, and at the end of two minutes, and the unbroken lines those with mitral stenosis. The figures at the side are pulse rates per minute.

In Diagram II are represented the pulse rates when the exercise tolerance was determined by the symptoms and the pulse rate. In those with good exercise tolerance the summits of the curves reach approximately the same point; in those with poor exercise tolerance they are at a higher level, with the mitral stenosis peak a little above the D.A.H. peak. In Diagram III the tolerance was determined by the symptoms alone. In those with good exercise tolerance the summits of the curves reach about the same height, and at a lower level than in those with poor tolerance. The mitral stenosis lines are both lower than the D.A.H. lines, and considerably lower than the mitral stenosis lines in Diagram II. In Diagram IV, which is II and III combined, the high points are the same when the tolerance is good; when it is poor they are the same, and at a higher level than in those with good exercise tolerance.

From these figures it can be stated—and it is the only point which I desire to make—that when there is an equal degree of distress after effort, the pulse rates rise to the same level in soldiers with early mitral stenosis and D.A.H.

The study of the symptoms in patients with mitral stenosis leads one to consider the signs of mitral stenosis and the methods employed in recognizing this valvular defect. I have described the symptoms occurring in patients with early mitral stenosis in whom there were no signs of cardiac failure. It is not sufficient to say that these men had a presystolic murmur at the apex and no venous engorgement. These observations will be incomplete if I do not define what I mean by early mitral stenosis and what I consider signs of heart failure.

I regard early mitral stenosis as including patients possessing the earliest signs by which the disease may be recognized. In those with unmistakable signs but no increase in the size of the heart, or only a moderate degree of enlargement, the valve defect may be of long standing, but the condition is not one of advanced heart disease; the former I refer to as patients with early signs, the latter as having developed signs of the disease. Many of these patients were very early cases of mitral stenosis; in others there were unmistakable signs of the disease. In all but a few there was little or no enlargement. The signs of mitral stenosis may be taken as an indication of myocardial disease. It is rare to have valvular disease of this type without pathological changes in the heart muscle. The agent that has damaged the valve has at the same time injured the myocardium. Disease of the myocardium means myocardial weakness, and leads to enlargement of the heart.

If there is in mitral stenosis much enlargement of the heart—that is, two fingerbreadths or more beyond the

nipple line—the disease may be said to have reached an advanced stage of development. There may be no signs of cardiac failure, but the breakdown is likely to occur sooner than if the heart were not enlarged, or only slightly increased in size. Symptoms are of little help in fixing the onset of the disease. A history of a recent attack of rheumatic fever may be a guide in arriving at the date of origin of the disease. Rheumatic fever in childhood may indicate that the disease is one of long standing. In patients who give no history of rheumatic fever—and these form 60 per cent. of my series—or in those in whom there is no history of any infection we must rely upon the signs alone in estimating the number of years during which the disease has been present. Patients with mitral stenosis and no enlargement are not cases of advanced heart disease. In those with unmistakable signs of mitral stenosis and little or no enlargement of the heart the disease may have been of long standing, and yet the pathological changes have occurred so slowly that the disease has not reached an advanced stage in its development. These patients I refer to as early cases with developed signs of mitral stenosis. Patients with signs that are recognized only by special methods of examination I consider early cases, with early signs of mitral stenosis. It is important to classify early mitral stenosis in this way, for we gain information concerning the course of the disease in the past, and we are better able to forecast the number of years remaining before heart failure sets in.

The diagnosis of early mitral stenosis can only be made in the presence of a diastolic rumble. In its absence the diagnosis is not sound. There are some who hold that an impure first sound at the apex, or perhaps a reduplication or an accentuation of the first sound, with a loud pulmonary second sound, are early signs of mitral stenosis. They may be an indication for a more careful examination, but they are untrustworthy signs. Such heart sounds are frequently heard in normal over-acting hearts, but as signs of valvular disease they are not to be relied upon.

Listen at the apex for a low-pitched murmur or a rumble in presystole, leading up to a sharp accentuated first sound. If uncertain of the presence of this murmur, and the examination is being made in the upright position, examine the patient lying down, or reclining on the left side. If still hesitating, give the patient an exercise test, sufficient to raise the heart rate to 140 or more. If there is no murmur to be heard in diastole it is highly probable that there is no narrowing of the mitral orifice. Adopt the same procedure in examining for a thrill. Do not be misguiding by the pseudo-thrill of an over-acting heart, which is systolic in time, and lacks the purring quality of the presystolic thrill of mitral stenosis. A murmur and thrill that are brought about by change of posture or effort are early signs of mitral stenosis. There may or may not be enlargement of the heart. When the murmur is present at all times, standing or lying, or the thrill is felt in one or more positions, it is sound to diagnose the condition as one of developed mitral stenosis. The murmur may be heard in presystole as a rumble, or throughout the whole of diastole.

As the disease progresses the full pulsating veins of the neck stand out conspicuously with the patient lying flat, and they do not collapse when the head is raised above the level of the front wall of the chest. The ears and lips are cyanosed, the liver is palpable, and there is tenderness over it. With the increase of venous engorgement pulmonary congestion and other signs of cardiac failure are added.

The heart may or may not be enlarged in mitral stenosis. Cardiac enlargement is one of the most important signs which we possess of myocardial mischief. The ordinary methods of estimating the degree of enlargement are inexact, but for clinical purposes they are sufficiently reliable as an aid in diagnosing structural disease of the heart. It is best to take the left border of the heart, as determined by palpation and percussion, as an index of cardiac enlargement. When there is a defined impulse, unmistakably outside the nipple line, and on palpation it is felt as a thrust, it is sound to consider the heart enlarged. It is wrong always to regard such enlargement as due to hypertrophy or dilatation of the left ventricle, for a large right ventricle may give an impulse to the left of the nipple line. It is not safe to draw conclusions from percussion to the right of the sternum in gauging the size of the right heart. Increase in the area of cardiac dullness to the right, in hearts that are not displaced, and in the absence of pericardial effusion, is a sign of dilatation of the right auricle. The right ventricle increases in size in a

downward direction, and more to the left than to the right. When the right auricle is dilated there is usually engorgement of the veins of the neck and other signs of cardiac failure.

To map out accurately on the chest wall the right border of the heart is difficult, if not impossible, even in the hands of experts. It is better to rely on signs of venous engorgement, which all can recognize as indicating dilatation of the right auricle. It is certainly wrong to consider increase in the size of the heart to the right as a sign of enlargement of the right ventricle. Epigastric pulsation is too inconstant in mitral stenosis, and too frequently observed in patients with normal hearts to be of service as a sign of right ventricular hypertrophy. It is generally safe when there is a sign of enlargement of the heart to the left to consider the whole heart as increased in size. It is true that in mitral stenosis the hypertrophy which predominates is usually a right ventricular one, but it is equally true that both ventricles are usually hypertrophied. Observations which Lewis and I made have shown this.¹ We weighed separately the ventricles of a large number of hearts with mitral stenosis, and found the hypertrophy to be general, but with a relative increase in the weight of the right ventricle. Such pathological findings, together with electro-cardiographic records, do not support the hypothesis that the valvular defect is the only factor in the production of hypertrophy in mitral stenosis. Some other cause must be found to explain the increase in weight of the muscle in both ventricles.

Prognosis is difficult in early mitral stenosis. By the symptoms alone as I have described them one may gauge the man's present capacity for work. The exercise tolerance, as determined by a simple exercise test, gives useful information concerning his present disability. As a measure of physical endurance the reaction to exercise is of prognostic value. As a test to be employed in predicting the duration of life it is not to be relied upon. Good exercise tolerance is never observed when there are signs of heart failure. Poor exercise tolerance is not necessarily associated with a cardiac breakdown. It is true that there are symptoms which so incapacitate that total disability is at once recognized, and the duration of life may be estimated with a fair degree of accuracy. I refer to such symptoms as breathlessness, associated with cyanosis and pulmonary congestion, and the pain of angina pectoris; such symptoms are associated with definite signs of heart failure. The disease is no longer in its early stages; our problem is an easy one, total disability is obvious, and prognosis is of less consequence. The prognostic task becomes a more difficult one when we are required to foretell, in the patient with early heart disease, the number of years remaining before the final stage of total disability has been reached. When will the patient with mitral stenosis and no symptoms have symptoms due to cardiac failure? With symptoms after effort when may we expect signs of venous engorgement? These questions cannot be answered unless we understand the symptoms and the relation they bear to the signs. Until we know what symptoms arise from loss of cardiac reserve through myocardial disease, and can recognize the early symptoms of heart failure, and identify symptoms due to other causes, it will not be possible to prognose with any degree of certainty in early mitral stenosis.

We know from experience that the course of the disease is a progressive one, the disability an increasing one, and heart failure the end of most patients with mitral stenosis. The duration of life may be shortened by repeated attacks of rheumatic fever, or other infections, or prolonged by the mode of living and proper care. A single attack of rheumatic fever many years back, with good health since, provided the heart is not enlarged, or only slightly increased in size, may be an indication that the disease is stationary. With the heart much enlarged the onset of heart failure in most cases is not far off.

REFERENCE.

¹ Cotton: "Observations on hypertrophy," *Heart*, vi, 217.

THE Board of Trade has received through the Norwegian Consul-General two silver cups awarded by the King of Norway to the master and the surgeon, Dr. A. Humphreys, of the steamship *Haverford*, of Liverpool, in recognition of their services to rescued members of the crew of the Norwegian steamship *Augvald* in the North Atlantic Ocean on July 4th, 1918.

APPARENT SPONTANEOUS RUPTURE OF A NORMAL SPLEEN.

BY

W. WOOD SHORTEN, F.R.C.S.ED., MAJOR R.A.F.M.S.

SURGICAL SPECIALIST, STATIONARY HOSPITAL,
R.E.F. FRANCE.

AFTER considering possible alternatives I have come to the conclusion that the following must be counted a case of spontaneous rupture of the normal spleen.

A private aged 43 years, whilst walking from his officer's billet to his own at 11.30 a.m. on December 20th, 1917, was seized with pain in the region of the umbilicus, so severe that it caused him to fall to the ground. He vomited, and the pain subsided sufficiently to allow him to walk to his billet. He endeavoured to carry on his duties, which were light, but, the pain getting worse, at 3.30 p.m. he reported sick, and was seen by his medical officer, who came to the conclusion he had colic and gave him a dose of castor oil, which he immediately vomited. As the pain was getting steadily worse he was sent to hospital.

When he arrived, at 6.30 p.m., I found him very collapsed; the temperature was 96.8° F., the pulse 130 and very feeble; the face was ashy grey. There were no external signs of injury. The abdomen was flat and breathing entirely thoracic. He lay with his legs drawn up. The abdomen was tender and there was board-like rigidity of the abdominal muscles. The liver dullness was normal. Both flanks were dull whilst lying on his back, shifting on turning over. Physical signs of bronchitis were present; the heart was normal. He vomited bile-stained fluid once after admission. The patient was so ill that he could not give a clear history of his previous life, but it was subsequently elicited that he had always been healthy except for chronic bronchitis during the winter. Eighteen months previously he had been buried in the trenches and was admitted to hospital suffering from severe abdominal pain, for which he was kept in bed for three weeks. Since his discharge from hospital he had had no recurrence of that pain and had been well in every way except for the bronchitis. He had never been in a malarial country.

Diagnosis.

The diagnosis of rupture of an abdominal viscus was based on the marked abdominal tenderness and board-like rigidity of abdominal muscles and free fluid in abdominal cavity, but there were no localizing symptoms. The patient refused immediate laparotomy, but three hours later he consented. Morphine gr. 2, atropine gr. 1/10 given.

Operation.

At 10 p.m. the abdomen was opened in the middle line above the umbilicus; a large quantity of fluid and clotted blood escaped on opening the peritoneum. The abdomen was hurriedly mopped out; the liver was found normal, but on passing the hand into the splenic region a large quantity of clot was displaced and free bleeding was found to be going on. A large rupture in the spleen was felt. When the splenic vessels were grasped the bleeding stopped. The wound was then extended transversely towards the costal margin, the left rectus being divided. The condition of the patient was too serious to allow an attempt at suture. The splenic vessels were isolated and ligatured with linen thread and the spleen removed. The wound was sutured with linen thread. The gall bladder was packed with stones, but was not touched. Subcutaneous saline was given continuously during the operation; warm ether was the anaesthetic administered. The pulse improved at the end of the operation, and he continued to make satisfactory progress during the night. In the morning the temperature was 98° and the pulse 108.

Description of Spleen.

The spleen was normal in size and weight; the tear, which extended from the convex surface to the hilum, divided the organ into two equal portions. There was no stripping of the capsule to suggest that at first there had been subcapsular haemorrhage later tearing through the capsule. It was clear that the tear in the spleen and capsule were present from the first, allowing of free intra-abdominal haemorrhage. Microscopical examination showed the spleen to be normal.

Progress.

The temperature ranged from about 100° to 102° F., but this was accounted for by the state of the chest. The pulse rate gradually dropped to 80. The stitches were taken out on the tenth day. The wound healed by primary union. No glandular enlargements were observed; he made a rapid recovery from anaemia, and when he was evacuated to England four weeks after the operation he was apparently in the best of health.

The question arises whether the injury he received eighteen months previously tore the spleen. If it did, there should have been some adhesions around the spleen or some sign of the old tear on the organ at the time of operation. I found no adhesions of any kind, and on examination of the spleen after the operation I found no evidence of an old tear; this was borne out later by pathological examination.

It may be suggested that at the start of the attack he had a gall stone colic so severe that it caused him to fall and in his fall strike some object which ruptured his spleen. I do not think this at all likely, for he showed no external signs of injury either at first or later, and he would scarcely drop so helplessly as to make his fall comparatively heavy; he was absolutely confident that he fell on level ground without any stones or other objects likely to have caused the rupture. There was no jaundice, and when the abdomen was opened there was no evidence of stone in the ducts.

For my part, I do not think either of these two reasons could be the cause of the rupture, and I must look upon it as a case of "spontaneous rupture of a normal spleen." I regret I was unable to have a blood count made.

THE RELATION OF PFEIFFER'S BACILLUS TO INFLUENZA.

BY

STANLEY WYARD, M.D., M.R.C.P.,

PHYSICIAN TO THE BELGRAVE HOSPITAL, AND ASSISTANT PHYSICIAN TO THE VICTORIA HOSPITAL FOR CHILDREN.

The following report is based upon a number of cases examined during the 1918 epidemic. Attempts to obtain cultures from the circulating blood were made in three cases, and from the heart's blood *post mortem* in two. Of the former, two were sterile and one yielded streptococci; of the latter, one was sterile and one gave streptococci. In no case was Pfeiffer's bacillus discovered, and of three swabs taken from the nasopharynx none showed this organism. Cultures were made from the sputum in seventy-three cases, the specimens in all cases being purulent or muco-purulent in character. The *Bacillus influenzae* was recovered seventeen times (24 per cent.).

The earliest cultures were made on agar smeared with fresh human blood, but the results with this medium were not equal to those with the media afterwards used, and the percentage of positive results was smaller. The later media were Levinthal's and Flemming's. Both were prepared freshly for each plate (within twelve hours).

Levinthal's was prepared by melting some nutrient agar, cooling to 75° C., and adding 5 per cent. citrated human blood. The whole was then just brought to the boil, cooled 10° to 15° C., and raised a second time to ebullition; it was finally passed through a sterile gauze and cotton-wool filter and poured immediately in plates.

Flemming's was prepared as follows: Stock flasks containing 160 c.cm. nutrient agar were prepared and kept ready for use. Human blood was obtained and added to five times its quantity of tap water and an equal quantity of NH_4Cl . The mixture was well stirred and preserved in a sterile stoppered bottle in the ice chest for three to seven days. This was found necessary to ensure sterility. Tubes put up with blood newly treated were contaminated with *B. subtilis* in from 25 to 50 per cent. Immediately before use 14 c.cm. of the acidulated blood were taken and 2 c.cm. of normal NaOH added, mixed thoroughly and the reaction adjusted to just blue to litmus. The whole amount was then added to 160 c.cm. of melted agar and plated.*

Both these media proved highly satisfactory but rapidly lost the power of giving good growths. The primary culture and first and second subcultures must be made on the freshly prepared medium. Subsequently the organism becomes acclimatized and will grow on older media.

Pfeiffer's bacillus grows on them as minute, round, colourless colonies, which generally require thirty-six hours' incubation before they can be picked off for subculture. Here, as on other media, they show a marked tendency to congregate round colonies of staphylococci. An organism was accepted as a true *B. influenzae* if it was a minute Gram-negative coccus-bacillus with slightly tapering ends, non-motile, growing best on blood media, and staining only slowly with ordinary aniline dyes.

For further investigation three strains were chosen, numbered 14, 16, and 43, after very numerous replatings to ensure absolute purity.

*I have been unable to discover any references in bacteriological literature to either of these media. In both cases the details of the preparation were communicated to me personally by a fellow worker. I believe that the second has not yet been published, but a very similar method has been devised by Hundsdoegen, *Dtsch. med. Wochs.* 1918, 44, 1181, quoted by the *Medical Supplement to the Daily Review of the Foreign Press*, vol. i, No. 12, December, 1918, p. 456.

Pathogenicity.—None of the strains produced any symptoms when injected intraperitoneally into rats or intravenously into rabbits.

Immunity.—A suspension of strain 14 was put up against the serum of a rabbit by Dreyer's technique. No agglutination occurred. The same rabbit received on the following day, December 5th, 1918:

At 10.55 a.m. an intravenous injection of one agar slope of strain 14 suspended in physiological saline to which had been added 0.5 per cent. phenol, the whole having been heated to 60° C. for thirty minutes.

At 11.55 a.m. a second slope culture of the same strain similarly prepared was injected intravenously, and again at 12.55 p.m. a third slope. The animal remained perfectly well.

On December 12th, 1918, two slopes of strain 14 were given into the ear vein. This time the organisms were living. Again no ill effects ensued.

On December 15th, 1918, a few c.cm. of blood were drawn off and the serum put up against all three strains of the bacillus, with the following results (in Dreyer's nomenclature):

	Dilution of Serum.			
	125.	250.	625.	1,250.
14	T	T -		
16	T	T	S + +	S +
43	T	T -	S +	S

On December 20th, 1918, the rabbit was bled to the amount of 20 c.cm., the serum removed and used as a control for further experiments. It consistently gave a clear agglutination of all three strains in a dilution of 1 in 1,250.

Having demonstrated the antigenic properties of these strains, the serums of patients suffering from influenza were put up against them with unvarying negative results.

Bronchopneumonia Present.		Bronchopneumonia Absent.	
Week of Disease.	No. of Serums Examined.	Week of Disease.	No. of Serums Examined.
1 (1-7 days)	3	1 (1-7 days)	12
2 (8-14 days) ...	8	2 (8-14 days) ...	11
3 (15-21 days) ...	4	3 (15-21 days) ...	10
4 (22-28 days) ...	5	4 (22-28 days) ...	1
5 (29-35 days) ...	3	5 (29-35 days) ...	2
Total	23	Total	35

From this table it is seen that no agglutination of either of three typical strains of Pfeiffer's bacillus was obtained with serums removed from 59 cases of influenza, whether those cases were or were not complicated by bronchopneumonia, and whether they were in the first, second, third, fourth, or fifth week of the disease.

When it was found that agglutination tests failed to reveal the presence of antibodies in the blood of influenza patients, attempts were made to discover them by means of complement fixation tests; but here a difficulty arose in the preparation of the antigen. At first a suspension of the bacilli in 0.85 per cent. saline was employed. The growth on several agar slopes was washed off in saline and washed several times. Unfortunately great difficulty was experienced in obtaining the use of a centrifuge, so that the washing was not as thorough as could be wished. Possibly more perfect washing would have altered the result. As it was, every suspension that it was possible to obtain was so strongly anticomplementary of itself that no complement fixation tests in the presence of a possible antibody could be carried out.

In order to overcome this, further cultures were washed off the medium with normal NaOH , a little of the latter being used for much growth of the bacilli. The suspension was kept on ice for a few days, and then neutralized exactly with normal HCl . Finally it was diluted with distilled water to give a NaCl content of 0.9 per cent., and further diluted with saline to give the requisite strength of antigen. This was determined empirically for each strain. Eight serums were put up against all three antigens, and in no case was the complement fixed.

One patient had bronchopneumonia, and two bronchitis, probably bronchopneumonia; and the day of the disease was 8, 25, 14, 14, 25, 6, 15, and 17 respectively. At the time of this experiment no control with a known agglutinating serum was possible.

CONCLUSIONS.

From the above observations it appears that influenza is not produced by Pfeiffer's bacillus, but by some other virus at present unknown, since—

1. The *B. influenzae* is found in only a proportion of the cases. Other workers have, however, recovered it in more than 90 per cent., but streptococci can be found in quite as many.

2. In certain epidemics of influenza it has been found extremely rarely, while in others it has been entirely absent.

3. It is found in cases other than influenza.

4. No specific immunity has been demonstrated to follow infection with this organism. Here again, however, others have arrived at a different result, and have found agglutinins to the bacillus in certain cases of influenza, but their presence has been found by no means constant, and they appear more frequently in the first week of the disease than in the later stages.

The observation that the bacillus is pathogenic to animals after intracerebral injections is no proof of an etiological relation with influenza, since in the human disease infection can never be effected by that path; while equally invalid in this respect is the fact that it has been recovered from pleural, arthritic, and meningeal exudates. It is well established that certain organisms—for example, *B. coli communis*—though normally harmless saprophytes, may in certain circumstances become pathogenic; and it is probable, or even certain, that the *B. influenzae* Pfeiffer is one of these. What are the factors producing such a change have not yet been determined.

REFERENCE.

¹ Dopfer et Sacquépée. *Bactériologie*, 1914, p. 527.

PREGNANCY COMPLICATED BY VOLVULUS OF THE PELVIC COLON.

BY

VICTOR BONNEY, M.S., M.D., B.Sc.LOND., F.R.C.S.,

ASSISTANT GYNAECOLOGICAL SURGEON, MIDDLESEX HOSPITAL;
SURGEON TO THE CHELSEA HOSPITAL FOR WOMEN;

AND

E. CHITTENDEN BRIDGES, M.D.DURH.,

CONSULTING PHYSICIAN, MARGARET STREET HOSPITAL FOR
DISEASES OF THE CHEST; VISITING MEDICAL OFFICER,
ST. DUNSTON'S HOSPITAL.

THE publication in the BRITISH MEDICAL JOURNAL of December 13th last of Dr. M. Donaldson's interesting case of pregnancy complicated by volvulus, prompts us to place on record another case of the same kind presenting several remarkable features.

In February, 1918, one of us (E. C. B.) was called to see a lady five months pregnant who had symptoms of acute intestinal obstruction. She was very ill, in great pain, and the abdomen was exceedingly distended.

First Operation.

The abdomen was opened in the middle line and an enormous volvulus of the pelvic colon was found, so large that when untwisted the loop of intestine was long enough to reach from the wound to the floor of the room and back again. The bowel was not only greatly distended, but greatly hypertrophied as well. There was an anatomical abnormality whereby the descending colon was continued sessile over the brim of the pelvis and down its side wall to within an inch of the point where the rectum began. The pelvic mesocolon, therefore, had only this length of base from which it spread fanwise to its attachment to the enormous loop of movable pelvic colon, so that the whole loop was, so to speak, pedunculated, and it was at the point of the peduncle that the twist had occurred. At the junction of the colon and the rectum the bowel wall was much thickened and its lumen narrowed, so that a degree of chronic intestinal obstruction must have existed for some time before the acute attack took place, and there was, in fact, a history of symptoms for two years pointing in this direction.

Having untwisted the volvulus, the bowel was incised and emptied of a great quantity of gas and faeculent fluid; but even in its collapsed state it was so large that it was impossible

to return it into the abdomen, and it was necessary to "colostomize" it at the upper end of the wound, the segment left outside the abdomen being thrice the size of a man's fist. The pregnancy was not interfered with, as the patient's state did not permit of a prolongation of the operation.

Second Operation.

There was a good deal of suppuration round the colostomy, and it was several weeks before the exposed portion of the bowel shrank to a reasonable size.

The next problem was to deal with the pregnancy, for the position of the anchored bowel would not permit of the uterus attaining a size much over six months. Consequently, five weeks after the first operation vaginal Caesarean section was performed and a dead six and a half months child was extracted, the fetal head having been perforated first. The patient again made a good recovery except for a slight attack of femoral thrombosis three weeks after the operation.

Third Operation.

Finally, in June, the colostomy being healthy and the uterus involuted, the abdomen was reopened, the anchored bowel freed, the whole loop of still hypertrophied pelvic colon excised, and what was practically the end of the descending colon was joined to the rectum.

Once again the patient did well, and at the present time is in very good health.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

DEATH DUE TO SWALLOWING A DENTAL PLATE.

A WOMAN, aged 40 years, was admitted into Chelsea Infirmary on October 9th, at 4.15 p.m., with the following history:

She had been healthy until three weeks before admission. On September 18th, in the afternoon, whilst eating a potato, she swallowed a dental plate. She drank a cup of tea to wash it down, and then tried to vomit, but could not do so. She felt pain and heaviness in the pit of the stomach, and pain in the back of the chest. She then took about 8 oz. of castor oil in two doses, but could not say whether she passed the plate. She was quite comfortable, took her food fairly well until October 8th, at 5.30 p.m., when she fell down a few stairs; she was picked up by her daughter in a fainting condition, and recovered after taking a drink of water. About half an hour later she complained of feeling faint, and vomited blood (about 10 oz.). She slept quite well that night, but at 6 a.m. on October 9th she again complained of faintness, with a sensation of choking, and then vomited about a pint of blood. She was seen by a doctor at her house, who ordered her removal to the infirmary, where she was admitted at 4.15 p.m. on the same day.



FIG. 1.—Dental plate showing attachment which pierced oesophagus into aorta (two-thirds actual size). A, Gold attachment of plate.

On admission the patient looked very pale, anaemic, was rather restless, respirations were rapid, her pulse being almost imperceptible at the wrist. She was given 1 c.cm. of pituitary extract (intramuscularly) and one pint of saline per rectum. She returned most of the saline mixed with blood. She then stated she felt faint, and had an attack of haematemesis, vomiting about 10 oz. of blood. Abdominal examination showed nothing except dilated stomach, with tenderness in the pyloric region. A haemic murmur could be heard all over the heart region, and the lungs showed evidence of emphysema and chronic bronchitis.

The patient rapidly became worse, and died at 5.15 p.m., complaining of choking sensation and the desire, but inability, to vomit.

A post-mortem examination was performed by order of the coroner on October 11th, and the following was found:

The body was well nourished. There was no evidence of violence except a slight discoloration of the skin over the left tibia. The mouth was normal; on opening the oesophagus a dental plate was found lodged 5 in. from the back of the pharynx, at the level of the arch of the aorta where the trachea divides. An attachment of the plate had pierced the left antero-lateral surface of the oesophagus and made its way into the aorta, just below the origin of the left common carotid artery. There was a bean-shaped ulcer (1 in. by $\frac{1}{2}$ in.) on each side of the oesophagus where the margins of the plate had rubbed against the mucous membrane. There was also dilatation of the oesophagus. There was a large clot, easily detachable from the posterior wall of the aorta. The heart was fatty

but there were no abnormalities in the valves. There was an *ante-mortem* clot in the right auricle. The stomach was distended, and contained two pints of blood with shreds of mucous membrane. The whole of the intestines was filled with blood. The remaining organs of the body showed signs of acute anaemia with slight fatty changes. The lungs were emphysematous, and there was oedema of both bases.

Death was due to loss of blood from the aorta, passing into the oesophagus through a communication between oesophagus and aorta, produced by an attachment of dental plate ulcerating through the lateral wall of the oesophagus into the aorta.

I am indebted to the medical superintendent, Dr. E. T. Holland, for permission to publish this case.

VICTOR FELDMAN, M.R.C.S.,
Assistant Medical Officer.

Chelsea Infirmary.

Reports of Societies.

MULTIPLE EXOSTOSES.

At a meeting of the Medical Society of London held on December 7th, the President, Mr. V. WARREN LOW, being in the chair, Professor ARTHUR KEITH read a paper on the true nature of multiple exostoses, in which he said that he had had opportunities of studying the x-ray records of four cases of multiple exostoses, and from his study had come to the conclusion that the disease should be definitely removed from the category of tumours and placed among the disorders of growth, under the name—suggested by Mr. Morley Roberts—"diaphysal aclasis." The exostoses which attract the clinician's attention to the presence of this disease in patients are merely secondary results which mask one of the most remarkable of all disorders of growth. His attention had been drawn to the nature of the underlying condition by certain x-ray plates which were taken in France by Captain J. A. Annan in the spring of 1918, and sent to England to be added to the War Office Collection in the Royal College of Surgeons. They had been taken from a private in a labour battalion, aged 20, who had been diagnosed in the 3rd Canadian General Hospital as suffering from multiple exostoses, and subsequently discharged as unfit. The lower ends of the shafts of this man's femora and the upper and lower ends of the shafts of his tibiae represented an arrest of bone development of a peculiar kind, one which was to be anticipated if John Hunter's teaching concerning the growth of bones was correct. John Hunter was the first to perceive that the shafts of long bones grew by a double process: in the first process new bone is laid down at the extremities of the shaft, in the diaphysal lines; in the second, which Hunter named the "modelling process," the cancellous bone laid down in the diaphysal line is rebuilt, trimmed, and gradually converted into an architectural part of the shaft. In diaphysal aclasis the pruning or modelling process is arrested; hence between the properly formed part of the shaft and the epiphysal end there is interposed an irregular cylinder of imperfectly modelled bone, on the surface of which there are usually several outgrowths. Further investigation of the first case showed that the diaphysal ends of all the bones of the body manifested a similar disturbance of growth, the disturbance being greatest at the lines where growth is most vigorous and most prolonged.

For the x-ray plates of a second case Professor Keith was indebted to Captain Lionel West, who forwarded them to the War Office Collection early in the present year. They were taken in Pres Heath Military Hospital from a soldier, aged 26, 5 ft. in height. The x-ray plates showed the same growth disturbance at the diaphysal ends of all the long bones. As in the first case, the inequality of growth between the bones of the forearm had led to a dislocation of the proximal end of the radius. The plates of the third case, a soldier aged 29, in Fulham Military Hospital, were taken and sent to the War Office Collection by Dr. Florence Stoney. In the first and second cases only imperfect family histories could be obtained. In Dr. Florence Stoney's case one brother and four maternal uncles were affected with the same disorder. It was probable that there was a family history showing a Mendelian hereditary incidence in the majority of cases. For full records of a fourth case Professor Keith was indebted to Mr. W. Rowley Bristow. This case, that of a girl aged 16, was particularly valuable, because Mr.

Bristow had obtained two sets of x-ray plates, the second taken ten months after the first, and in such a way that the one set was strictly comparable to the other. By a close comparison of the two sets of plates it had been possible to work out the exact nature of the growth changes which had taken place in a period of ten months. The changes thus observed were totally different from those which occur at the diaphysal ends in normal growth. For the fifth case he was indebted to his colleague, Professor Shattock, who brought to his notice a case of multiple exostoses, represented in the museum of St. Thomas's Hospital by the bones of the upper and lower extremities. Although the disease was not uncommon, the case preserved in St. Thomas's Hospital Museum—that of a short adult man of unknown age, but probably well over 30, who committed suicide by throwing himself in front of a railway train—was the only skeletal representation of the disease in London. Professor Keith was thus able to check his interpretations of the x-ray plates by a study of actual specimens of the disease.

A clue to the true nature of multiple exostoses (diaphysal aclasis) was given by noting its incidence on the skeleton. Bones formed on a membranous basis, such as those of the face and vault of the skull, were not affected. Nor were bones formed in cartilage, such as the epiphyses of long bones, the vertebrae, sternum, carpal or tarsal bones. It was only where these two processes—membrane formation and cartilage formation—came into juxtaposition in the formation of bones that this peculiar disorder of growth occurred. Hence the disturbance was most marked at the growing ends of diaphyses of long bones, and was most emphatically marked where growth was greatest. In the upper extremity the proximal end of the humerus and the distal ends of the radius and ulna showed a much greater growth disturbance than the shafts which end at the elbow-joint. In the lower extremity growth was greatest at the diaphysal ends directed towards the knee, and there the disturbance was greatest; but as there was also a considerable growth at the proximal end of the shaft of the femur and at the distal ends of the tibia and fibula, these parts also exhibited ample evidence of the disease. The growing margins of the os innominatum and scapula, particularly the vertebral border of the latter bone showed irregular formation with the production of exostoses. The clavicles showed a disturbance at both extremities: in the ribs the alterations occurred at the growing costo-chondral junctions. At all these sites two different kinds of bone formation are in progress; as bone is laid down within the growth disc (epiphysal line) in cartilage, a covering of fibroblastic bone is being deposited by the growing margin of the overlying periosteum. We had been so in the habit of concentrating our attention on the process of ossification which takes place in the cartilaginous growth disc that we had left out of sight the equally important growth processes which go on in the ferrule of periosteum which surrounds the growth disc, consequently we were not prepared to encounter a dislocation in the harmony with which these two processes ought to proceed in health. In achondroplasia the arrest of growth was a partial cessation or a retardation of the growth process which goes on within the cartilaginous disc; in diaphysal aclasis the arrest or retardation lay in the growing edge of the periosteal ferrule. Hence it came about that large areas of cartilage-formed bone laid down at the ends of the shafts of long bones were left exposed. A comparison of plates taken from subjects showing different degrees of disorder in the growth and architecture of bones made one quite certain that this arrest of periosteal formation was not permanent, but temporary. The modelling process, which is attended by the deposition of periosteal bone, went on for years after all growth in length had ceased.

Although the chief lesion lay in a delay in the extension of the periosteal ferrule which surrounds every cartilaginous growth disc, yet it was legitimate to infer that there was also a definite disorder in the growth disc itself. The exact nature of that disorder could only be revealed by a study of the microscopic appearances of the growing ends at various stages of the disease. As seen in x-ray plates, the growth discs of the shafts of long bones had the same irregular notched appearance as in late rickets, to which disease diaphysal aclasis presented several points of resemblance. In normal development

the margin of growing bone, through a mechanism we had not yet discovered, exercised a most definite influence on the cartilage cells of the growth disc. The manner in which the cartilage cells divide and group themselves in ranks, placed so that they are enfiladed by the ingrowing osteoblasts, was well known. It was possible, however, that the prime movers in the normal process of ossification were not the bone cells but the cartilage cells. It might be that the primary changes occurred in the cartilage cells, and as a consequence of these changes there took place an invasion of the cartilage territory by the bone cells. It was also possible, as many believe, that the cartilage cells actually became bone cells. The essential lesion in achondroplasia was a failure in the preliminary transformation of the cartilage cells at the growing edge of the diaphysal disc. Experiments on the thyroid had failed to produce achondroplasia; microscopic examination had revealed no change in the thyroid gland in cases of that disorder of growth, nor had thyroid medication any influence on the growth of those who were the subjects of the disease. Yet the disordered growth in the subjects of achondroplasia had so many resemblances to the growth disturbances seen in cretins that one might safely group achondroplasia as a growth disturbance due mainly to an alteration in some of the functions of the thyroid body. If we agreed to place achondroplasia in that group we must also place diaphysal aclasis there too, for the growth disturbances were related, although of opposite types.

The study of growth disturbances was of interest to all medical men, but especially to anatomists, because it gave opportunities of discovering the very complex mechanism concerned in the growth of the human body. Diaphysal aclasis was primarily a disturbance of growth discs, and of both the cartilaginous and periosteal elements comprised within these discs. Giantism and dwarfism in all their forms involve disturbances in growth discs, and disordered function on the parts of the glands of internal secretion. In diaphysal aclasis the stature was stunted; it fell from four to eight inches (10 to 20 cm.) short of the stature that might have been anticipated if growth had been normal. When adult years were reached growth ceased, both in the diaphyses as well as in the diaphysal exostoses; the retarded modelling process, on the other hand, still went on. Although the exostoses usually became evident at, or soon after, the period of puberty, a review of all the evidence indicated that diaphysal aclasis was congenital, but in only severe cases were there manifest signs of the condition before the eighth year. It was not unusual to find exostoses springing from near the middle of the shaft of a long bone—the site of the diaphysal end in the first or second year after birth. Multiple enchondromata formed a distinct but allied disorder of growth.

The disorder was attended by several curious results. In more than a third of the cases on record the growth at the distal end of the ulna failed, while that at the distal end of the radius continued. The result was that the radius became bent into a bow, the ulna serving as its stretched string. Under the stress of growth the proximal end of the radius became dislocated, and might detach with it the external epicondyle from the humerus. There was only a slight disparity of growth between tibia and fibula, but in the majority of cases the diaphysal extremities of these two bones became fused and firmly ossified together. Further clinical observation would probably show that in diaphysal aclasis there were disorders of other systems of the body besides the bony one. The conception of multiple exostoses as a growth disease was not a new one. John Hunter emphasized its constitutional nature; Paget recognized it as an ossific diathesis due to some morbid condition of the blood. Several German writers had recognized it as a disturbance of growth. Quite recently Dr. Alfred Hess had suggested treatment with extract of the parathyroid glands. A full account of Professor Keith's investigation will be published in the forthcoming number of the *Journal of Anatomy*.

SCHOOLS FOR PSYCHIATRY.

A MEETING of the Medico-Psychological Association of Great Britain and Ireland was held in the rooms of the Medical Society of London on November 25th, under the presidency of Dr. BEDFORD PIERCE, who announced that

Sir James Crichton-Browne would deliver the first lecture under the Maudsley bequest, at the date of the next May meeting of the association.

THE PRESIDENT made sympathetic references to the deaths of Dr. Charles Mercier, a former president, Dr. Drapes, an editor of the association's journal, and of Dr. Fearnside. A vote of condolence with the relatives of each was carried.

A paper on the need for schools of psychiatry was contributed by Dr. C. HUBERT BOND. He said that in 1918 the Board of Control drew attention, in a more extended form than hitherto, to deficiencies in the arrangements, as at present organized, for the treatment of persons suffering from mental disorder, especially in its incipient and early stages, and to the insufficiency of the attention paid to this important subject in the medical schools. It also pointed out the ill effects, both to patients and the profession, of this deficiency, and to the absence of any special qualification in psychiatry as a requirement for the higher posts in public institutions for the insane. Recommendations of changes in the law had been made, but these were still *sub judice*. He urged the need for the establishment of clinics, either as independent units or, preferably, closely affiliated with general hospitals. Certainly clinical facilities for the study of mental disease should be given in every medical school. Moreover, without research progress in this study could not be expected to be other than intermittent and spasmodic. He hoped that the day was not far distant when no hospital staff would be regarded as complete without a physician expert in psychiatry. A further reason for the establishment of mental clinics was the reluctance of patients with symptoms of early mental breakdown to present themselves to the out-patient department of a hospital which labelled the patient as a subject of nervous or mental ailment. Perhaps this feeling would be removed when the significance of various forms of mental disorder was fully established, giving confidence to the assurances which were conveyed to the patient. Instead of attempting to enlarge existing structures, he favoured arrangements to treat certain types of patients in separate units, erected on a site where land was liberally available, their administration forming part of that of the main building. He protested against the idea of relegating institutions for the insane to the rôle of receiving houses for the care and nursing of irrecoverable cases. Such a divorce from incentive to treat to recovery would be very depressing medically, and would cause these institutions to be pervaded with a feeling of hopelessness. Clinics for mental cases should provide: (1) Therapeutic facilities for the recent and recoverable cases, also for incipient uncertifiable and early certifiable cases; (2) better educational facilities during the medical curriculum, enabling the student constantly to appreciate the relationship between psychological and general medicine, though these would be incomplete without the clinical material from the neighbouring asylum; (3) a centre for laboratory and clinical research and post-graduate study.

Dr. Bond alluded to the powerful paper read before the Association in May, 1908, by Dr. D. G. Thomson, in which he advocated a series of measures to combat the absence in this country of an adequate scheme of instruction by the establishment of diplomas, etc. This resulted in a circular letter being sent to each of the universities and other examining bodies in the kingdom, formulating a carefully considered syllabus of instruction, which it was hoped would lead to the establishment of diplomas in psychiatry. In the two years following gratifying action was taken by Manchester, Leeds, Edinburgh, Cambridge, and Durham, each of which passed regulations for a diploma after attendance at approved courses and examinations in approved subjects. He detailed the differences which existed in their several schemes. The Control Board felt that the possession of a diploma in mental diseases should ultimately be obligatory on the holders of the higher medical posts on the staffs of institutions for the insane. He set out the conditions which it was thought ought to govern such diplomas. But it would be a mistake to dwell too insistently on the possession of this or that diploma, as it was but a hall-mark. The really important result to be attained was that, based upon a previous sound knowledge of general medicine, a prescribed course of instruction had been followed, that there should not have been merely knowledge of facts memorized,

but acquisition of principles which awakened interest would transmute into the true life-student of the specialty.

Lieut.-Colonel J. R. LORD, C.B.E., said patients suffering from mental diseases were too frequently looked upon as a class apart, and this idea should be combated. He thought the cure of mental conditions should be cultivated as a specialism far more than was the case at the present time; there was need for a concentration of the best effort to this end; effort was now too diffuse.

Lieut.-Colonel D. G. THOMSON, C.B.E., alluded to the importance of the teaching and even the non-teaching hospitals taking this matter up, but he foresaw obstacles to this. He referred with pride to the unified curriculum, for which the Medico-Psychological Association was answerable.

Brevet Lieut.-Colonel Sir FREDERICK MOTT, F.R.S., said that hearing the paper caused him to recollect that more than thirty years ago the London County Council, at its inception, proposed the establishment in London of a hospital for acute mental cases, but nothing came of it. But eleven years ago the late Dr. Maudsley came to him and offered to give the London County Council £30,000 to enable them to build such an institution. This was accepted, but it took the Council a long time to find a site; eventually it did so, and the building was nearly completed when the war broke out. It was finished in 1915, and was handed over to the War Office and served a most useful purpose as a neurological clearing hospital. Dr. Maudsley had the satisfaction of seeing it in operation, but, unfortunately, neither he nor Mrs. Maudsley saw the hospital employed for the study and treatment of mental disease among the civil population. At present it is utilized by the Ministry of Pensions for borderland cases. The Council are now anxious to carry out Dr. Maudsley's wishes to use the building for the civil population, and to establish the teaching of psychiatry there by systematic lectures and clinical instruction in correlation with the London asylums. It may be mentioned that upon the death of Dr. Maudsley the Council received the £10,000 he had promised. It is hoped that the Maudsley Hospital will be a recognized institution of the London University, for that was one of the conditions attached by Dr. Maudsley to the gift.

Dr. R. H. STERN referred to the general misconceptions on the subject of insanity, and to some efforts which had recently been made to provide clinical teaching in psychiatry.

Dr. GOON (Oxford) stated that for two years there had been a psychiatry clinic in association with the Radcliffe Infirmary in that city.

Dr. DEVINE regarded the question as international in importance. He commented on the lack of systematized teaching on insanity in this country, which was noted and commented on by Americans and other visitors. He pleaded for opportunities for intensive study. Specialists in psychiatry should combine and start a school and a tradition of British psychiatry; short of that he did not see a prospect of real progress.

Dr. PRACHELL thought much good would be done if an extended epitome of Dr. Bond's paper could be sent to various asylum committees.

Sir ROBERT ARMSTRONG-JONES gave his experience in starting a mental department at St. Bartholomew's Hospital, and said an important question was, How should the general practitioner be educated? He thought every medical man ought to have a chance of seeing in his neighbourhood a case of acute mania, one of melancholia, of epilepsy, of general paralysis, and of arterio-sclerosis. There was a great need of someone who would kindle interest in the subject.

Dr. BOND replied to the various comments.

OCIPITO-POSTERIOR CASES.

At a meeting of the Edinburgh Obstetrical Society, held on December 10th, with Dr. WILLIAM FORDYCE, President, in the chair, Dr. J. LAMOND LACKIE read a paper on artificial rotation of the head in persistent occipito-posterior positions. The frequency of these positions was, he said, much greater than was usually taught. In his practice they constituted about 30 per cent. of the total. In the treatment of posterior positions the case should be left to Nature so long as progress was being made, for the

majority of cases rotated forward spontaneously. If the head were obstructed, manipulative rotation should be attempted. If the position led to impaction of the head at the brim, the hand should be introduced under an anaesthetic, dilatation of the cervix completed if necessary, and the position corrected by manual rotation by the fingers on the shoulder. If seen later, manual rotation should be attempted. If that failed, rotation by means of the forceps was often easy and satisfactory. In this it was imperative that the handles should be swept round through a large circle to allow of simple rotation of the blades within the pelvis. Dr. Lackie described some illustrative cases.

Dr. BERRY HART agreed that in suitable cases rotation with the forceps was often useful. Dr. BARBOUR thought that interference should never be made until the cervix was fully dilated. Dr. BALLANTYNE referred to the frequency with which at his ante-natal clinic rectification of posterior positions was made during pregnancy. Dr. HAIG FERGUSON often found it possible to rotate the head by continued rotatory pressure on the blades of the forceps with the fingers in the pelvis. He also sometimes used Fabre's method in which rotation was exerted on the forceps by tapes passed through holes in the blades. Dr. DORR described his method in which the forceps were introduced backwards so that after rotation of the head the forceps lay in the proper position. Dr. H. OLIPHANT NICHOLSON had used manual and forceps methods of rotation with success for many years. Dr. R. W. JOHNSTON quoted from Smellie's textbook to show that rotation with forceps for posterior positions was carried out by that obstetrician several hundreds of years ago.

THE TEACHING OF PATHOLOGY.

At a meeting of the Section of Pathology of the Royal Academy of Medicine in Ireland, on October 31st, Mr. T. T. O'FARRELL (President of the Section) read an introductory address on "The teaching of pathology."

The address began by a short survey of the history of medical teaching in Dublin. Having drawn attention to the efforts which are being made in various teaching centres towards the improvement of teaching methods, Mr. O'Farrell discussed their adaptability to the requirements of the Dublin school. He said that many of the schemes had already been adopted, but considered that some further modifications could be usefully made. He considered that improvements should be made in the direction of modification of existing arrangements rather than as an addition to the already over-burdened course of the medical student.

He had arrived at the following conclusions:

1. The modern student is anxious to comply with the regulations laid down for his guidance.
2. The examinations and the teaching should conform with modern ideas. The reading of a current medical journal should be part of the programme. Questions relating to articles which have appeared in a selected journal should be asked at the examination. (Mr. O'Farrell emphasized the advantage of encouraging students to develop the habit of reading current medical literature.)
3. In view of the close association of pathology with clinical work, the hospital pathologist should be in a position to discuss teaching methods on the same footing as clinicians.
4. Round-table conferences should be held from time to time of all teachers in medical subjects.
5. The following alterations in the medical curriculum were suggested: (a) Third-year students to receive the ordinary courses in general and special pathology, bacteriology, and practical work. (b) Fourth-year students to attend a practical course in clinical pathology. They shall also be required to report upon six autopsy cases, having, if possible, ascertained beforehand the clinical histories for themselves, or have the histories provided. The results of the post-mortem examination, together with histological findings and other data, to be drawn up as a report. Marks to be given which should be included in the totals at examinations. (c) Fifth-year students to report upon a given number of "live" cases, giving the clinical findings and detailing clinical pathological methods. (d) Fourth and fifth year students to be encouraged to bring their work before a students' medical society; this would be an extremely useful adjunct to the student's medical education.
6. A system of lectures, demonstrations, or classes in practical work to be instituted in "specialized" subjects, such as gynaecological pathology, dermatology, ophthalmology, skin, etc. These to be conducted by extra-mural teachers in consultation with the director of the department. All the pathological material available in the laboratory to be placed at the disposal of the lecturer.

Mr. O'Farrell thought that these courses might be made optional, but he considered, in view of the modern tendency to specialization, that such classes ought to be available for senior students.

Sir JOHN WILLIAM MOORE complimented the President upon his address, and emphasized the indebtedness of the clinician to the pathologist in the elucidation of cases.

Dr. MOORHEAD thought that certain introductory subjects—such as botany and zoology—might well be jettisoned and replaced by elementary morbid anatomy, and even simple bacteriology, correlating both with clinical instruction. Wherever possible, cases should be followed to autopsy, and systematic pathological teaching be given at all clinical hospitals at least once a week. In particular he would enter a plea for courses of chemical pathology, such as sugar-content of blood. He joined very heartily in complimenting Mr. O'Farrell upon an admirable address.

Dr. BOXWELL referred to the difficulty experienced by the student of pathology upon being confronted by an entirely new terminology, nomenclature, and over-elaborate classification. Pathological teaching should not be divorced from, but simultaneously correlated with, that of anatomy, physiology, and clinical instruction. No terms should be used without immediate confirmation by microscopical preparations. He strongly favoured simple chalk diagrams as a method of illustrating lectures. He would like also to see a division of the subject into clinical and research pathology, the former being that taught to the average student of medicine.

Dr. CROFTON dwelt upon the advantages of team work upon selected subjects of investigation.

Dr. O'KELLY held that the tendency of the student to drop pathology after passing his third professional examination was to be combated by the reappearance of the subject in the final examination. For one intending to enter the practice of any branch of medicine he considered the subject of bacteriology to be overdone.

Reviews.

MENTAL DISEASES.

In the second edition of *Mental Diseases*,¹ a textbook of psychiatry for students and practitioners, by Dr. R. H. COLE, a careful revision has been carried out and some new material added. The opening chapters are devoted to an account of normal psychology and the various mental symptoms which are found in mental disorder. A description of the structure of the brain is given, and the author emphasizes the necessity for correlating mental processes with the underlying cerebral mechanism. The classification follows to some extent that generally adopted at the present time, but it may perhaps be suggested that while the terms of modern psychiatry are utilized by the author, he approaches the subject in a manner which is scarcely consistent with the more recent conceptions. Thus it seems better to confine the term "melancholia" to the depressive psychosis of involution than to apply it also to the depressed phase of manic-depressive insanity—and why do we find the term *maniacal*-depressive in this and other English textbooks? Again, if such terms as dementia praecox, manic-depressive insanity, and confusional insanity are employed, it is surely unnecessary to introduce the group associated with the stress of childbirth, or to give separate treatment to a symptom-complex such as stupor. The student will tend to attach such a label as "puerperal insanity" to a case and feel satisfied that he has done all that is necessary for the purpose of diagnosis, and he will overlook the importance of placing the case in a fundamental category which carries with it prognostic or other significance. We may perhaps suggest, also, that insufficient emphasis is laid on the distinction between the psychoses and psycho-neuroses. It is important that the student should be made thoroughly aware of the essential differences between the groups. It would be easy to gain the impression from this volume that psychasthenia is one form of insanity, which is the very last thing that an obsessional case should be permitted to think. It is unfortunate that such terms as obsessional insanity are

still included in the official classification of the Medico-Psychological Association.

Apart from such criticisms the book will be found a useful guide to the student. It contains a chapter on the legal relations of insanity and the methods of certification which will be helpful, and includes the information the practitioner requires in this direction. The discussion of general treatment contains much that will be found of practical assistance in actually dealing with cases of insanity. The volume has a number of excellent illustrations.

THE NERVOUS HEART.

In *The Nervous Heart*² Captain R. M. WILSON and Major J. H. CARROLL discuss the problems of functional heart disease from the point of view of the nervous system.

It will be remembered that Dr. R. M. Wilson published, a little over a year ago, a book entitled *Hearts of Men* (reviewed in our columns on September 28th, 1918, p. 346) in which he put forward the view that a definite peristaltic action can be recognized in arteries, and that it is under the control of the sympathetic and the vagus. He was understood to suggest that the peristaltic movements are systolic and diastolic, and that four regions, or "blood lakes," are to be recognized in this connexion—namely, the abdominal, pulmonary, dermal, and muscular. In the book before us it is contended that these "lakes" are in a state of constriction (so-called "plus-systole") during mental or muscular activity and are filled during rest. This contraction they say takes place through the true or adrenalin sympathetic, whereas relaxation or vaso-dilatation is a function of the vagus depressor system. During a call for effort the sympathetic dominates the picture: the "blood lakes" are shut and the blood is driven to the muscles and brain. Over-stimulation of the vagus depressor, on the other hand, produces vaso-dilatation in the skin, lungs, and especially in the mesentery, and causes uneasiness, giddiness, muscular weakness and fainting. Failure to mobilize the blood when required from the "lakes" to the brain and muscles is attributed either to sympathetic inadequacy or to hyperexcitability of the vagus depressor, and is said to be associated with sensations of fear, anxiety, depression and distress, the degree depending on the extent of the failure. These sensations appear when, for any reason, the natural response to a stimulus for action is prevented. For instance, the man faced with an angry employer whom he dare not defy is in the same position as a patient physically incapable of exertion. Both feel distress, and in both relief will probably be sought by action on a lower plane (for example, the exasperated employee may go and "kick the dog," the neurotic patient will have a hysterical fit), but of course complete satisfaction will not be achieved in this manner, and feelings of irritation will remain. A neurotic person is said to be one whose vagus depressor system is unduly sensitive; he is unfit for strenuous action because he cannot close his "blood lakes" rapidly when called upon to do so. The promptness of response to stimuli can, however, be improved by training, and the drill sergeant who turns raw recruits into good fighting material affords an example of how this can be done.

Having expounded their views on these matters the authors proceed to describe methods of testing the irritability of the vagus depressor and sympathetic systems. They hold that both are hyperexcitable in patients with irritable heart. The factors producing functional derangement of the heart are discussed: the various symptoms are analysed in detail, and explained by the theory of defective action of one or other component of the autonomic system. The final chapter describes the treatment the authors recommend in accordance with the principles enunciated.

The book is interesting, and the exposition is remarkably clear. If fault is to be found it is perhaps in an over-insistence on the points which are brought forward. Whatever view the reader takes of the theories presented, or of the imagery with which they are draped, the book cannot fail to interest those who are seeking an explanation of the phenomena of the "nervous heart."

¹ *Mental Diseases*. By R. H. Cole, M.D., F.R.C.P. Second edition. London: University of London Press, Ltd. 1919. (Demy 8vo, pp. 12+351; 54 illustrations and plates. 15s. net.)

² *The Nervous Heart: Its Nature, Causation, Prognosis and Treatment*. By R. M. Wilson, Captain R.A.M.C., and John H. Carroll, Major M.C. U.S.A. London: Henry Frowde, and Hodder and Stoughton. 1919. (Med. 8vo, pp. vi+136; 55 figures. 6s. net.)

MANCHESTER GRAMMAR SCHOOL.

THE high reputation of Manchester Grammar School fully justifies the pains expended by its medical officer, Dr. MUMFORD, in his full and careful history of this seminary of sound learning. This work, or to quote its subtitle, "A Regional Study of the Advancement of Learning in Manchester since the Reformation," grew out of the compilation of statistical details obtained to solve problems forced upon the author's attention in connexion with the supervision of the boys. The significance of these data dealing with the use made by the pupils of their opportunities was illustrated, with a view of tracing the school's development, by information on contemporary events; and thus the story grew.

The school was founded as a grammar school in 1515, four years before his death, by Hugh Oldham, Bishop of Exeter and protégé of the pious founder of St. John's and Christ's Colleges, Cambridge, Lady Margaret Beaufort, Countess of Richmond and Derby. The regulations were on the same lines as those of St. Paul's School, London, which had been founded some six years earlier by Colet. The history is then traced in successive chapters; in Elizabethan times, when Latin was the only possible language of commerce, the merchant-adventurers liberally supported universities and schools. One of the early high masters (1588-1595), Dr. Thomas Crogan, was, like Linaere, a physician and a good Grecian, but it does not appear that his influence was responsible for any increased tendency on the part of the pupils to the study of medicine. The ups and downs are shown by the juxtaposition of the chapters "Whig benefactions" (1639-1720), describing the endowments by Sarah, Duchess of Somerset, and the establishment of exhibitions at Brasenose College by William Hulme of Kersley, and that on "Threatened collapse" (1720-1749), which contains "an Act concerning the High Master of the Free School of Manchester," to the effect that "the feoffees of the said school have had many complaints against Mr. John Richards, the High Master, as to his gross negligence and absence from the said school." He was got rid of in 1727, and the situation was eventually saved by the devotion of William Purnell.

The modern success of the school, told in the chapter entitled "The Fable of the Phoenix," dates from the appointment in 1859 of the late F. W. Walker as High Master. Walker was educated at Rugby and Oxford; after a brilliant career, crowned by a fellowship at Corpus, he raised the once famous but then decadent Manchester school until it became one of the great public schools; great as were his combative instincts, his human sympathies were even greater, and his overmastering wish was to make boys and men successful. His method of planning a school curriculum, designed to meet the new educational requirements of the middle classes and to afford scope for many forms of talent, entailed the abandonment of much evil school tradition and the organization of a time table, including the teaching of modern languages and science, which, though approved as an important part of the scheme drawn up for the school by the Court of Chancery in 1848, had never been put into execution. During his seventeen years' tenure of office the school was transformed and the number of boys rose from 250 to 750. The continued success of the school under the high mastership of Mr. Dill, Dr. Michael Glazebrook, and Mr. J. L. Paton was thus assured, and in 1918 there were about 1,200 boys. The appendices complete a work which, as its subtitle implies, is much more than a history of this great school.

NOTES ON BOOKS.

PROFESSOR CALEB'S *Practical Physiological Chemistry*¹ is a handbook for Indian medical students and clinical assistants to use in the physiological laboratory and side-room. It is based on the courses given by the author to students at the Lahore King Edward Medical College, and gives the qualitative and quantitative methods of analysis used by the physiologist and the clinician, together with accounts of the general chemistry and constitution of

the various bodies with which it deals. The first three chapters are given to carbohydrates, proteins, and fatty bodies; the next two deal with common articles of food and the digestive juices. The second half of the volume is devoted to the description and methods of examining normal and abnormal urines. The text is clearly written and full of detail well-presented. Adequate descriptions of the experimental methods advised are included in most instances; perhaps a description of the mode of using the polarimeter might be added with advantage.

INFLUENZA IN THE BRITISH ARMY IN FRANCE.

THE Medical Research Committee has issued a report founded on studies of influenza in hospitals of the British armies in France in 1918.¹

In an introductory note Colonel Cummins, C.M.G., A.M.S., Adviser in Pathology, gives a general summary of the epidemics affecting the armies and of the investigation made in various sectors. He draws attention to striking differences between the summer epidemic and that occurring in the winter months; the former showed a sharp rise and equally rapid decline in the incidence of cases, and the mortality was only 1 per cent.; in the latter the decline was gradual, and a high mortality prevailed. There was some evidence that immunity was established by a previous attack of the disease, but it was not quite conclusive. The excellent clinical accounts by Major Sundell of the Abbeville research team and by Colonel Martin cover ground which will be fairly familiar to most medical men. Major Sundell attaches considerable importance to the prevalence of haemorrhage as a symptom, but this, though it appeared in various situations, does not seem to have been copious or serious. Petechial rashes were seen only in three out of over 1,000 cases. Colonel Martin emphasizes the discrepancy between the relatively slight physical signs observed at the bedside and the extensive pathological lesions found in the lungs *post mortem*.

In the reports dealing with morbid anatomy the main interest centres round the varied and extensive lesions observed in the respiratory tract—inflammation in the lower part of the trachea and in the bronchi was almost invariably present; in the lesser bronchi the condition was frequently purulent. Bronchopneumonia resulted either from direct spread along the air passages or from extension of inflammatory changes through the bronchial walls. Multiple miliary abscesses were sometimes observed in the peribronchial lymphatic tissue. In early cases the pulmonary inflammation was frequently accompanied by much oedema, and it is clear from the descriptions of Tytler, Janes and Dobbin, and of Connor, that where haemorrhage was a feature of the pulmonary lesions it was part of a severe inflammatory change—a haemorrhagic inflammation—and not an antecedent phenomenon.

In the various reports dealing with the bacteriology of the disease there is striking unanimity regarding the frequency of the occurrence of Pfeiffer's bacillus. It was found by various groups of observers in the sputum or bronchial secretion of from 80 to almost 98 per cent. of cases examined, and it was often the most abundant organism present and sometimes the only one segregated. Other organisms, such as pneumococcus, staphylococcus, and streptococcus, were very frequently present in addition, but their prevalence varied according to the area in which the disease was observed, and depended apparently on the prevailing bacteriological flora of the various districts. In confirmation of Cruickshank's observations in the summer outbreak, Hartley, Gibson, and Bowman obtained evidence of specific agglutinins in the serum of patients, but the reactions did not occur with sufficient constancy to be of value in diagnosis, nor to enable any certain deductions to be drawn regarding the relation of this organism to the disease.

The report embodies an account of the experimental work, particulars of which were related by Gibson, Bowman, and Connor, in a paper on a filtrable virus, published in our issue of March 22nd, so that we may be excused from going further into a subject which is still in

¹The Manchester Grammar School (1515-1915). By Alfred A. Mumford, M.D. London: Longmans, Green, and Co. 1919. (Demy 8vo, pp. xi + 565; 18 figures. 21s. net.)

²Practical Physiological Chemistry. For Indian medical students and clinical assistants. By C. C. Caleb, M.B., M.S. Durham. Calcutta and London: Butterworth and Co. 1919. (Demy 8vo, pp. 252; 22 figures. Rs. 6 net.)

¹Medical Research Committee, Special Report Series, No. 35. H.M. Stationery Office. To be obtained through any bookseller. Price 3s. 6d.

need of investigation. It is, however, proper to say that doubt may be felt with regard to one of the main conclusions—namely, that the pathological lesions in the experimental animals closely resembled those seen in the lungs of men; the authors state explicitly in another place that bronchopneumonia was never seen in the animals, the pulmonary lesions being oedematous and haemorrhagic. It would appear, indeed, from the plates and microphotographs that some of the experimental lesions could be explained by hypostasis alone without any inflammatory complication.

PREVENTIVE SELF-DISINFECTION AGAINST VENEREAL DISEASE.

A MEETING took place at the Central Hall, Westminster, on December 16th, under the auspices of the Faculty of Insurance (London Centre), to consider the prevention of venereal disease by the immediate self-disinfection of men. Lord WILLOUGHBY DE BROKE, President of the Society for the Prevention of Venereal Disease, occupied the chair.

Sir W. ARBUTHNOT LANE, in an opening address, said that the Society for the Prevention of Venereal Disease realized only too plainly that, in spite of much moral propaganda, irregular intercourse had greatly increased, and that the average moral code of young women particularly had deteriorated. In the vast majority of cases chastity was obviously the only means by which venereal disease could be avoided; yet it must be recognized that the nature of mankind was such that irregular intercourse would continue in the future, and therefore steps must be taken to reduce infection to a minimum, in order that the community should suffer as little as possible, and that these diseases should be eliminated. The attempt to terrorize men and women by depicting the results of these diseases in exaggerated terms was as futile as the fear of an imaginary hell upon an educated public. If men were impelled to indulge an appetite which varied widely in intensity in different individuals, they should be made aware of the most effectual means of avoiding infection, and possess the necessary drugs in a convenient form for employment as soon as possible after intercourse. The effective use of antidotes within an hour after exposure gave almost certain immunity; further delay, by diminishing the germicidal value of the chemicals, increased the risk of infection proportionately. The chief function of medical men was to prevent disease, and as the public became familiar with the conditions underlying venereal and other communicable diseases, such preventive treatment would be more generally taught in the schools. The disinfectants the society recommended were 1 in 1,000 solution of potassium permanganate (one 5 grain tablet in half a pint of water) and an ointment of 3 parts calomel, 4 parts lanoline and 2 parts vaseline. To ensure immunity from contagion both these antiseptics should be used. The mechanism of the female sexual apparatus rendered purification far more difficult, but the society hoped soon to deal with this matter more thoroughly.

Captain W. E. ELLIOT, M.P., said that it might be urged that the publication of self-disinfection would itself be suggestive to the adolescent mind; but those who used that argument forgot the vast amount of suggestiveness which existed already in the form of advertisements in all kinds of periodicals, and which hinted at sexual licence without the smallest warning as to the inevitable penalty.

Dr. R. A. LYSTER criticized the procedure of the National Council for Combating Venereal Diseases, which, he said, was constantly shifting its position. In its early propaganda the preaching of continence was the sole plank in its platform; its latest advertisement told men to run to the doctor within an hour of incurring the risk of infection. In the army, officially, prophylaxis was barred during the whole of the war, and was only put into operation by a few medical officers, in the face of official disfavour, with encouraging results.

Dr. LEONARD WILLIAMS contended that the only logical and sensible thing was to provide prophylactic packets for any one who wanted them. It was true that even military discipline could not compel the use of packets, but neither could it enforce continence. If people were going to be incontinent, let them at least be "cleanly incontinent," and not impose the results of their incontinence upon the innocent.

Sir J. Y. W. MACALISTER held that the highest morality would stigmatize it as the worst of crimes to allow the suffering of the innocent to continue, and he believed that the society's propaganda would go some way to a meliorate

that consequence. A letter was read from Dr. ERIC PRITCHARD putting forward the same view. Miss ETTIE ROUTH and Miss NORA MARCH also spoke in support of the society's propaganda from the standpoint of their experiences in army social work.

Various speakers in the audience took an opposite view. Dr. AMAND ROUTH complained that in the society's propaganda there was no single word of warning. Continence was the only safe preventive, and he regretted that it was not urged. It was not the hardened profligate who should be considered, but the timid, hesitating youth, who might finally determine upon an immoral course because of the immunity held out to him. Dr. MARY STURGE thought the public needed to be protected from undue confidence in any remedy or preventive, and expressed a fear for the future of domestic life if men were given the idea that, possessed of these packets, they could safely surrender themselves to self-indulgence. Another speaker, who said he was an approved society representative on the London Insurance Committee, declared that the disinfectants were not a remedy but a miserable expedient, and that doctors were so wrapped up in the scientific side of the matter as to be oblivious to its human and social aspects altogether.

NOTIFICATION OF EPITHELIOMATOUS AND CHROME ULCERATION.

SECTION 73 of the Factory and Workshop Act, 1901, requires every medical practitioner attending on or called in to visit a patient whom he believes to be suffering from poisoning by lead, phosphorus, arsenic, or mercury, or from anthrax or toxic jaundice contracted in a factory or workshop, to notify the case to the Chief Inspector of Factories at the Home Office; and a similar obligation is imposed on the occupier of a factory or workshop to send written notice of every such case to the certifying surgeon and inspector of factories for the district.

The Home Secretary has now made an Order, in pursuance of Subsection (4), applying the provisions of the above section to all cases of:

(a) *Epitheliomatous ulceration*, due to tar, pitch, bitumen, mineral oil, paraffin, or any compound, product, or residue of any of these substances; and

(b) *Chrome ulceration*, due to chromic acid or bichromate of potassium, sodium, or ammonium, or any preparation of these substances,

occurring in a factory or workshop.

The following explanatory statement is made by the Factory Department of the Home Office:

1. *Epitheliomatous Ulceration*.—In general, ulceration of the skin is a term used to define a raw surface forming on the skin, which, in industrial employment, is not infrequently set up by the substances handled. Under appropriate treatment, at no matter what age, such ulceration usually heals quickly, and, should it recur, will again heal with rest and treatment. In the case of those handling the substances named, however, especially when the workers are over 35 years of age and have worked for about ten years or more in particular operations exposing them to dust or liquids, the ulceration following on the skin irritation set up may not heal but spread over a larger area of the surface of the skin and extend downwards into the flesh. And this form of ulceration, among other places, occurs with relative frequency on the scrotum. It is then to be regarded as epitheliomatous or cancerous, and this is the condition to be notified. The only method of treatment for these ulcers likely to be successful is operative, which should be undertaken as early as possible, and roughly the need for operative interference is a criterion by which to judge of the need for report. Many workers coming into contact with the substances named are prone to inflammations of the skin, such as plugging of the orifices (hair follicles and sebaceous glands) leading to hard red raised lumps on the skin (papules) often with a black central spot (blackheads). These are most marked on the forehead, neck, and outer surface of the arms. Sometimes the continued irritation causes scattered patches of pigmentation or reddened areas on the face or forearms, or quite small warts form without ulceration or extension into the surrounding skin. These conditions do not come within the definition of "epitheliomatous ulceration" and it is not the intention that they should be notified.

2. *Chrome Ulceration*.—If chrome compounds and their solutions remain in contact with the broken skin (and sometimes even with a very sensitive skin in the absence of an obvious broken surface) they give rise either to a general eczematous ulceration or a circumscribed ulcer known as a "chrome hole." Both these conditions, when definitely ulcerative, will become reportable.

Recurring attacks of epitheliomatous and of chrome ulceration should be reported when they appear in a fresh place. The Order comes into force on January 1st, 1920.

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SATURDAY, DECEMBER 27TH, 1919.

LUNACY REFORM.

THE fifth annual report of the Board of Control,¹ which took over the work of the Lunacy Commissioners when the Mental Deficiency Act, 1913, came into operation, deals with the year 1918. It contains, in addition to the usual statistics of insanity, particulars of the various suggestions for legislation made by the Board during that year.

The treatment of mental disorders in their early stages is discussed in an interesting section. The Board, in suggesting the heads of a bill for the amendment of the law, strongly recommends that it should be introduced into Parliament at the earliest practicable date, and be pressed forward as a measure of urgent importance to the health of the people. "No proposal," it is said, "affecting the public health is more urgently needed or is more promising of improvement in national efficiency. The questions of improved treatment of cases of incipient mental disorder and the raising of the professional qualifications of the medical staff of institutions for the insane are closely connected, as both are dependent on increased opportunities being furnished for clinical teaching and study." Proposals of this kind have been warmly advocated by this JOURNAL in the past, and it is earnestly to be hoped that nothing will prevent their early translation into practice. Though it will not be wise to be very sanguine, yet public and medical opinion in favour of this reform is now so strong that it must have considerable influence with Parliament. For the full realization of these aims considerable expenditure will doubtless be necessary, but the passing of such a measure would allow much valuable work to be done even though the outlay was limited to a quite modest sum.

Among the other legislative proposals made by the Board was one to extend to public asylums, and to single cases, the principle of voluntary admission which now obtains with respect to private asylums. This has long been urged by the British Medical Association and the Medico-Psychological Association in regard to public asylums, and as regards single care was strongly advocated by Dr. Weatherly in his recent book, *A Plea for the Insane*. Another proposal of the Board is that the holders of the higher medical posts on the staff of institutions for the insane should be required to possess a diploma in mental diseases. It asks also that it should be empowered to make grants to "After-care" Associations.

Recent statistics of insanity present a very noteworthy feature. In 1915 for the first time the recorded number of notified insane persons under care in England and Wales showed a decrease of 3,278 on the preceding year; in 1916 the decrease was 3,159; in 1917 it was 8,188, and in 1918 it was 9,138. For the ten years ending December, 1914, there had been an average annual increase of 2,251, and had this rate continued the number of persons under care on January 1st, 1919, would have been 32,767 in excess of that actually recorded. It is inferred that these decreases are of a temporary character, being related to the exceptional conditions, social and economic, arising from the war. The very large decreases in

each of the last two years, however, have been due mainly to the abnormal number of deaths occurring amongst the patients in institutions for the insane. The number of deaths for the two years 1917 and 1918 was 17,293 more than would have occurred had the pre-war average been maintained, and this number of patients would have been living to swell the numbers under care; the actual decrease for these two years as shown above has only just exceeded that number.

As might be expected, there is a large reduction in the proportion of males to females under care as compared with the pre-war figures. Probably a considerable number of the 3,000 to 4,000 mental and nervous cases in military hospitals will eventually be certified as insane, and this must tend to restore the previously existing proportion between the sexes. It has to be remembered also that among those who volunteered or were called up for military service there must have been a certain number who, though showing no signs of disordered mind at the time of their medical examination, would, had they remained in civil life at home, have come under care and swelled the numbers. It is impossible to say what became of these potentially insane persons, but we may assume that some actually developed insanity while serving, some were killed, and possibly some found the remedy for their condition or were saved from the adverse effects of their civil surroundings by the life of the camp or the field; it is, of course, by no means necessary to conclude from the statistics that we sent lunatics into the army as such. It is clear, unfortunately, that no comfort can be derived from the smaller numbers under care as an indication of a diminished prevalence of insanity in the community. Nor can much greater encouragement be found in the statistics of admissions. It is true that a large and progressive decrease under this head occurred during each of the first three years of the war; a sharp rise was noted in 1918, and though it did not reach the level of 1914, which was considerably above the pre-war decennial mean, it only fell short of that mean by 321. The recovery rate calculated upon the total admissions was the lowest ever recorded in these statistics; but we are reminded that this may be due to a large number of recoverable cases having been dealt with in military and war hospitals without certification which in normal times would have come under the care of the Board. The death rate in 1918 was 19.56 per cent. of the average number resident; this was 7.89 above the percentage for the decennium and 2.70 above the rate for 1917. The proportion per cent. of deaths to the daily average resident in county and borough asylums was 20.2—namely, 25.1 males and 16.4 females. The average rate for the preceding ten years was 11.0 per cent.—namely, 12.4 for males and 9.7 for females.

A record so startling led the Board to appoint a Special Committee to investigate the matter; its recommendations, which in January last were issued with a circular letter from the Board to those connected with asylum administration, are printed in the report. The death rate per cent. rose in 1915, the first year of the war, to 12.1, and a marked rise in the mortality rate per 1,000 continued during 1915, 1916, and 1917. The chief causes of death were tuberculosis, senility, pneumonia, dysentery, and enteric fever. The Committee attribute part of the increase to the effect of war conditions, such as reduced supply of food, inadequate staff, and some degree of overcrowding; all are of a temporary character, and already some degree of improvement is being shown, but it is not believed that war conditions alone

¹ H.M. Stationery Office, 1919, price 4d.

would account for the alarming increase of sickness. Attention was drawn also to a number of matters of asylum practice and administration which were said to call for special effort towards improvement. While the Committee was of opinion that among the war conditions the unavoidable reduction in quantity and quality of the food supplied was the main factor in increasing sickness, it held that other factors were to be borne in mind, such as the lower physical condition and greater age of the patients admitted since 1914 and the more frequent transfer of patients from one asylum to another. In its recommendations the Committee laid stress on the need for much more effective segregation of sick and infectious patients and on the provision of an up-to-date self-dependent hospital building in connexion with each institution, under general hospital trained nurses, with small blocks for the treatment of dysentery and tuberculosis, and a section for the isolation of suspected cases of infectious disease. For the immediate treatment of tuberculosis and dysentery the purchase as early as possible of temporary hospital huts is urged, and the provision of adequate facilities for the expert bacteriological or pathological examination of cases.

DIAPHRAGMATIC HERNIA.

HERNIA of the abdominal contents through the diaphragm is a rare event in civil life, but among the wounds of war were a considerable number which produced this condition. As the liver prevents the smaller and more mobile viscera from attaining the right cupola of the diaphragm, hernia is practically unknown on that side. On the left it is otherwise, and both stomach and splenic flexure of the colon readily herniate through a defect in the diaphragm into the thorax. It will be remembered that the left cupola of the diaphragm rises in front as high as the fifth rib in the mid-clavicular line, corresponding to the eighth rib behind in the scapular line. A missile traversing the thorax at a comparatively high level has, therefore, ample opportunity of lacerating the diaphragm. As Cruveilhier showed many years ago that wounds of this muscle do not heal spontaneously (an observation more recently confirmed by Lapalle), it is evident that the conditions suitable for hernia must be of fairly frequent occurrence in chest wounds. The difficulties of diagnosis are sufficiently obvious, but with evidence of a previous low chest wound the possibility of diaphragmatic hernia should never be far from the mind of the clinician faced with an upper abdomen crisis.

An interesting review of the French literature on this subject which has appeared since 1914 has been published by Chastenot de G ry.¹ In this series are some 10 cases, only 4 of which were recognized clinically. This may be compared with Vayhinger's oft-quoted collection of 28 cases, in which the diagnosis was made eleven times. De G ry lays stress on the three types of symptoms and signs which may be present: (1) the purely abdominal, (2) those in which the chest signs predominate, (3) those with combined abdominal and thoracic trouble. Sometimes the abdominal signs may be of the common type of intestinal obstruction, as in Abadie's case, where the splenic flexure of the colon was strangled in an aperture in the diaphragm. More often the signs are anomalous: the obstruction is not absolute, distension is absent, the abdomen flat and supple, but vomiting is severe and may be of coffee-ground type, and chest signs are present, such as dullness at

the left base, absence of breath sounds; intercostal and epigastric pains, perhaps of remarkable severity may be present. The danger is that these chest signs may cause the surgeon to delay or even to abandon the idea of operation. In the case recorded by Legrain, Qu nu, and Richard the signs were those of a pyo-pneumothorax, and aspiration, practised *in extremis* for dyspnoea, withdrew gastric contents.

In one of Gaudier's cases, thoracotomy disclosed faecal fluid, and an intestinal fistula developed through the chest wound; the patient recovered. The most important help to a diagnosis is the realization of the effect the wound may be having. In quiescent cases, those of slow evolution, where the patient presents himself with gastric disturbances, epigastric or left hypochondrial pains, constipation, dyspnoea, palpitation, and intrathoracic gurglings, the diagnosis can be made with certainty by systematic radiography. It should be noted that it is not enough to exclude a gastric hernia by a bismuth meal; the stomach does not invariably travel through the diaphragm, and the colon may do so alone; a careful study must therefore be made of the splenic flexure.

As to methods of operation, there is a choice of the abdominal or the thoracic route, with the possibility of combining the two. The abdominal is the method of choice when the diagnosis is in doubt, but it may be impossible satisfactorily to suture the concave vault of the diaphragm from below without resection or mobilization of the costal margin. For this reason many have chosen the thoracic route. Suture is undoubtedly easier, but if repairs have to be carried out on the herniated abdominal contents there is little facility for doing them. Of the combined methods, that of Auvrey is at once the most efficient and the most drastic. The ninth rib is resected from behind forwards to its anterior end, and the incision then carried down to the umbilicus; the cartilaginous costal margin is cut through and the diaphragm incised up to the hernial opening. The diaphragm is carefully repaired and sewn up, and the wounds are closed. A difficulty sometimes met with is that the size of the aperture in the diaphragm is so great that it cannot be sutured. Cotte has suggested that mobilization of a rib might allow of closure by loosening the diaphragmatic attachments, but de G ry rightly believes that a fascial transplant would be equally efficacious and more simple.

THE BATTLE OF THE LODGES IN VICTORIA.

THE attack by the friendly societies (or lodges) in Victoria, Australia, upon the medical profession in that State has entered upon a new phase. Defeated at home, they are now seeking reinforcements in the United Kingdom. Their emissary is to try to obtain in this country one hundred doctors to act as medical officers, and is to be authorized to offer £1,000 a year, with extras for midwifery and surgery. At the same time the officials of friendly societies and "medical institutes" are asking the State Parliament to appoint whole time State health officers, whose duties would include attendance upon friendly society members, particularly in the country districts. We hope we may apply to the present generation of English doctors the scriptural proverb that "in vain the net is spread in the sight of any bird"; and we make no doubt that any man who studies the story told in the letter published in the SUPPLEMENT will be able to read between the lines of any offer that may be made to him, and realize the humiliating conditions to which he would be subjected. We do not know how the emissary

¹ *Gaz. des H p.*, September 13th, 1919.

of the friendly societies and medical institutes may proceed when he reaches this country—if, indeed, he has not already arrived—but we may say that advertisements, if tendered to this JOURNAL, would not be accepted. We may also take this opportunity of suggesting to young medical men that medical appointments of the kind which can be approved by the profession are not usually advertised only in the lay press; they may be, and in some circumstances by rule must be, advertised there, but announcements appear also in the medical papers. We suggest also that the deans of all medical schools should read the letter, since it is to them that young qualified men particularly apply for advice.

THE NEEDS OF THE EPSOM FOUNDATION.

ONLY a week ago, in reporting the Old Epsomian dinner, we were able to give an outline of the record of Epsom College in the war, from which it was apparent that the old boys of this public school may well be proud of their services to the country. This week it is our privilege to draw the attention of readers of the JOURNAL to the claims upon their benevolence of the Royal Medical Foundation of Epsom College. The school was founded some sixty-five years ago by a member of our profession whose object was to assist medical men to educate their sons well and economically. On another page we print a Christmas appeal by Sir Henry Morris, the honorary treasurer of Epsom College and its Royal Medical Foundation. The College Foundation, on which fifty boys are educated and maintained free of cost, is confined to the necessitous sons of medical men. In order to maintain these fifty scholarships, and the fifty pensions to aged and needy medical men or their widows, a yearly sum of not less than £4,500 has hitherto had to be raised by subscriptions. The treasurer now states that a far larger sum than this will be needed in the future. The Foundation, as he truly says, has strong claims on the public, and we wish to associate ourselves with him in urging all friends of the College to do their utmost to gain further financial support. Those who can are asked to increase their subscriptions for a few years; those who cannot do that are asked to bring the good work of the Foundation before their medical colleagues and others. The need for new contributors was never greater.

STANDARD SOLUTIONS FOR ESTIMATING THE REACTION OF CULTURE MEDIA.

A SHORT time ago the Medical Research Committee issued a report on the reaction of media, prepared by a subcommittee of the Pathological Committee appointed to consider how far it might be practicable and desirable to obtain the standardization of routine pathological methods. Modern work has shown that among the factors influencing growth the reaction of the medium is important. Some bacteria will grow in media having a wide range of reaction, but there are certain reactions at which they grow best. Certain other bacteria demand a more limited range, so that to obtain the best possible growth the reaction of the medium must be accurately adjusted. It was found that the titration method hitherto used gave untrustworthy results; a method to determine the concentration of hydrogen ions in the solution was found to be reliable. Further, it was ascertained that in ordinary laboratory practice very accurate results may be obtained by a colorimetric method, founded on the principle mentioned, which is comparatively simple in its application. These solutions may be made in accordance with the directions given in the report¹; but it appears that many workers would welcome an opportunity of purchasing sets ready for use. The Medical Research Committee, accordingly, have come to an arrangement with Messrs. Baird and Tatlock, whereby the latter have placed sets of these standard solutions on the market at an approved price, the actual

making and testing of the solutions being performed under the Committee's direction. The sets are at present of two kinds, one (with phenol red as indicator) having a range of P_H 6.6 to P_H 8.0, and the other (with bromocresol purple as indicator) having a range of P_H 5.4 to P_H 6.8. The solutions have been electrometrically controlled, and are permanent if kept protected from light. Each set consists of eight hermetically sealed tubes in a wooden block, and is sold at the price of 10s. 6d. An outer case to hold one set can be supplied at an additional cost of 8s. 6d. Indicator solutions to be used with these standards are also obtainable from the same firm, and are made up in duro-glass flasks, each containing 50 c.cm. All inquiries should be addressed to Messrs. Baird and Tatlock, Limited, 14-15, Cross Street, Hatton Garden, E.C.1.

DEATH OF AN X-RAY OPERATOR.

EARLY in December the daily press announced that a well-known French x-ray specialist, Dr. Auguste Jangeas, had been electrocuted whilst carrying out an ordinary x-ray examination of a patient. We are indebted to Messrs. Watson and Sons, x-ray apparatus manufacturers, for the following account of how the accident occurred: "Dr. Jangeas was making a screen examination at a hospital in Paris. The equipment consisted of a small high tension transformer working from alternating current without a rotating rectifier and with a radiator type of Coolidge tube. The x-ray room was very small and the high tension wires from the transformer to the tube were hanging in the form of a loop. Dr. Jangeas was making a fluoroscopic examination and had his hand upon the wheel of the tube stand, which was of metal, for the purpose of adjusting the height of the tube. The tube stand was not 'earthed,' and the result of the movement of the tube was to bring one of the hanging wires in contact with the stand, causing a direct short-circuit from the main through the transformer to Dr. Jangeas, who fell with his hand still grasping the tube holder, which he pulled down with him: the floor was of concrete, which made matters worse." It should be understood that with the ordinary x-ray apparatus which is in constant use in this country there is no danger of an accident of this kind to either the patient or the operator. The small American type of transformer in use was one in which the secondary high tension wires are in direct connexion with the primary current. With an apparatus of this kind it is imperative that examination couches, screening stands, and so on, should be earthed, and if this had been done the accident could not have happened. With this type of apparatus it is also essential that the wiring should be such that any short-circuiting is impossible. Unhappily, both these precautions had been omitted. The accident was most unfortunate and is to be deplored, but there is no reason why it should cause unnecessary alarm to either x-ray workers or those who have to be examined or treated by x rays.

FEE FOR NOTIFICATION OF INFECTIOUS DISEASE.

A CIRCULAR letter has been issued to local authorities by the Ministry of Health stating that the payment of the notification fee of 2s. 6d. will be resumed on the termination of the war. The fee was reduced from 2s. 6d. to 1s. under the provisions of the Local Government (Emergency Provisions) Act, 1916, which was to have effect only during the continuance of the war, and afterwards for such period, not exceeding one year, as might be fixed by the Ministry. Notice is now given that the provisions of the section will lapse on the date of the termination of the war as fixed by Order in Council, after which date the fee to be paid to a medical practitioner for the notification of a case of infectious disease will be restored to 2s. 6d. It will be remembered

¹ H.M. Stationery Office. Special Report Series, No. 35. Through any bookseller. Price 6d.

that by a recent order the notification of measles is no longer required. The Order in Council fixing the date of the termination of the war has not yet been issued.

SYNTHETIC DRUGS.

A COURSE of three Cantor Lectures was delivered at the Society of Arts during December, on the subject of synthetic drugs, by Mr. John Theodore Hewitt, D.Sc., F.R.S., Emeritus Professor of Chemistry, East London College. He followed the encyclopaedic method of describing each group of substances in turn, and this at least enabled his audiences to appreciate the present wide range of the subject. He began with a description of simple aliphatic compounds, and then of alcohols, formaldehyde, and paraldehyde; ketones and derivatives such as sulphonal; veronal and other compounds derived from urea, and non-aromatic cyclic compounds, such as the derivatives of borneol. Then from phenol, salicylic acid, and related substances, he went on to the derivatives of aromatic amines and amino-phenols—for example, phenacetin—and to compounds of heterocyclic structure, antipyrine, flavine, and others. Next came the modified alkaloids, chiefly heroin (diamorphine hydrochloride), which he described as a sedative resembling morphine, but without the same depressing action on the respiratory centre. He had also something to say, while on the subject of alkaloids, about adrenalin. The lecturer dealt with the large class of substances in which metallic or metalloid elements are associated directly with carbon atoms. He went through the elements, from copper to bismuth, and mentioned the many derivatives of sulphur used chiefly for their disinfecting and bactericidal action. Of mercury he said that the ordinary salts were not everything to be desired, chiefly because they so easily coagulated protein matter; therefore it was necessary to get the mercury into organic combination, if possible, and the chief success had been obtained by the use of more complicated amides and also amino-acids. Aluminium salts were astringents, and there were a good many aluminium derivatives, but not of any particular interest from the synthetic point of view and with very little recommendation from the medicinal. Although there were a good number of organic phosphorus compounds known, those in which the phosphorus was directly attached to a compound did not seem to have found much use, though, on the other hand, there was a large group of glycerophosphates. Many arsenic organic compounds had high therapeutic value. Professor Hewitt described the synthesis of salvarsan.

THE IRON BACTERIA.

A NUMBER of the higher bacteria are a source of perennial anxiety to engineers in charge of waterworks. Like certain protozoa, algae, and thread fungi, these bacteria have the power of picking up iron from the water in which they live, and storing it in and about their sheaths in the form of ferric hydroxide. It is to them that the foxy-red ochre beds of ferruginous pools and streams familiar to dwellers in the country are due; and there is good reason to believe that some, at any rate, of the commercially important beds of iron ores such as limonite and bog-iron ore are due to the activity of these bacteria in bygone ages. Excellent, however, as this habit of collecting iron salts from water may sometimes be, these bacteria have often done much damage to water supplies and their iron conduits. Mr. David Ellis, who has recently written a monograph¹ on the subject, states that some of the iron bacteria occasionally multiply to an extraordinary degree in the course of a few weeks and altogether change the character of the water. Others again multiply in attachment to iron pipes and accelerate the formation of incrustations, necessitating the installation of new

pipes or a thorough cleaning of the affected ones. Thus at Cheltenham in 1896 the water supply became reddish and turbid in March, and presently smelt abominably, not returning to the normal till the middle of June. This incident was recalled in an article on the biology of waterworks published in these columns in the autumn of 1917. Here the invading organism was the iron-bacterium *Crenothrix polyspora* known on the Continent as the "Brunnenpest," or pest of water supplies. Mr. Ellis describes the morphology and life-history of this organism and several others, the most important of these being *Leptothrix ochracea*, *Gallionella ferruginea*, *Spirophyllum ferrugineum* (first described by himself), *Cladothrix dichotoma*, and *Clonothrix fusca*. They all have limiting membranes, which are described indifferently as "mucilaginous" or "mucinous." Only two of them have been grown artificially in pure cultures hitherto, and there would seem to be a promising field for the bacteriologist in the further investigation of these organisms and of the best ways of combating their ravages. Thus *Gallionella ferruginea* must be regarded as the common cause of the appearance of the limpet-like incrustations of iron hydroxide which are apt to form inside iron water pipes and lessen their calibre, yet this organism has never yet been cultivated artificially. Mr. Ellis has collected a great deal of information about the iron bacteria, much of it based on his own investigations and discoveries, and his account of them is well written, and admirably illustrated with microphotographs.

THE NEW R.A.M.C. RATES OF PAY.

IN the JOURNAL of September 20th, 1919, an account was given of the new rates of pay and allowances for regular officers of the Army Medical Service. On October 18th we pointed out certain respects in which the new rates and conditions are unsatisfactory, drawing special attention to the main grievances in respect of the rate and method of calculation of retired pay. Our object was to express in plain terms the deep dissatisfaction which exists among R.A.M.C. officers with the provisions for pensions under the new Royal Warrant. We ended by making the suggestion that a fair remedy would perhaps be, in fixing pensions, to credit medical officers with five years' service on entry. More than two months have passed, but, so far as we are aware, nothing has yet been done. A medical officer (who is good enough to express his warm approval of the leading article published on October 18th) now writes to suggest that this matter is one that should be taken up in Parliament. He is certain that unless some such alteration as we suggested is made the effect upon the service of the retired pay provisions will be most detrimental.

THE SECRETARY OF THE OXFORD PRESS.

WE are indebted to Dr. Charles Singer of Oxford for the following tribute to the memory and work of Mr. Charles Cannan, who died on December 15th. His death, Dr. Singer says, will come with a sense of real personal loss to many members of the medical profession. For the last twenty-one years Mr. Cannan has been Secretary to the Delegates of the Oxford University Press, and he brought to his office a ripe scholarship, a fund of kindly humour, and an experience of men and things that earned for him the respect and affection of a whole generation of scholars. Though he wrote little, his broad interpretation of the duties of his post and his sympathetic outlook towards all departments of knowledge have set their stamp, deeply and permanently, upon British learning. Mr. Cannan was among the greatest Aristotelian scholars of his time, and many must have carried away from an interview with him the impression of a man who was not only an authority on the works of the master, but also one of his true disciples. His extraordinary fund of unexpected knowledge, extending to science and medicine, his

¹ *Iron Bacteria*. By David Ellis, D.Sc., Ph.D., F.R.S.E. London: Methuen and Co. 1919. (Demy 8vo, pp. xx + 189; 45 figures, 5 plates. 10s. 6d. net.)

flashes of humour, his eager love of truth and desire to help all good literary work, made up a most delightful personality, very thinly veiled and never hidden by a somewhat taciturn temper. His literary courage, the openness and freshness of his mind, the matter-of-fact manner in which he would discuss and undertake the biggest ventures, were truly remarkable. The Oxford Medical Publications, the *Quarterly Journal of Medicine*, and the series of works on medical history, all undertaken primarily on the initiative of Sir William Osler, as well as the host of other scientific publications that have issued from the great castle in Walton Street, commanded his attention and sympathy no whit less than the classical and philosophical material with which the name of Oxford and its Press is more anciently associated. Wisdom, he would have held, is justified of all her children. It was impossible to come in contact with Mr. Cannon without being influenced by his very powerful and interesting character, and there will be many of our profession who will miss a good friend and what is perhaps rarer and more valuable, a good critic. Learning herself has indeed lost a faithful and loving follower; but art is longer than life, and it is perhaps even more true of Charles Cannon than of most men that he continues to live in his works. Those works are to be seen in the mass of sound scholarship, wisdom, and research that has issued from the Clarendon Press in the last twenty-one years.

WE regret to announce that Mr. C. Louis Taylor, who retired from the position of Assistant Editor of the *BRITISH MEDICAL JOURNAL* in 1917 after many years' service, died on December 21st, after a long illness.

At the meeting of the Senate of the University of London on December 17th, 1919, the first award of the William Julius Mickle Fellowship, which is of the value of £200, was made to Dr. Thomas Lewis, F.R.C.P., F.R.S., of the Cardiographic Department of University College Hospital Medical School, in recognition of the work which he has carried out during the past five years on the nervous mechanism of the heart.

Medical Notes in Parliament.

Conditions of Life in Vienna.—Mr. Lloyd George, on December 18th, gave a number of particulars as to the conditions of life in Vienna. The bread ration per head per week for ordinary workers was 1,170 grams of flour, including 250 grams for cooking; for hard workers, 1,686 grams of flour, and 250 grams for cooking. It had been impossible for the Food Controller to guarantee these quantities. The normal ration in Vienna was 1,150 grams of flour and 500 grams for cooking. The normal ration for hard workers was 2,045 grams of flour and 500 grams for cooking. The supply of coal was 7 kilos per household per week for domestic and cooking purposes, as against in normal conditions 25 for domestic purposes and 20 for cooking. The existing ration could not be provided with any regularity. Vegetables were not rationed; only beetroot and turnips could be had. The present meat ration was 100 grams per head per week. The ration of fats was 120 grams. The milk supply was one tin of condensed milk supplied only to children under 7 years old, half to one litre per day of fresh milk supplied to children under one year. The supply of sugar was limited to three-quarters of a kilo per month in towns and half a kilo per month in the country. No figures were available as to the rate of mortality of children in Vienna. During 1918, the number of children born in the city was 19,000, and the number of children that died was 51,000. All food supplies now in transit to or in Austria would, it is understood, come to an end on January 21st, but every effort was being made to arrange for a further supply.

Residential Treatment for Tuberculosis.—Dr. Addison, on December 17th, in reply to Sir S. Hoare, gave the following information: The number of persons in England and Wales who were receiving residential treatment for tuberculosis under

the National Insurance Acts on December 1st was approximately 8,350. There was no precise information as to the numbers who were in receipt of domiciliary or dispensary treatment at that date. The numbers of persons who had received sanatorium benefit in England and Wales during the past five years were as follows:

1914	31,793
1915	29,711
1916	23,850
1917	31,566
1918	35,430

Sir Samuel Hoare asked whether Dr. Addison was satisfied with the results obtained, and if not whether he proposed to make any change in the system or the administration. Dr. Addison replied that he was not satisfied. Circumstances connected with the war were largely the cause of the incomplete success attending the measures inaugurated under the National Insurance Acts for combating tuberculosis. The circumstances were explained in the report of the inter-departmental committee presided over by Sir Montague Barlow, and steps were being taken to carry out the recommendations of that committee. The Government had under immediate consideration the question of the desirability of change in the system of administration. Major Molson asked whether many patients suffering from tuberculosis were untreated long before the war. Dr. Addison said that was so; it would take a generation to catch up arrears. Sir S. Hoare asked whether the Minister had considered the desirability of forming a special department at the Ministry of Health to deal with tuberculosis. Dr. Addison said that would be most undesirable. Asked the present cost of treatment, Dr. Addison said that the amount expended by public authorities in England and Wales during the financial year 1917-18 was approximately £1,550,000. This was the latest period for which complete figures were available. It was estimated that the expenditure during the present financial year would exceed £2,000,000. Expenditure defrayed by loans was in both cases excluded. Asked if he was satisfied that the expenditure was sufficient, Dr. Addison pointed out he had already said that he thought the facilities for treatment were insufficient. Major Hills inquired whether the Minister was satisfied that all persons entitled to receive treatment for tuberculosis were receiving it, and were receiving it at a sufficiently early stage of the illness. Dr. Addison said that all persons recommended for sanatorium benefits under the National Insurance Acts were receiving treatment in one form or another, but uninsured persons were in several areas not so fully provided for. The accommodation at present available for residential treatment was inadequate to meet the needs of the country as a whole. Steps had already been taken to expediate as far as possible the provision of additional residential accommodation. The question of securing proper treatment for each case at a sufficiently early stage was dependent to a large extent upon a correct diagnosis being made, and upon the willingness of patients to accept the appropriate form of treatment in the early stages of the disease. Captain Ormsby-Gore asked whether tuberculous children of insured persons were now given treatment under the Act. Dr. Addison said they were not as matters stood at present.

Payment for Medical Service under Insurance Acts.—Mr. R. Young asked, on December 18th, whether there were any fixed dates on which panel doctors should receive payment for work done under the Insurance Acts; and whether the Pensions Minister was aware that in Lancashire payment had not yet been made in full for services rendered in 1918. Dr. Addison said the existing arrangements necessitated the calculation of the number of insured persons in each area during the period to which each payment related, and necessarily involved delay in making a final settlement, although substantial sums were paid as promptly as possible. He was informed that there had been certain unavoidable delay in effecting a settlement in Lancashire for 1918, but payment of the final balances had now been made in all cases except in the few instances in which statements from the doctors had not yet been received. A new basis of payment would come into operation in 1920, and would enable settlements to be effected quarterly. Dr. Addison repudiated a suggestion by Mr. Newbould that the Insurance Act had not improved the health of the nation, and therefore that an alternative medical service was desirable. Mr. Newbould asked, further, whether the majority of panel practitioners regarded service under the Insurance Acts as degrading, but were under the present economic conditions compelled to take the service. Dr. Addison replied he had every reason to believe that both the suggestions of the question were unfounded.

The Air Medical Service.—Mr. Churchill, on December 16th, on the vote of £1,020,000 for supplies and transport for the Air Service, said he could quite see that the medical service of the Royal Air Force, even if it were not separated from the general medical service (as it was at present), must be a highly specialized branch, because the conditions required special aptitude. The effect that flying produced on officers and men made it necessary that the medical service dealing with them should have had a specialized study of those conditions. Therefore he fully recognized that it must be a specialized branch of the medical service. Dealing with points of detail on the vote, Mr. Churchill said he did not believe that the apparatus available for testing the efficiency of pilots was in any way inferior to any apparatus in use in any other air force in the world. Nevertheless, endeavours were being made to keep such apparatus up to the highest level that medical authorities could suggest.

Ministry of Health Orders in Council.—In a written reply to Sir J. Harwood-Banner, on December 15th, Dr. Addison stated that three Orders had been made under Section 11 of the Ministry of Health Act, dated June 25th, September 22nd, and November 25th. The effect of these Orders was that the whole of the Act had now been brought into operation, except proviso (1) to Subsection (1) of Section 3, dealing with medical research. The date on which it was proposed to bring this into operation had not yet been decided. No Orders had been made under Section 3. These draft Orders had been laid before the House, but they could not actually be made until next Session.

Sanatoriums in East Sussex.—Dr. Addison, in a written answer to Mr. Gwynne on December 18th, stated that there were six approved sanatoriums in the county of East Sussex, including those of the county boroughs of Brighton, Eastbourne, and Hastings. These sanatoriums contained accommodation in all for 248 patients, 146 men and 102 women and children. The 146 beds were all available for discharged soldiers and for insured and non-insured men, and the 102 beds for insured and non-insured women and children. There was need for further accommodation in East Sussex, and the purchase by the county council of a site and building to provide 120 beds had recently been approved. The returns did not show that discharged soldiers and others in the county who were urgently in need of treatment were unable to obtain it. On December 1st 29 discharged soldiers and other insured persons were in the sanatoriums, and 13 persons, including only 2 discharged soldiers, were awaiting treatment.

Army Doctor's Disablement Allowance.—Mr. S. Samuel, on December 18th, asked the Minister of Pensions under what circumstances his medical adviser set aside the considered finding of a medical board in the case of Captain D. L. Rowse, R.A.M.C., after the medical board had thoroughly examined him, the adviser never having seen or examined him, and if this adviser had the power to override the medical board without seeing or examining the applicant. Sir L. Worthington-Evans replied that Major E. L. Rowse (to whom he presumed the question referred) was examined in Malta on March 8th, and his disability was assessed at 10 per cent. On arrival in England he was again examined at a dispersal station, and the medical officer, who gave no particulars of his condition, put the disablement at 40 per cent. In view of the considerable difference between these assessments, Major Rowse was specially examined by a medical board of three doctors, who, after a careful examination, assessed the disablement at "under 20 per cent." Major Rowse, therefore, was eligible only for a gratuity, and this had been paid to him.

Medical Reports for Pensions Claims.—Mr. T. Thomson asked the Pensions Minister, on December 18th, if in the Middlesbrough district the doctors were refusing to issue the two medical reports prescribed in Circular 143, in connexion with claims for pensions under Article 9 of the Royal Warrant, unless they received from the discharged soldier a fee of 5s. for each of the two certificates required by every applicant, and whether authority would be given to the local Pensions Committee to pay their fees. Sir L. Worthington-Evans replied that under the article named a discharged soldier was entitled to claim a pension at any time after leaving the service if he could show that he was suffering from disability due to or aggravated by service, though he had made no claim on demobilization or discharge, and had then appeared to be in perfect health. In such circumstances it must rest on the man to substantiate his claim; the Ministry could not defray the expense of obtaining the necessary evidence. The procedure for claims was, however, being revised, and it was hoped to reduce the amount of primary evidence required.

Veneral Disease in Portsmouth Area.—Sir T. Bramsden asked the War Secretary, on December 18th, whether he would state, as regards military troops during the year 1919, so far as information was available, what venereal disease occurred in the Portsmouth area—the area administered by the Assistant Director of Medical Services, Portsmouth; what cases occurred in other similar areas in the United Kingdom; and a number of other particulars of classification which he enumerated. Mr. Churchill said it was quite impossible to furnish the information, which would only be available if special investigation had taken place, not only in the Portsmouth but other areas. Sir T. Bramsden asked for information as to the number of men suffering from venereal disease who had passed through Hulse Military Hospital in the Portsmouth district; how many were infected after using a disinfectant immediately after infection within one, two, three, four, and more than four, hours, and how many did not use a disinfectant. Mr. Churchill said that inquiries were being made, and the information sought would be given so far as it was found to be available.

Diphtheria and Scarlet Fever in London.—Dr. Addison, on December 18th, in answer to Mr. Gilbert, acknowledged that there was a shortage of beds for diphtheria and scarlet fever cases in London. He had for some time past been endeavouring to get back from the military authorities institutions which during the war were taken from the control of the Metropolitan Asylums Board.

Orthopaedic Hospitals.—Captain Ormsby-Gore asked, on December 17th, whether the Minister of Health had received proposals (BRITISH MEDICAL JOURNAL, October 11th, p. 457) from Sir Robert Jones and Dr. G. R. Girdlestone of Oxford for the establishment under the Ministry of Health of open-air country orthopaedic hospitals for children suffering from rickets, infantile paralysis, and surgical tuberculosis, on the model of the Baschurch and Stoke centres for crippled children. Dr. Addison

said he was acquainted with a very interesting scheme referred to which had been under the consideration of the Ministry. It dealt with one (a very important one) of those special institutional services the development of which was greatly needed, and which were now under the direct consideration of the Consultative Council, whom he had asked to advise as to a scheme of medical and allied services generally.

Administration of Anaesthetics in Hospitals.—Mr. Gilbert asked the Home Secretary, on December 17th, whether his attention had been drawn to some recent inquests held in London, when it was proved that anaesthetics had been administered in hospitals by unqualified persons, and whether he proposed to introduce legislation to prevent this practice. Dr. Addison replied that the subject was receiving his attention in relation to the recommendations of the Departmental Committee on Coroners. He could not make any statement as to the second part of the question.

Welsh Board of Health.—In a written answer to Sir David Davies (Denbigh), on December 15th, Dr. Addison said that four members had so far been appointed to the Welsh Board of Health—the Chairman (permanent), and two members (temporary), who received the same emoluments as were paid to them as insurance commissioners for Wales. The fourth member was the Housing Commissioner for Wales. The appointment was temporary and the holder drew a salary of £1,000 a year. The future establishment of the Welsh Board of Health was being considered in consultation with the Treasury.

Indian Army Medical Appeal Board in London.—Mr. Montagu, replying to Mr. Kidd on December 18th, stated that the medical board at the India Office consisted of three officers of the Indian Medical Service, of whom two only were present at the ordinary meetings, and there was right of appeal from the decision of such two members to the third member, who had not taken part in the decision. This member was ordinarily the president. The president was at present in India, and during his absence the appeal had consisted of two medical men, one of whom was a member of the Indian Medical Service but retired twenty-four years ago, and the other was a civilian. Neither took any part in the work of the India Office Medical Board. He did not propose to make any alteration in these arrangements.

Death Certification.—Mr. J. Davidson, on December 18th, asked the Minister of Health whether, in connexion with his consideration of intended reforms in the present law of death certificates, he would take note of the desirability of providing that no medical practitioner should certify a death without having first inspected the body, and that all deaths occurring suddenly after operations, or vaccination, or inoculation, or during injections, should be reported to the coroner by the medical practitioner in attendance. Dr. Addison said that the point referred to in the question would be considered.

BEIT FELLOWSHIPS.

THE trustees of the Beit Memorial Fellowships for medical research have recently elected seven Fellows, of whom two are medical women. The annual value of the fellowships is £300, and their tenure is three years, with the possibility of an extension of one year. The following are the new Fellows and, briefly stated, the researches they propose to carry out:

HARRY CECIL BROADHURST, M.B., B.S. Dunelm., late temporary Surgeon R.N., who will investigate, in the physiological laboratories of the University of Sheffield, the function of the kidney in maintaining the normal reaction of the blood by the secretion of acid, and its relation to the similar function of the lungs effected by the removal of carbonic acid.

IVAN DE BURGH DALY, M.A., M.B., B.Ch.Camb., who proposes, in the Institute of Physiology, University College, London, to compare the results on the electrical changes and mechanical response in the heart, and controlled changes in its mechanical conditions, as effected in the heart-lung preparation; and to engage in other electro-cardiological researches.

DAVID KEILIN, B.A.Camb., Sc.D. University of Paris, who proposes to investigate in the Quick Laboratory, Cambridge, the life-history of flies (parasitic, blood-sucking, and others) and their parasites.

ELIZABETH HERDMAN LEPPER, O.B.E., M.B., B.S.Lond., lately attached to the R.A.M.C. as bacteriologist at Malta and Salonica, who will undertake, at the Lister Institute of Preventive Medicine, an investigation into infections of the urinary passages with *B. coli*.

HELEN MARION MACPHERSON MACKAY, M.B., B.S., M.R.C.P. Lond., who will investigate, at the Lister Institute and at a children's hospital, the dietetic deficiencies causing malnutrition and debility in children, with special reference to the application of recent experimental work on vitamins.

THOMAS ARCHIBALD MALLOCH, M.D., C.M. McGill, M.R.C.P. Lond., late Major C.A.M.C., who will study, at St. Bartholomew's Hospital, types of pneumonia in relation to the causative bacterial organisms as a help towards exact diagnosis and treatment.

GEOFFREY MARR VEVERS, M.R.C.S., L.R.C.P., late temporary Captain R.A.M.C., who will undertake research, at the Helminthological Department, London School of Tropical Medicine, and at the Prosectorium of the Zoological Society, into the life-cycles of helminth parasites, with special reference to their migrations and the consequent reactions in the host.

HONOURS.

THE following are the statements of gallant and devoted services for which the decorations announced in the *London Gazette* of April 2nd, 1919, were conferred:

Military Cross.

Captain (acting Major) George Frederick Allison, R.A.M.C., attached 149th Field Ambulance.

For conspicuous gallantry and devotion to duty. On September 29th, 1918, immediately after the crossing of the Canal de l'Escout, when a regimental medical officer was mortally wounded, he went forward under intense fire and dressed and evacuated the wounded who were lying out. By his fine example of courage and devotion to duty he was directly responsible for saving many lives at this critical phase of the operations.

Temporary Captain (acting Major) Lewis Anderson, D.S.O., R.A.M.C. (D.A.D.M.S., 32nd Division).

On November 7th, 1918, in the neighbourhood of Avesnes during the advance following the breaking of the Sambre-Oise Canal line, he heard that a number of men were lying out wounded in the vicinity of the enemy. Having heard that the medical officer was also a casualty, and seeing that the area was being heavily shelled, he twice went to their assistance with the utmost disregard for his personal safety, and cleared the wounded.

Captain John Patrick Bonfield, C.A.M.C., attached 20th Battalion Canadian Infantry, 1st C. Ontario Regiment.

For conspicuous gallantry and devotion to duty. He established a regimental aid post in M-strin, immediately behind the front line, and twice went under heavy machine-gun fire to the lower slope of the Bois le Haut to attend and evacuate wounded. He also went to the help of a wounded officer under close range of machine-gun fire.

Temporary Lieutenant Samuel Frederic Boyle, R.A.M.C., attached 51st Brigade, R.F.A.

During the operations since September, 1918, he showed great devotion to duty. In particular in the operations round Ooteghem on October 22nd, 23rd, and 24th, 1918, he showed great gallantry in attending to wounded men at the battery position under heavy shell fire, and on one occasion crossed the open during an enemy barrage and helped to carry in wounded infantrymen.

Temporary Lieutenant Andrew Fisher Calwell, R.A.M.C., attached 13th Battalion K.R.R.C.

For gallantry and devotion to duty in the attack on Louvignies on November 4th, 1918. He attended to the wounded under very heavy shell fire, and subsequently removed them to a place of safety. Later he went forward through a barrage and remained dressing them in the open for two hours until all had been attended to.

Temporary honorary Captain Donald Earl Carter, R.A.M.C., attached 13th Battalion East Lancashire Regiment.

For devotion to duty and conspicuous gallantry during the operations at Pecq on November 6th, 1918. He went forward to the forward companies when a heavy artillery bombardment was on. Although gassed himself he remained at duty all night, and did not leave his post until the last case had been evacuated.

Captain Raymond John Chapman, 2/3rd (East Lancashire) Field Ambulance, R.A.M.C. (T.F.).

For great gallantry and devotion to duty at Le Cateau on October 18th, 1918. When a medical officer was shelled out of his aid post, he personally superintended the establishment of relay posts to the new regimental aid posts, and arranged for the clearing of the old regimental aid posts under heavy shell fire. Throughout the whole battle he set an inspiring example to those under him.

Temporary Captain Herbert Midgley Cockcroft, R.A.M.C., attached 75th Brigade Royal Field Artillery.

For conspicuous gallantry and devotion to duty at Malgarni on November 7th, 1918. Heavy and continued shelling caused many casualties, which he attended to in the battery positions, moving about from man to man with total disregard of danger, and although the position had to be cleared, he remained until all the wounded were dressed and evacuated.

Captain Douglas Gordon Cheyne, R.A.M.C., attached 240th (S.M.) Brigade, R.F.A. (T.F.) (Italy).

He is an ideal regimental medical officer, and commands the confidence and respect of all ranks. He shows great energy and cheerfulness under all conditions. These qualities were very marked during the recent operations, especially during the early stages of the advance on the Asiago Plateau, on October 31st and November 1st, 1918, when he displayed great coolness and devotion to duty under heavy enemy fire.

Temporary Captain Archibald Francis Reignier Conder, 109th Field Ambulance, R.A.M.C.

For conspicuous gallantry and energy during the advance through and north of Harlebeke between October 14th and 27th, 1918, in charge of the bearers clearing the 109th battalion. During the whole time he kept in close touch with the battalions, often in the front line under heavy shell fire. At the crossing of the Lys he brought his ambulance cars and bearers right up to the canal, and quickly evacuated the wounded, remaining under heavy shell fire till all were cleared.

Captain Walter Mundy Cox, 1/2nd (S.M.) Field Ambulance, R.A.M.C. (T.F.).

For conspicuous gallantry and devotion to duty during the late strenuous operations north of Asiago, Italy, from October 31st to November 2nd, 1918. He remained on duty night and day for practically seventy-two hours. During this time he was in constant communication with the infantry, and it was largely due to his efforts that such excellent touch was kept with the troops. He showed exceptional pertinacity in maintaining the liaison which was absolutely necessary to the success of the operations. He was much exposed to shell and machine-gun fire.

Captain John Alexander Dougan, C.A.M.C., attached 58th Battalion 2nd Central Ontario Regiment.

For gallantry and devotion to duty during the attacks on the Marocque line and Pont d'Aire on September 28th and October 1st, 1918. Throughout both of the above actions he worked under heavy

fire, dressing the wounded and superintending their evacuation. He at all times showed great coolness, and several times assisted in the carrying of the wounded. His untiring energy was the means of saving many lives.

Captain John James Balmanno Edmond, R.A.M.C. (S.R.), attached 4th Battalion King's Royal Rifle Corps.

For conspicuous gallantry and devotion to duty during the actions near Villers Outreaux on October 8th, 1918, and near Dourler on November 7th. When in charge of a regimental aid post he carried on the work of dressing the wounded in an exposed situation for several hours under heavy shelling, high explosive, and gas. Later, in an advance against the enemy position he continued to dress wounded men under heavy machine-gun fire for several hours, though early wounded in the leg.

Temporary Captain Dugald Ferguson, R.A.M.C., attached Head Quarters, 168th Brigade, Royal Field Artillery.

For conspicuous gallantry and devotion to duty at Bazuel on November 4th, 1918. He visited batteries constantly under heavy shell fire, and attended to wounded under most trying circumstances. His cheerfulness and untiring energy kept up the spirits of the troops.

Captain (acting Major) Thomas Ottiwell Graham, R.A.M.C. (S.R.), attached 71st Field Ambulance.

For conspicuous gallantry and devotion to duty during operations on the Piave, Italy, between October 27th and 29th, 1918. He was responsible for evacuation of wounded from the left brigade to the advanced dressing station, Lovadina. During the attack from the Island of Grave di Papadopoli, he led his bearers closely behind the infantry across the river under heavy shell and machine-gun fire and established a post on the left bank. He personally supervised the collection and evacuation of wounded from regimental aid posts to the island. It was due to his untiring energy, personal supervision, and excellent organization that the evacuation of wounded was carried out rapidly and with the maximum of comfort for the wounded.

Temporary Captain Hugh Arrowsmith Grierson, R.A.M.C., attached 251st (Northumbrian) Brigade, R.F.A. (T.F.).

For gallantry and devotion to duty. On October 1st, 1918, at Rallencourt, a battery came suddenly under heavy shelling, four men being killed and an officer and six men of a detachment wounded. He hurried to the spot and dressed the wounded men, staying on the position until assistance was procured to evacuate the wounded. On October 23rd, 1918, in Le Cateau, he again showed great devotion to duty under heavy shelling.

Captain James Gill Hill, 2/2nd (Northumbrian) Field Ambulance, R.A.M.C. (T.F.).

He showed great gallantry and devotion to duty as bearer officer on November 4th, 1918, at Fontaine-au-Bois, where he worked continuously, treating and clearing a large number of wounded under heavy shell and machine-gun fire. On the night of the 7th he volunteered to take up ambulance cars to St. Remy Chaussee. At this time the bridge at Tannieres was almost impassable for cars, but he succeeded in taking cars up to the line in the dark and cleared the forward posts.

Captain George Gerald Jack, R.A.M.C. (S.R.), attached 2/2nd (West Riding) Field Ambulance, R.A.M.C. (T.F.).

On the evening of November 2nd, 1918, at Escarmain, a main dressing station had just been commenced when the enemy opened a half-hour's concentration fire. Two bearers were killed and several others wounded. He promptly took charge and directed the collection and dressing of the cases and their clearance to a safe place. He showed great gallantry and ability.

Temporary Captain Rupert William Percival Jackson, 91st Field Ambulance, R.A.M.C.

During the attack by the 18th Infantry Brigade east of Vaux Anduys, on October 17th, 1918, he was in command of the R.A.M.C. bearers clearing the forward area. The routes of evacuation were under constant heavy shell fire. He kept constantly moving along these routes encouraging the bearers and setting a splendid example to his men. He undoubtedly saved the lives of many severely wounded.

Temporary Captain Arthur Cecil Laing, R.A.M.C., attached 1/2nd (Highland) Field Ambulance, R.A.M.C. (T.F.).

For gallantry and devotion to duty on October 24th, 1918, while on duty at the advanced dressing station, Douchy (south-west of Valenciennes), when for some hours the enemy shelled the immediate vicinity. During this period about twenty-two bursts occurred, several very close to the advanced dressing station, which was in an open building without cellars. His coolness and energy much facilitated the efficient treatment and evacuation of the patients.

Temporary Captain Frank Whitwell Kinnear Lawrie, R.A.M.C., attached 11th Battalion Notts and Derby Regiment.

During the advance east of Le Cateau, on October 23rd and 24th, 1918, he behaved with great gallantry under heavy fire, to which his post was subjected. He dressed and attended to large numbers of wounded with unflinching devotion to duty, and rendered very valuable service by going forward and evacuating wounded.

Temporary Captain Percival Garmany Leeman, 12th Field Ambulance, R.A.M.C.

South of Valenciennes, throughout the period October 21st to November 2nd, 1918, he was bearer officer, in the performance of which duty he displayed great gallantry and resource. His duty entailed constant movement in the open between regimental aid posts under heavy shell fire; he organized and maintained continuous touch between regimental aid posts, car posts and bearer posts, and although wounded remained at duty until the conclusion of the action.

Captain (acting Major) Henry Wingate Maltby, R.A.M.C. (S.R.), attached 22nd Field Ambulance (Italy).

For conspicuous gallantry, zeal, and devotion to duty. He was acting D.A.D.M.S., and during the operations of October 23rd and 24th, 1918, personally superintended the evacuation of wounded from the Lido bridgehead. His arrangements throughout showed the greatest initiative. Subsequently he personally supervised the arrangements for evacuating the wounded across the Grave di Papadopoli, and on both occasions he was frequently under heavy shell fire. Throughout the course of the operations his services were invaluable, and it was largely owing to his untiring efforts that the wounded were evacuated so successfully.

Captain Walter Cornel Morgan, C.A.M.C., attached 46th Battalion Saskatchewan Regiment.

For conspicuous gallantry and initiative on September 27th to 29th, 1918, before Cambrai. On September 27th, when the battalion attacked, he went forward under heavy fire and attended to the wounded in the field, and later establishing regimental aid post in the battalion objective he organized stretcher parties and personally supervised the clearing of all wounded. On September 28th he carried on his work in the face of great danger until he was wounded severely.

Temporary Captain David Lyall Morrison, R.A.M.C., attached 27th Brigade, R.F.A.

For most conspicuous gallantry and devotion to duty during the night of November 3rd and the morning of November 4th, 1918, near Beaudignies, when the batteries in the brigade were very heavily shelled. He went from one battery position to another, attending to and dressing the wounded and having them carried away to an aid post.

Captain Harris Mendelsohn, 6th Field Ambulance, A.A.M.C., attached 21st Battalion Australian Infantry.

During operations in the vicinity of Outbrechin, on October 5th, 1918, soon after the attack had been launched, he pushed his aid post forward under heavy shell fire, and established it at a most advanced position. Throughout the day he worked unceasingly, showing fearless devotion to duty, and was the means of saving many lives.

Captain Joseph Armand Pare, 11th Field Ambulance, C.A.M.C.

For conspicuous gallantry and devotion south-east of Valenciennes on November 2nd, 1918. Whilst working as bearer officer he made repeated trips into the village of Marly to evacuate wounded. This was done under intense gas and shell fire, the village being practically the front line all day. During subsequent operations he kept in close touch with advancing troops, and was responsible for the splendid work of clearing the battlefield.

Lieutenant Malcolm Clark Paterson, R.A.M.C.(S.R.), attached 7th Battalion Seaforth Highlanders.

For conspicuous gallantry on October 2th, 1918, near St. Louis, when he went forward under heavy fire to dress wounded in the open and to arrange for their removal to the rear. Again, on October 25th, 1918, near Ooteghem, when the battalion was held up by very heavy machine-gun fire, he made a tour of the front line and attended to the wounded under very trying circumstances. From September 28th to October 26th he showed marked devotion to duty.

Lieutenant Arthur Vernon Pegge, R.A.M.C.(S.R.), attached 15th Battalion Lancashire Fusiliers.

During the attack on the Oise-Sambre Canal, November 2nd to 4th, 1918, his aid post came under very heavy shell fire, and was also gassed at intervals. The casualties were very heavy, and he carried out his work in the open, working unceasingly and with untiring energy. By his personal example and zealous devotion to duty under fire, the task was carried out successfully, and an absolute block prevented.

Captain (acting Major) Andrew Picken, R.A.M.C.(S.R.), attached 70th Field Ambulance.

For conspicuous gallantry and devotion to duty between October 28th and November 1st, 1918, especially on night of October 31st, 1918. When the enemy were still holding part of Scile (Italy), on hearing there were wounded on the far bank of the Livenza River, he crossed the river, collected and dressed the wounded, and remained with them until he could evacuate them, at times being under heavy machine gun and rifle fire. He behaved splendidly.

Temporary Captain Alfred James Pirie, R.A.M.C., attached 10th Battalion Essex Regiment.

For conspicuous gallantry and devotion to duty. On October 29th, 1918, while holding the line in front of Petit Planty (near Le Cateau), battalion headquarters was heavily shelled. He dressed the wounded as casualties occurred and withdrew them into sheltered positions outside the area of fire. He has consistently shown great devotion to duty.

Captain (acting Major) Richard Payne Pollard, 2/3rd (London) Field Ambulance, R.A.M.C.

He showed great gallantry and devotion to duty during the period November 4th to 6th, 1918, near Sebourg. He worked for long hours attending and operating under fire on wounded men. At the same time he organized the dressing station and the evacuation of serious cases in such a manner that he was undoubtedly instrumental in saving many men's lives.

Captain (acting Major) Herbert Barrett Pope, 2/1st (West Riding) Field Ambulance, R.A.M.C.(T.F.).

For conspicuous gallantry and devotion to duty during the advance of the division from west of Le Quesnoy to east of Maubeuge between November 4th and 10th, 1918. During six successive days and nights he worked unceasingly as bearer officer in charge of evacuation from the divisional front. Adverse weather and the blowing up of roads and bridges made evacuation extremely difficult, but he maintained a continuous liaison with regimental aid posts, personally visiting them, and planning out fresh routes under heavy hostile fire.

Captain William Benton Rennie, R.A.M.C., attached 7th Hussars.

For conspicuous gallantry and devotion to duty near Huwais, Mesopotamia, on October 28th, 1918. During the withdrawal of the regiment he stayed behind to tend the wounded under heavy fire. He finally had to withdraw himself, and after mounting noticed a corporal who had lost his horse about to be overtaken by the advancing enemy cavalry. He immediately returned and taking the corporal up behind him rejoined the regiment. His fine action saved this non-commissioned officer from capture.

Captain Stuart Robertson, R.A.M.C.(T.F.), attached 16th Battalion Royal Welsh Fusiliers.

At Englefontaine, November 4th, 1918, he heard that the battalion had suffered heavy casualties on its position of assembly. He left his aid post immediately, and led his men through a heavy barrage to the assembly position. Here he worked in the open with the utmost coolness and disregard of danger under heavy fire, until all the wounded were cleared.

Captain (acting Major) William Albert Robertson, 22nd (Northumbrian) Field Ambulance, R.A.M.C.(T.F.).

During the recent operations he was in charge of the bearers attached to an infantry brigade from November 4th to 10th, 1918. He showed great resource and gallantry in the operations at St. Aubin and district, and his gallantry was an example to all the men under his command.

Captain (acting Major) Henry James Drew Smythe, 1/3rd (S.M.) Field Ambulance, R.A.M.C.(T.F.).

For conspicuous gallantry and devotion to duty on October 31st and November 1st and 2nd, 1918. He was in charge of the front line evacuation during all the active operations on the Asiatic front (Italy). He made a personal reconnaissance of the front and its approaches to establish the line of evacuation. On November 3rd he was ordered to withdraw his bearers, and in spite of intense shelling he personally saw to the withdrawal and brought all his men safely back, though slightly wounded himself. During the subsequent attacks he spent thirty hours visiting posts and encouraging bearers, often under intense shell fire and machine-gun fire. It was mainly owing to his disregard of danger, initiative, and devotion to duty that the long line of evacuation was kept working smoothly.

Temporary Captain Thomas Stordy, 23rd Field Ambulance, R.A.M.C.

He was with the bearers from the commencement of operations on the Piave (Italy) on the night of October 23rd to 24th, 1918. He showed a fine example to all his men under dangerous and difficult circumstances, maintaining liaison at all times with regimental medical officers, on two occasions passing through machine-gun fire to do so. He showed a complete disregard for danger and set a fine example of courage and perseverance to all under him.

FOREIGN DECORATIONS.

The President of the French Republic has awarded the *Médaille des Epidémies (en Vermeil)* to the following medical officers in recognition of distinguished services rendered during the course of the campaign: Major (acting Lieut.-Colonel) Rochford N. Hunt, D.S.O., R.A.M.C.; Major R. E. Todd, R.A.M.C. Temporary Major (acting Lieut.-Colonel) Henry Maurice Chasseaud, R.A.M.C. Captains Arthur E. Bonham, R.A.M.C.(T.F.), Cromwell Gamble, R.A.M.C.(S.R.), Archibald Oliver, R.A.M.C.(T.F.). Temporary Captain (acting Major) Albert W. D. Coventon, R.A.M.C. Temporary Captains Arthur Hyde Greg, O.B.E., R.A.M.C.; John W. Peil, R.A.M.C.

England and Wales.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

At a meeting, on December 16th, of the Council of King Edward's Hospital Fund for London, with the President, the Prince of Wales, in the chair, the honorary treasurer reported that the Fund was in a position to distribute £230,000. Sir William Collins said that the League of Mercy had contributed £17,000, an increase of £1,000 over last year, and of £3,000 over the last pre-war year. The report of the Distribution Committee, presented by its chairman, Sir John Tweedy, stated that there was a sum of £218,000—an increase of £28,000 as compared with 1918—for distribution among the London hospitals. Grants for maintenance amounted to £174,625, capital grants to £43,375. Of this last sum £12,025 was for the reduction of capital liabilities already incurred, the remaining £31,350 being earmarked for schemes which it was proposed to carry out in the more or less near future. Many applications had been received for capital grants, but it had been resolved to postpone several of the more important for consideration during 1920. In the first place some of the schemes had not yet been matured; in the second place many of them involved the provision of additional beds, calling for large capital expenditure and formidable liabilities for maintenance; in the third place the Fund was about to make a survey of the very large number of schemes that had been framed in view of the forthcoming distribution of surplus funds by the Joint Committee of the British Red Cross and the Order of St. John of Jerusalem in aid of improvements or extensions to hospitals able and willing to treat ex-soldiers and ex-sailors. The amount the Joint Committee had promised for the London area was £250,000. The survey would provide the Fund with complete material for considering how this amount should be distributed. The capital expenditure required to fulfil all the schemes would, it was estimated, be not less than three million pounds, and the additional annual upkeep would be more than half a million. Further capital expenditure would be required to meet schemes to bring existing hospital accommodation up to date by the provision of new nurses' quarters, the enlargement of out-patient departments, and other much-needed improvements which would not involve more beds. The report of the

Convalescent Homes Committee, presented by its chairman, Sir William H. Bennett, showed that the amount to be distributed to consumption sanatoriums was £8,770, and to convalescent homes £3,230, making a total of £12,000. The amount allotted to convalescent homes had been increased because most of those which, on account of the war, had ceased to be occupied by convalescent patients from London had been reopened during the course of 1919. The number of beds provided was sixty-six, distributed through six sanatoriums; of these nineteen beds were allocated to chest hospitals and the remainder to general hospitals. The small number of men's beds which the general hospitals appeared to be able to use for tuberculosis was a matter which might require further consideration next year; with regard to women's beds the committee had been unable to secure enough to satisfy the demand.

LIVERPOOL MEDICAL INSTITUTION.

At the fourth ordinary meeting, held on December 11th, 1919, when the president, Mr. W. Thelwall Thomas, was in the chair, Mr. Frank Jeans read a note on the treatment of hour-glass stomach, describing the condition, its causation, and x-ray appearances after a bismuth meal. He discussed the various methods of operation, and illustrated his own predilection by numerous drawings showing stages in the operation. Mr. George E. Simpson described a case of aneurysm implicating the blood vessels of the popliteal space. A shell fragment had lacerated the vein, and subsequently communication had been made between this vessel and the main artery. The aneurysm was excised and the patient made an uneventful recovery. Dr. H. Drinkwater of Wrexham read a paper on the clinical diagnosis of diphtheria and other throat affections. He described the appearance of faucial diphtheria, and emphasized the fact that the membrane was solitary, not multiple, and had a well defined margin. He contrasted this appearance with that of follicular tonsillitis and Vincent's angina, and made a strong plea for careful clinical examination so that a correct diagnosis might be made without waiting for the decision of the bacteriologist. Mistakes in diagnosis would be avoided if due attention alone were paid to the clinical appearances which were pathognomonic of diphtheria. He illustrated his statements by coloured photographs thrown on the screen, and numerous water-colour drawings of diphtheria, follicular tonsillitis, and Vincent's angina.

SCARLET FEVER AND DIPHtheria.

The number of cases of scarlet fever notified in London, which had been 515 and 503 in the two previous weeks, declined to 443 in the week ending December 13th. Cases of diphtheria in London, which numbered 305 and 269 in the two previous weeks, numbered 272 in the week ending December 13th. The Ministry of Health issued the following statement on December 19th:

The number of cases of scarlet fever notified in England and Wales (including London) during the week which ended on December 13th shows a decline on the number notified during the week before. The cases of diphtheria notified in England and Wales during the same week were slightly higher than in the week before, but the figures indicate that in London a fall in the number of cases had already begun. The suggestion which has been made in some quarters that the present epidemic prevalence of these diseases arises from causes connected with the milk supply is without foundation. There is no difficulty in London as to the supply of diphtheria antitoxin.

Inasmuch as scarlet fever and diphtheria are always present to a lesser or a greater extent, the administrative arrangements of the Metropolitan Asylums Board and the London County Council for dealing with cases are kept in working order. The difficulty which has been experienced in the course of the present epidemic in meeting the requirements of all the cases for which hospital accommodation has been sought, has arisen partly from the circumstance that the military occupation of the hospitals of the Metropolitan Asylums Board had not yet finally ceased. The Ministry of Health have for some time been taking steps to recover certain of these hospitals for civil use, and the difficulty of finding accommodation for patients is now being progressively overcome.

On the more general question, it may be stated that epidemics of scarlet fever occur at intervals of about four or five years and during interepidemic intervals the proportion of susceptible persons undergoes an increase. Scarlet fever was epidemic in England and Wales in the years 1907 and 1914 and the present epidemic differs from those of the above years in being of smaller dimensions, and in the attainment of the maximum prevalence a little later in the season. The periodic or quasi-

periodic appearance of epidemics is probably due to the occurrence of a cycle in the life-history of the unknown causative organism, and the increase of the non-immune population - causes which are beyond the sphere of administrative control.

INFANT WELFARE IN LONDON.

A deputation from the London Federation of Infant Welfare Centres recently had an interview with the Ministry of Health, when the results of a preliminary survey of the work of maternity and infant welfare centres in London were discussed. Sir Henry Harris, M.P., said that in London there was an exceptionally large number of voluntary agencies carrying on infant welfare work; the number was 154 as compared with 41 municipal centres. He urged that the voluntary centres should be encouraged as part of properly co-ordinated borough schemes. At the present time ninety centres received no financial aid from the borough councils. There ought, he said, to be an efficient scheme in every borough; as there was no central municipal authority with power to carry out the co-ordination, the help and guidance of the Ministry of Health was needed. Mrs. Waley Joseph, after pointing out that the success of the centres depended upon the confidence of mothers, workers, and midwives, due to the personal touch, said that adequate grants were needed, which should be paid promptly. Dr. H. H. Mills of Kensington expressed the opinion that it was undesirable for the M.O.H. to act as medical officer at a centre. The extensive and increasing use of dried milk ought to be considered a temporary expedient only, and added that more accommodation was needed for the institutional treatment of children from infant welfare centres. He concluded by expressing the hope that the Ministry would find it possible to keep the voluntary committee, as it was composed of women interested in many different problems. Dr. Addison, in his reply, said that he recognized the essential nature and great value of the pioneer work of the voluntary centres, but was not prepared at once to accept the idea that the Ministry, before accepting proposals submitted to it by borough councils, must consult voluntary agencies interested. He hoped that before long it would be possible to introduce measures for securing a properly directed and co-ordinated health administration. When Parliament imposed duties upon municipal authorities they must be held responsible and given discretion as to how far they should secure the co-operation of others. He thought, however, that it would be quite possible to frame proposals whereby voluntary agencies could be linked up with a proper scheme for health service. The points made with regard to delay in the payment of grants and those raised by Dr. Mills have, we are informed, since been discussed between the Federation and the Ministry.

ORGANIZATION OF HEALTH SERVICES IN LONDON.

Last March the London County Council appointed a committee to consider what alterations and extensions were desirable in the powers and duties of the different local authorities and other bodies, both official and voluntary, responsible for health duties in London. The report, which was presented on December 16th, sketched the development of health services in London. First in point of time came the environmental and other public health services of a local character, and the Poor Law medical services; then services in respect of infectious diseases, school medical services, services under the Insurance Acts, and services in connexion with maternity and child welfare. Concurrently the voluntary hospitals and other voluntary bodies, such as the Red Cross, the nursing associations, and various care committees, made an important contribution to the existing provisions. Defects in the organization were the overlapping of the functions of the Insurance Committee with those of local authorities; certain anomalies in connexion with the Poor Law authorities and the Metropolitan Asylums Board; divided jurisdiction in the health services for children, and the lack of adequate arrangements for the after-care of tuberculous patients and of properly organized medical services available, in return for suitable payment, for every member of the community. The existing arrangements for panel treatment had caused widespread dissatisfaction, and, as regards the non-insured population, there was a lack of facilities for obtaining treatment in nursing homes for those whose

circumstances permitted of the payment of a moderate fee. The proposals for reconstruction submitted were—

That the health functions of London Poor Law authorities should be divided between the Council and the borough councils substantially on the basis proposed in the report (the Maclean report) of the Local Government Committee appointed by the Minister of Reconstruction.

That the administration of such additional health services as might be required by future legislation should also be entrusted to the county and borough councils.

That the County Council should be the central organizing authority for all these services, which should be governed by a scheme prepared by the Council after consultation with the borough councils and approved by the Minister of Health.

That the Council should set up an enlarged Health Committee, the majority of whose members would be members of the Council, and the remainder other persons of experience in health matters; this would facilitate the appointment of sub-committees, one of which might be concerned with hospital management, and another with children's welfare.

That a Central Council of London Hospitals should be formed, on which the County Council and the Ministry of Health should be represented on a plan similar to that for the Central Council of District Nursing, but with a larger proportionate voluntary representation.

That the cost of public services of environmental or entirely local character should be borne by local funds, the cost of the prevention of the spread of infectious diseases by national funds to the extent of not less than one-half, the cost of the medical treatment of school children should remain on the present basis.

That in any other medical treatment provided by public authorities the principle should be recognized that the cost of such treatment should be borne, to the extent of his ability to pay, by the person treated, or by a fund, like the insurance fund, made up mainly by the contributions of employers and employed.

Underlying the whole scheme was the idea that the Council should be the sole central institutional authority for the county, making the by-laws, supervising the health work of the borough councils, acting in default in the event of their negligence, and responsible for surveying the whole field of health work and formulating schemes to provide for deficiencies, the fullest regard being paid in such schemes to the position of the voluntary bodies.

BIRMINGHAM R.A.M.C. DINNER.

A most successful reunion dinner was held at the Grand Hotel, Birmingham, on Wednesday, December 3rd, by the medical men who had served in the R.A.M.C. during the war. Lieut.-Colonel C. H. Howkins, C.B.E., D.S.O., presided, in the absence of Brevet Colonel F. Marsh, C.B.E., officer commanding Birmingham units, R.A.M.C., who was prevented by illness from being present. Fifty officers attended. During the proceedings Lieut.-Colonel Robertson, C.M.G., suggested that a permanent record of the work done by the medical units associated with Birmingham should be carried out in the form of a book, which would deal not only with those medical units which proceeded overseas, but also with the various hospitals formed in the Birmingham area. The diners were entertained by members of the 1st South Midland Field Ambulance pierrot troupe—"the Varlets." The arrangements of the dinner were carried out by the honorary secretaries, Captain H. F. W. Boeddicker and Captain W. Bowater, M.C. As the dinner was such a success it was decided to make it an annual event.

MEDICAL REUNION DINNER AT NEWCASTLE.

The Newcastle-upon-Tyne Division of the British Medical Association on December 11th entertained to dinner at Tilley's Rooms the returned medical officers resident in the Division who had served overseas. The guests numbered more than 80, and there were 150 present in all. It was thus one of the biggest dinners ever held by members of the medical profession at Newcastle. The chair was taken by Dr. E. F. Pratt. After the loyal toasts, Dr. W. Martin proposed "The Imperial Forces," to which Major-General Sir R. A. Kerr Montgomery responded. As general officer of the district he wanted to say how grateful all in the army were to the medical men for what they had done overseas. He wished also to thank those at home who did the work of doctors who had gone abroad. The toast of the evening, "Our Guests," was proposed by Sir Thomas Oliver, who congratulated them on their safe return to civil duty, and expressed the hope that the experience gained during the war would be turned to the highest account in the alleviation of suffering, and the restoration to health and fitness of those

needing their services. He ended with a sympathetic reference to the four local practitioners—Drs. Dunn, Sewell, Cross, and Bulkeley—who had laid down their lives in the service. Surgeon Commander R. J. Willan, R.N.V.R., replied on behalf of those who had served in the navy, and Colonel John Clay, A.M.S.(T.F.), on behalf of those who had served in the army, both speakers expressing warm appreciation of the welcome extended to them that evening by their colleagues. Dr. Andrew Smith proposed "The University of Durham," and Sir Theodore Morison and Dr. David Drummond responded. The health of the Chairman was submitted by Lieut.-Colonel D. Wells Patterson, and was very warmly received. The dinner was in every way a great success.

Ireland.

COUNTY TYRONE MEDICAL COMMITTEE.

At a meeting of the County Tyrone Medical Committee Dr. E. Thompson, F.R.C.S.I., D.L., was elected chairman: Dr. W. Lyle, treasurer; and Dr. F. Bradley, honorary secretary.

The following resolutions were passed unanimously:

That this meeting of the Tyrone Medical Committee, held on November 29th, 1919, to consider the letter addressed to the Omagh Asylum Committee, by four of our members, relating to the administration of anaesthetics and other matters, strongly disapprove of, and condemn the action of the doctors who signed the letter, and have heard the expressions of personal regret of two of the signatories for the methods they adopted.

That medical fees throughout the county be increased by at least 50 per cent. on pre-war rates, and that this resolution be published in all the newspapers circulating in Tyrone.

In the event of Dr. Murnaghan's resignation of the medical officership of Omagh Foresters' Society, as a protest against the smallness of the remuneration, we, the members of the Tyrone Medical Committee, pledge ourselves not to seek or become candidates for the appointment.

Correspondence.

MEDICINE AND THE PEOPLE.

SIR,—Words such as those of Sir Clifford Allbutt in your last issue fall like trumpet notes on the ears of the idealist. Many of us—now unknown to him—are not likely to forget the light of his teaching, or the inspiration of his faith. But out in the rough and tumble, groping, as we always are, amongst those "minor and incipient variations wherein diseases begin," the way often grows dark and uncertain, and false voices call to the easy path. It is just then that the authentic, authoritative, and unmistakable voice can hail us, and fill us again with the restless spirit of advance.

Only too well we know those "mischievous tendencies" which raise artificial boundaries and seek to distribute the practice of medicine, as it were, in parcels to a set of specialists. Be it noted that the true practitioner is a synthesist whose success depends upon a right fusion of the knowledge imparted to him by the specialists. He is also a pre-specialist in the sense that boundaries form only a small part of his equipment. A case, as it comes to him for the first time, is not necessarily medical, or surgical, or gynaecological; it is just and foremost a human being afflicted with "faint discords in the reciprocal interplay." This is indeed such difficult ground that we often shrink from it, but voices like those of Sir Clifford Allbutt and Sir George Newman give new courage. We have heard. We go on.—I am, etc.,

W. A. STOKES, M.A., M.D.Cantab.

Birmingham, Dec. 14th.

TEACHING OF OBSTETRICS AND GYNAECOLOGY.

SIR,—I beg the hospitality of your columns to correct an error. In the remarks I contributed to the above discussion I am reported to have said:

That efficiency in teaching was possible in a general hospital which was out of the question in a special institution.

What I really did say was:

That combined research among those practising different branches of medicine is easy in a general hospital, but wellnigh impossible in a special institution.

If you will refer to the official report of the meeting forwarded to you on December 15th you will see my remarks thus reported:

Dr. Williamson wished to add a few words upon the disadvantages of removing the study of obstetrics and gynaecology to special institutions. He pointed out the close association of the different branches of medicine with one another, and stated that in his opinion the best results could only be obtained by a band of workers—the surgeon, the radiologist, the physicist, the chemist and the physiologist combining together. Such a combination was impossible in a special institution.

I have a great admiration for the teaching given in Edinburgh, Dublin, Manchester, Glasgow, and other schools where obstetrics are taught in special institutions, and a very sincere regard for the teachers, many of whom are my personal friends.

I endorse heartily from my own observations the remarks in your leading article, that the education in these institutions is second to none, and I regret deeply that a misunderstanding on the part of your reporter has made me appear to cast a slur upon it.—I am, etc.,

London, W., Dec. 20th. HERBERT WILLIAMSON.

MODE OF QUININE ADMINISTRATION.

SIR,—In his interesting letter in the *BRITISH MEDICAL JOURNAL*, p. 796, Colonel W. H. Willcox states:

The therapeutic value of quinine bishydrochloride when given rectally, orally, intramuscularly, or intravenously for a given dose would in my opinion be approximately represented by the figures 1, 2, 20, and 40—for example, 5 grains given intravenously would be equivalent in therapeutic value to 120 grains given by the mouth.

He would greatly oblige us all by informing us whether this is a clinical or a statistical estimate, and also how the therapeutic values were measured. Is he sure that 100 grains given orally are much better than, say, only 30 grains orally (in one day)? I am very doubtful whether the therapeutic value of quinine always increases *pari passu* with the dosage. For example, Captain T. Gardner found that 2 grains four times a day caused the parasites to disappear as quickly as 30 grains a day did in eight cases of each class of treatment (vide the forthcoming *Observations on Malaria* being published by the War Office). But this was with relapsing cases only—see also the long series of precise observations in the *Annals of Tropical Medicine and Parasitology* (Liverpool). I am writing now merely to beg Dr. Willcox for further details.—I am, etc.,

London, N.W., Dec. 17th. RONALD ROSS.

"NEW LAMPS FOR OLD" IN OBSTETRICS.

SIR,—I remember Professor Simpson of Edinburgh telling us, in the course of his lectures, a story of a distinguished obstetrician being called to a case of labour, and asking his son to come with him, and on his noticing the latter furtively transferring a pair of forceps to his coat pocket, said, "What have you got there, laddie?" "Forceps, father." "Pit them awa, pit them awa, dae ye no ken what it says in the Lord's prayer?—Lead us not into temptation." I think of this story every time I dive into my midwifery bag, for it is always a temptation to get a case over as soon as possible, so as to be able to return to the warm comfort of one's bed, or to get on with other work. I am astonished that there should be any correspondence at all over the wisdom or otherwise of using forceps in normal presentations. To my mind, and surely to the minds of all sensible men, it is positively cruel to risk tearing the cervix, lacerating the vagina, and rupturing the perineum, with all the attendant dangers of sepsis, when a little time and patience will obviate all this. We have all seen the disastrous effects of too early interference, and gynaecological surgeons must have a poor opinion of the obstetric skill of some of our brother practitioners.

The golden rules to be observed in all normal labours are:

1. Have a well trained, cheerful nurse; this is very important.
2. Refuse to stay with the patient until the cervix is fully dilated. Should the baby be born before your next visit, so much the better for mother and baby. For my own part, once I am convinced that everything is normal, I direct the nurse to call me when the perineum begins to dilate.
3. Ease the pain by hypodermics and give chloroform when the head is about to be delivered.

4. Wait at least ten minutes before expressing the placenta so as to give it time to separate. Immediate forcible expulsion means the danger of mutilation and the leaving of some still adherent fragments.

There is too much rot talked about the "tortures of the damned," and so on. Look at the healthy old women of over 70 who have borne families of a dozen children and more without forceps, chloroform, or anything else.

To Drs. Mears and Stark I would say: Swot up Caesarean section.—I am, etc.,

Upholland, Dec. 13th.

J. THOMSON SHIRLAW.

SIR,—The answer to Dr. Corbet (p. 798) is that the teaching of hospital obstetric physicians is not always sound. Some of us remember the disastrous mistake they made in advocating antiseptic douching before delivery. Then, with regard to haemorrhage, sepsis, and lacerations, I quite agree with him that all these may occur if the forceps are applied twenty-four hours after the child should have been born, by a man who is careless about touching infectious cases, and who has never been taught to apply forceps properly. But when they are applied by a skilful practitioner, as soon as there is evidence of the slightest obstruction, and when the placenta is removed immediately and completely and the uterus squeezed down to the size of a cricket-ball and held firmly in both hands for two minutes, haemorrhage will never occur; at least, it has never occurred in my long series of cases. As regards sepsis, it should never occur as a result of anything the practitioner may do if he is careful about his hands and arms. Moreover, it is better to use no antiseptic other than soap and water, which is also a good lubricant.

Lacerations of the cervix do not occur from the forceps if the practitioner takes care to dilate it fully before applying them, and the perineum is not lacerated nearly so often as it is when the case is left to nature. But many practitioners do use terribly hard pulls in the case of occipito-posterior presentations; and here again lack of training is the cause of the trouble, because under chloroform the presentation may be changed to the normal by slipping the soapy hand over the child's head and revolving the body from the shoulders, thus facilitating delivery.

The preventable mortality from childbirth will never decrease till obstetrics is taught by the bedside; but the instruction should not be given until the students are qualified in medicine and surgery, and no practitioner should be allowed to undertake midwifery unless he qualifies also in this subject. The teaching may be done partly in hospital, but chiefly outside amongst the thousands of cases that are at present attended by students. When the students have watched experts use the forceps in hospitals, and have been allowed to put them on several times under supervision, they should be sent out in couples, one to give chloroform and one to deliver, on the understanding that any really bad case must be transferred to the wards, or if this is impossible, that the resident accoucheur must see for.

I wish to make it quite clear that I only advocate the early and frequent use of the forceps by competent men; and that only men who are competent should be allowed to practise midwifery.—I am, etc.,

North Shields, Dec. 14th.

F. C. MEARS.

PREVENTION OF VENEREAL DISEASE.

SIR,—In your issue of November 29th the honorary secretary of the National Council for Combating Venereal Diseases published a memorandum of nine clauses setting forth the present policy of the National Council. He states that the Council unanimously adopted the memorandum, and therefore we must presume that the whole of the Executive Committee endorse this policy.

Clause I states that "ample facilities for treatment and instruction to the public occupy the first place." As treatment is placed before instruction we presume that they consider treatment of more importance than prevention; yet it is a well established fact that no infectious disease has ever been noticeably reduced, much less exterminated, by treatment; whereas a large number have been greatly reduced, if not entirely eliminated, by efficient preventive measures.

Clause II states that it is not the policy of the National Council to conceal the truth, but it cannot be denied that

numerous supporters of the National Council have affirmed the inefficiency and uselessness of self-disinfection as a means for preventing disease.

Clause III is a truism.

Clauses IV and V actually represent the published policy of the Society for the Prevention of Venereal Disease, if the word "disinfection" is substituted for "cleansing," and the words "well-established prophylactics" for "disinfectants as may be recommended by a medical practitioner."

Clause VI is not quite a fair statement of the facts, and although we agree that these applications, if properly used, do sensibly reduce the risk of disease if applied within four hours after exposure, we consider that, if applied within one hour after exposure, would not only sensibly reduce but practically eliminate this danger.

We agree as regards Clause VII.

Clause VIII, which states that "no one should be urged to arm himself in advance with a prophylactic packet," is absolutely contradictory to the statements made in Clauses II, IV, and V, and renders the whole policy of the National Council for Combating Venereal Diseases incomprehensible. While recognizing the value of early disinfection they refuse to sanction the only means of carrying this out which is likely to succeed.

Clause IX only states a truism, for there can be none so foolish as to deny the value of other methods beyond chemical disinfection. Moral education, efficient legislation, notification, proper treatment, and the protection of individuals by a rigid code of convention are universally acknowledged as important weapons in our armamentarium for an antivenereal campaign.—We are, etc.,

H. WANSEY BAYLY,
A. C. MAGIAN,
C. F. MARSHALL.

London, W., Dec. 13th.

SIR,—We have recently had an opportunity of seeing the pamphlet issued by the Society for the Prevention of Venereal Disease and intended for wide circulation among the male population of this country. While giving detailed instructions for "immediate self-disinfection" it contains not a single word in favour of continence. The whole tone of the pamphlet is an implied sanction of, nay, an encouragement to, fornication, and would most certainly be so construed by any unfortunate lad into whose hands it chanced to fall.

It would be interesting to hear the comments in this country had that pamphlet been "made in Germany." Granted that universal premarital continence is unattainable, is this any reason for inciting the men and boys of this country to regard incontinence as a social necessity for civilized races? Do all the distinguished members of the Society for the Prevention of Venereal Disease regard with complacency and approval this attempt to make fornication "safe for democracy," or rather for the cold-blooded hedonist?

We have in our hands documentary evidence showing the effects of this pamphlet in leading astray young officers who, after hearing a N.C.C.V.D. lecture, had elected for a continent life, and demobilized officers of the R.A.M.C. can testify to the increased immorality among young soldiers resulting from the issue of "packets."

Apart altogether from the ethical question, is the policy of the Society for the Prevention of Venereal Disease the one best calculated to diminish the incidence of disease? We readily assent to the value of disinfection as a principle, but in this connexion it must be judged by practical results, not by laboratory experiments or armchair deductions. The real issue between the National Council and the Society is this: Take two large groups of lads, say, 10,000 in each group. To the one apply the teaching of the Society for the Prevention of Venereal Disease, as laid down in their pamphlet—merely directions for self-disinfection. Give the other group the benefit of the Council's methods—a clear exposition of the advantages of continence and of the nature and dangers of these diseases, with instructions as to the importance of immediate cleansing should intercourse occur, coupled with an appeal to their patriotism, chivalry, and sportsmanship to keep straight. In which group would the incidence of venereal disease be greater? Personally, we have the utmost confidence in asserting that the figures would show the superiority of the Council's instructions as an efficient weapon for prevention.

Very few statistics are as yet available, but we defy the Society for the Prevention of Venereal Disease to bring forward a single set of figures showing, to the satisfaction of an actuary, that methods based on their system have ever resulted in any striking diminution of disease. Should the recent debate on this subject in the House of Lords lead, as is hoped, to a publication of the actual figures for the Portsmouth area (in which, according to Lord Sandhurst, the incidence of venereal disease is two and a half times greater than for the whole United Kingdom), the profession will be able to judge how little foundation exists for the misplaced optimism of Sir Archdall Reid, whose "experiences" in that town constitute one of the chief assets of the Society for the Prevention of Venereal Disease.—We are, etc.,

E. B. TURNER,
OTTO MAY.

London, W.C., Dec. 16th.

EPSOM COLLEGE.

SIR,—It is again my duty to bring before your readers the good work carried out by the Royal Medical Foundation of Epsom College, which consists of (a) giving pensions of £30 a year to fifty aged and impecunious medical men or their widows; and (b) providing, free of charge, a high class education, together with clothing, maintenance, and pocket money, for fifty necessitous sons of medical men.

To enable these beneficent objects to be carried out the Council have had to supplement the moderate income derived from invested funds by procuring contributions from medical men and others amounting to at least £4,500 a year. It will be necessary, however, for a much larger sum to be obtained in future from subscriptions and donations, owing to the greatly increased cost of food, clothing, lighting, heating, wages, repairs, and general expenditure. Furthermore, Epsom College, like other secondary schools throughout the country, has had to incur a heavy additional expenditure in masters' salaries, while a more costly masters' pension scheme will have to be instituted shortly if the best masters are to be attracted to the College.

I therefore urge all friends of the College to do what they can to assist the Council to procure the further financial support needed, by increasing their own subscriptions for a few years, and by bringing the good work of the Foundation before medical men and others.

The Foundation has strong claims on the public, bearing in mind the services rendered by the medical profession in the prevention of disease as well as in the treatment of illness and accidents. It frequently happens that, owing to the exceptional risks to which medical men are exposed, permanent disablement and even premature death occur in the course of the discharge of their everyday duties. The Council have received numerous applications for assistance as a direct consequence of the war, and Foundation Scholarships and Salomons Entrance Scholarships have been awarded to several boys whose fathers were killed in action or lost their lives in torpedoed vessels. But these scholarships, together with the Council exhibitions, very inadequately meet the calls for aid in forwarding the education of many very necessitous and deserving sons of medical families.

The Pensioners and Foundation Scholars are elected in June each year by the votes of the Governors, who are allotted ten votes for every guinea subscribed annually; and ten votes a year for life for every donation of ten guineas.—I am, etc.,

HENRY MORRIS,
Honorary Treasurer of Epsom College and
its Royal Medical Foundation.

London, Dec. 17th.

DURHAM UNIVERSITY WAR RECORD.

SIR,—May I have the hospitality of your columns to appeal to all members of the University of Durham for help in compiling the definitive edition of the Roll of Service and Roll of Honour? Forms framed to include all details of military service have already been sent to all those whose addresses are known, and further applications from others for them would be welcomed by me at these offices. The last date for receiving such information will be December 31st, 1919.—I am, etc.,

H. J. THEODOSIUS,
University Offices, 38, North Bailey,
Durham, Dec. 18th. Registrar.

HOME AMBULANCES.

SIR.—I enclose a cutting from the *Western Mail*, December 20th, in which it is stated that the Order of St. John in Wales, through its new Priory, "intends organizing an ambulance transport service so that every village would have its motor ambulance."

I understood by your interesting leading article which appeared in an October issue, on Red Cross work in peace, that the conjoint body of the Red Cross Society and the Order of St. John were going to do such work. Now, Sir, I would like to know, in the public interest, if that arrangement has come to an end, or has the conjoint body ceased to exist? I am personally interested in the matter, because my friend Dr. Powell (Newcastle Emlyn) pointed out some time ago in the *Cardigan and Tivy-Side Advertiser* the urgent need of an ambulance transport in the district, and was supported in his appeal by the president of the county branch of the British Red Cross Society, Lady Webley-Parry-Pryse. I have frequently felt the need of such transport in my practice; this feeling is shared by all my colleagues in the district, and I am sure I am expressing their opinion when I say that I would like this matter definitely cleared up.—I am, etc.,

T. J. JENKINS,

Honorary Secretary, Vale of Tivy Medical Society; Coroner for the Cardigan District of the County of Cardigan.

December 20th.

** We regret that we are not able wholly to solve our correspondent's difficulties. The Joint Peace Committee of the British Red Cross Society and the Order of St. John was formed some months ago in order that the co-operation between the two bodies which had been so successful in war might continue in peace and any rivalry or overlapping be avoided. The policy of the Home Service Ambulance Committee is for the present to leave the large cities to provide for themselves, but to furnish ambulances for the use of country districts. In pursuance of this policy the Committee two or three months ago allotted two cars each to Anglesey, Brecknockshire, and Cardiganshire, one to Pembrokeshire, and four to Glamorganshire; two cars were allotted to Monmouthshire. It rather looks, therefore, as if the local centre or "Priory" of the Order of St. John in Wales were presenting another instance of that duplication of effort which it was hoped the amalgamation of the two central bodies might prevent.

PENSIONS FOR SENIOR MEDICAL OFFICERS, R.N.

SIR.—Elsewhere the British Medical Association, its works and its critics, are to be the subject of discussions. I should be glad if I might be allowed to add a further criticism.

My attention was drawn yesterday to some remarks in the columns of *Truth* bearing on the subject of pensions to senior naval medical officers which are such as to give rise to distinct and serious grievances. It is not my purpose to discuss these grievances, but I am told on the best authority that several letters on the subject have been sent to the *BRITISH MEDICAL JOURNAL*, and I would ask—I think with good reason—why it should be a lay publication and not our official journal which first takes action in this matter.

Moreover there is an idea in the service, whether right or wrong I cannot say, that when these questions are brought to the notice of the British Medical Association the matter is first referred to the authorities before any action or even discussion is allowed. Nor is this the first occasion on which the Naval Medical Service has felt that the British Medical Association takes but little interest in its welfare.

Sixteen years ago it was my privilege to try and enlist the sympathies of the British Medical Association in behalf of the service. I remember that *Truth* took up the question then. Although I have lived to see more reforms than I adumbrated then, I do not find that we have to thank the British Medical Association for any of them. My letters on that occasion were allowed to be twisted into a personal attack on the then medical director-general, and, in the absence of any editorial attempt to deal with matters on a useful basis, I saw no use in continuing the discussion.

I am not now, let me point out, making any personal attack, but I am venturing to criticize a corporate body (corporate bodies are notoriously without conscience or feelings)—to wit, the British Medical Association. In justice to this body and to the medical service of the navy I hope you will publish this letter, and thus add one more to the critics to be answered and possibly confounded.—I am, etc.,

GERALD SICHEL,
Late Surgeon R.N.

Sevenoaks, Dec. 12th.

. The British Medical Association has taken action in the matter of pensions to senior naval medical officers, as Dr. Sichel could have seen in a Current Note printed in the SUPPLEMENT of November 15th last. He is aware that a variety of letters on this subject were published in the JOURNAL during the weeks following the announcement (in our issue of July 26th) of the new rates of pay. These letters were considered by the Naval and Military Committee along with the communications received by it. The action taken was explained in a paragraph published last week (p. 824).

There is no foundation for the suggestion in Dr. Sichel's third paragraph that matters brought to the notice of the British Medical Association are referred to the authorities before action or even discussion is allowed. We have heard a similar statement before, but do not know how the myth originated. The other statement in this paragraph is an example of the proverbial shortness of memory for benefits received. The action of the British Medical Association in the interests of medical officers R.N. goes back to 1874. What was then done led, after a series of memorials and deputations, to the issue by the Admiralty of a new Warrant, which induced a naval medical officer of the period to declare that his brother officers "would never forget what is due to the British Medical Association for what it has done during the eventful years 1874-75." The Warrant seems to have produced content at the time; but various causes of discontent arose later. In respect of one of these, which would have involved a burking of the findings of a commission appointed to consider the affairs of the medical department, the Association was prepared to take action, but the Admiralty eventually issued new regulations which at the time were considered satisfactory. Later on, when it was obvious that the changes had not rendered the medical service of the Royal Navy popular, the Association again took action and forwarded a detailed memorandum to the Admiralty in July, 1914. The matter remained in suspense during the war, but early this year a special subcommittee was set up to deal with it. As to his fourth paragraph, the correspondence published in these columns in 1903 is on record, and Dr. Sichel's grievance can be judged by any reader who cares to consult the volume.

Universities and Colleges.

UNIVERSITY OF OXFORD.

At a congregation held on December 17th the following medical degrees were conferred:

D.M.—O. Newcomb.

B.M.—W. T. Collier, B. G. von B. Mellé.

The following candidates have been approved at the examinations indicated:

SECOND M.B.—*Materia Medica and Pharmacology*: C. C. H. Chavasse, H. K. Donham, W. E. Hayes, W. S. Tunbridge. *Pathology*: T. H. Cathrall, C. C. H. Chavasse, W. E. Hayes, J. G. Johnstone, M. H. MacKeith. *Forensic Medicine and Public Health*: H. E. A. Bolger, I. Harris, D. B. Pauw. *Medicine, Surgery, and Midwifery*: W. T. Collier, B. G. von G. Mellé.

D.P.H.—*Part I*: H. M. Arnan, J. I. Baerz, J. N. L. Blamer, G. K. Bowes, J. G. Browne, C. H. Carleton, A. P. Ford, F. W. Hamilton, G. T. Hebert, H. O. Jennings, M. M. Khan, T. McKibbin, S. C. Morgan, H. Smith, K. E. Tapper, H. Vallow, O. H. Warner. *Part II*: A. G. Auld, J. I. Baerz, G. K. Bowes, M. M. Khan, T. McKibbin, S. C. Morgan, K. E. Tapper, H. Vallow.

UNIVERSITY OF CAMBRIDGE.

At a congregation held on December 19th the following medical degrees were conferred:

M.D.—A. N. Drury, R. L. Mackenzie Wallis.

M.B., B.Ch.—D. S. Page, M. S. Thomson.

M.B.—R. St. L. Brockman, S. D. Kluwer.

UNIVERSITY OF LONDON.

At a meeting of the Senate on December 17th Dr. S. Russell Wells was elected Vice-Chancellor in succession to Sir Cooper Perry, who resigned the office in view of his appointment as principal officer.

Professor W. Bulloch, F.R.S., was appointed the first occupant of the newly established chair of bacteriology founded by the Goldsmiths' Company, and tenable at the London Hospital Medical College.

The following candidates have been approved at the examinations indicated:

- M.D.—BRANCH I (*Medicine*): R. A. Bennett, W. S. George, R. H. Simpson, Sybil I. Welsh.
BRANCH II (*Pathology*): L. M. Moody.
BRANCH V (*State Medicine*): C. S. van Renen Harwood, R. D. Passey.
M.S.—BRANCH I (*Surgery*): H. B. Kent, Raghuuath Dadoba Shrivalkar, E. G. Slesinger (University medal).

UNIVERSITY OF LIVERPOOL.

The following candidates have been approved at the examinations indicated:

- FINAL M.B. AND CH.B.—Part I, *Pathology*: O. A. Akhaly, W. J. Birchall, Doris Brown, W. E. A. Burton, Doris M. Cassady, A. C. Crawford, Susan H. Gilchrist, W. S. Gilmour, J. Goldberg, S. B. Herd, Isabel E. Imison, *E. W. Johnson, T. M. Jones, Florence M. Lamport, J. F. C. McColl, R. F. J. Martin, M. Newman, G. W. Phillips, Kathleen M. Platt, J. H. Pottinger, A. McK. Reid, Gladys Rutherford, J. C. Twomey, *S. V. Unsworth, D. O. Williams, Josephine M. Wilson.
Part II, *Forensic Medicine, Toxicology, and Public Health*.—†W. H. Evans, M. H. Pinegan, R. O. Jones, R. M. Jones, T. M. Jones, M. K. el Khadem, †G. H. Potter, G. R. Wadsworth.
* Distinction in Pathology.
† Distinction in Forensic Medicine and Toxicology.
‡ Distinction in Public Health.

The Diploma in Tropical Medicine has been awarded to the following:

- C. H. Bowle-Evans, R. M. Burnie, Joan M. F. Drake, W. J. Fraser, R. M. Gordon, C. F. Krige, I. L. Oluwole, W. C. Sowers, Mary G. Thompson, C. J. Young.

UNIVERSITY OF MANCHESTER.

The following candidates have been approved at the examinations indicated:

- FINAL M.B. AND CH.B.—Mary E. Boulton, Elizabeth C. Davies, J. B. Higgins, *F. S. Horrocks, E. R. Ormerod, E. Pigott, Doris M. R. Tomkin, *Obstetrics*: F. G. Hammett, J. N. Laing, *Medicine*: F. G. Hammett, *Forensic Medicine*: S. Almond, F. H. Anderson, Martha F. Barritt, Dorothy M. L. Dyson, E. Jones, A. Maude, E. R. Ormerod, J. S. Robinson, Constance Snowden, G. Talbot, H. W. Taylor.
* Distinction in Medicine and Surgery.

UNIVERSITY OF EDINBURGH.

GRADUATION CEREMONY.

The usual graduation ceremony which marks the beginning of the Christmas vacation was held on December 19th, when the Principal, Sir Alfred Ewing, K.C.B., conferred eighty-seven degrees, including the M.D. on nineteen, the M.B., B.Ch. on forty-nine, and the diploma in tropical medicine and hygiene on one.

At the close of the ceremony the Principal gave a short address, in which he said that the term had been crowded and strenuous, difficult for students, teachers, and even administrators. Never before had the rooms of the University been so crowded, and never before had the University been compelled to shut the door in the face of candidates whose only fault was that they had been too late in applying. It was satisfactory to find a spirit of real earnest work; men and women had come back to the University with maturer minds and a determination to get the best out of themselves and the University. Moreover, there had been a splendid resurrection of the social life of the University, both intellectual and athletic. The University was passing through a period of mental reconstruction very stimulating, but not without its special dangers and inconveniences. In every line of activity the world was calling for men and women with the higher education the University could give.

The following degrees were conferred:

- M.D.—C. E. Blair, A. S. Bremner, *W. F. Christie (Major R.A.M.C.), Mary O. Fergusson, J. Geoghegan (Captain R.A.M.C.), D. A. R. Haddon, S. H. Hall, *A. Hosking, S. Jackson, W. P. S. Johnson, H. Kerr, Muriel H. Kerr, W. McFarlane, *W. K. McIntyre, D. McKelvey, M. C. (Captain R.A.M.C.), *R. Morison, W. T. Paterson, *K. Simpson (Captain R.A.M.C.), †F. H. Stewart (acting Lieutenant-Colonel I.M.S.).

* Commended for thesis.

† Highly commended for thesis.

- M.B., B.Ch.—Ahmed Fahmi Abbassi, G. S. Bainbridge, L. van R. Becker, Gladys A. A. Boyd, J. G. L. Brown, D. A. Cadman, Margaret S. Caskie, N. H. G. Cloete, A. Y. P. Cochrane, W. H. Critien, Dorothy G. Davidson, I. A. W. Davison, H. J. A. Dingwall, H. R. Dodson, N. M. O. Dotti, Evelyn W. A. Dunderdale, A. R. Erskine, Millicent Fox, Gurdial Singh Gill, Alice M. Graham, J. A. Hennessy, W. A. Hennessy, R. A. S. Hoyte, A. Joe, R. N. Johnson, J. I. Kuit, J. Learmont, A. R. McLean, Jane S. McPhail, W. M. MacPhail, A. M. MacRae, †D. A. Miller, L. E. Miller, Helen

- Morison, Georgia I. B. Nichol, E. G. H. Payne, D. Rankin, E. A. Renner, W. B. Ross, Janet C. Ruge, Muriel Seilers, A. H. Shennan, A. M. Simson, S. Stein, H. W. Y. Taylor, T. R. R. Todd, Vera C. Veitch, G. R. S. Wallis, D. T. Watt.
D.T.M. AND H.—F. G. Macnaughton.

The Whiteside Bruce Bursary was conferred upon E. R. Boyd.

‡ First class honours.

§ Second class honours.

UNIVERSITY COURT.

At the meeting of the University Court on December 15th it was announced that a number of ordinances had been approved by Order in Council, including that for the foundation of the Chair of Psychiatry, and it was announced that Dr. G. M. Robertson, physician-superintendent of the Royal Asylum, Morningside, and lecturer on mental diseases in the University, whose nomination to the chair was announced some time ago, would formally assume his duties on January 1st, 1920.

Mr. F. E. Burton, M.B., was appointed lecturer on applied anatomy, and Dr. David Lees, with the concurrence of the city of Edinburgh, lecturer on venereal diseases. A post-graduate course in economic entomology has been instituted. It was reported that Dr. John Aitken, F.R.S., of Falkirk, an engineer who gave particular attention to colour and colour sensation and to the counting of dust particles, had left to the University such parts of his scientific apparatus as the University might select.

UNIVERSITY OF ST. ANDREWS.

The following candidates have been approved at the examinations indicated:

- THIRD M.B. CH.B.—*Pathology*: G. G. Buchanan, Nona S. Leslie, Isobel M. Mansie, *Materia Medica and Therapeutics*: G. G. Buchanan.
SECOND D.P.H.—*Sanitary Law and Vital Statistics, and Sanitation and Epidemiology*: D. Dempster, F. L. Keith.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

The following gentlemen, having passed the requisite examinations, have been admitted Fellows:

- J. R. Anderson, M. H. Barton, C. O. Bodman, C. S. Brown, A. H. Budler, A. Campbell, N. S. Carruthers, P. J. Chissell, F. Crooks, W. Crosse, A. B. Danby, W. Everett, A. H. Gibson, H. R. W. Husbands, Karan Chand Jaidka, H. V. Lamb, J. B. McDiarmid, G. M. Mullan, W. Martin, L. May, V. P. Norman, C. H. G. Poehin, W. Sowerby, G. Sparrow, M.C., D. C. Suttie, M. G. Sutton, Rustom Navroji Vakil, D. B. Walker, N. G. Sutton.

The Services.

SPECIALIST PAY IN THE R.A.M.C.

THE Director-General of the Army Medical Service in his address—which was published in the JOURNAL of October 11th—made the first public announcement with regard to the new rates of pay for specialist appointments in the R.A.M.C. In the past a limited number of such appointments have carried additional pay at the rate of 2s. 6d. a day, such appointments being limited to captains and majors. Sir John Goodwin gave an account of the revised rates which would come into force when the corps again settled down to the more or less normal conditions of peace.

In our issue of December 13th we printed a brief note announcing that sanction had been given by Royal Warrant to the issue of revised rates of additional pay and charge pay for officers of the Royal Army Medical Corps. The conditions and rates are published in full in Army Order No. 411 of 1919. This states that, with effect from January 1st, 1920, the following alterations will be made in the Pay Warrant dated December 1st, 1914. Additional pay within a limit of 5s. a day will, as from the beginning of next year, be issuable to officers not above the rank of lieutenant-colonel, while acting as specialist, in a post considered by the Army Council to merit the grant of additional pay, according to subjects or groups of subjects as under.

At the rate of 5s. a day:

- Operative Surgery, advanced.
Medicine.
Ophthalmology.
Gynaecology and Midwifery.
Dermatology, including Venereal Disease.

At the rate of 2s. 6d. a day:

- Otology, Laryngology, and Rhinology.
Radiology.
Anaesthetics.
Mental Diseases.
Hygiene.
Pathology.
Subjects, other than above, at the discretion of the Army Council.

Officers granted temporary higher rank while holding appointments in the services of hygiene and pathology will not be eligible for additional pay as specialists while holding such temporary rank.

The new rates certainly mark an advance in the right direction, and it is an important point that officers may now hold specialist appointments and draw the pay for them up to the rank of full Colonel—that is to say, Lieutenant-Colonels are no longer excluded. The number of subjects is increased, and the specialist pay in several of them is doubled.

Charge Pay.

The new scale of hospital charge pay, in substitution for Article 361 (a) of the Royal Pay Warrant of 1914, was announced in the JOURNAL of December 13th last, at p. 800. It is further laid down that an officer graded as a specialist appointed to the charge of a medical or surgical division of a general hospital may be allowed to retain his additional pay and to draw the rate of charge pay laid down for a divisional officer, provided that the total of the additional and charge pay so drawn does not exceed the rate of charge pay drawn by the officer in charge of the hospital. With this exception charge pay and additional charge pay as specialist will not be issuable concurrently.

The Royal Warrant governing all the above changes is dated November 27th, 1919.

The names of Lieut.-Colonel T. H. Foulkes and Major (temporary Lieut.-Colonel) I. M. Macrae, of the Indian Medical Service, have been brought to the notice of the Secretary of State for War for gallant and distinguished services rendered in connexion with the military operations at Aden from September 1st to December 31st, 1918.

Obituary.

J. I. B. BERKART, M.D., M.R.C.P.,

London.

DR. BERKART, who died on December 9th, was educated at University College, London, where he was a pupil of Sir William Jenner; he graduated M.D. at the University of Würzburg in 1871, and took the diploma of M.R.C.P. Lond. in the following year. He was for some time physician to the City of London Hospital for Diseases of the Chest.

His monograph on asthma was a well known work, and has often been referred to, containing, as it did, a critical survey of the different views which had been put forward in regard to the pathogenesis of the disease. The theory adopted by the author, however, found very little favour, seeing that it did not attribute the respiratory embarrassment to bronchial spasm, but to the presence of viscid exudate in the larger bronchi.

He had for some years, moreover, laboured at the subject of gout, in the same critical spirit, though only fragments of this work were published from time to time in the BRITISH MEDICAL JOURNAL and the *Lancet*. After Ebstein, he was the first to describe accurately, and to figure, the histological structure of intraosseous tophi, the details of which are not even now, as generally known as they might be. These observations showed that the deposition of urate is not the initial, but a later event in the production of the lesions.

Dr. Berkart was a physician of studious habit and retiring disposition. He ever held fast to the highest standard of medical ethics, and remained a close student of medical literature to the end of his career.

FREDERIC SKAIFE, L.R.C.P., M.R.C.S.,

Chichester.

By the death on October 23rd of Mr. Frederic Skaife, in his 70th year, Chichester and district lost one of its most popular medical practitioners. He studied medicine at St. Bartholomew's, and after taking the diplomas of L.S.A. and L.R.C.P.E. in 1871 and M.R.C.S. in 1872, he for a short time held resident appointments in Carlisle, Penrith, and Wigton; but his life's work was done in Chichester, where he started practice in 1879, and retired only in March of this year. During the whole of that time he was on the surgical staff of the Royal West Sussex Hospital, where his work was held in great repute. In private practice, on account of his experience and skill, he was highly esteemed. Equally attentive to rich and poor, he established a remarkable hold on the affections of all who knew him. He was a keen sportsman, his chief recreation being hunting. As a follower of hounds he was a fearless rider, and was considered one of the finest of horsemen. Genial, courteous, straightforward, of good

presence and attractive personality, he was a fine type of an English gentleman.

Like so many others, Mr. Skaife had his sorrows in connexion with the great war. Both his sons were officers in the old army, and both went to France with the Expeditionary Force. Within a short time both were reported killed. Subsequently it was found that the younger son was wounded and a prisoner in German hands; he was repatriated in 1918. Notwithstanding his great sorrows and anxieties Mr. Skaife kept bravely on as usual, and did much war work. He is survived by his widow and by his younger son already mentioned—Lieut.-Colonel E. C. Skaife, O.B.E., Royal Welsh Fusiliers.

WE regret to announce the death of Dr. R. FRANCIS CRAGGS, which took place at Newcastle-upon-Tyne on December 6th. He was born at Newcastle in 1869, and was the son of the late Joseph Craggs of that city. He studied medicine at Newcastle, and graduated M.B. and B.S. at the University of Durham in 1890, and proceeded M.D. in 1893. Though chiefly engaged in general practice in Newcastle, which he commenced in 1894, he was also for many years ophthalmic surgeon to the Hospital for Sick Children, and surgeon to the Throat and Ear Hospital, Newcastle-on-Tyne. He was a keen antiquary and philatelist, and was for some time vice-president of the North of England Philatelic Society. Dr. Craggs had for some years suffered from severe heart disease, and this was much accentuated by his self-sacrificing work during the war, when practically all the doctors of the district were on military service. He is survived by his widow and two sons. The funeral service was held on December 9th at St. George's Church, Jesmond, with which he had been closely associated, and on the following Sunday the Vicar of that parish paid a tribute to his zeal and earnestness. The interment took place at St. Andrew's cemetery in the presence of a large gathering.

Medical News.

DR. ADAM FULTON has been appointed a Justice of the Peace for the city of Nottingham.

DR. ADDISON, the Minister of Health, has appointed Mr. A. L. Lowe, C.B.E., and Miss Alice L. Wallace to be members of the Advisory Committee on the Welfare of the Blind.

THE discussion on the various aspects of tuberculosis as affecting child life will be continued at a further joint meeting of the Tuberculosis Society and the Association of School Medical Officers to be held on Monday, January 12th, 1920, at the rooms of the Medical Society of London, 11, Chandos Street, W., at 7.30 p.m. Lieut.-Colonel F. W. Higgs, C.B.E., Dr. Letitia Fairfield, C.B.E., Dr. Jane Walker, and Dr. Watt are expected to take part in the discussion.

THE Medical Research Committee has issued an important report on the ultimate results of the treatment of syphilis with arsenical compounds, to which we hope to refer more at length in an early issue; but it will be interesting now to note that the observations confirm the overwhelming importance of diagnosis and treatment in the primary stage before the Wassermann reaction becomes positive, and afford no evidence that the administration of mercury, after a course of arsenical treatment, has any effect in preventing relapse.

THE Royal Statistical Society has presented to the Prime Minister a petition signed by a large number of persons of experience in statistics, and also on behalf of many learned bodies, some of the most important county and municipal authorities and chambers of commerce, asking that a Royal Commission or Parliamentary Committee should be appointed forthwith to inquire into the existing methods of the collection and presentation of public statistics, and to report on the means of improvement. A number of instances are given, relating chiefly to trade and commerce, in which statistics are either not available or very imperfect. It is said that there is a lack of co-operation between the different departments, defective supervision of the collection of statistics in some cases, and the employment, especially for census purposes, of persons ill paid and insufficiently educated, and therefore not interested in the collection.

Dr. T. BARRETT HEGGS, medical officer of health of the North-East Kent United Districts, has been appointed by the Government of Mesopotamia to be Medical Officer of Health of the City of Baghdad and will leave England for this appointment in March next. For the past ten years Dr. Higgs has been M.O.H. of these districts of Kent, medical superintendent of his districts' joint isolation hospital, local tuberculosis officer, medical inspector of school children, M.O. to school clinics and infant welfare centres, certifying factory surgeon for Sheppey, and M.O.H. to a portion of the Port of Faversham, and also medical superintendent of Keycol Sanatorium (the first municipal sanatorium to be built in Kent). During the war, while serving in Mesopotamia, Dr. Higgs was appointed by the army to be Medical Officer of Health of Baghdad in August, 1918, till demobilized early this year.

WE learn that an important amalgamation of French journals devoted to obstetrics and gynaecology has been arranged, and that Messrs. Masson are about to begin to issue a new periodical—(*Gynécologie et Obstétrique*)—to replace the *Annales de Gynécologie et d'Obstétrique*, the *Bulletin de la Société Obstétricale*, *La Revue de Gynécologie* (Pozzi), *Les Archives Mensuelles d'Obstétrique et de Gynécologie* (de Bar and J. L. Faure), and *Les Annales d'Obstétrique et de Gynécologie* (Hartmann, Couvelaire, and Pinard).

THE Vermin Repression Society will hold a dinner at the Connaught Rooms, Great Queen Street, W.C., on January 9th, 1920, to celebrate the success of its efforts to induce the Government to legislate for the suppression of rats and mice. The chair will be taken by Lord Aberconway. The council of the society includes men of science, and one of its aims is to encourage scientific research.

THE subject for the next award of the Liddle Triennial Prize is "The etiology of influenza." Essays, distinguished by a motto or device, must be received by the Dean of the London Hospital Medical School (from whom further particulars can be obtained) not later than June 30th, 1920. The object of the prize, which is of the value of £120, is to encourage original observation and investigation. No award will be made if, in the opinion of the examiners, the essays have not attained a sufficiently high standard of excellence.

AN association of the medical press of Japan has recently been established. The first meeting was held on August 11th.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the BRITISH MEDICAL JOURNAL alone unless the contrary be stated.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C.2, on receipt of proof.

IN order to avoid delay, it is particularly requested that ALL letters on the editorial business of the JOURNAL be addressed to the Editor at the Office of the JOURNAL.

THE postal address of the BRITISH MEDICAL ASSOCIATION and BRITISH MEDICAL JOURNAL is 429, Strand, London, W.C.2. The telegraphic addresses are:

1. EDITOR of the BRITISH MEDICAL JOURNAL, *Atiology*, Westrand, London; telephone, 2631, Gerrard.
2. FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate*, Westrand, London; telephone, 2630, Gerrard.
3. MEDICAL SECRETARY, *Medisecra*, Westrand, London; telephone, 2634, Gerrard. The address of the Irish Office of the British Medical Association is 16, South Frederick Street, Dublin.

LETTERS, NOTES, ETC.

MEDICAL FEES.

"JUSTITIA" writes: Is it not time for the fee for police calls to be raised? The medical man is still practically obliged to attend during the day any such case whatever he may be engaged in at the moment—often at great inconvenience to himself—for a fee of 3s. 6d., which is the pre-war fee. I ought also to mention that the Metropolitan Water Board only pay 10s. a year for medical attendance and medicine for each of their employees, who are mostly older men; and, worse still, the Hospital Saturday Fund only pay 3s. 6d. for a month's attendance and medicine on each of their applicants.

"DAMAGED GOODS" ON THE FILM.

EUGENE BRIEUX's play *Les Avariés* was written in 1901. It shows the tragedy of a home riddled with syphilis, and is therefore in line with Ibsen's *Ghosts*. An English translation

was made by John Pollock, under the title of *Damaged Goods*, and private performances were given in London in 1913. The play was afterwards licensed by the Lord Chamberlain, and when produced by Mr. J. B. Fagan in 1917 it ran for 250 performances. A film version has now been prepared by the W. and F. Film Service, Limited, and a private representation was given on December 16th at Terry's Theatre. The film has been produced in this country by British actors and actresses. We understand that the Censor of Films has so far refused to pass it for representation in public, yet it is a powerful piece of moral propaganda, and there has been an evident effort to avoid what is merely revolting. After the performance Father Bernard Vaughan gave it as his opinion that *Damaged Goods* was a most impressive film that would inculcate a great warning to unthinking young people. He said that the cinematograph had come to stay, and those who exhibited it had a great opportunity to take a share in educating the masses upwards. Mr. J. A. Seddon, M.P., who agreed with this point of view, was probably not far wrong when he said that 90 per cent. of the population were more influenced by visual than by oral education. Considering the sort of stuff that is shown daily and nightly to millions of people of this country at cinematograph theatres, we find it difficult to understand on what grounds the licensing authority withholds permission for public representation of this artistic and most serious production.

SEVERE ANAPHYLAXIS: RECOVERY.

Dr. A. ESTCOURT-OSWALD (Colchester) writes: I am glad to see an account of Captain W. T. Munro's case of anaphylaxis recorded in the BRITISH MEDICAL JOURNAL of November 22nd, 1919, p. 668. Captain Munro mentions that it is not possible to produce anaphylaxis in an animal while it is under the influence of ether. This raises an interesting question: was the recovery in this case due to any antianaphylactic action of the chloroform, or purely to its antispasmodic action?

One other point. Captain Munro has hardly done himself justice in his account of the case. I was present at the time and I have never seen a man so near death and yet recover. Had it not been for Captain Munro's extremely prompt and plucky treatment the case must have ended fatally.

AN IMBECILE'S MEMORY.

Dr. A. N. HAIG (Yeovil) writes: Apropos of Dr. Pereira Gray's note on "An imbecile's memory" in the BRITISH MEDICAL JOURNAL of December 6th, p. 762, the following extract from *Memories Grave and Gay*, by John Kerr, LL.D., late Chief Inspector of Schools for Scotland, may be of interest:

"The abnormal development of one sense or faculty, as in some sort a compensation for the absence of others, is well known. I have seen two very striking examples of this in the same asylum. One was a boy, and the other a girl, both completely blind, and both largely imbecile. . . . The girl, who was 8 or 9 years of age, was an inmate for several years, but was ultimately sent home as hopelessly unteachable, and yet she had the remarkable faculty of being able to tell instantly on what day of the week any date that could be mentioned would fall. Three or four years ago, when the Lord High Commissioner and his suite visited the asylum, I gave each of them a separate card of all the months of the year. To every date they mentioned the girl gave at once the day of the week on which it fell. I tried her with the dates of the three preceding years, with the same result. She made only one slip, and immediately corrected herself. She has not been taught, for the best of all reasons, that the teacher has not the slightest idea how she does it. When asked how she does it, she replies, apparently in the most brainless tone, 'I don't know.'"

I am reminded that the late Professor Stephenson of Aberdeen used often to say that to be able to guess the time correctly was the mark of an imbecile.

VACANCIES.

NOTIFICATIONS of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 36, 37, 39, 40, and 41 of our advertisement columns, and advertisements as to partnerships, assistantships, and locum tenencies at pages 38 and 39.

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Each additional line	...	...	...	...	0	0	9
Whole single column	...	...	...	...	4	0	0
Whole page	...	...	...	...	12	0	0

An average line contains six words.

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Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.

THE
British Medical Journal.

THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

SUPPLEMENT

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PROCEEDINGS OF THE GENERAL MEDICAL COUNCIL

MEDICAL BILLS IN PARLIAMENT

NATIONAL INSURANCE PROCEEDINGS

NAVAL AND MILITARY APPOINTMENTS

ETC.

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SPECIAL NOTICE TO MEMBERS.

Every Member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he or she belongs.

MATTERS REFERRED TO DIVISIONS.

British Medical Association.

SUPPLEMENTARY REPORT OF
COUNCIL, 1918-19.

Preliminary.

HONOURS TO PAST AND PRESENT OFFICERS OF THE
ASSOCIATION.

230. The Council has gratification in reporting the following honours bestowed upon past and present Members of the Council:—

Major (temporary Colonel) Hamilton A. Ballance, C.B., a former Chairman of Representative Meetings, created K.B.E.

Lieut.-Col. A. Bolam, created O.B.E.

Lieut.-Col. (temporary Colonel) Henry Davy, C.B., a former President of the Association, created K.B.E.

Lieut.-Col. E. W. Goodall, created O.B.E.

Col. R. I. D. Hackett, created C.B.E.

Lieut.-Col. D. G. Thomson, created C.B.E.

Dr. T. Jenner Yerrall, Chairman of Central Medical War Committee, and a former Chairman of Representative Meetings, created a Knight.

Lieut.-Col. Sinclair White, a former President of the Association, created C.B.E.

Organisation.

GROUPING OF HOME DIVISIONS FOR ELECTION OF
REPRESENTATIVE BODY, 1919-20.

(Continuation of paras. 45-6, page 73, of Annual Report of Council.)

231. Pursuant to authority delegated by the Council, the Organisation Committee on consideration of the membership figures contained in the Annual List of Members, 1919, decided that the Constituencies for election of the Representative Body, 1919-20, under By-law 33, be the same as for 1918-19, with the exception that (1) the Isle of Wight Division be grouped with Southampton Division, (2) Caithness and Sutherland, Islands and Ross and Cromarty Divisions form an independent Constituency, and (3) Inverness Division form an independent Constituency.

The Annual Report of the Council was published in the Supplement of May 3rd, 1919.

GROUPING OF HOME CONSTITUENCIES FOR ELECTION OF
TWELVE MEMBERS OF COUNCIL, 1919-20.

232. Acting on the authority conferred by Minute 104 of the A.R.M. 1918, the Council has grouped, subject as stated in the foregoing paragraph, the Home Constituencies for election of twelve Members of Council 1919-20, under By-law 46 (c), in the same way as for 1918-19.

REPORTS OF DIVISIONS AND BRANCHES, 1918.

(Continuation of para. 48, page 73, of Annual Report.)

233. In spite of all the difficulties due to the War, reports for 1918 have up to June 17th, 1919, been received by the Council, as follows:—

	Total.	Number which have reported.
Home Divisions	208	140
Home Branches	41	32
Oversea Divisions	16	1
Oversea Branches	43	11

GRANTS TO HOME BRANCHES.

(Continuation of para. 54, page 74, of Annual Report.)

234. In all, up to June 25th, 1919, the Council has allotted grants for 1919 of from 6d. to 4s. per Branch Members to 30 of the 41 Home Branches. The question of grants to the remaining Branches is held over by the Council pending receipt of reports by them for 1918.

RESIGNATION OF DR. JAMES NEAL AS DEPUTY MEDICAL
SECRETARY.

235. In consequence of the regretted death of Dr. A. G. Bateman, General Secretary of the Medical Defence Union, that post was in April 1919 offered to, and has been accepted by, Dr. James Neal, who has been Deputy Medical Secretary of the Association since 1912. The Council regrets to lose the valuable services of Dr. Neal, and wishes to place on record its high appreciation of the work he has done for the Association and the profession during his period of office as Deputy Medical Secretary.

MEMBERSHIP.

(Continuation of paras. 49-51, page 73, of Annual Report.)

236. During the period December 31st, 1918, to May 26th, 1919, 1,178 new members joined, 34 members paid arrears, and the Association lost by resignation (36), death (134), arrears (175), and expulsion (3), 348, a net increase of 864, as compared with a net decrease of 167 in the same period of 1918. On May 26th, 1919, the total membership of the Association was 22,929, as compared with 22,157 at the end of May 1918, an increase of 772.

Journal.

237. The Council at its meeting on January 23rd, 1918, directed that the number of pages in the weekly issue of the *Journal* should be reduced by one-third, and the mottled grey cover abandoned as from the first issue of March. The number of pages was accordingly reduced to 64 in the issue of March 2nd, and maintained at this down to and including the issue of August 10th. With the exception of one week (report of Representative Meeting) the issues consisted of 30 pages of matter and 34 of advertisements. Having reviewed the situation at the beginning of August, the Chairman of the Journal Committee and the Treasurer, acting on the discretion given to them, sanctioned an increase as from August 17th to 72 pages in an ordinary issue, and to 112 for the Educational Number. Under this arrangement the text in an ordinary issue occupied 32 pages and the advertisements as a rule 40 pages.

238. The reduction in the number of pages in the weekly issues was made by the Council in compliance with the regulations of the Paper Controller and in view of the shortage of supplies, but the effect was an economy in the expenditure of the Association on paper. The change made on August 17th when the conditions had become easier increased the revenue from advertisements and showed a balance of profit under this head. Since the beginning of 1919 the position in the paper market has become easier and it has been found possible to exceed the limit imposed in August, 1918. The increased number of pages available have been distributed between the text, including the Supplement, and the advertisements.

239. Condensed reports of the very successful clinical and scientific meeting of the British Medical Association in London in April, were published in the *Journal* at the time and the Council has decided that the full text of the proceedings of the meeting shall be published in a separate volume, together with certain particulars of medical interest concerning the war. A copy of the volume will be sent to any Member applying for one.

Science.

EMOLUMENTS OF, AND PENSIONS FOR, LABORATORY AND RESEARCH WORKERS.

(Continuation of para. 80, p. 75, of Annual Report.)

240. The Council has considered the question of provision for the emoluments of, and pensions for laboratory and research workers being made a condition of grants to medical schools. As a result, the Council has drawn the attention of the Board of Education to the fact that the emoluments of a whole-time professor at any of the medical schools of the University of London is at present only £600, whereas in 1913 the Royal Commission on the University of London expressed the view that the minimum salary of a professor in the Faculty of Medicine should be £1,000.

DELEGATES TO CONGRESS OF AMERICAN MEDICAL ASSOCIATION AND ONTARIO MEDICAL ASSOCIATION.

241. The Council nominated Sir StClair Thomson and Sir Bertrand Dawson to attend as delegates from the Association at the Congresses of the American Medical Association and Ontario Medical Association. Sir StClair Thomson accepted nomination and has gone to America, but Sir Bertrand Dawson found it impossible to absent himself from this country.

242. The American Medical Association expressed its gratification on the appointment of delegates and promised them a hearty welcome.

SPECIAL CLINICAL AND SCIENTIFIC MEETING, APRIL, 1919.

(Continuation of para. 69-73, p. 74, of Annual Report.)

243. The American Medical Association has warmly congratulated the Association on the success of the Special Clinical Meeting of April last.

Ministry of Health.

MEDICAL CONSULTATIVE COUNCIL.

(Continuation of para. 96, p. 77, of Annual Report.)

244. The Council forwarded to Dr. C. Addison, M.P., President of the L.G.B., now Minister of Health, a scheme for the constitution of a Medical Consultative Council to the Ministry.

245. Dr. Addison replied very sympathetically on May 12th, 1919. He stated that after careful consideration of the Association's proposal that a number of members of the Medical Consultative Council, amounting to nearly one-third of the whole, should be appointed by direct election, and not, as was contemplated in the case of the remaining members, by the Minister, and on his responsibility, he had come to the conclusion that there were serious objections to the procedure

proposed as regards those seven members. In the first place, it had always been contemplated that the Minister should be responsible to Parliament for determining the composition of the Consultative Councils. In the second place, he did not think the suggested analogy with the procedure adopted in the case of the General Medical Council was complete; the particular function which the Minister would look to the Consultative Councils to discharge was to furnish him with advice and assistance in relation to specific questions which the members of the Council collectively were specially qualified to consider, and that function seemed to him to be distinct from that of a body such as the G.M.C. which was primarily concerned with educational and disciplinary matters. He also pointed out that the suggested procedure by direct election would tend to delay the early establishment of the first Council; would involve a considerable and recurring expenditure; and would also involve an increase in the total number of members of the Medical Consultative Council to which he would be reluctant to assent, and which would be likely to lead to a similar increase in the size of the other Consultative Councils, and to a demand for adoption of a similar procedure in determining the composition of certain sections of their membership.

246. Dr. Addison therefore felt that for the purpose of securing that the knowledge and experience of the general practitioners were given due weight in the process of formation and in the actual membership of the Medical Consultative Council, it would be preferable to rely upon such safeguards as were suggested in the several proposals laid before him on behalf of the profession which would not involve a system of direct election.

247. Before receipt of Dr. Addison's letter of May 12th, it had been gathered unofficially that he intended asking certain medical bodies to forward names of medical practitioners for appointment on the Consultative Council from which he would select members, reserving to himself the right of adding any practitioner whose name was not so forwarded. It was therefore considered desirable that, in anticipation of such a request, the Association should be prepared with the names of its nominees.

248. The Honorary Secretaries of Divisions were therefore asked for names, and were requested to have regard to the following points:—

(i.) That, at the outset, it should be clearly understood that it was the Minister who would appoint the members of the Consultative Council; that the paramount consideration would be representation of varieties of knowledge and experience (both clinical and administrative); that, therefore, Divisions in submitting names should have regard to the individual capacity of their nominee, his knowledge of the subject, and administrative experience, rather than to the mere question of geographical representation;

(ii.) that each Division, if so desiring, should submit the names of not more than three practitioners who need not necessarily be resident in its area (though limited to England and Wales), and indicate, if possible, the order of its preference.

(iii.) that it must be clearly understood that the Ministry of Health Committee in submitting names to the Minister must look at the matter from the point of view of submitting a suitable and efficient "team," and therefore did not hold itself bound to the names sent up by Divisions;

(iv.) That the name of any practitioner nominated should be accompanied by a record of his work fitting him for nomination by the Association.

249. 58 Divisions sent in 73 nominations and eventually 30 names were selected therefrom by ballot and have been approved by the Council. These names are not published because no indication of the number of names required by the Minister has yet been given and a further process of selection may be necessary. The names will be given to the Representative Body, and those forwarded to the Minister will be published.

PANEL FOR SELECTING NAMES FOR MEDICAL CONSULTATIVE COUNCIL.

250. The Bill received Royal Assent on June 3rd, 1919. On May 27th there had been received from Dr. Addison a letter as to the setting up of the Medical Consultative Council, indicating that as a first step he proposed setting up a panel of eight persons who would assist him in selecting the medical bodies which should be invited to nominate persons suitable to become members of the Council and thereafter to assist him with advice as to the persons to be selected from among the nominations sent in by the bodies so invited. He asked for 3 names; and that one of the persons nominated

should be engaged in National Health Insurance practice, one not so engaged, and one have special knowledge of general practice in rural areas.

251. In view of the urgency of the matter, the Ministry of Health Committee submitted to Dr. Addison the following names as the Association's nominees for the panel:—Dr. J. A. Macdonald, LL.D., Dr. G. E. Haslip, Dr. J. P. Williams-Freeman. The Council confirmed the Committee's action.

CONDITIONS OF SERVICE UNDER THE INSURANCE ACTS.

252. In the opinion of the Council it is essential that there be considered by the R.B. the Memorandum of Discussions lately issued by the Insurance Commissioners to all members of the profession, and also the following paragraph 106 of the Insurance Acts Committee's Report (M. 25), which raise important questions of policy:—

Conditions for Extra Services.

106. From the purely professional point of view it is evident that the method by which and the conditions under which any extensions of the medical service are brought about are extremely important, and the Committee, after considering the memorandum of the conferences with added representatives, finds itself in general agreement therewith and is of opinion—

(i.) That insurance practitioners are crippled in their work by the limitations of the present service, which limitations are also detrimental to its prestige in the eyes of their patients and of the public generally, that they cannot guarantee a really good service while they are so limited, and that it is urgently necessary to extend the scope of the insurance medical service to include (a) consultant or specialist non-residential services, (b) laboratories, (c) a nursing service.

(ii.) That the provision of general practitioner domiciliary attendance and treatment is the only foundation on which any systematic provision of other kinds of treatment can properly be based, and that, therefore, speaking generally, these additional services should not be provided at the public cost for other than insured persons (for whom alone, at present, apart from the Poor Law, there is universal provision of general practitioner treatment) until a general practitioner service can be set up at least for the dependants of insured persons and others in a similar economic position.

(iii.) That the partial and local provision of some kinds of advice and treatment now made, or about to be made, at maternity and infant welfare centres, at school clinics, at venereal disease clinics, and at tuberculosis dispensaries should at once be brought into proper relationship with the domiciliary attendance of general practitioners.

(iv.) That clinical and pathological laboratories (which could be largely used also for preventive purposes by the local sanitary authorities) should be at once provided for suitable areas, as proposed in 1914, for the whole population where the local health authority is prepared to contribute, and for the insured where the local health authority will not contribute.

(v.) That the clinical medical staffs of these services should (unless in a few exceptional cases) be appointed on a part-time basis, and be remunerated on a time basis; and that a medical committee should play an important part in their selection.

(vi.) That in every case general practitioners, if possessed of the necessary special qualifications, should be eligible in the same way as consultants or specialists to render the services; and that all general practitioners should be given opportunities for taking suitable part in the work of clinics.

(vii.) That, although the actual practical development of these services might be gradual throughout the country, they should be regarded as an essential and integral part of the whole medical service as from early in 1920.

(viii.) That as it seems evident that there must on public grounds—questions of finance, authority and the like—be delay in providing a residential institutional service, and in extending the whole service (including general practitioner service) to the dependants of insured persons or other classes of the community, these two matters should be considered at further conferences with a view to the conditions under which they should be provided being agreed upon.

253. The Council therefore recommends:—

Recommendation.—That each of the sub-paragraphs in the above quoted paragraph 106 of M. 25 be dis-

cussed separately, and the opinion of the Representative Body expressed thereon.

MINISTRY OF HEALTH COMMITTEE.

254. The Council has considered the question of the continuation in office of the present Ministry of Health Committee or the appointment of a new Committee, having regard to the fact that in the ordinary way the present Committee would terminate with the 1918-19 Council. Regard has also been had by the Council to the possibility of the Council or Representative Body deeming it desirable in the near future to consider the question of the appointment of a Standing Ministry of Health Committee, with possible modification of the references to various existing Committees of the Association affected thereby.

255. The Council has for the present continued the existing Committee in office with the same reference as before, i.e. the Committee is for the present authorised to deal with all questions arising in connection with the Ministry of Health.

256. Dr. Pilman Williams has been appointed a member of the Committee as representing the Medical Women's Federation, in place of Dr. Alice M. Benham, resigned; and, on the recommendation of the British Dental Association, Mr. J. H. Badcock has been appointed to represent that body on the Committee.

Medico-Political.

DIRECT REPRESENTATIVES ON GENERAL MEDICAL COUNCIL.

257. The Council has considered the question of action by the Association in view of the election in November 1919, of 4 direct representatives of the profession on the G.M.C., and has had regard to the scheme adopted by the Association in the election of 1911, whereby the Association's nominees were returned at the head of the poll. The English and Welsh representatives present at the A.R.M.s. of 1915 and 1916 decided that the support of the Association be given to the following candidates in the election of direct representatives, which it was then understood would take place in November 1916, viz., Dr. H. W. Langley Brown, Dr. H. A. Latimer, Dr. J. A. Macdonald, LL.D., and Sir T. Jenner Verrall, LL.D., though in the event no action was taken, owing to the election being postponed by the Privy Council.

258. The Council instructed the Medico-Political Committee to take, and that Committee is taking, action with a view to nomination by the Association of candidates for the election in November on the lines of the following scheme, similar to that used in 1911:—

1. The Medico-Political Committee shall cause to be circulated as early as possible a notice to every Division in England and Wales (i.) advising the Divisions of the fact that an election of Direct Representatives on the General Medical Council for England and Wales will take place in November, 1919; (ii.) requesting that the matter be taken into consideration by the Divisions; and (iii.) asking to be informed not later than July 1st, 1919, of the name of any person or persons legally qualified for election, whom the Division may deem suitable to be nominated on behalf of and supported by the Association.

2. The Committee shall cause a list to be prepared of those persons legally qualified for election who shall have been named by Divisions in the manner provided in Clause 1. The said list shall be circulated to the Divisions at the earliest possible date before the A.R.M., 1919, and each constituency shall be requested to adopt such resolutions as may enable its Representative at that Meeting to give effect to the wishes of the constituency in a vote taken in the manner hereinafter prescribed.

3. At the time of the Annual Representative Meeting, 1919, a Special Meeting of Representatives of Divisions in England and Wales shall be convened to select from the list of nominees of Divisions four persons for nomination as candidates.

4. The Medico-Political Committee shall arrange that the four persons selected shall be duly nominated, on behalf of the Association, as candidates for the office of Direct Representative on the General Medical Council, and every effort shall be made by the Association to secure the election of the said candidates.

The following nominations have been received from the Divisions:—Dr. R. A. Bolam (Newcastle-on-Tyne), Dr. J. J. Falconer (Middlesbrough), Dr. Adam Fulton (Nottingham), Dr. H. A. Latimer (Tunbridge Wells), Dr. J. A. Macdonald, LL.D. (Taunton), Mr. E. B. Turner (London), Sir Jenner Verrall (Bath)

MINISTRY OF PENSIONS APPOINTMENTS FOR DEMOBILISED OFFICERS.

259. The following letter was forwarded on May 6th, 1919, to the Ministry of Pensions:—

"The intention of the Ministry of Pensions to give the preference for its work to doctors who have returned from Service has been made widely known and there is no doubt that this work has been of the utmost service to medical men returning from service during the first few critical months of rebuilding their practices. At the last meeting of the Council of the Association statements were made that in some places preference seemed to be given to retired and pensioned military officers rather than to temporary officers who had returned, and I was instructed to bring this matter to your notice and to ask that instructions shall be given, if they have not already been given, which will insure that the preference shall always be given to temporary officers who have no pensions and whose claims for special consideration seem obvious."

The following reply dated May 13th, was received:—

"I am directed to acknowledge your letter of the 6th instant, and to inform you that all the circumstances of applicants for posts under this Ministry, including the position of temporary officers who have no pensions, are carefully considered before appointment.

"The opportunity of giving part time employment to doctors returned from service during the critical period of rebuilding their practices is welcomed by the Ministry, and it is the express policy of the Ministry that this should be carried out wherever the circumstances permit, always subject to the primary consideration of maintaining the efficiency of the work of the Boards."

PUBLIC MEDICAL APPOINTMENTS.

260. The Council has decided that no advertisement of a public medical appointment shall be accepted for publication in the *British Medical Journal* unless the salary offered is definitely stated.

STATE REGISTRATION OF NURSES.

(Continuation of para. 104, p. 77, of Annual Report.)

261. The Nurses Registration Bill of the Central Committee for the State Registration of Nurses, upon which the Association is represented, has passed committee and second reading in the Commons, and is down for further consideration in that House on June 27th.

262. The promoters of the Bill of the College of Nursing, Ltd., introduced that Bill into the Lords on May 1st, where it was read a second time on May 27th.

263. The Royal British Nurses Association and the Central Committee asked for the help and support of the Association in the crisis thus reached. The Council therefore requested the Divisions and Branches to communicate with their Members of Parliament, urging the latter to support the Bill of the Central Committee, and not to support the Bill of the College of Nursing. The Council suggested that opposition to the further progress of the College of Nursing Bill and work in support of the Bill of the Central Committee, should be concentrated on the following fundamental points:—

(a) That the Commons Bill has already received full Parliamentary discussion;

(b) That the Lords Bill, instead of confining itself to registration of nurses, seeks to set up the College of Nursing as the body to control Nurses, a proposal as improper as if, for example, when the State registration of doctors took place it had been suggested that one of the Royal Colleges should take charge of that registration.

264. The House of Commons Medical Committee has been informed of the action being taken by the Association.

NOTIFICATION OF INFECTIOUS DISEASES.

(Continuation of para. 103, p. 77, of Annual Report.)

265. As a result of renewed representations to the L.G.B. as to payment for notification a Deputation from the Council waited upon Dr. C. Addison, M.P., President of the L.G.B., on April 25th, 1919. The Deputation emphasized the indignation and resentment which the reduction of the fee had aroused throughout the whole profession, being the only instance on record, so far as is known, of a reduction of remuneration during the war; protested against the view that notification was a purely clerical matter; gave numerous instances of the grave inadequacy of the present scale of fees; and expressed the widespread and urgent desire of the profession that the fee be restored to the pre-war level.

266. In reply Dr. Addison said there was much force in many of the points made by the Deputation. He did not personally wish to perpetuate any longer than he was compelled by existing statutes, the difficult position created by the reduction of the fee made by the Act of 1916, and he had made arrangements to revert to the pre-war scale as soon as possible. He could not at present bind himself on points of detail but was happy to give the Deputation this general indication of the course which he proposed to adopt. It is understood that the increase of the notification fee will come into effect at or about the official "end of the War."

267. Dr. Addison also promised the Deputation to have enquiry made on certain points of detail raised by them—e.g., the legal liability of a practitioner in the notification of certain classes of disease, and the number of forms of notification certificates.

POSTAL MEDICAL OFFICERS.

(Continuation of paras. 117-8, p. 79, of Annual Report.)

268. With a view to pressing for better payment of Postal Medical Officers, and especially for a better system of attendance upon "itinerants," a statement of the present position is being inserted in "Current Notes" (*B.M.J. Supplement*, June 28th, 1919), in order to elicit information on the subject from Postal Medical Officers throughout the country. The co-operation of the Postal Medical Officers' Association was sought, but was refused.

WORK AND REMUNERATION OF SCHOOL MEDICAL OFFICERS.

(Continuation of paras. 114-6, p. 78, of Annual Report.)

269. In reply to the further representations made to the Board of Education as to the question of provision for payment of doctors for the medical examination of discharged soldiers proposing to train as elementary school teachers, the Board informed the Council that it has made no attempt to secure gratuitously the services of medical practitioners for those examinations. The Council feels that no further action can usefully be taken in the matter.

PAYMENT FOR MEDICAL EXAMINATION OF SCHOOL TEACHERS UNDER SCHOOL TEACHERS (SUPERRANNUATION) ACT, 1918.

270. A Member urged that the Association should take steps to secure that the fees for medical examination of school teachers under the Superrannuation Act of 1918 should be paid by the Board of Education, and not by the individual teacher.

271. The Council consulted the National Union of Teachers which however preferred not to express any opinion. It was finally decided that as the certificates were required for the benefit of the individual teacher and not for that of the Board of Education, the practitioner must look to the teacher for his fee; and that the amount of the fee would be fixed by the individual practitioner in accordance with his usual custom.

MEDICAL PRACTITIONERS CALLED IN ON THE ADVICE OF MIDWIVES.

(Continuation of paras. 111-12, p. 78, of Annual Report.)

272. Correspondence has taken place with the L.G.B. as to certain questions of interpretation of the Association's scale of fees for payment of medical practitioners called in on the advice of midwives. The Council found that several points of real difficulty of interpretation of the scale had arisen. It has accordingly intimated to the Board that in its opinion it would be useful if a conference were held of representatives of the Association and of the Board, together with such medical representatives of local authorities as the Board might think fit to call in.

273. The Council draws attention to the unsatisfactory state of affairs which has arisen in a few districts in the country. It will be remembered that after several years' agitation the Association secured the adoption by the L.G.B. of the scale in question, which was adopted, after due notice to the Divisions, by the Representative Body in 1915. The Council felt that by the Local Government Board's recognition of the scale and of the liability of the Local Authority to pay doctors in the cases in question, a considerable victory had been won for the profession. It is with considerable regret, therefore, that the Council has to report that in some areas a considerable number of the profession (including some Members of the Association) have repudiated the Association's scale of fees as inadequate. The Local Government Board has drawn attention to this state of affairs.

274. The Divisions and Representative Body will appreciate that such action by Members seriously imperils the reputation of the Association as a body with which a bargain can be made which its Members will honour. The Council would point out that up to the present no Division has adopted the constitutional course of tabling a motion for the reconsideration of the fees at the A.R.M.

TREATMENT OF DISCHARGED SOLDIERS AND SAILORS AS
OUT-PATIENTS.

275. The attention of the Council was drawn to the practice of a Local Pensions Committee of referring discharged soldiers and sailors, not to the Insurance practitioner with whom arrangements had been made for treatment, but to voluntary hospitals as out-patients, and the consequent loss both to the medical referee and to the Insurance practitioners of the area. Representations were made to the Ministry of Pensions, which replied that it was not aware of the practice in question, and that such action was not in accordance with the policy of the Ministry.

The Council has ascertained that the practice complained of has now been abandoned.

SEAMEN'S NATIONAL INSURANCE SOCIETY.

(Continuation of para. 123, p. 79, of Annual Report.)

276. The Council urged upon the Seamen's National Insurance Society the necessity for extra payment of medical practitioners in view of the increased cost of living due to the War. The Society has replied that the Insurance Commissioners have approved of a 10 per cent. or 12½ per cent. bonus, according to the income of the practitioner, payable on accounts submitted to the Society. The Society states that it prefers to keep to the existing scale of fees, and to deal with any additional payments in the same way as the Commissioners deal with additional payments to Insurance practitioners.

RESTRICTION OF SALE OF INTOXICATING LIQUOR.

277. At the request of Dr. William Collier of Oxford, a former President of the Association, supported by many prominent Members of the profession, the following Memorial to the Government has been adopted by the Council and is being sent to each Division with a view to possible signature by the Members of the Division:—

“Memorial to His Majesty's Government:—

In view of the great advantages to the efficiency and well-being of the nation, and to public health and order, which have followed the restrictions placed on the sale of intoxicating liquor during the War, the undersigned earnestly request His Majesty's Government to maintain reasonable restrictions until a permanent measure of reform has been enacted by Parliament.”

(The Council has substituted the word “reasonable” in the last line but one, for the word “these” which appeared in the original form of the Memorial.)

UNDER CONSIDERATION.

278. Terms and conditions of service of Assistant Asylum Medical Officers.

279. Remuneration of part-time Prison Surgeons.

280. Remuneration of civilian practitioners for examination of officers and men under demobilisation regulations.

National Health Insurance

ALLOWANCES FOR 1919 TO INSURANCE PRACTITIONERS FOR
INCREASED COST OF LIVING.

(Continuation of paras. 151-3, p. 81, of Annual Report.)

281. In view of the necessity of immediately increasing the remuneration of Insurance practitioners for 1919 so that it might conform to the altered value of money, representations were made by the Insurance Acts Committee to the Commissioners, urging an increase accordingly for 1919, and suggesting that the basis for the addition should be the comparison in values made by the Government in its proposal to make the income limit for insured persons £250 instead of £160. In reply, the Chairman of the National Health Insurance Joint Committee has, after consultation with the Treasury, intimated to the Association that the Government are prepared to make for 1919 a payment of a War Bonus to Insurance practitioners at a substantial rate over and above the rate paid for 1918 (*B.M.J. Supp.*, June 28th, page 149), but that he cannot admit the applicability of the rates suggested by the Insurance Acts Committee.

DEMOLISHED SOLDIERS AND SAILORS.

282. The Insurance Acts Committee considered the position created by the demobilisation of large numbers of soldiers and sailors whose health had deteriorated, though not to the extent of their being invalided from the Service. These persons now return to the ordinary lists of insured persons. As it was understood to be the intention of the authorities that the arrangements for paying for invalided men attendance should cease at the close of 1919 and that all such men should also be placed on the ordinary lists, it was decided that the proper plan would be to use the existence of such large numbers of “damaged lives” as one of the important factors for a demand for an increased capitation rate, and the Commissioners have been so informed. They have also been asked whether or not

they had any proposals to make as regards dealing with this particular class of insured persons during the course of the present year.

REMUNERATION OF RURAL PRACTITIONERS.

283. The Insurance Acts Committee has reported to the Council its efforts to place the remuneration of rural practitioners on a logical and equitable basis, and the Council has approved the proposals which have been submitted to the Commissioners in order to secure this in the forthcoming new agreement. The Council recommends that the following principle be adopted by the Representative Body.

Recommendation.—That the mileage or travelling fund in connection with the National Health Insurance system should be calculated according to data which would aim at securing for rural practitioners an amount corresponding as nearly as possible to the excess cost of their necessary travelling (including extra time spent) over that of an urban practitioner.

RAISING OF INCOME LIMIT OF INSURED PERSONS.

(Continuation of para. 155, p. 81, of Annual Report.)

284. On June 2nd a deputation from the Council waited on Major Astor and discussed with him the proposed Bill for raising the income limit for non-manual workers. The deputation was reported in the *B.M.J.* of June 7th, 1919, p. 715, together with a memorandum from the Government giving the reasons why they felt compelled to introduce the Bill. At the interview, Major Astor said the Government would be prepared to consider any practical amendment brought forward to restrict the effect of the measure to those who were previously in insurance, keeping them in insurance without introducing any who would not otherwise have been introduced. The preparation and furthering of such an amendment has been put in the hands of a committee consisting of:—Drs. H. B. Brackenbury, H. G. Dain, E. R. Fothergill, A. Fulton, T. W. H. Garstang, G. E. Haslip, I. W. Johnson, J. Stevens, and Mr. E. B. Turner. Dr. Farquharson, M.P., who introduced the deputation on the 7th June has promised to help in the drafting of the amendment.

NEW AGREEMENT FOR 1920: POSSIBLE EXTENSION OF
SERVICE.

(Continuation of paras. 156-63, p. 82, of Annual Report.)

285. The Conferences between representatives of the Commissioners and the Insurance Acts Committee, with the addition on five occasions of representatives of consultant and special practice, have terminated. There have been issued to every practitioner throughout the kingdom (a) a Report of the Committee on the Revision of Service under the Acts (M. 25), and (b) the Commissioner's Memorandum of Five Discussions on certain questions of Provision of Medical Services. The former was printed by the Committee and the latter by the Commissioners, who franked the whole issue to the profession.

286. With a view to eliciting the opinion of the profession throughout the country upon the suggestions in these reports, arrangements have been made for their consideration (1) at meetings of the profession in each insurance area (2) at grouped Conferences held at different centres, and (3) at a Special Conference to be held in London on July 17th of representatives of Local Medical and Panel Committees. The group Conferences are taking place between June 13th and July 12th at London, Norwich, Bristol, Birmingham, Plymouth, Northampton, Southampton, Leeds, Newcastle-on-Tyne, York, Nottingham, Carlisle, Preston, Cardiff, Manchester, Chester, and Brighton.

287. The Scottish Sub-Committee of the Insurance Acts Committee is arranging a similar series in Scotland.

288. The Branches and Divisions have been asked to co-operate in calling these group Conferences, and most if not all of the Conferences are being called under the joint auspices of the Divisions and Local Medical and Panel Committees concerned.

After the opinion of these conferences and the Conference of Representatives of Local Medical and Panel Committees is obtained, the Insurance Acts Committee will be in a position to negotiate with the Government upon the conditions of service by Insurance practitioners for next year: but on the amount of capitation fee proper for the services proposed and on proposals for the extension of service involving the practices of those not now Insurance practitioners, it will be necessary to consult the profession again.

289. With a view to necessary co-ordination and the protection of the interests of those practitioners who are not taking part in the National Health Insurance system, the questions raised in the reports are also being watched by the Ministry of Health Committee of the Association (see para. 252, p. 3).

NATIONAL INSURANCE DEFENCE TRUST.

(Continuation of paras. 166-8, p. 82, of Annual Report.)

290. Over 50 of the Panel Committees of the country, many of them large ones, have intimated their intention to support the National Insurance Defence Trust, and there are indications that a large majority will decide to do so.

Public Health and Poor Law.

SUPERANNUATION OF SCOTTISH POOR LAW MEDICAL OFFICERS.

291. The Scottish Poor Law Medical Officers' Association has raised with the Council the urgency of securing that Scottish Poor Law Medical Officers be placed upon the same footing as those Officers in England and Ireland as regards superannuation. The Council is taking all possible steps to secure this.

POOR LAW MIDWIFERY SCALE OF FEES.

292. The Council is obtaining detailed information as to the midwifery fees paid by Guardians to Poor Law Medical Officers, with a view to such action as may be necessary to bring these fees into line with those sanctioned for payment to practitioners called in on the advice of a midwife.

REMUNERATION OF MEDICAL OFFICERS IN PUBLIC HEALTH SERVICES.

(Continuation of paras. 170-1, p. 83, of Annual Report.)

293. The Council has received further gratifying intimations of increases granted to Medical Officers of Local Authorities as a result of the Association's circular letter urging that the pre-war salaries of those officers be increased by 33½ per cent. The Council has arranged that authorities which have not replied to the Association's letter on the subject be asked what action, if any, they have taken in the matter. The Divisions in the areas of those authorities are being asked to use their influence in securing the desired increases in the salaries of the Medical Officers.

294. The attention of the Council was called to the refusal of the Local Government Board to sanction a 33½ per cent. increase to a part-time Medical Officer in whose case such increase had been recommended by the Local Authority. The Council has informed the Board that it sees no reason why part-time Officers should not be treated in the same way as whole-time Officers as regards the suggested increase.

295. The assistance of the Association was sought to secure a 33½ per cent. increase in the salaries of Medical Officers under the Metropolitan Asylums Board. The Council expressed the opinion (a) that non-resident Medical Officers under the Board should receive a 33½ per cent. increase, and (b) that while it is considered that the 33½ per cent. increase should not apply to residents, upon whom much of the increased cost of living does not fall, those Officers are entitled to some increase on their pre-War salaries. The Board has been so informed.

Hospitals.

PAYMENT OF MEMBERS OF STAFFS OF VOLUNTARY HOSPITALS FOR TREATMENT OF DISCHARGED DISABLED SOLDIERS AND SAILORS.

296. The Council has had under consideration the following resolution of the A.R.M. 1918 adopted by that Meeting on the recommendation of the Council 1917-18:—

Minute 118.—Resolved: That where it is possible, without detriment to the claims of the civil population, to give hospital treatment, either as in or out-patients, to discharged soldiers and sailors for whom a public authority is liable, a charge should invariably be made which should repay the hospital for cost of working and maintenance, and that in addition £2. 2s. per case treated, or alternatively a sum equal to 10 per cent. of the amount paid to the institution for working and maintenance expenses, should be put at the disposal of the medical staff;

and has also had before it information as to the position throughout the country as regards acceptance by voluntary hospitals of the policy of the Association as expressed in that Minute.

297. The Council recommends:—

Recommendation.—That in the light of the past year's experience of the working of Minute 118 of the A.R.M., 1918, the Representative Body is of opinion that, in the case of the larger hospitals, not less than 25 per cent. of the amount paid to the institution, and in the case of the smaller hospitals not less than 15 per cent. of such amount, should be placed at the disposal of the medical staff.

298. The discrimination is made between the two classes of institutions, because in the larger hospitals the average cost per bed is lower than in the smaller hospitals, and therefore the larger hospitals are able, out of the amount allowed by the Ministry of Pensions for the upkeep of patients, to recoup themselves and pay the larger percentage to the medical staff.

TEACHING STAFF IN VOLUNTARY HOSPITALS.

299. The Council considered the question of the action of the London Hospital in appointing a whole-time salaried "team" of medical officers to take the place of retired honorary officers, and the question whether the arrangements made would mean that the whole of the teaching of the medical students would be carried out by the whole-time staff and not by the visiting honorary physicians and surgeons.

300. A Sub-Committee was appointed to consider and report upon the subject and to obtain an interview with Sir George Newman, of the Local Government Board and Board of Education.

FURNISHING OF CERTIFICATES BY MEMBERS OF STAFFS TO HOSPITAL PATIENTS.

301. Attention has been drawn in "Current Notes" (*B.M.J. Supplement*, June 14th, 1919, page 127,) to the policy of the Association as regards furnishing of certificates by members of hospital staffs to hospital patients, and to the opinion of the Solicitor as to the giving of certificates under the Workmen's Compensation Act by members of those staffs.

INSTITUTIONAL FACILITIES FOR MEDICAL AND SURGICAL TREATMENT.

302. The Council considered a scheme published by Dr. Middleton Martin, Medical Officer of Health for Gloucestershire, and placed by him before the local profession, for establishment of out-patient stations throughout the county at which that treatment which is provided by the Local Authorities could be given by general practitioners or consultants, as the case might require. These stations would be in direct communication with parent hospitals or institutions where special in-patient treatment could be carried out. Dr. Martin's object in framing his scheme was to secure that the money which the Local Authorities are or will shortly be spending on medical treatment of various kinds, such as treatment of school children, tuberculosis, venereal diseases, child welfare, should be spent to the best advantage. The County Council favoured the employment of whole-time officers, but Dr. Martin thought it would be possible to induce that body to try the experiment of employing private practitioners if he could show that the plan would not cost more. He therefore suggested that the local profession should take on the work, at any rate for an experimental period, at fees which, though not remunerative, would enable the scheme to compete with a whole-time scheme.

303. The Council, while expressing cordial approval of the employment in such a scheme of part-time practitioners, both general practitioners and consultants, was of opinion that the fees hitherto suggested were entirely inadequate and has urged the local profession to try to secure an improvement in the scale suggested.

Naval and Military.

REPRESENTATION OF ROYAL AIR FORCE MEDICAL SERVICE ON THE COUNCIL, 1919-20.

304. In the event of the Representative Body adopting the recommendation of the Council contained in paragraph 181 of the Annual Report of the Council (*B.M.J. Supplement*, May 3rd, 1919, p. 83),

305. The Council recommends:

Recommendation: That Col. G. Nixon Biggs, of the Royal Air Force Medical Service, be appointed to represent that Service on the Council, 1919-20.

REPRESENTATION OF ARMY MEDICAL SERVICE ON COUNCIL, 1919-20.

306. The Council regrets to report the resignation of his seat on the Council, to which he was elected by the Representative Body in 1917 for three years, of Col. R. I. D. Hackett, A.M.S. (Retired). Col. Hackett has represented the Army Medical Service on the Council continuously since 1914.

307. The Council will make a recommendation for a substitute for Col. Hackett at the Annual Representative Meeting.

R.A.M.C. (TERRITORIAL FORCE).

308. It having been announced in the lay press that the Secretary of State for War was on May 1st, 1919, to meet Presidents and Chairmen of Territorial Force Associations, to

discuss matters affecting the future constitution of the Territorial Force, the Secretary of State was asked to permit the Association to nominate Members to attend the Conference on behalf of the medical branch of the Force. A reply was received to the effect that the Conference was restricted to Presidents and Chairmen of Territorial Force Associations in virtue of their representing all branches of the Force, including the R.A.M.C. (T.F.), and that any questions affecting that branch should be brought to the notice of the Secretary of State through the Presidents and Chairmen.

309. The War Office was at once informed that none of the Presidents and Chairmen of the Territorial Force Associations was a medical man; and that there would be present at the Conference Medical Officers who, being officials of the War Office, could not put forward the medical side of the case with the same freedom as could be employed by representatives of other sections of the Force. The Secretary of State was urged to take no steps to settle the medical arrangements of the Force until there had been consultation with representatives of non-official members of that branch. He was again urged to allow the Association to send representatives to such a Conference.

310. On June 7th, 1919, the Association was informed that a Committee had been appointed to consider the conditions under which the R.A.M.C. (T.F.), should be constituted, and was invited to send a representative to attend the meetings of the Committee, commencing June 12th. Major E. R. Annis, R.A.M.C. (T.F.), a Member of the Naval and Military Committee, was accordingly appointed to represent the Association.

311. It is the intention of the Council that there be appointed at the proper time a Special Sub-Committee, with the Territorial Members of the Naval and Military Committee as a nucleus, together with additional Members who are Territorial Medical Officers with War Service, for the purpose of making recommendations to the War Office on the subject.

MEDICAL WOMEN EMPLOYED BY WAR OFFICE.

(Continuation of paras. 193-7, p. 84, of Annual Report.)

312. As already reported, the Under Secretary of State for War (Lord Peel) received on March 28th, 1919, a Joint Deputation of the Association and Medical Women's Federation as to the question of the grievances of medical women practitioners who were serving with H.M. Forces.

313. Subsequently a memorandum was sent by the Secretary of State for War to the Medical Women's Federation to the effect that if medical women were to enjoy the privileges from which they were excluded in the present conditions, it was common ground that they must be not only willing but able to perform all the duties which commissioned Medical Officers have to undertake. The War Office could not accept the view put forward by the deputation that there were no duties in the Army at present undertaken by Medical Officers which could not equally be performed by commissioned medical women. For this and various other reasons given, the Secretary of State regretted that the granting of commissions to medical women could not be entertained, nor could they be demobilised with commissioned rank in order to provide precedent should any future emergency necessitate their employment.

314. A reply, approved by the Council, was sent to the War Office by the Federation, regretting the attitude of the Secretary of State. That reply pointed out that each woman member of the deputation expressed the opinion that whilst women were able and willing, if it were necessary, to perform all the duties required of officers of the R.A.M.C., there were duties which it was desirable to have performed by men if men were available; that the contention of women was based upon the fact that the War Office had asked medical women to do work previously done by commissioned officers; that they had done this, and therefore should receive the commissions which their men colleagues would have received for the work; that a system of commissions for "Limited Service" might not be desirable, but it already existed; and that should a future emergency arise it would be impossible to recommend medical women to volunteer for service under the War Office unless and until the War Office was ready to give them equal terms with medical men.

1914-15 STAR.

315. The Council considered complaints received from Medical Officers that those who had served in Malta and on transports in the Mediterranean, were not entitled to the 1914-15 Star, but came to the conclusion that it could take no effective action in the matter, as it is one affecting the Army as a whole and not the Medical Officers only. The attention of the War Office has however been drawn to the case of those medical officers who served on hospitalships which were under fire or were exposed to the risk of submarine attack.

INDIAN MEDICAL SERVICE.

(Continuation of paras. 182-7, p. 84, of Annual Report.)

316. The alterations in the rates of pay of Officers of the Indian Medical Service reported by the Council in May (Annual Report B.M.J. Supp., May 3rd, 1919, p. 84, paras. 182-7) have now been published by the Secretary of State for India in a communique which was printed in the *Journal* of May 3rd, 1919 (p. 563).

317. Many officers are complaining that the new rates of pay do not place them in as favourable a position as they were given to understand. The Council, however, considers that it is not desirable for the Association to take any further action pending publication of the decision of the Government on the report of the Committee on the Medical Services in India, which has been sitting in India under the chairmanship of Sir Verney Lovett (see B.M.J., May 10th, 1919, p. 592). A statement to this effect has been inserted in the *Supplement* (June 7th, 1919), so that Officers of the Indian Medical Service may be aware of the present position. The whole question is being assiduously watched by the Council.

UNDER CONSIDERATION.

318. Pay of Officers of R.A.M.C., Territorial Force and Special Reserve.

Scotland.

319. The recent developments as regards the Scottish Board of Health have brought to the front the question of further devolution of the business of the Association in Scotland. This matter is receiving the serious consideration of the Scottish Committee and of the Council.

320. Meantime, the Council has decided to appoint as soon as possible a whole-time Scottish Medical Secretary. Nominations for the post will be placed before the Council by the Scottish Committee, and the duties of the new Medical Secretary when appointed shall be such as shall from time to time be prescribed by the Committee and Council. The Scottish Office will be in Edinburgh.

321. The Committee and Council being desirous of retaining the services of the present Clerk to the Scottish Committee, Mr. W. Findlay, it is proposed to appoint him Solicitor to the Committee and its Sub-Committees, including the Insurance Acts Sub-Committee (Scotland), and as Solicitor to the Council in Scotland in respect of any matters as to which a legal opinion on Scottish affairs may be required.

MEDICAL FEES UNDER MIDWIVES (SCOTLAND) ACT.

(Continuation of para. 209, page 85, of Annual Report.)

322. The Committee has remitted to the Chairmen's Sub-Committee for consideration, opinions received from the Divisions in connection with the scale of fees allowed to medical practitioners in Scotland and England for professional services under the respective Midwives Acts. The Sub-Committee has also been instructed to prepare a new scale of fees for practitioners in Scotland for the consideration of the Divisions.

MINISTRY OF HEALTH: SCOTTISH BOARD OF HEALTH BILL.

(Continuation of paras. 203-5, p. 85, of Annual Report.)

323. The general principles involved in the establishment of the Ministry of Health having been under consideration by the Divisions and the lines of action having been agreed upon, the Scottish Committee took joint action with other medical bodies in Scotland, including the Scottish members of the General Medical Council and representatives of the Medical Faculties of the Universities and the Medical Corporations, to secure the objectives of the profession, and especially emphasized the importance of having a wide experience of general practice among the qualifications of the medical members of the Scottish Board of Health.

REPORT BY COLLIERY AND PUBLIC WORKS SURGEONS' COMMITTEE FOR SCOTLAND.

324. The Committee received a report from the Colliery and Public Works Surgeons' Committee for Scotland, to which the Association subscribes and on which it is represented, as to its proposal to terminate the agreements of practitioners in the event of failure to obtain satisfactory terms of service from the miners' representatives. The Scottish Committee received a statement from the Secretary of the Colliery Committee as to the present position of the negotiations for readjustment of the scale of charges. It was explained that the Colliery Committee proposed to request its members throughout Scotland to make a uniform charge of 5d. per worker per week, exclusive of drugs, for attendance upon the worker's dependants.

325. The Scottish Committee is circularising all practitioners in the areas affected, explaining the position as regards present

and proposed rates, expressing strong disapproval of the existing rates, and urging support of the proposed rates in the interests not only of the practitioners affected but of the whole profession. Obviously, any existing rates of remuneration would form a basis for fixing the rates for attendance upon dependants, in the event of any extensions of service.

RURAL PRACTITIONERS' SUB-COMMITTEE.

326. The Committee is appointing a Rural Practitioners' Sub-Committee, to look after the special interests of practitioners whose practice is largely or mainly rural.

POSITION OF MEDICAL PRACTITIONERS IN THE HIGHLANDS AND ISLANDS.

(Continuation of paras. 206-8, p. 85, of Annual Report.)

327. The Committee and Council wish to correct a misapprehension which has arisen in connection with the election of the members of the Highlands and Islands Sub-Committee. The elections were based on nominations made by the practitioners serving under the Highlands and Islands Medical Service Board, whether Members of the Association or not. The voting was similarly confined to the practitioners serving under the Board.

328. No nomination was received as regards Sutherland. The Scottish Committee therefore requested the Caithness and Sutherland Division to nominate a member for that county, and Dr. J. P. Simpson, of Golspie, was nominated and appointed.

329. The Sub-Committee has received a great deal of information as to the special position of practitioners serving under the Board, and is preparing a case which will bring out the special needs and difficulties of these practitioners. Those interested are urged to put themselves in communication with the representative on the Sub-Committee of the County in which they practise.

Ireland.

PROPOSAL TO AMALGAMATE MEDICAL ORGANISATIONS IN IRELAND.

330. At a meeting of delegates, representative of the entire Irish medical profession, held in Dublin on June 3rd, 1919, it was decided to authorise the Irish Medical Committee, constituted under the various resolutions of meetings of delegates, to represent the profession of Ireland in regard to legislative measures affecting the interests of the profession, and in regard to the interests of the profession generally.

It was also resolved:—

"That this meeting of delegates urges that a special Committee be constituted of:—

Five members of the Irish Medical Association, nominated by the Council of the Irish Medical Association.

Five members of the British Medical Association, nominated by the Irish Committee of the British Medical Association;

Five members of the Irish Medical Committee, nominated by the Irish Medical Committee; together with the Medical Secretary to the Irish Committee of the British Medical Association, and the Secretary to the Irish Medical Association as *ex officio* members (without the right of voting) and as joint Secretaries; The Committee to appoint its Chairman and Convener at the first meeting;

(1) To consider the question of uniting the Irish Medical profession in one representative organisation, and the best method of attaining that object;

(2) To submit their recommendations and alternative minority suggestions to the *entire profession* in the form of a referendum;

(3) To take the necessary action to establish such representative body on the lines indicated in the referendum, suggest Articles of Association, etc. etc. The incidental preliminary expenses to be met by the body when established.

(4) That in such representative body as may be agreed on, Dr. Hennessy and Mr. Gick be respectively "Medical Secretary" and "Secretary" at rates of remuneration not less than they now receive from their respective Associations."

331. The Irish Committee of the British Medical Association, the Irish Medical Association, and the Irish Medical Committee have, in accordance with the mandate of the meeting of delegates, each appointed five representatives to form a joint

Committee to consider the question of uniting the Irish medical profession in one representative organisation, and the best method of attaining that object. Members will appreciate the seriousness of the proposals that have been made, which are receiving the attention of the Council and its Irish Committee.

South Africa.

332. The South African Committee appointed Dr. A. Jasper Anderson, Cape Town, President; and Dr. A. W. Reid, Cape Town, Hon. Secretary.

PUBLIC HEALTH LEGISLATION.

333. In September, 1918, the South African Committee, on consideration of an invitation by the Minister of the Interior of the Union of South Africa, appointed its President as the delegate of the Committee to attend a Conference held that month to consider certain important questions in connection with proposed public health legislation.

334. Subsequently the Committee welcomed the proposals, embodied in the Public Health Bill, (1) for a Department of Public Health under the control of a Minister of Public Health; (2) that every Medical Officer appointed under the Bill should be a medical practitioner, and that every chief medical officer should hold a special qualification in public health; pressed that a notification fee of not less than 2s. 6d. be definitely imposed as at present; opposed the imposition on any duties on the profession under the Bill other than notification of births and of infectious disease; declared that the treatment of venereal disease should be free; that public vaccination should in all cases be carried out by district surgeons, public vaccinators or other medical officers, and in no case by a lay vaccinator; that stringent measures should be taken to ensure the purity of all milk supplied to the public; and that the duty of notification of a birth should in the first instance fall upon the father of the child or other relative of the woman.

RAILWAY MEDICAL OFFICERS.

335. In September 1918 the Committee urged upon the Railway and Harbours Sick Fund Board and the Minister of the Interior (1) that in the payment of railway medical officers the *per capita* rate be adhered to, and that that rate should be 10s., with such local allowances in addition as the exigencies of the case might demand, (2) that those officers should be paid a war bonus, and (3) that every board connected with the Railway and Harbours Sick Fund should have a medical advisory member.

336. At its meeting in February, 1919, the Committee had before it the reply of the Board, forwarded with a copy of the Revenue and Expenditure Account of the Board, regretting that in view of the financial position of the Fund it was at present impracticable to increase the remuneration of the medical officers throughout the Union to a minimum of 10s. per cap. p.a.; that since inauguration of the Fund in 1913 the salaries of the medical officers had in many cases, in spite of the difficulties due to the War, been substantially increased, while in a number of cases in country districts and where special circumstances appeared to warrant it, the salaries paid were already equivalent to, and in some cases exceeded 10s. a head. As regards a war bonus, the Board regretted that, on the grounds of financial stringency, and inasmuch as, with one exception, the medical officers were only part-time officers, and in many cases the salaries attached to their appointments formed but a small part of their total income, it could not see its way to give effect to the proposal. The Board had however referred to the district boards for report the proposal that every sick fund board should have a medical advisory member.

337. On consideration of the whole position the Committee decided to support a resolution passed by a meeting of railway medical officers held in Cape Town, requesting—(1) the increase to 10s., (2) an allowance, on the fee system, to the medical officers for visiting sick members, (3) that each medical officer be supplied yearly with a census of his district, to include white labour, and (3) that mileage be paid to medical officers of certain rural or scattered districts.

DISTRICT SURGEONS.

338. Steps were taken for the protection of the interests of district surgeons on active service.

PENSIONS SCHEME.

339. Representations were made to the Public Service Commission and Minister of the Interior that in all cases where a medical practitioner in the employ of a public body lost his life through the performance of his duty, that body should provide an adequate pension for the practitioner's dependants.

MEDICAL AND PHARMACY BILL.

340. The Committee has pressed for compulsory registration of all trained nurses and certified midwives.

QUESTION OF CONSCRIPTION.

341. The Committee ascertained that the great majority of the medical profession of South Africa was strongly opposed to the principle of the commandeering of medical services. The Committee placed on record its opinion that such commandeering was unnecessary, and if enforced would be less effective than voluntary effort. The Committee believes that the profession will gladly co-operate with the authorities in co-ordinating medical services in times of grave epidemic outbreak.

New South Wales.

342. The New South Wales Branch appointed Dr. A. A. Palmer, Sydney, President, and Dr. R. H. Todd, Sydney, Hon. Secretary.

MEMBERSHIP.

343. The Branch membership on March 28th, 1919, was 1,136, an increase of 45 from 1918.

ROLL OF HONOUR AND ACTIVE SERVICE LIST.

344. During the year 4 more Members of the Branch died on Active Service, of whom 1 was killed in action, and 2 died of wounds.

345. A Roll of Honour and Active Service List have been compiled by the Branch. The Roll of Honour sets forth the names and particulars of 31 New South Wales practitioners who have been killed, or whose death is attributable to their service, and the Active Service List contains the names of 621 who have served in the Naval or Military Forces. It is hoped to establish a worthy Memorial to those who have made the supreme sacrifice, and a conspicuous permanent record of all those who, in their loyal and devoted service to the Empire, have brought honour and distinction to the medical profession.

MEETINGS.

346. The Branch held 11 ordinary and 2 extraordinary meetings during the year, with an average attendance of 41. There were 8 clinical evenings, with an average attendance of 34. The business of the meetings included 43 scientific papers and several reports of cases, and numerous exhibits and lantern demonstrations.

CONTRACT PRACTICE: FRIENDLY SOCIETY LODGES.

347. The approved common form of agreement with friendly society lodges has continued to give satisfaction. It has been accepted during the year by several lodges which previously resisted it.

THE WAR EMERGENCY.

Protection of Practices of Members on Active Service.

348. The Rule made by the Branch in August, 1914, has been kept constantly in view. Under that Rule, with a view to conserving the interests of Members of the Branch on Active Service, the other Members individually engaged, in the event of being called upon to fill their positions or attend their patients, to restore these to them upon their return to civil practice so far as it might be in their power to do so.

Civil Medical Appointments.

349. It was arranged with the *Medical Journal of Australia* that no advertisement for a medical appointment should be accepted for publication unless the applicants were limited to those ineligible for, or released from military service.

Government Appointments.

350. The Federal and New South Wales Governments were communicated with, urging that no permanent medical or scientific appointments be made until after the end of the war. Favourable replies were received from the Department of Home and Territories, from the Prime Minister, and from the Premier of New South Wales.

Removal from Medical Register of Practitioners of Alien Enemy Qualifications.

351. The Federal Government was approached with a view to all medical men of alien enemy birth and qualification practising in Australia being repatriated, and the State Government with a view to removal from the Medical Register of the names of all persons registered in virtue of German or Austrian qualifications who were not resident or practising in New South Wales at the commencement of the War, and of all persons registered who had been interned as alien enemy subjects or otherwise.

Medical Officers' Relief Fund (Federal).

352. At the instance of the Australian Federal Committee, the Executive and Finance Committee of the Branch Council has been appointed to be the Local Committee of Management of the Medical Officers' Relief Fund (Federal), which has been instituted for the assistance of medical men who have been disabled by their War service and the dependants of those who have died, and, by means of loans, to help those who, by reason of their War service, may require temporary assistance. The Federal Committee arranged that, for the sake of convenience in administration, all the Trustees of the Fund should be resident in one State, and invited the Council of the New South Wales Branch to nominate them. That Council nominated Dr. W. H. Crago, Dr. George Armstrong, and Dr. K. Gordon Craig, who were duly appointed by the Federal Committee.

VENEREAL DISEASES ACT, 1918.

353. Like the Acts already in force in Queensland, Western Australia, Victoria and Tasmania, the New South Wales Venereal Diseases Act 1918 provides for compulsory treatment, and makes it an offence for any one not a legally qualified practitioner registered in New South Wales, or a person acting under the direct instruction of such a practitioner, to treat venereal disease.

AUSTRALASIAN PHARMACEUTICAL FORMULARY.

354. The Branch appointed Members to co-operate with the Pharmaceutical Society of New South Wales in the issue of a fresh "Australasian Pharmaceutical Formulary."

AUSTRALASIAN TOWN PLANNING CONFERENCE, 1918.

355. Delegates were appointed by the Branch to attend the Australasian Town Planning Conference, held at Brisbane.

PNEUMONIC INFLUENZA EPIDEMIC.

356. At the request of the Minister of Public Health, fourteen Members of the Branch were appointed as a Consultative Council to re-inforce the Director-General of Public Health, and the Health Department, in devising measures to combat the influenza epidemic.

J. A. MACDONALD,
Chairman of Council.

Association Notices.

ELECTION OF COUNCIL, 1919-20.

NOTICE is hereby given that **Nominations** for candidates for election as Members of Council by the Lancashire and Cheshire Branch, and the Bath and Bristol, Gloucestershire, West Somerset, and Worcestershire and Herefordshire Grouped Branches for the year 1919-20 must be forwarded to reach the Acting Financial Secretary and Business Manager, at the Office of the Association, 429, Strand, W.C., not later than Saturday, July 19th, 1919. Each nomination must be on the prescribed form, copies of which will be furnished by him upon application.

Separate forms have been prepared:

- (a) For a nomination by a Division, and
- (b) For a nomination by any three Members of a Branch respectively.

Those applying are requested to state for which purpose the form is desired.

An announcement of the Nominations received will be made in the JOURNAL of July 26th.

Election will be by voting papers. These papers will contain the names of all duly nominated candidates, and will be issued from the Central Office on Saturday, August 2nd, and will be returnable not later than Saturday, August 9th.

The result of the election of Members to the Council will be published in the JOURNAL of August 16th, or, in the event of there being no contests, earlier.

July 5th, 1919.

BRANCH AND DIVISION MEETINGS TO BE HELD.

EAST ANGLIAN BRANCH.—Dr. B. H. Nicholson (East Lodge, Colchester) gives notice that a general meeting of the East Anglian Branch will be held in the Town Hall, Ipswich, on July 10th, at 2 p.m., to consider the date most suitable for carrying into effect the dissolution of the East Anglian Branch. Members wishing to read a paper or show cases should communicate at once with Dr. Nicholson, Colchester.

MIDLAND BRANCH: CHESTERFIELD DIVISION.—Dr. H. W. Pooler, Honorary Secretary (Stonebroom, near Alfreton, Derbyshire), gives notice that a meeting will be held at the Station Hotel, Chesterfield, on Friday, July 11th, at 2.30 p.m., to consider the report of the Insurance Acts Committee (M. 25) and to pass resolutions thereon.

SOUTHERN BRANCH.—Dr. A. A. MacKeith, Honorary Secretary (66, Howard Road, Southampton), gives notice that the annual meeting of the Branch will be held at the Royal Hants County Hospital, Winchester, on Tuesday, July 8th, at 2 p.m., when Dr. Alfred Cox, O.B.E., Medical Secretary, will give an address. The President invites all members to tea at the close of the meeting. The annual golf competition will take place as usual. The President (Dr. Lockhart Livingston) will be pleased to see non-members of the Association at the meeting and afterwards at tea.

IRISH COMMITTEE.

A MEETING of the Irish Committee was held in Dublin on June 3rd, with Dr. J. S. DARLING in the chair. There were also present Drs. J. Craig, T. B. Costello, H. Corby, P. Grace, R. J. Johnstone, W. W. Murphy, and T. Hennessy, Irish Medical Secretary.

Proposed Amalgamation of Medical Associations in Ireland.

Arising out of a notice of motion on the agenda paper for the annual meeting of the Irish Medical Association, it was proposed by Professor CRAIG, seconded by Professor CORBY, and unanimously resolved:

That the Irish Committee of the British Medical Association gives its heartiest approval to any workable scheme by which an amalgamation of the Irish Branches of the British Medical Association and the Irish Medical Association can be effected.

Poor Law Medical Officers' Salaries.

Correspondence was considered from members who complained of the action of the Local Government Board in refusing to sanction the full amount of initial and maximal salaries when passed by boards of guardians, and the failure of that Board to exercise its power to fix adequate salaries in the case of boards of guardians who, in some instances, had refused on several occasions to give any increase on salaries fixed over fifty years ago, and in other cases the increases given were altogether inadequate.

The Committee directed the Irish Medical Secretary to write again to the Local Government Board drawing its attention to the unsatisfactory condition of Poor Law medical officers' salaries, and to point out that whilst many boards of guardians were willing to pay their medical officials the moderate maximal salary of £250 and £300 per annum, other boards refused to pay their doctors for the same work a salary of more than £120 or £150 per annum.

MEETING OF MEDICAL DELEGATES.

At a largely attended meeting of delegates of the Irish medical profession, held in the Royal College of Surgeons, Dublin, on June 3rd, the following among other resolutions were passed:

Reappointment of Irish Medical Committee.

That this meeting of delegates authorize the Irish Medical Committee, constituted under the various resolutions of meetings of delegates, to represent the profession of Ireland in regard to proposed legislative measures affecting the interests of the profession, and in regard to the interests of the profession generally. An amendment constituting the Council of the Irish Medical Association the executive of the Irish profession was withdrawn.

Special Medical Committee for Ireland.

That this meeting of delegates urges that a special committee be constituted, consisting of five members of the Irish Medical Association, nominated by the Council of the Irish Medical Association; five members of the British Medical Association, nominated by the Irish Committee of the British Medical Association; five members of the Irish Medical Committee, nominated by the Irish Medical Committee. The Irish Medical Secretary of the British Medical Association and the Secretary of the Irish Medical Association to be *ex-officio* members (without the right of voting) and to act as joint secretaries.

The terms of reference are:

(a) To consider the question of uniting the Irish medical profession in one representative organization and the best method of attaining that object.

(b) To submit the recommendations and alternative minority suggestions to the entire profession in the form of a referendum.

Public Health Council.

That if the Public Health Council, to be set up under the Ministry of Health Act, is to effect any useful reform it must be so constituted as to command the confidence of the pro-

fession and of the public. The medical members of the Public Health Council should constitute one-third of that body, and this meeting requests the Chief Secretary to permit the Irish Medical Committee to nominate the three non-official medical members.

Medical Legislation.

That a legislative measure such as the needs of Ireland demand should include:

(a) The establishment of a special department of health which should take over the functions concerning health at present exercised in Ireland by the Local Government Board, the Insurance Commissioners, the Home Office, the Privy Council, the Inspectors of Lunacy, and other public departments concerned with the health of the country.

(b) The establishment of a National Medical Service, on the principle of the decision of the referendum of the profession taken in 1911. The conditions and details of such a service to be more fully considered at a more suitable time. The members of such a service, who are engaged in curative duties, should not be debarred from private practice, and for its members there should be adequate remuneration, provision for promotion, regular holidays, study leave, and pension rights. There should be provision for the family of any medical officer who died from the result of his service.

(c) Arrangements for medical attendance on the insured classes on a contributory basis satisfactory to the profession.

(d) The establishment of a complete sanitary system with county medical officers of health provided with such skilled assistance as may be necessary in different areas. Such officers should be whole-time officers not engaged in private practice, and to have the assistance of the district medical officers of health in their several areas.

(e) Provision for the medical and dental inspection of schools and school children; the treatment to be referred to the usual medical attendant.

(f) That medical attendance, whether on poor persons or on the working classes, should be dissociated completely from the administration of the Poor Laws.

(g) That the workhouse hospitals should become district hospitals, dissociated from the management of the workhouses, and should, with the county infirmaries, constitute a system of local hospitals to which all local doctors would have access in case they included provision for the treatment of private patients.

(h) Adequate provision for the treatment and prevention of tuberculosis and venereal diseases.

(i) Adequate provision for the care of women while expectant and nursing mothers and during labour.

(j) Adequate endowment of medical research and provision of laboratory facilities in the several parts of the country.

Underpaid Medical Services.

The remuneration for medical attendance on the Royal Irish Constabulary, postmen, coastguards, and the travelling expenses in connexion with the registration of births, deaths, and marriages, were considered, and it was resolved: That as practically in these services the remuneration was not only as in pre-war times but was not increased during the past fifty years, that an increase of 100 per cent. be demanded.

The inadequacy of the remuneration for certification of sickness benefits under the Insurance Act, fees for the medical examination of applicants for insurance policies, and the conduct of sworn inquiries under the Medical Charities Acts, with other matters already mentioned, were referred to the Irish Medical Committee to organize united action amongst the profession, with the view to their redress.

Immediate Organization of the Profession.

Arising out of a recommendation of the County Meath Local Medical Committee, and the different matters referred for action to the Irish Medical Committee, it was resolved:

That an organization fund be opened and limited to a subscription of £1 ls. for each member of the profession. The secretaries of the Local Medical Committees to appeal to the medical practitioners in their counties or areas to forward their contributions with as little delay as possible; the names of subscribers to be published in the press, and that Dr. Hennessy, 16, South Frederick Street, Dublin, and Mr. C. H. Gick, Royal College of Surgeons, Dublin, receive subscriptions from members of the profession who wish to forward them direct and at once.

The proceedings closed with warm votes of thanks to the Chairman, Mr. R. J. Johnstone, F.R.C.S., and the Secretaries, which were suitably acknowledged.

INSURANCE.

CONFERENCE OF LOCAL MEDICAL AND PANEL COMMITTEES.

A SPECIAL conference of representatives of Local Medical and Panel Committees throughout Great Britain will be held under the auspices of the British Medical Association in the Connaught Rooms, Great Queen Street, London, W.C., on Thursday, July 17th, at 10.30 a.m., and if necessary on the following day. The chair will be taken by

Dr. J. A. Macdonald, LL.D., Chairman of Council of the British Medical Association. The central expenses of the conference will be borne by the Association. Every Local Medical and Panel Committee has been invited to appoint jointly one representative for every 400 practitioners on the local medical list; the representative need not necessarily be a member of the Association. The members of the Insurance Acts Committee will, as on former occasions, attend the conference and take part in its deliberations, but they will not vote unless they are also elected to the conference as representatives.

The main business of the meeting will be to consider the two reports which have been issued to the medical practitioners of Great Britain in regard to the conditions and possible extensions of service under the National Insurance Acts. The provisional agenda paper has already been issued by the Medical Secretary. Committees desiring to place motions on the final agenda are requested to forward them as soon as possible; they should be sent before Monday, July 7th, but relevant motions or amendments received later will be dealt with at the conference. Notice of the conference has been forwarded to the secretaries and chairmen of all Local Medical and Panel Committees, together with the actuary's report of his investigations into the suggested new method of calculating the central pool, and a report by the Insurance Acts Committee on the present position of the mileage question. Owing to the impossibility of making central arrangements for retaining rooms in London, representatives are urged to make their own arrangements as soon as possible.

MEETINGS OF THE PROFESSION.

CONFERENCE IN LONDON.

MEMBERS of the profession from the area comprising London (south of the Thames), Surrey (with Croydon) and Kent (with Canterbury) met at the Essex Hall, Strand, on June 27th to consider the reports on the revision of conditions of service under the Insurance Acts (M. 25). About fifty were present. The chair was taken by Dr. H. J. CARDALE, Chairman London Local Medical and Panel Committees, who was supported by Dr. J. Smith Whitaker, Deputy Chairman National Insurance Commission, Dr. H. B. Brackenbury and Dr. H. G. Cowie of the Insurance Acts Committee, and Dr. B. A. Richmond, Secretary London Local Medical and Panel Committees. At the opening of the discussion the question of the attendance of the press was raised. By a show of hands it was decided that the representative of the BRITISH MEDICAL JOURNAL should remain.

Dr. COWIE made a short statement on M. 25. At the present time, he said, the profession was in the melting pot, and it was not clearly seen how it would emerge. It might be found that the profession had been proceeding on the definite line of devolution of the general practitioner and the establishment of the expert. If that process were still carried on, the ultimate logical conclusion would be for the general practitioner to become merely a second-rate medical man, to fetch and carry for the expert. Yet the general practitioner constituted three-fourths of the profession, and surely it would not be suggested that all the brains of the profession were in the other fourth. It could not be in the professional interest, nor in the wider national interest, that three-fourths of the profession should be condemned to atrophy, while the other fourth was encouraged in a lopsided development. This process must be arrested, and the general practitioner must take his proper place in solving the problem of national health. The profession must be prepared to concentrate all its energies now in evolving an adequate and efficient service. How should they approach revision? He did not see why they should not have a blunderbuss handy—(hear, hear)—but they must be sure that it was properly loaded and likely to go off. Dr. Cowie went on to explain that M. 25 was only a basis for discussion at present. It was hoped the new arrangements would be operative from January 1st next, but if it was considered that the question of remuneration had not been adequately discussed, it might be necessary to carry on under the old system until March. He hoped the report would be received sympathetically, as very hard and honest work had been put into it, but if it was not satisfactory by all means let them show how it could be made so.

The CHAIRMAN next called upon Dr. Smith Whitaker to speak, but an objection was raised, and, after some discussion, it was decided by 26 votes to 22 that he should be heard.

Dr. WHITAKER said that the Government had simply been anxious that there should be discussions that would

clear up all the issues of this complicated business. It was thought quite reasonable that doctors would want to know what services they were to give before the question of remuneration for those services was dealt with. Asked if the report represented the views of the Government, he replied in the negative. The object had been to make an analysis of the whole position, and place before the profession quite frankly the issues involved. It was desired that it should not be open to any member of the profession to say, when the next bargain was entered into, that he did not have the whole position clearly and frankly placed before him. Replying to several questions, Dr. Whitaker repeated the statement that the report was simply an exploration of the ground to enable the profession to consider what it would like to do.

Dr. F. COKE (Ashford) said that every section of the community was getting larger remuneration, yet the doctor's fee remained the same. He proposed:

That this conference demands to know what capitation fee it is proposed to pay for 1920, over the present range of service, not later than August 16th, 1919.

The CHAIRMAN said that he did not propose to take resolutions, but after an animated discussion, in which it was evident that the feeling of the meeting was strongly in favour of recording such expressions of opinion, he agreed to this course.

Dr. WHITAKER could not imagine the Government proceeding to any calculation of what the remuneration should be for 1920 for a kind of service which might not be in existence.

Dr. COWIE said that the resolution was wholly based on a misunderstanding. They had first to discuss what they were going to do; the next stage would be to find what money they would require for doing it. The resolution was carried by a large majority.

In the course of further discussion, Dr. GORDON WARD, speaking for Kent, urged that in the setting up of a fund ordinary and special purposes must be kept separate. He thought the Insurance Acts Committee had shown lack of foresight, for it was contemplated that general medical attendance should be increased in scope. He moved:

That this meeting is strongly of opinion that the capitation fee for ordinary medical attendance must be kept entirely separate from any sums set apart for special purposes.

This was carried unanimously.

In a discussion on the section dealing with temporary residents, Dr. COWIE said it was hoped that what was proposed would lessen the burden of clerical work, but Dr. COKE, who referred specially to the position of health resorts, moved that there should be no change in the method of payment for temporary residents, and this was carried with one dissident. Also on the motion of Dr. COKE the meeting agreed to a resolution to the effect that there should be no limitation of lists.

An animated discussion took place regarding the suggested minimum assured payments to entrants into practice. Dr. GORDON WARD considered that nothing would create more dissatisfaction. Dr. COWIE replied that the panel should be kept as open as possible; men were coming back from war service whose practices had entirely disappeared. A resolution to the effect that the suggestions should not be adopted was carried.

The question of limitation of lists being raised, it was agreed:

That this meeting is of opinion that the only satisfactory way of limiting the numbers on the list is by adequate remuneration to the medical men practising under the Act.

There was considerable discussion regarding the paragraphs in the report headed "Differences in professional skill," and particularly the suggestion that a practitioner who did not wish to perform any surgical operations should employ another doctor at his own expense. Dr. GORDON WARD thought it extremely dangerous to include any services not formerly included among general practitioner services. Dr. BRACKENBURY pointed out that increased competence and ability would entail an increase of payment. All the facts would be taken into account when the capitation fee was adjusted. Dr. WHITAKER remarked that the main question was simply whether certain methods of diagnosis or treatment were within the competence of a practitioner "of ordinary competence and skill."

A long discussion, which dealt with many other points in the report, concluded with a vote of thanks to the Chairman.

COUNTY OF FIFE.

The following is a fuller account of the meeting of the medical practitioners resident in the county of Fife, held at Kirkcaldy on June 6th, of which a brief note only appeared in the SUPPLEMENT of June 21st. The meeting considered the memorandum

by the Insurance Commissioners and the report of the Insurance Acts Committee (M.25) on the proposed revision of the Insurance Act. Resolutions were passed as follows:

1. *Temporary Residents*.—That subsection (b) of paragraph 10 should read: "For the purpose of determining his proportion of the area pool an appropriate addition would be made to his remuneration for the ensuing quarter in respect of persons so notified; this addition might be made by counting a smaller number of temporary residents as equivalent to a larger number of ordinary insured persons—for example, 1 as 4."
2. *Limitation of Numbers on Lists*.—Resolved to agree to the number limitation.
3. *Suggested Minimum Assured Payments to Entrants into Practice*.—The suggestion contained in the memoranda was entirely opposed.
4. *Special Anaesthetics*.—Resolved to oppose the proposition that the payments for anaesthetics should be a prior charge on the Medical Benefit Fund. It was unanimously agreed that all operations requiring a general anaesthetic and the administration of a general anaesthetic should be considered special services.
5. *Right to Medical Benefit*.—The meeting agreed that the onus of proof should be upon the insured person; that the insured person should be treated as a private patient and pay fees until proof is forthcoming.
6. *More frequent right of Change of Doctor*.—No objection was raised to the proposition to allow change of doctor twice a year.
7. *Question as to Transfer in Death or other Vacancies*.—Resolved that in case of death or retirement from the panel, notification should be sent in the same way as in the case of transfer of practice.
8. *Possibility of a Fresh Issue of Medical Cards*.—The proposal contained in the memorandum was unanimously negatived.
9. *Possible Abolition of "Floating Sixpence"*.—Agreed that this should be abolished.
10. *Differences in Professional Skill*.—Resolved that the practice of the district should not be taken into consideration in regard to what came within the scope of ordinary professional skill and competence. The meeting strongly objected to the proposal that a practitioner should employ, at his own expense, another doctor to render any service to which an insured person was entitled as part of medical benefit, but which he himself preferred not to undertake.
11. *Adequacy of Service*.—The meeting objected to the proposal contained in M. 25.
12. *Deputising Arrangements*.—This proposal was also objected to, as the meeting felt that the present arrangements were quite satisfactory.
13. *Emergency Treatment*.—Objection was taken to the proposal that payments for emergency services should be made from a local pool.
14. *Medical Referees*.—Strong objection was taken to any interference in the form of inspection, supervision, or treatment in connexion with work of the panel practitioner.
15. *Income Limit*.—It was agreed by a majority, after a vote, that the proposal to raise the income limit for insured persons from £160 to £250 should be uncompromisingly opposed.

The report of a special committee upon maternity and child welfare schemes was submitted to the meeting, and ordered to be circulated amongst practitioners resident in the county.

It was decided to appoint a clerk for the various Medical Committees in the county, and it was left to the Secretary to arrange accordingly.

It was unanimously decided to support the National Insurance Defence Trust of the British Medical Association in the way proposed by the Association.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

The following appointments are announced by the Admiralty: Surgeon Commander T. A. Smyth to the *St. Margaret of Scotland*; Surgeon Lieutenant Commanders: A. G. Valpy-French to Pembroke Dock Hospital, G. Nunn to H.M. Dockyard, Portsmouth; Surgeon Lieutenants: A. E. Laone to the *Seagrab*, J. F. Hynes to the *Orbin*, J. F. M. Campbell to the *Moth*, A. C. V. Green to the *Mantis*; Surgeon Lieutenants (temporary): A. S. Bisset to the *Cæsar*, H. C. Billings to the *Powerful*, additional for Trevelick Sick Quarters; J. B. Crawford to the *Carlisle*, S. H. Waddy and A. T. Hawley to R.N. Hospital, Haslar; H. N. Roper-Hall to R.N. Hospital, Chatham; J. T. Johnston to the *Coventry*, N. H. Smith, D.S.O., to R.M. Division, Forton; A. C. Halliwell to the *Delhi*, C. Young to the *Sandhurst*, C. F. McLean to the *Stuart*. To be Surgeon Lieutenant (temporary): D. H. Cameron.

ARMY MEDICAL SERVICE.

Major-General Sir W. B. Leishman, K.C.M.G., C.B., F.R.S., to be Director of Pathology at the War Office.
Colonel Sir W. H. Horrocks, K.C.M.G., C.B. (ret. pay), to be temporary Director of Hygiene at the War Office and to be temporary Brigadier-General whilst so employed.

Lieut.-Colonel D. Harvey, C.M.G., C.B.E., R.A.M.C., to be Deputy Director of Pathology at the War Office and to be temporary Colonel whilst so employed.

Major and Brevet Lieut.-Colonel W. C. Smales, D.S.O., R.A.M.C., from Deputy Assistant Director-General to be Assistant Director of Hygiene at the War Office.

Major A. C. H. Gray, O.B.E., R.A.M.C., to be Assistant Director of Pathology at the War Office and to be temporary Lieut.-Colonel whilst so employed.

Colonel J. Fallon retires on retired pay.
Temporary Colonel H. Wade, D.S.O. (Captain R.A.M.C., T.F.), relinquishes his temporary commission on reposting.

Major and Brevet Lieut.-Colonel C. W. Holden, D.S.O., relinquishes the acting rank of Colonel on reposting, April 4th, 1919 (substituted for notification in the *London Gazette*, June 5th, 1919).

Temporary Colonel T. P. Legg, C.M.G., relinquishes his commission and retains the rank of Colonel.

The following temporary Colonels relinquish their temporary commissions on reposting: H. G. Barling, C.B. (Lieut.-Colonel R.A.M.C., T.F.), J. Swain, C.B. (Major R.A.M.C., T.F.).

ROYAL ARMY MEDICAL CORPS.

The following officers relinquish their commissions: Temporary Lieutenant-Colonels and retain the rank of Lieutenant-Colonel: Guy N. Stephen, O.B.E., G. A. Bannatyne, O.B.E. (on ceasing to serve with the Bath War Hospital). Temporary Major A. F. Hurst, and is granted the rank of Lieutenant-Colonel. Temporary Majors and retain the rank of Major: G. S. Samuelson, C. Christy, E. F. Ackery, A. Robertson (on ceasing to serve with the Halifax War Hospital), J. G. Fitzgerald, H. S. Brander (on ceasing to be employed at the Keighley War Hospital). Temporary Captains and are granted the rank of Major: E. G. D. Pinco, J. B. Lowe, L. H. C. Birkbeck, J. V. Holmes, W. Haward, (acting Major) G. S. Mill (on ceasing to serve with the Staincliffe War Hospital), W. E. Hallinan, M.C. Captains J. A. Andrews, M.C., J. A. W. Ebdon. Temporary Captains and retain the rank of Captain: M. C. R. Grahame, A. T. I. Macdonald, G. R. Potter, W. Henderson, T. N. Darling, W. E. Cooper, C. C. G. Gibson, N. P. Pritchard, M.C., A. Campbell, L. Gibbons, A. W. Cochrane, G. Hamilton, E. V. Hunter, H. R. W. Husbands, A. C. Giles, M.C., L. L. Hadley, M.C., C. C. B. Gilmour, D. Hardie, M.C., C. A. Joll, A. G. K. Ledger, A. J. Andrew, J. S. Taylor, D. A. Donald, M.C., J. W. Lindsay, J. O. Thomas, M.C., H. Rogers-Tillstone, J. A. Renshaw, R. Kenefick, M.C., H. V. Taylor, F. C. Trapnell, K. H. Bennett, W. A. Murphy, A. E. Hallinan, M.C., B. D. Crichton, J. L. H. Paterson, V. D. O. Logan, T. Kirkwood, A. E. Donaldson-Sim, W. J. G. Johnson, H. A. Cutler, E. H. Jones, R. Calleya, W. H. Gowan, H. E. Clutterbuck, I. Feldman, W. H. Brown, W. J. G. Henderson, J. C. Bramwell, R. B. Heygate, D. S. Harvey, D. Johnston, H. B. Pare, W. A. Paterson, W. A. Rees, R. W. L. Wallace, P. O. W. Browne, W. B. Primrose, A. M. Hewat, C. G. G. Winter, A. R. F. Douglas, R. C. B. Briscoe, D. B. Leitch, W. M. McFarlane, J. Rigby, P. C. Bushnell, H. R. Wright, A. Mudie, T. G. Fetherstonhaugh, M.C., A. Farquhar, R. de V. King, A. E. Francis, E. Gardner, J. A. Loughbridge, G. S. Murray, A. Lees, M.C., A. M. Bayne, F. M. Auld, A. P. Ford, D. Gray, W. W. Turner, H. E. Collier, E. R. Lyth, A. H. M. Seward, L. G. Leonard, S. A. Tucker, D. W. Tacey, H. H. P. Morton, G. P. Taylor, I. M. Frazer, G. A. Ticehurst, H. S. McSorley, C. S. Stollerforth, G. Scullard, G. B. Messenger, G. B. Crawford, W. M. Johnston, C. W. Ewing, H. Findlay, J. S. Dickson, C. O. Donovan, D.S.O., L. W. Oliver, A. Walker, G. B. Mason, J. B. Cook, H. L. Cronk, C. Clyne, H. R. Tighe, S. G. Harrison, S. A. Day, R. M. Moore, E. P. Darik, M.C., H. C. Harrison, on account of ill health contracted on active service, April 29th, 1919 (substituted for notification in the *London Gazette*, June 14th, 1919). Temporary Lieutenants and retain the rank of Lieutenant: W. F. Waugh, B. W. Lacey, H. L. Parker, W. Hickey, R. C. Redman. Temporary honorary Lieutenant F. A. Georger, and retains the rank of honorary Lieutenant.

APPOINTMENTS.

BANKS, Cyril, M.B., B.S.Lond., D.P.H.Sheffield, Medical Officer of Health of Stafford.
FELDMAN, Captain William D., M.B., B.S.Lond., Medical Officer to Out-patients, London Jewish Hospital.
HELISHY, W. G., M.R.C.S., L.R.C.P., District Medical Officer and Public Vaccinator, Wandsworth Union.
WILKINS, Arthur G., M.B., Ch.B.Vict., Senior Medical School Inspector for Staffordshire.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

MARRIAGE.

VANCE—ENGLISH.—On June 18th, 1919, at St. Mary at the Quay, Ipswich, by the Rev. F. H. Nicholl, Vicar, Captain John Hazlett Vance, R.A.M.C., only son of James Vance, Whitehead, co. Antrim, to Grace Marion English, M.B., elder daughter of Major W. English, R.A.S.C.

DIARY FOR THE WEEK.

OXFORD OPHTHALMOLOGICAL CONGRESS.—Thursday, 10 a.m., opening by the Master, Mr. Sydney Stephenson. Noon, Doynce Lecture, Preventive Ophthalmology, followed by a discussion. Friday, 10 till 1, Papers.

ROYAL SOCIETY OF MEDICINE.—Section of Neurology: Wednesday, 8.30 p.m., Colonel E. Farquhar Buzzard: Encephalitis Lethargica and its Results, with demonstration of Cases. Section of Psychiatry: Friday, 8.30 p.m.: Dr. C. G. Jung (Zurich): The Problem of Psychogenesis in Mental Diseases.

FRIDAY, 5.15 p.m., Presentation to Sir William Osler, Bt., at the house of the Royal Society of Medicine, 1, Wimpole Street, W.1.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
JULY.	
8 Tues.	Southern Branch, Annual Meeting, Winchester, 2 p.m.
10 Thur.	East Anglian Branch, Town Hall, Ipswich, 2 p.m. London: Science Committee, 2.30 p.m. London: Special Medical Research and Laboratory Workers Sub-committee, 4.30 p.m.
11 Fri.	Chesterfield Division, Station Hotel, Chesterfield, 2.30 p.m.
23 Wed.	Annual Conference of Secretaries, 429, Strand, London, W.C.2.
24 Thurs.	OPENING OF ANNUAL REPRESENTATIVE MEETING, Connaught Rooms, Great Queen Street, London, W.C.2. 10 a.m.
25 Fri.	ANNUAL GENERAL MEETING, 2 p.m.

GROUP CONFERENCES.

Tues., July 8th.	Carlisle. At No. 1 Committee Room, The Courts, 2 p.m. (Chairman: The Rev. Canon Sutton, Chairman, County Insurance Committee.)
Wed., July 9th.	Cardiff. At Old University College, 2 p.m. (Chairman to be elected at meeting.)
Thurs., July 10th.	Manchester. At Milton Hall, Deansgate, 3 p.m. (Chairman: Dr. T. A. Goodfellow.)
Fri., July 11th.	Chester. At Council Chamber, Town Hall, 2 p.m. (Chairman: Dr. F. J. Butt, Chester.)
Sat., July 12th.	Brighton. At Oddfellows' Hall, Queen's Road, 2 p.m. (Chairman: Dr. H. H. Taylor, Hove.)

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JULY 12TH, 1919.

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British Medical Association.

CURRENT NOTES.

Income Limit for Insured Persons.

THE Government bill for raising the income limit for insurance of non-manual workers from £160 to £250 was read a second time in the House of Commons on July 3rd. As will be seen from the report of the debate in the column of Medical Notes in Parliament, in the body of the JOURNAL, Dr. Farquharson made a spirited protest, in the course of which he brought the views of the British Medical Association to the notice of the House. He had intended to move an amendment which would have had the effect of excluding from insurance any person who had not hitherto been insured, but of allowing non-manual workers to continue to be insured, even though their income had been raised from below the £160 limit to something less than £250 a year. He was precluded from doing so by the rules of procedure. The amendment was as follows:

Provided also that nothing in this Act shall be construed as entitling to insurance benefits any person employed otherwise than by way of manual labour who, at the date of the coming into operation of this Act, is not an insured person and whose income exceeds £160 per annum: and that any such person claiming to be entitled to insurance benefits shall make a declaration accordingly.

The bill has been referred to a Standing Committee, and Dr. Farquharson will, we understand, press the amendment on the attention of that committee.

Insurance Practitioners' Emergency Settlement, 1918-19.

Representations having been made to the Insurance Commissioners by the Insurance Acts Committee that arrangements should be made to carry out emergency settlements for the payment of insurance practitioners for 1918-19, the Committee has been informed by the Commissioners that they are prepared to meet the wishes of insurance practitioners by carrying out emergency settlements for the years 1918-19 on the lines of those adopted for the three previous years, and that they are at present engaged on the calculations necessary to effect a settlement on these lines for 1918.

Salaries of Medical Officers.

At a meeting of the Exeter City Council, on June 24th, the Mayor moved the adoption of the report of a special committee appointed to consider the salary of the medical officer of health, Dr. Stirk. The Mayor stated that the report had been made as the result of representations by the British Medical Association, and the endeavour of the committee had been to bring Dr. Stirk's salary into accord

with the scale laid down by the Association and the Society of Medical Officers of Health and with the salaries now paid elsewhere. They recommended that the salary be raised from £650 to £800 a year. Mr. Munro contended that a city of the size of Exeter could not afford to pay such a salary for the post, and moved an amendment that the salary be £700. Mr. Kolland complained that at the bidding of a strong union like the British Medical Association the council gave way at once. After some discussion, in the course of which it was pointed out that the increase was reasonable in view of the depreciation in the value of the sovereign, and that it represented an increase of 33½ per cent., whereas workmen throughout the country had been advanced from 100 to 120 per cent. over pre-war rates, the amendment was defeated by a substantial majority, thirteen only supporting it, and the report was adopted.

Discharged Soldiers as Panel Patients.

The following letter, dated June 26th, 1919, has been sent by the Medical Secretary of the British Medical Association to the Secretary of the National Insurance Joint Committee:

For some time past we have been receiving many complaints as to the position of discharged soldiers whose health is unsatisfactory. It seems there are large numbers of such men who are almost, if not quite, as unfit for work as the men who are invalided out, but who are not included by the army authorities in that category and are therefore put on the ordinary list and are not paid for on the payment per attendance scheme. Typical instances are the men who have suffered from malaria who are apparently well when they arrive home, but break down and are off work periodically. Some of these men afterwards obtain pensions but are still regarded as technically demobilized or discharged and not as invalided. Our correspondents point out that it is an injustice that such men should be regarded as being ordinary "risks," and thus entitled to be attended on the capitation basis. The question is under the consideration of the Insurance Acts Committee, and will doubtless come up at the Conference of Representatives of Local Medical and Panel Committees on July 17th, but we should be glad to know whether the Commissioners have taken the position of these men into consideration, and if they have any proposals to make. At its last consideration of the question the Insurance Acts Committee came to the conclusion that whatever action might be taken as regards these men this year, they must be regarded as exceptional risks, and must therefore be an important factor in settling the capitation fee for the forthcoming year.

The Medico-Political Union's Conference.

A correspondent—the honorary secretary of a Panel Committee—considers that the medical profession should not regard the conference of Local Medical and Panel Committees held in London, on June 24th, at the invitation of the Medico-Political Union, as a representative gathering. The Committee of which he is secretary did not receive an invitation to the conference. He therefore thinks it ought not to be assumed that all other Local Medical and Panel Committees were invited.

Meetings of Branches and Divisions.**CAMBRIDGE AND HUNTINGDON BRANCH.**

THE seventy-fifth annual general meeting of the Branch was held in Sidney Sussex College, Cambridge, by kind permission of the Master and Fellows, on July 1st, 1919. The following officers were elected:

President: Dr. W. R. Grove. *Vice-Presidents:* Dr. Meacock, Dr. Newton. *Honorary Secretary and Treasurer:* Dr. G. S. Haynes.

Professor F. GOWLAND HOPKINS, M.D., F.R.S., delivered an address on the bearing of recent researches on the feeding of infants and children. Members, their wives and guests, were entertained to tea by the President and Mrs. Grove.

EDINBURGH BRANCH.

THE annual meeting of the Edinburgh Branch was held on June 24th, when the retiring President, Dr. MCKENZIE JOHNSTON, occupied the chair. The annual report of the Branch Council and the treasurer's financial statement were read and approved. The office-bearers for the year 1919-20 were elected as follows:

President: Lieut.-Colonel John Keay. *President-elect:* Dr. J. J. Graham Brown. *Vice-Presidents:* Dr. William Stewart and Dr. John Stewart Muir. *Honorary Treasurer:* Dr. Robert Thin. *Honorary Secretaries:* Dr. John Stevens and Dr. John Eason.

A vote of thanks was cordially given to the retiring president. Lieut.-Colonel JOHN KEAY then occupied the chair.

The re-election of Dr. John Stevens as representative of the Edinburgh and Fife Branches on the Central Council was announced.

Dr. William Fordyce was elected to the Board of Management of the Queen Mary Nursing Home.

The question of the arrangements for the clinical meeting was remitted to the Branch Council with powers.

On the motion of Dr. KENNIE PATERSON, it was resolved to strongly recommend the Council of the Association to proceed now to appoint a Scottish Medical Secretary.

The meeting concluded with a vote of thanks to the President and to the Royal College of Physicians for granting the use of their hall for the meeting.

EDINBURGH BRANCH: EDINBURGH AND LEITH DIVISION.

THE annual meeting of the Edinburgh and Leith Division was held on June 26th, when Dr. LAMOND LACKIE, Chairman of the Division, presided.

The scale of fees under the Midwives (Scotland) Act, suggested by the Executive, was approved. The SENIOR SECRETARY reported on the action of the Executive, by correspondence and conference with the Chemists' Associations in the area, about the difficulty of obtaining medicines after closing hours. The pharmacists, acting on a suggestion, are preparing a list of those of their number who have night bells, or whose houses are near, and intend forwarding it to the Division. It has been suggested to put "statim" on the top of all urgent after-hours prescriptions—not "urgent," as this might be used wrongly by the public.

The SECRETARY reported on the action of the Executive with regard to the Nurses' Registration Bill in Parliament.

Dr. STEVENS, member of Council, reported that the Central Council had decided to advertise for a medical secretary for Scotland with offices in Edinburgh.

The following motion was passed unanimously:

As the memorandum of the Insurance Commissioners and part of the Insurance Acts Committee Report deal with matters affecting the whole profession, reports and resolutions bearing on them ought not to be dealt with by a special Conference of Local Medical and Panel Committees, but by a body representing the whole profession. The part of the Insurance Acts Committee Report which only concerns insurance practitioners can appropriately be dealt with by the special Conference of Representatives of Local Medical and Panel Committees.

The following officers were elected for 1919-20:

Chairman: Dr. J. Lamond Lackie. *Vice-Chairmen:* Drs. W. Stewart, J. Ritchie. *Senior Secretary and Treasurer:* Dr. G. Keppie Paterson. *Junior Secretary:* Dr. J. D. Comrie. *Representatives on Representative Body:* Drs. J. Stevens, R. Thin. *Deputy Representatives:* Drs. C. M. Pearson and J. Eason.

EDINBURGH BRANCH: SOUTH-EASTERN COUNTIES DIVISION.

A SPECIAL meeting of the Division was held at Newtown St. Boswells on June 5th, when Dr. MUIR presided.

The Division approved of the resolution adopted by a meeting of practitioners held in Edinburgh suggesting that the proposal to raise the income limit for insured people from £160 to £250 be uncompromisingly opposed.

The HONORARY SECRETARY directed the attention of members to document M.21 regarding the formation of a fund to be called the National Insurance Defence Trust, and suggested that members might use their influence in the Panel Committee within the Division to forward the objects of this fund.

The meeting then proceeded to consider M.25—the report on the revision of the conditions of service under the National Insurance Acts and possible extensions of service by the Insurance Acts Committee. Paragraphs 15 and 16 were disapproved. With regard to paragraph 39 it was considered that it would be sufficient if insured persons had an opportunity to change their doctor once a year. The meeting also considered that the floating sixpence (paragraph 43) should now be included in the capitation, and that any deficit in the drug fund should be met by the Treasury. Paragraph 58 was ordered to be expunged. The report was approved with the reservations indicated.

LEINSTER BRANCH.

THE annual meeting of the Leinster Branch was held in Dublin on June 23th, when Dr. W. V. FURLONG was in the chair. The following officers were appointed:

President: Dr. W. V. Furlong. *President-elect:* Dr. R. J. Rowlette, F.R.C.P. *Vice-Presidents:* Colonel W. Taylor, C.B., F.R.C.S.; Dr. A. R. Parsons, F.R.C.P.I. *Honorary Secretary and Treasurer:* Mr. W. Doolin, F.R.C.S. *Representative on Council:* Mr. W. Doolin, F.R.C.S. *Representatives on Irish Committee:* Drs. James Craig and R. L. Heard.

Consideration was given to the case of a member who was called upon to resign as a medical officer to an employees' benefit society, which, when requested, had refused to assign any reason for requesting his resignation. The matter was referred to the Irish Medical Secretary, who was directed to write to the secretary of the benefit society requesting that the medical officer in question should be informed as regards the cause for his being called upon to resign, and that, further, he should be afforded the usual and necessary facilities to meet any charge which may be made against him.

It was announced that nineteen applicants had been elected members of the Association.

DUBLIN DIVISION.

The annual meeting of the Dublin Division was held on the same day, when the following officers were appointed:

Chairman: Dr. W. M. Crofton. *Vice-Chairman:* Captain McWalter, M.D., R.A.M.C. *Honorary Secretary:* Dr. M. R. J. Hayes. *Representative in Representative Body:* Dr. W. M. Crofton. Members of the Branch Council were re-elected, with Dr. McFetridge vice Dr. J. O'C. Delahoyde (deceased).

EAST LEINSTER DIVISION.

The annual meeting of the East Leinster Division was also held on June 20th. The following officers were elected:

Chairman: Dr. R. Hatch. *Vice-Chairman:* Dr. D. Jackson. *Honorary Secretary and Treasurer:* Dr. R. G. Peacocke, O.B.E. *Representative in Representative Body:* Colonel W. T. Johnston, M.D. *Executive Committee and Representatives on Branch Council:* The officials of the Division, and Drs. W. V. Furlong, T. D. Good, H. C. Groves, R. L. Heard, Hennessy, W. F. Law, Jackson, and Peacocke.

METROPOLITAN COUNTIES BRANCH.

THE sixty-seventh annual general meeting of the Metropolitan Counties Branch was held at 429, Strand, on June 26th, when Dr. M. G. BIGGS, President, was in the chair.

The following officers were elected for the year 1919-20:

President: Lieut.-Colonel W. McAdam Eccles. *President-elect:* Major-General Sir Bertrand Dawson, G.C.V.O., C.B. *Past President:* Dr. M. G. Biggs. *Vice-Presidents:* Captain Wilfred Kingston, Dr. Reginald Morton, Dr. C. E. Shelley, Dr. Wynn Westcott. *Honorary Treasurer:* Mr. Comyns Berkeley. *Honorary Secretaries:* Mr. N. Bishop Harman, Dr. J. A. Percival Barnes.

The report of the Council for 1918-19 was received, approved, and directed to be entered on the minutes, as was also the report of the representatives on the Central Council.

The following alteration in Rule 13 was approved:

13. The Branch Council shall have the following duties and powers:
(a) To elect members of the Association in the manner prescribed by the By-laws of the Association, etc.

The CHAIRMAN then inducted the President, Lieut.-Colonel W. McAdam Eccles, who delivered his presidential address entitled Reconstruction in Medical Education (see BRITISH MEDICAL JOURNAL, June 28th, p. 797). On the motion of Dr. A. J. RICE-OLLEY, C.B.E., seconded by Dr. CUNNINGTON, a hearty vote of thanks was accorded to Lieut.-Colonel McAdam Eccles for his able and interesting address.

A vote of thanks to the retiring president, Dr. Biggs, moved by Dr. POLLARD and seconded by Dr. ROXBURGH, was carried with acclamation.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.

THE forty-ninth annual meeting of the South Wales and Monmouthshire Branch was held at Llanelly on June 12th, when Dr. A. LLOYD JONES presided. The report of the Council and financial statement were read and adopted.

The following officers were elected:

President-elect: Major W. J. Graer. *Treasurer:* Dr. C. Biddle. *Honorary Secretaries:* Drs. L. Freeman-Marks and E. E. Brierley.

Dr. OWEN WILLIAMS, having been inducted as President for the ensuing year, proposed a vote of thanks to the retiring

president, Dr. A. Lloyd Jones, for the able way in which he had carried out the duties of the office during the past year. The motion was carried with acclamation.

The President then delivered an address entitled "Short notes on a few interesting cases." On the motion of Dr. A. Lloyd Jones, seconded by Dr. Evans, and supported by Dr. Crawford Treasure and Dr. Edgar Davies, a vote of thanks to the President for his interesting and able address was adopted with acclamation.

SUSSEX BRANCH.

The annual meeting of the Sussex Branch was held at Brighton on June 26th, 1919. The President (Captain R. SANDERSON) entertained the members at lunch, and afterwards delivered an address on the lessons of military surgery applied to civil practice, which will be published in an early number of the JOURNAL. There was a discussion, in which members who had been lately on military service took part. By kind permission of the Commanding Officer the members then went to the Pavilion Military Hospital, where Major Fitzmaurice Kelly showed the following cases and demonstrated the recent methods of dealing with them surgically: (1) A case of aneurysm of the axillary artery following a gunshot fracture of the humerus, treated by excision of the sac; (2) cases illustrating methods of amputation of the leg and at the hip-joint, giving stumps suitable for the fitting of modern prostheses; (3) cases illustrating methods of kineplastic amputation (a) by tunnelization of muscles (b) by club-shaped motors built of the triceps and brachialis anticus muscles, with their bony insertions into the olecranon and coronoid processes. The members were entertained at tea by the Brighton Division at the conclusion of a successful meeting.

SUSSEX BRANCH: CHICHESTER AND WORTHING DIVISION.

The annual meeting of the Chichester and Worthing Division was held on June 3rd, when Dr. Morris, Chairman, presided.

On the motion of Dr. GOING, seconded by Dr. GOSTLING, a hearty vote of thanks to Dr. Morris for his efficient chairmanship of the Division for the last three years was carried with acclamation.

The following officers were elected:

Chairman: Dr. W. Ayton Gostling. *Vice-Chairman:* Dr. Morris. *Secretary:* Dr. Milbank-Smith. *Representative on Branch Council:* Dr. Milbank-Smith. *Representative in Representative Body (together with the Horsham Division):* Dr. Milbank-Smith.

The revised scheme of the Insurance Commissioners and the report of the Insurance Acts Committee thereon were next considered, and certain recommendations to the Representative were suggested. (1) Dr. THOMPSON pointed out that as regards temporary residents a flat rate would be unfair in places where large convalescent homes were situated, as the panel practitioner had to attend constantly and give certificates throughout the year. There appeared to be no provision in the scheme for adequately remunerating this work. (2) Dr. CHARLIN considered that with regard to rural practitioners who dispensed for all their patients a fair share of the floating sixpence was not obtained. He was under the impression that the basis for calculating the drug fund for the chemists was on the whole number of insured persons in the area. He maintained that the number of patients for whom the doctors dispense should be subtracted first, otherwise the doctors do not share as dispensers with the chemists in the floating sixpence.

Dr. VERNON pointed out that when a Panel Committee had suggested that the conduct of a practitioner ought to be inquired into by the Commissioners with a view to removing such practitioner from the panel, the Commissioners were unwilling to put the machinery in motion till the Panel Committee had definitely requested that the practitioner's name should be removed. This was throwing an unfair responsibility on the Panel Committee, who had no power to collect the required evidence, and were asked to judge the case untried, with a risk of becoming involved in damages.

It was considered just that the expensive serums should be supplied under the Laboratory Scheme of the Ministry of Health, and should not be made a charge on the drug fund.

After the meeting the members dined together at Warne's Hotel, twenty-three being present at the dinner.

Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1919.

The Annual Representative Meeting of the Association will be held in the Connaught Rooms, Great Queen Street, London, W.C.2, commencing on Thursday, July 24th, at 10 a.m.

The Provisional Agenda was published in the SUPPLEMENT of May 3rd, 10th and 24th, 1919.

BRANCH AND DIVISION MEETINGS TO BE HELD.

EAST YORK AND NORTH LINCOLN BRANCH.—Mr. H. L. EVANS (101, Princes Avenue, Hull) gives notice that the annual meeting of the East York and North Lincoln Branch will be held in the Board Room of the Hull Royal Infirmary, on Friday, August 8th, at 4 p.m. Business: Annual report, financial statement, etc. The President elect, Dr. J. Divine, who has chosen for his address "The immediate future of the medical profession," will entertain members at tea after the meeting.

INSURANCE.

MEETINGS OF THE PROFESSION.

CONFERENCE AT LEEDS.

A GROUP conference to consider the report (M. 25) of the Insurance Acts Committee was held at the Philosophical Hall, Leeds, on July 1st, under the auspices of the Local Medical and Panel Committees for Leeds, Sheffield, Halifax, Wakefield, Rotherham, Bradford, Dewsbury, West Riding of Yorkshire, in conjunction with the Leeds, Bradford, and Halifax Divisions of the Association. The chair was taken by Dr. CHARLES FORBES, of Sheffield, and the arrangements were made by the Leeds Panel Committee.

More than 100 practitioners were present from different parts of the area. There were also present Dr. J. Smith Whitaker and Mr. E. J. Maude, representing the Ministry of Health; and Dr. Alfred Cox, representing the Insurance Acts Committee.

Dr. FORBES thanked the Leeds Panel Committee for the arrangements they had made and for asking him to take the chair. Captain RIGBY (Huddersfield) said this was a good opportunity for the medical profession to consider whether the insurance system was sound and whether they should not recommend that it be abolished in favour of something else. The CHAIRMAN ruled that this would be the equivalent of declining to proceed further with the consideration of M. 25, and the meeting decided to go on with the discussion.

The meeting then proceeded to discuss the report M. 25, taking the summary paragraph by paragraph. On the question of the suggested first charge on the local pool for the administration of general anaesthetics (paragraph 16), a motion was carried to the effect that there should be no prior charge on the areal pool for any special services.

On paragraph 7 a discussion took place on the relative merits of the capitation system and a flat rate for drugs and dressings. The capitation fee was approved by a large majority.

A motion that there be no limit fixed for panel lists was lost by 33 to 35. The Sheffield Panel Committee sent a motion suggesting that the limit should be 2,500, but this was lost.

An animated discussion took place on the suggestion of the possibility of a new practitioner being given a subsidy irrespective of the number on his list, provided that he undertook special obligations. The question was asked what would happen if the Insurance Committee desired to introduce a practitioner and the Panel Committee did not agree. Dr. COX said there must, of course, be a right of appeal to the Ministry of Health, and Dr. WHITAKER agreed that there would be this right in such a case. There was, however, a majority against the original proposition.

The meeting expressed indifference on the proposal to substitute for the present form of agreement a letter from the practitioner accepting the published terms and conditions of service.

On paragraph 12 of the summary the meeting was in favour of the suggestion made for the charge of a fee in cases where there is a doubt as to whether the patient is entitled to medical benefit, or where there is a doubt as to whether the service to be rendered is inside the scope of medical benefit, the fee being deducted from subsequent payments to the practitioner should the patient prove his title to benefit or should the decision on the other point be against him; but it considered that there must be a definite period fixed for the time during which the patient could claim the recovery of the fee.

Much interest was shown in the discussion on paragraph 14 as to the proposed arrangements for attendance on emergency cases. Representatives from the West Riding Committee gave examples which showed the necessity of safeguards against allowing persons to believe that they had a right to call in any insurance practitioner, thus leading to the creation of many unnecessary "emergencies." They pointed out that most of these cases at present paid a private fee in the absence of their own doctor. A West Riding motion to the effect that there should be no compulsion on the doctor for attendance on emergency cases was carried.

Dr. COX explained the position as regards paragraphs 61 and 62 suggesting the linking up of a maternity and child welfare service with the insurance service. He urged those present to "stake out a claim" for this work, in which he said the general practitioner was as much a specialist as any one could be, and was much more likely to be satisfactory to the public than the usual young whole-time officer who had no access to the homes of the

people. He explained that the question was hardly one of practical politics yet, that there was no intention of making it part of the service for next year, and that there had never been any intention that the remuneration for it should come out of the insurance capitation fee. There was an interesting discussion, during which general agreement with the proposals was expressed, with a proviso that there should be no compulsion put on men who did not wish to do any midwifery to undertake that work.

There was considerable opposition to the reimposition of records, which was withdrawn after a discussion which showed that the objection was not to any form record, but to a form of record which, in the opinion of all present, had been useless in the past. It was recognized that for the sake of the profession itself there should be some record of attendances, and a suggestion that the whole matter should be referred to a special committee containing representatives of the profession was accepted.

There was very little discussion on paragraph 16, the proposed additional services—but a unanimous feeling was expressed that insurance practitioners would welcome the provision of these additional services, if made under conditions generally acceptable to the profession. It was felt, however, that it was not necessary to go into much detail at the present time.

The meeting closed with cordial votes of thanks to the Chairman and to the representatives of the Ministry of Health and the Insurance Acts Committee.

LIVERPOOL.

At a meeting of the Liverpool medical profession held on June 12th to consider document M. 25, a resolution was unanimously adopted to the effect that the Insurance Acts Committee can no longer be trusted to represent the profession in the negotiations with the Commissioners, and that the Conference of Panel Committees be asked to appoint an *ad hoc* committee to lay the profession's views before the Commissioners.

STALYBRIDGE.

The following resolution was passed unanimously at a meeting of the panel medical practitioners of Stalybridge, held on July 5th:

We, the panel practitioners of Stalybridge, have been requested to meet together to discuss M. 25 and to answer various questions. We have done so, but have come to the conclusion that all our discussions and expressions of opinion are futile and of no effect so long as we remain in the absolute power of the Commissioners with regard to our work and the payments therefor. We have placed ourselves in this position by signing a document unwarily with a vehicle or dummy, in which document power has been given to the Commissioners to do what they like with both of us. This position is absolutely untenable, but we have now the opportunity of rectifying the mistake by demanding a legal contract in which the Commissioners must be one of the parties. By this means only can we keep open a way to the courts of law, preserving our rights of citizenship, instead of as at present being completely at the mercy of our employers and paymasters.

SHROPSHIRE AND MID-WALES.

A meeting of the medical profession, arranged by the Shropshire and Mid-Wales Branch, was held on June 3rd, when some sixty-five practitioners, including non-members, were present.

Document M. 25 was discussed at length. Referring to sections as numbered in the Summary, paragraphs i and ii were passed subject to the following amendment:

That the Secretary of the Salop Insurance Committee be asked to publish for the information of panel practitioners the method by which the local pool is distributed.

With reference to paragraphs iii and iv, the following amendment, carried by a large majority,

That miscarriages, anaesthetics, fractures, and dislocations be not paid for out of the pool, but by the Government,

was declared to be out of order, and the sections were rejected. Paragraphs v, vi, vii, viii, x, xi, xii, xiii, xv, and xvi were approved. Paragraphs ix and xiv were not approved. Paragraph xvii was negatived.

The Recommendations were all approved so far as the claims of the summary had been agreed to by the Branch.

HACKNEY.

At a meeting of the Hackney panel practitioners, held on July 1st, document M. 25 was considered and the following instructions were issued to their representatives on the Panel Committee:

Paragraph 5: The areal pool to be audited by a properly paid accountant, and no prior charges for special services. Paragraph 10: Temporary residents to be paid for by a fund outside

the Areal Pool, and if by a capitation fee, this should be at least as 3 is to 1 (evidence and figures supplied). Paragraph 13: To oppose automatic limitation of lists, and especially Section III. Limitation to be left to the discretion of the Panel Committee for individual cases of incompetence or inadequacy. Paragraph 15: To be deleted: 16 opposed. Paragraph 39: Agreed to with the proviso of change of patient by doctor. Paragraph 41: Opposed, but a fresh issue of register cards would be welcomed. Paragraph 60: Agreed to. Paragraph 61: Present arrangements considered not unsatisfactory enough to warrant this proposal, hence opposed. Paragraph 74: Agreed to (on condition it really means one item (visit or consultation)). Paragraph 107: Agreed to, except the routine inspection of surgeries, instruments, etc. Paragraph 108: Opposed on the grounds of inconvenience to patient and practitioner, increased expenses, and the resulting confusion. Paragraph 112: Agreed to.

COUNTY OF RENFREW.

At a meeting of panel practitioners of the county of Renfrew held at Paisley, memorandum M. 25 of the Insurance Acts Committee was discussed. The summary on page 16 was approved, with the following exceptions:

(a) Paragraph iii: Agreed to express disapproval of present requirement on a panel practitioner to provide at own cost an anaesthetist.

(b) Paragraph xiv: Agreed to decline to treat without reasonable charge another practitioner's panel patient presenting himself in emergency (recommendation in paragraph 74 of M. 25 thereby disapproved).

It was agreed to call upon all practitioners on the panel for the area to contribute one farthing per insured person per quarter for the purpose of forming a fund, 50 per cent. of which would be transferred to the National Insurance Defence Trust founded by the British Medical Association, and the remainder applied to the administrative expenses of Panel and Local Medical Committees and to the Panel Committee's Local Defence Fund.

LOCAL MEDICAL AND PANEL COMMITTEES.

COUNTY OF LONDON.

THE newly elected London Panel Committee on July 8th re-elected Dr. H. J. Cardale as chairman, Dr. J. A. Angus as vice-chairman, and Dr. Lauriston Shaw as treasurer. The Committee appointed Drs. Bentham, Cardale, Richmond, and Shaw as its delegates to the Conference of Local Medical and Panel Committees to be held on July 17th, and the rest of the meeting was occupied with a discussion on the instructions to be given to these delegates. It was decided, while generally approving the report M. 25, to endeavour to secure amendments to the effect that there should be no limit fixed as to the number of insured persons a practitioner might accept on his list, but that on a practitioner accepting, say, 3,000, the Panel Committee, if the matter were brought to its notice, should satisfy itself as to the adequacy and efficiency of the service rendered by him; that while minimum assured payments should be made to entrants into practice, no such new-comer should be introduced into a district until every established practitioner had had an opportunity of raising his list to, say, 3,000; that additional services should include dental treatment, and that this provision should be made as early as possible; that midwifery should not be excluded from a general practitioner service, but that provision should be made for the setting up of a special midwifery panel, and no individual practitioner should be compelled to do midwifery under his agreement; and that an inquiry was necessary into the whole question of certification, particularly as to chronic cases and the demand for certificates on special days of the week. Other minor instructions dealing with the emendation of the report were also agreed to.

COUNTY OF BEDFORD.

At a meeting of the Local Medical and Panel Committee held on June 5th Dr. H. D. Pollard was appointed to represent the committee on the Disablement Subcommittee of the Bedford War Pensions Committee.

Memorandum M. 25 of the Insurance Acts Committee was considered and the salient points were dealt with by Dr. Kilham-Roberts. The Secretary was instructed to send particulars of the Group Conference at which this memorandum was to be discussed, to all members of the medical profession in Bedford. In connexion with the National Insurance Defence Trust the Secretary reported that of the 87 panel doctors in the area 68 had undertaken to subscribe annually $\frac{1}{2}$ d. per head of insured persons on their panel, 7 refused to subscribe, 11 had not replied to his letter, and one doctor was retiring from practice.

MONMOUTHSHIRE.

The Monmouthshire Panel Committee, at a meeting held on July 4th, presided over by Colonel STEEL, unanimously passed the following resolutions:

1. That we consider that the Insurance Acts Committee had no authority to negotiate on the matters set forth in M. 25, other than increased remuneration for present services.
2. That we ask the Cardiff Conference to limit the mandate of the Insurance Acts Committee to negotiating for an increased and adequate remuneration for the services rendered under the existing range of medical benefit and that this increase be

absolute and not dependent on the keeping of records or any other such condition.

3. That we protest against the keeping of records.
4. That we strongly protest against any interference with the present poundage system in South Wales and Monmouthshire which provides general practitioner domiciliary treatment for the dependants of insured persons.
5. That we approve of the resolutions passed at the recent meetings of the medical profession in Edinburgh and Leith as reported in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL on June 28th and adopt them as far as they apply to conditions existing in South Wales and Monmouthshire.

STAFFORDSHIRE.

At a meeting of the Local Medical and Panel Committee held on April 29th, 1919, the question of the National Insurance Defence Trust was discussed at length, and it was resolved that all practitioners resident in the county and all practitioners on the panel for the area be invited to attend a meeting at Stafford to consider the advisability of subscribing to the National Insurance Defence Fund of the British Medical Association.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

The following appointments are announced by the Admiralty: Surgeon Commander (acting Surgeon Captain) P. W. Bassett-Smith, C.B., C.M.G., has been specially promoted to the rank of Surgeon Captain in recognition of services rendered. Surgeon Lieutenant Commander A. B. Cox to the *Fivid*, additional. Surgeon Lieutenants (temporary): W. L. Anderson to the *Cornelia*, G. R. Hull to the *Tiger*, J. M. Bickerton to the *Royal Oak*, A. P. Robb to the *Cyclops II*, additional; G. Blunton to the *Eekin*, F. L. Williams to the *Tarantula*, J. G. Gilruth to the *Sandhurst*, J. E. Clark to the *Hermione*, T. L. Hillier to R.N. Hospital, Chatham.

ROYAL NAVAL VOLUNTEER RESERVE.

Surgeon Lieutenant (temporary) E. B. O'Shea to the *Cassir*.

ARMY MEDICAL SERVICE.

Colonel S. G. Allen retires on retired pay.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonel G. A. T. Bray, D.S.O., is placed on retired pay. Lieut.-Colonel S. H. Fairrie retires on retired pay. The following relinquish the temporary rank of Colonel on reposting: Lieut.-Colonels F. J. Brakenridge, C.M.G., J. S. Gallie, C.M.G., D.S.O., G. J. Houghton, D.S.O., H. E. M. Douglas, V.C., C.M.G., D.S.O., W. Bennett, D.S.O.

The following relinquish the acting rank of Colonel on reposting: Lieut.-Colonels F. McLennan, D.S.O., H. C. R. Hime, D.S.O., Captain and Brevet Major W. G. Wright, D.S.O.

To be acting Lieutenant-Colonels whilst commanding medical units: Majors J. A. W. Webster (from January 31st to April 21st, 1919), N. E. Dunkerton, D.S.O. (February 21st, 1919), R. N. Hunt, D.S.O., October 14th, 1918 (substituted for notification in the *London Gazette*, May 27th, 1919), Captain (acting Major) W. W. McNaught, M.C. (December 29th, 1918).

The following relinquish the acting rank of Lieutenant-Colonel on reposting:—Major and Brevet Lieut.-Colonel J. G. Bell, D.S.O., Majors: W. W. Boyce, D.S.O., D. P. Watson, D.S.O., T. H. Scott, D.S.O., M.C., E. C. Phelan, D.S.O., M.C., W. Egan, D.S.O., D. L. Harding, D.S.O., W. C. Nimmo, C. Bramhall, T. S. Blackwell, B. Johnson, D.S.O., G. F. Rudkin, D.S.O., J. J. O'Keefe, M.C., Captains: C. M. Drew, J. W. C. Stubbs, M.C., R. B. Price, D.S.O., J. H. Fletcher, D.S.O., M.C., C. Helm, D.S.O., M.C., F. Worthington, D.S.O., O.B.E., E. Phillips, M.C., R. Hemphill, D.S.O., W. J. Dunn, R. R. Thompson, M.C., L. F. K. Way, E. W. Vaughan, M.C., H. C. D. Rankin. Temporary Captain W. E. Hallinan, M.C.

The following relinquish the acting rank of Major: Captain and Brevet Major W. L. Webster, Captains R. C. Aitchison, G. P. Kidd, D.S.O., M.C., W. J. Knight, M.C., T. L. Thompson, M.C., F. R. S. Shaw, M.C., D. H. C. McArthur, A. L. Stevenson, R. H. Williams, J. H. Baird, R. W. Vint, T. D. Inch, O.B.E., M.C., J. A. Renshaw, F. C. Chandler, M.C., Temporary Captains: J. R. M. Whigham, M.C., T. Ferguson, W. F. Morgan, R. J. B. Madden, M.C., G. B. McTavish, M.C., A. R. Ester, E. F. C. Dowling, H. J. Pickering, M.C., F. J. O. King, A. J. Dunlop, G. C. Linder, C. L. Chalk, M.C., R. B. Blair, H. B. Shepherd, F. H. Moxon, G. S. Brown, M.C., J. Rodger, M.C., E. G. Dingley, T. H. Oliver, J. W. Littlejohn, M.C., J. L. Jackson, G. S. Murray, W. C. Horton, G. B. Elliott, W. H. Peacock, H. G. Freap, A. V. Craig, M.C., E. F. G. Ward, F. W. Diamond, C. Burnham, P. J. Chissell, J. S. Hall, T. Sturdy, H. E. Gamlen, F. H. Young, G. H. Culverwell, W. K. McIntyre, M.C., J. L. A. Grout, M.C., R. C. Cooke, M.O., Lieutenant (temporary Captain) G. E. Spicer, M.C.

To be acting Majors: Captains and Brevet Majors S. W. Kyle, A. Shepherd, Captain T. J. L. Thompson, M.C., Temporary Captains A. T. W. Forrester, December 23rd, 1918 (substituted for notification in the *London Gazette*, February 22nd, 1919), R. H. Stevens, January 11th, 1919 (substituted for notification in the *London Gazette*, May 16th, 1919), T. T. Giles, E. J. Poill (from October 3rd, 1918, to January 23rd, 1919), J. R. Griffith, H. Findlay (from February 17th to March 10th, 1919), R. S. Woods (from September 4th, 1918, to January 2nd, 1919), J. M. Morris (whilst specially employed), temporary Lieutenant J. E. G. Calverley, C.M.G.

The following to be seconded for service under the civil administration of Mesopotamia: Captains and Brevet Majors A. G. J. MacLaine, C.I.E., and L. Dunbar. Captains T. J. Hallinan, P. A. With, and O. D. Jarvis.

Temporary Major (acting Lieut.-Colonel) W. Robertson (Captain R. A. M. C. T. F.) relinquishes his temporary commission on reposting. Captain L. G. Bourdillon, D.S.O., M.C., is seconded for service with the Egyptian Army.

Captain (acting Major) R. B. Phillips to draw the pay and allowances of his acting rank from April 28th, 1918.

The notification regarding Major G. De la Cour in the *London Gazette* of March 22nd, 1919, is cancelled.

The following to be Captains, but not to reckon for pay or allowances prior to June 1st, 1919, with precedence as stated: Captain (acting Major) H. A. Sandford, M.C., from T.F., July 15th, 1918, next below P. Harris, and retains his acting rank. Temporary Captains: C. B. Hogg, February 10th, 1918, next below L. G. Bourdillon; E. E. Holden, March 16th, 1918, next below A. C. Jebb; W. Moodie, March

20th, 1918, next below D. W. John, A. Mearns, June 16th, 1915, next below F. J. Hallinan; F. H. Woods, August 10th, 1918, next below C. R. Dudgeon; F. A. L. Estrange, September 24th, 1918, next below A. W. Raymond.

Temporary Captain R. S. Miller to be acting Major from January 4th, 1918, to March 25th, 1919.

To be acting Majors: Temporary Captain H. Walker, M.C. (from December 1st, 1918, to January 31st, 1919). Whilst specially employed: Captain K. P. Mackenzie.

To be acting Majors:—Captains: K. P. Mackenzie, E. A. Strachan (whilst specially employed), N. V. Iothian, M.C. (whilst specially employed). Temporary Captain H. Walker, M.C. (from December 1st, 1918, to January 31st, 1919).

The notifications regarding temporary Captain (acting Major) C. Roche, M.C., and temporary Captain C. Gordon in the *London Gazette* of November 8th, 1918, and April 11th, 1919, respectively, are cancelled.

Lieutenants (temporary Captains) to be Captains: G. D. Gripper, G. T. Baker, M.C. (acting Major) H. C. Watson, M.C. (and retains his acting rank) G. T. Gimlette.

The following to be Lieutenants and to be temporary Captains, but not to reckon for pay or allowances prior to June 1st, 1919, with precedence as stated:—Captains: G. H. Barry, from S.R., October 2nd, 1916, next below G. G. Drummond; T. Stanton, from S.R., January 1st, 1917, next below J. P. Macnamara. Temporary Captains: H. J. Davidson, M.C., May 22nd, 1916, next below P. G. Russell; T. H. Twigg, June 1st, 1917, next below J. M. Morrison.

Late temporary Captains to be Captains: E. E. Frazer, F. J. Wheeler, R. Marshall.

Temporary Lieutenant T. C. A. Sweetman to be temporary Captain.

The following officers relinquish their temporary commissions: Temporary Lieut.-Colonel J. C. Muir, on ceasing to be employed at the Whips Cross War Hospital, and retains the rank of Captain.

Temporary Major R. H. Cooper, and is granted the rank of Lieutenant-Colonel. Temporary Majors, and retain the rank of Major: W. McDougall, J. R. Bibby, A. Drury (on ceasing to serve with the Halifax War Hospital); temporary Major C. V. N. Lyne (Major ret. Indian army). Temporary honorary Majors and retain the honorary rank of Major: W. K. Carew (on ceasing to be employed at the Dublin Castle Red Cross Hospital), S. Bousfield (on ceasing to be in charge of Aubrey Lodge and Moray Lodge Hospitals), Captain C. J. O'Reilly, M.C., temporary Captain and Brevet Major P. H. Bahr, and retains the rank of Brevet Major; temporary Captain G. D. Hindley, M.C., and is granted the rank of Lieutenant-Colonel. Temporary Captains and are granted the rank of Major: L. F. Hemmans (February 8th, 1919—substituted for notification in the *London Gazette*, April 17th, 1919), A. C. Sturrock (March 13th, 1919—substituted for notification in the *London Gazette*, April 22nd, 1919), G. W. Riddell, M.C., P. R. Woodhouse, D.S.O., M.C., J. W. Applegate, A. V. Poyser, W. F. Law, M. A. Power, M.C., C. M. Kennedy, H. G. Joyce, N. G. W. Davidson, March 14th, 1919 (substituted for notification in the *London Gazette*, April 10th, 1919), R. W. Nairn, M. P. Paton, D.S.O., M.C., G. T. Foster-Smith, G. H. Darlington, A. W. Rowe, G. C. Chubb, A. J. Clayton (March 16th, 1919—substituted for notification in the *London Gazette*, April 22nd, 1919), J. W. Linnell, M.C., K. G. Fraser.

Temporary Captains: W. G. Cobb, D.S.O., B. Suggs. Temporary Captains and retain the rank of Captain: J. S. Dunn, G. R. C. Wilson, T. B. Welch, S. G. Keane, F. J. Dunne, J. Watson, H. Stokes, H. W. Smith, R. M. Wishart, H. E. S. Sliven, A. R. Moore, R. Denman, C. C. Morrell, W. R. Wiseman, R. G. Abrahams, D. A. Hutcheson, W. Reid, W. O. Roberts, G. E. Stephenson, M.C., N. M. Cummins, J. C. Lorraine, H. F. Mullan, A. St. Johnston, W. K. Caldwell, J. W. McLeod, O.B.E., C. Cameron, W. P. Morgan, L. E. Williams, D. S. Pracy, J. Wyper, O. L. V. de Wesselow, W. H. Thresher, D. Meek, F. H. Moran, M.C., C. T. W. Hirsch (on ceasing to serve with the Home Hospitals Reserve), J. B. Ball, W. L. Webb, M. L. Farmer, R. Cope, G. Davidson, J. G. Garson, W. R. G. Hamilton, F. W. Milne, M. J. Fraser, M. D. Mackenzie, G. E. Lloyd, M.C., R. E. Moves, J. F. Jennings, C. G. Mackay, A. F. Morcom, A. V. McMaster, A. E. Staflurth, W. J. Woodman, W. Duguid, S. C. Pritchard, W. S. Sheppard, A. H. Aldridge, J. B. Wall, W. D. Kirkwood, A. G. East, T. Wunning, D. Wainwright (on account of ill health continued on active service), J. H. Johnston, J. Williamson, G. B. Richardson, J. M. Taylor, W. N. Montgomery, P. Cheal, L. Wayne-Morgan, G. Whittington, W. G. Silvester, F. H. Alexander, J. E. R. Orchard, D. P. Smith, W. E. Bullock, C. W. Somerville, A. K. S. Wyborn, A. M. Clark, M.C., S. Churchill, M. S. Baines, M.C., E. D. Cairns, M. J. Ahern, J. W. Cowie, J. W. Coffin, A. H. Turner, J. W. A. Wilson, J. W. Tocher, M.C., F. J. Cutler, L. C. Dillon-Kelly, W. J. D. Bromley, J. Low, M.C., P. W. Moore, T. J. Lloyd, B. T. Lang, H. Bardsley, W. Browne, W. H. Parkinson, C. W. Forsyth, L. N. Lee, R. Parry, J. Brown, V. G. Maitland, J. Graham, F. Jubb, C. G. Lambie, M.C., J. D. Oliver, E. J. Clark, M.C., E. C. Malden, J. M. Hall, H. C. Quirke, C. D. Holdsworth, D. M. Baillie, S. McMurray, F. H. Pickin, R. Nunn, K. D. Melville, J. R. Prytherch, H. F. Blood, J. C. McMillan, R. H. Calvert, E. A. Morgan, J. R. Cameron, J. Paton, A. Feiling, W. A. Reynolds, A. N. Hooper, A. Rutherford, R. Duncan, T. C. Hynd, T. C. Innes, W. A. Easton, W. B. Gordon, C. E. Harrison, J. W. Fox, J. E. Finlay, D. J. Evans, S. G. Graham. Temporary Lieutenants and retain the rank of Lieutenant: J. C. Bell, C. H. C. Cosen (on account of ill health), A. D. Pringle.

ROYAL AIR FORCE.

MEDICAL BRANCH.

Transferred to the unemployed list:—Major H. Pritchard; Captains R. G. Lyster, P. L. Moore, H. T. H. Butt, W. F. Walker, R. H. Dixon; Lieutenants G. A. S. Madgwick, G. M. Mellor.

The initials of Lieutenant G. O. Roper are as now described, and not G. A., as stated in the *London Gazette*, April 1st.

INDIAN MEDICAL SERVICE.

Lieut.-Colonel W. D. Sutherland, M.D., has been granted priviledges leave for six months (May 15th, 1919).

Captain R. B. Lloyd, M.B., was placed on special duty in the office of the Imperial Serologist from April 26th, 1919, to May 14th, 1919, and has been appointed to officiate as Imperial Serologist (May 15th, 1919).

Lieut.-Colonel F. H. G. Hutchinson, M.B., Officiating Sanitary Commissioner with the Government of India, has been appointed substantively to that post (June 1st, 1919).

Major F. Norman White, C.I.E., M.D., s.p.t. Sanitary Commissioner with the Government of India, on leave, reverts to the Bacteriological Department (June 1st, 1919).

Major now Brevet Lieut.-Colonel H. M. H. Melhuish has been granted the acting rank of Lieut.-Colonel while commanding No. 111 Indian Field Ambulance (June 9th, 1919).

Lieut.-Colonel J. C. Lamont, M.B. (retired), re-employed during the war, has been permitted to resign (March 13th, 1919).

Major F. H. Salisbury, M.B., will take seniority in his present rank from March 1st, 1918, his previous forfeited service having been restored for good service in the field.

The Honourable Major-General W. R. Edwards, C.B., C.M.G., M.D., K.H.P., D.G. I.M.S., has been granted privilege leave for six weeks, with effect from June 4th.

The Honourable Colonel R. C. MacWatt, C.I.E., M.B., F.R.C.S., Inspector-General of Civil Hospitals, Punjab, has been appointed to hold charge of the office of the D.G., I.M.S., in addition to his own duties.

Colonel C. R. M. Green, M.D., F.R.C.S., Inspector-General of Civil Hospitals, Central Provinces, has been granted combined leave for eight months.

Lieut.-Colonel C. H. Bensley, Inspector-General of Prisons, Central Provinces, has been appointed to hold charge of the office of Inspector-General of Civil Hospitals, Central Provinces, in addition to his own duties.

Lieut.-Colonel P. J. Lumsden, M.B., has been promoted to the rank of Colonel (October 15th, 1918).

Major W. D. H. Stevenson, C.I.E., M.D., has been granted the temporary rank of Lieutenant Colonel for the remaining period of the war while holding the appointment of Assistant Director-General, Indian Medical Service (Sanitary), November 11th, 1918.

Captain R. S. Townsend, M.B., has been granted the acting rank of Lieutenant-Colonel while holding command of No. 1 African Stationary Hospital.

Lieut.-Colonel T. H. Foulkes, F.R.C.S., and temporary Lieut.-Colonel L. M. Macrae, M.B., have been brought to notice for gallant and distinguished service rendered in connexion with the military operations at Aden during the period August 16th, 1917, to January 31st, 1918.

Major A. E. J. Lister, M.B., B.S.Lond., F.R.C.S.Eng., I.M.S., Ophthalmic Surgeon, King George's Medical College Hospital, Lucknow, India, has been appointed an Honorary Surgeon to His Excellency the Viceroy and Governor-General of India.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Captains relinquish the acting rank of Lieutenant-Colonel on reposting: W. M. Dickson, E. T. Burke, D.S.O.

Captains relinquish the acting rank of Major: J. G. Ronaldson, M.C., A. F. L. Shields, W. Barclay, M.C., R. Taylor, M.C., A. R. Hill, M.C., C. R. McIntosh, P. Thornton, M.C., J. Le M. Kneebone, J. B. Cavenagh, M.C., G. G. Alderson, W. M. Biden, M.C., A. Winfield, J. B. Scott, M.C.

Captain (acting Major) W. McN. Walker, M.C., relinquishes the pay and allowances of his acting rank, September 2nd, 1918.

To be acting Majors:—Captains: H. D. Rollinson, T. Hampson (from September 4th, 1918, to February 22nd, 1919).

Captains relinquish their commissions and retain the rank of Captain: J. P. Williams, I. D. Sultie, and J. M. Courtney (on account of ill health), C. B. B. Reid, D. S. Scott, F. C. Logan, R. P. Crawford, R. R. Scott.

The name of Thomas M. Davie, M.C., is as now described, and not as in the *London Gazette*, April 3rd, 1919.

Lieutenants to be Captains: A. E. Jenkins, N. D. Ball, E. Miller, J. Peter, M.C., P. W. Putnam, R. H. Sutherland, M. D. Vint, G. S. L. Kemp, J. P. J. Jenkins, H. A. Hill, D. O. Macdonald, S. O. Castell, D. C. Rennie, T. H. J. Douglas.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Major (acting Colonel) H. Richardson, D.S.O., relinquishes his acting rank on vacating the appointment of Assistant Director of Medical Services.

The following officers relinquish their acting rank on ceasing to be specially employed: Majors (acting Lieut.-Colonels) J. W. Bird, D.S.O., D. H. Weir, M.C., W. A. Thompson, H. T. Samuel (March 16th, 1919, substituted for notification in the *London Gazette*, February 11th, 1919), R. T. Turner. Captains (acting Lieut.-Colonels) H. G. G. Mackenzie, D.S.O., W. Simpson, J. W. Craven, M.C., E. Knight. Captains (acting Majors) A. M. Mackay, W. L. Cockcroft, G. E. Nash, T. Graham, M.C., N. H. H. Haskins, M.C., J. C. Denver, R. C. S. Smith, H. B. Sproat, H. M. Fort, G. Young, J. C. Marklewood, H. A. Playfair-Robertson, R. W. Swayne, G. P. D. Hawker, F. H. Robbins, M.C., W. T. Gardiner, M.C., A. W. Hayward, H. B. Cunningham, J. C. S. Dunn, R. Phillips, T. B. Layton, D.S.O., P. S. Martin, M.C., W. F. B. Bensted-Smith, J. H. Jordan, M.C.

Captains to be acting Majors whilst specially employed: T. S. Worboys, N. J. Wigram, T. W. S. Paterson.

Captain C. C. Fitzgerald is restored to the establishment.

Captain D. W. C. Jones is restored to the establishment on ceasing to hold a temporary commission in the A.M.S.

Captain N. C. Rutherford, D.S.O., relinquishes his commission on account of ill health.

Captain (acting Major) S. F. St. J. Steadman relinquishes his acting rank on vacating the appointment of D.A.D.M.S.

Captain (acting Major) L. P. Harris, M.C., relinquishes his acting rank on vacating the appointment of D.A.D.M.S., and is restored to the establishment.

Captain (acting Major) P. C. P. Ingram relinquishes his commission on account of ill health and is granted the rank of Major.

The announcements regarding Major J. Evans, D.S.O., which appeared in the *London Gazette*, February 11th, 1919, are cancelled.

1st Eastern General Hospital.—Captain J. F. Gaskell is restored to the establishment.

2nd London Sanitary Company.—Lieutenant C. J. Regan to be Captain.

3th London General Hospital.—Captain (acting Major) E. M. Corner relinquishes his acting rank on ceasing to be specially employed.

2nd Northern General Hospital.—Major (acting Lieut.-Colonel) W. Thompson relinquishes his acting rank on ceasing to be specially employed.

Sanitary Service.—Captain W. Robertson is restored to the establishment on ceasing to hold a temporary commission in the R.A.M.C.

1st Southern General Hospital.—Captain F. D. Marsh, M.C., is restored to the establishment.

3rd Southern General Hospital.—Major E. C. M. Foster is restored to the establishment.

5th Southern General Hospital.—Major W. P. Purvis is restored to the establishment. Captain (acting Major) G. H. Cowen relinquishes his acting rank on ceasing to be specially employed and is restored to the establishment.

3rd Western General Hospital.—Major (acting Lieut.-Colonel) W. M. Stevens relinquishes his acting rank on ceasing to be specially employed.

TERRITORIAL FORCE RESERVE.

ROYAL ARMY MEDICAL CORPS.

Captain I. D. Stubbs, from Attached to Units Other than Medical Units, to be Captain.

VOLUNTEER FORCE.

City of Glasgow R.A.M.C.(V.).—A. Macphie (late temporary Captain and Medical Officer to the 2nd Volunteer Battalion Cameronians—Scottish Rifles) to be honorary Captain.

Hampshire R.A.M.C.(V.).—H. Farncombe (late temporary Lieutenant and Medical Officer to the 3rd Volunteer Battalion Hampshire Regiment) to be honorary Lieutenant.

Kent R.A.M.C.(V.).—Dr. C. Killick (Captain T.F., R.), late temporary Major) to be honorary Major.

Lancashire R.A.M.C.(V.): Temporary Lieutenant B. Browning resigns his commission and is granted the honorary rank of Lieutenant.

QUEEN MARY'S ARMY AUXILIARY CORPS.

AUXILIARY SECTION, R.A.M.C. ATTACHED.

The following relinquish their appointments: Controller of Medical Services Dr. L. S. Sandeman; Medical Controllers Dr. M. G. McCullough (née Caskey) and Dr. A. H. Nicoll; Recruiting Medical Controllers A. M. Weston, M. B. Ferguson, and E. A. Montgomery (on account of ill health), A. S. Robertson, C. M. C. McNeil.

APPOINTMENTS.

BLAKISTON, F. C., M.R.C.S., L.R.C.P.Lond., Medical Superintendent Isle of Man Asylum, vice Dr. Arthur Finegan, resigned.

GAMGEE, Leonard P., F.R.C.S., Professor of Surgery in the University of Birmingham.

GRAY, H. Tyrrell, F.R.C.S., Honorary Surgeon to the Infants Hospital, Vincent Square, Westminster.

JEPHCOCK, C. M.A., M.B., B.Ch.Cantab., Honorary Anaesthetist to the Royal Infirmary, Chester.

SHATTOCK, Clement, M.D., M.S., F.R.C.S., Surgeon to Out-patients at the Paddington Green Children's Hospital.

THOMPSON, Ruby, M.B., Ch.B.Edin., Assistant Medical Officer of Health, Metropolitan Borough of Fulham, for Maternity and Child Welfare Work.

TIBBLES, Sydney, L.R.C.S. and P.Edin., Honorary Ophthalmic Surgeon to the Western General Dispensary.

ROYAL WEST SUSSEX HOSPITAL, Chichester.—Honorary Physician: H. E. Rutherford, M.D.Dub., vice Dr. E. H. Buckell, resigned.

Honorary Assistant Surgeon: G. Hamilton, M.B., B.S.Lond.

Honorary Radiographer: George W. Eustace, M.D., vice E. H. Buckell.

ST. THOMAS'S HOSPITAL.—Physicians in charge of Out-patients: J. I. Birtley, O.B.E., M.D., B.Ch.Oxon., F.R.C.P.Lond.; H. L. Tidy, M.D., B.Ch.Oxon., F.R.C.P.Lond., Surgeons in charge of Out-patients: C. M. Page, D.S.O., M.B., M.S.Lond., F.R.C.S.Eng.; W. H. C. Romanis, M.B., M.Ch.Cantab., F.R.C.S. Physician in charge of the Children's Department: R. C. Jewsbury, M.D.Oxon., F.R.C.P.Lond. Obstetric Physician in charge of Out-patients: James Wyatt, M.B., B.S.Lond., F.R.C.S.Eng. Director of the Orthopaedic Department: Sir Robert Jones, K.B.E., C.B., F.R.C.S. Medical Registrar: Eric Wordley, M.B., B.Ch.Cantab., M.R.C.P. Lond.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

RAWES.—On June 21st, at 6, The Croft, Stanley Gardens, Hampstead, the wife of Major Leslie Rawes, R.A.M.C.(T.F.), of a son.

WILLIAMS.—On July 2nd, at Broome Cottage, Bedlington, to Joan (née O'Callaghan) and F. S. Williams, M.B., B.S.Lond., a daughter.

MARRIAGES.

NIELD-FAULKNER-RIGBY.—On June 25th, at the Wigan Parish Church, by the Rev. R. G. Matthew, Rector, Lieutenant S. A. Nield-Faulkner, R.A.F., Surgeon, only son of S. A. and Mrs. Faulkner, The Rookery, Altrincham, to Florence Mary, youngest daughter of the late William and Mrs. Rigby, Park View, Wigan.

PHILLIPS-SMITH.—On July 2nd, at All Saints' Parish Church, Bradford, by the Rev. A. F. Alston, James Phillips, F.R.C.S.E., Major R.A.M.C., to Rose Agnes Smith, daughter of Mr. David Smith, of Windsor Road, Southport.

ROYAL SOCIETY OF MEDICINE.

THE Royal Society of Medicine keeps open house for medical officers of all the Allied Forces, and invites them to make free use of its library and rooms. The Emergency Post-Graduate Scheme under the charge of the Fellowship of Medicine is also open to all medical officers. Particulars of this will be supplied by the Secretary, "Fellowship of Medicine," 1, Wimpole Street, W.1.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
JULY.	
14 Mon.	London: Annual Representative Meeting Agenda Committee, 2 p.m.
15 Tues.	London: Joint Subcommittee of the Medico-Political and Public Health Committees, 2.30 p.m.
16 Wed.	London: Conference of Representatives of Various Medical Bodies, 2.30 p.m.
23 Wed.	Annual Conference of Secretaries, 429, Strand, London, W.C.2.
24 Thur.	OPENING OF ANNUAL REPRESENTATIVE MEETING, Connaught Rooms, Great Queen Street, London, W.C.2, 10 a.m.
25 Fri.	ANNUAL GENERAL MEETING, 2 p.m.
AUGUST.	
8 Fri.	East York and North Lincoln Branch, Hull Royal Infirmary, 4 p.m.

BRITISH MEDICAL JOURNAL.

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Association Notices.

ANNUAL REPRESENTATIVE MEETING, 1919.

THE Annual Representative Meeting of the Association will be held in the Connaught Rooms, Great Queen Street, London, W.C.2, commencing on Thursday, July 24th, at 10 a.m.

The Provisional Agenda was published in the SUPPLEMENT of May 3rd, 10th, and 24th, 1919.

ANNUAL GENERAL MEETING, 1919.

NOTICE is hereby given by the Council that the Annual General Meeting of the Association will be held at the Connaught Rooms, Great Queen Street, London, W.C., on Friday, July 25th, 1919, at 2 o'clock in the afternoon. Business: (1) Minutes of last Meeting. (2) Appointment of auditors (Messrs. Price, Waterhouse and Co. offer themselves for re-election). (3) Report of election of President.

ANNUAL CONFERENCE OF SECRETARIES.

THE Annual Conference of Honorary Secretaries of Divisions and Branches of the Association will be held at 429, Strand, W.C.2, on the afternoon of Wednesday, July 23rd, 1919, at 2.30 o'clock.

Meetings of Branches and Divisions.

BORDER COUNTIES BRANCH: DUMFRIES AND GALLOWAY DIVISION.

THE annual general meeting of the Division was held in Dumfries, with Dr. MAXWELL ROSS in the chair. The statement of accounts and Division report were submitted and approved.

The following officers were appointed:

Chairman: Dr. MacLachlan. *Vice-Chairman:* Dr. Reid. *Secretary:* Dr. Joseph Hunter. *Executive Committee:* Drs. Maxwell Ross, Scott, Bell, and Cromie. *Representatives on Branch Council:* Drs. Maxwell Ross, Scott, and Martin. *Representative in Representative Body:* Dr. Hunter. *Deputy Representative:* Dr. Robson.

A cordial vote of thanks was accorded to Dr. J. D. Robson for his past services as secretary.

The report of Council was first considered and the agenda for the Annual Representative Meeting. Motions 1, 2, 3, 4, and 5 were agreed to. The consideration of No. 6 led to considerable discussion in relation to its attitude towards trade unionism, and it was generally admitted that the weakness of the Association lay in the lack of cohesion among the members themselves. A motion that the report of Council be adopted was eventually carried. Nos. 7, 8, 9, 10, and 11 were also approved of, as also the remainder of the agenda under National Insurance. Paragraph 155 gave rise to considerable debate on the income tax limit, and it was the opinion of the meeting that, if the income limit was raised, there ought to be a corresponding increase in capitation fees. The question of the grant for mileage gave rise to considerable discussion, and it was eventually unanimously agreed that there ought to be formed a Lowland Rural Subcommittee of the Scottish Committee, composed of bona fide rural practitioners, to watch the interests of rural practitioners in the distribution of the grant.

MUNSTER BRANCH.

THE annual general meeting of the Munster Branch was held on June 25th, when Dr. J. GIUSANI was in the chair.

The following were elected officers for 1919-20:

President: Dr. D. J. O'Mahony. *Vice-President:* Dr. D. Morrissey. *Returning President:* Dr. Michael Shinkwin. *Honorary Secretary and*

Treasurer: Dr. Philip G. Lee (Cork). *Representative in Representative Body:* Dr. Walter Rahilly. *Representative to Irish Committee:* Professor H. Corby, M.D. (re-elected).

The Representative to Representative Meeting was instructed to support the resolutions of the Bournemouth Division.

The circular letter of the Medical Parliamentary Committee was read and discussed, but it was deemed impossible to send a representative to the meeting to be held on July 11th. The memorandum by the Medico-Political Union was read.

NORTH OF ENGLAND BRANCH: NEWCASTLE-ON-TYNE DIVISION.

THE annual meeting of the Newcastle-upon-Tyne Division was held on June 12th.

The officers for the ensuing year were elected.

The annual financial statement and report was read and carried unanimously.

The matters on the agenda for the Representative Meeting were discussed and Representatives instructed, and the annual report of Council was discussed.

An amendment was carried to Rule 11 in the Division rules so that voting by postal vote could be carried out. It was resolved that the election of officers should be carried out by show of hands, by ballot, or by a postal vote counted at the meeting.

NORTH WALES BRANCH: NORTH CARNARVON AND ANGLESEY DIVISION.

At the annual meeting of the Division the new officers and committees were elected:

Chairman: Dr. R. M. Williams. *Vice-Chairman:* Dr. Jas. R. Williams. *Honorary Secretary:* Dr. J. K. Prytherch. *Representative in Representative Body:* Dr. Prytherch. *Deputy Representative in Representative Body:* Dr. J. H. Morris Jones.

The report of Council and various other matters were discussed and the following resolutions were passed:

1. That steps be taken to restore the 2s. 6d. notification fees as soon as possible.
2. That the Division protest in the strongest manner possible against the proposed increase of income limit for insured persons.
3. That the extra services—for example, anaesthetics—should not come from the insurance pool. (M. 25, No. 16.)
4. That the insurance card must be produced. No payments to be refunded. (M. 25, No. 23.)
5. That in any contract of service under the altered conditions the forms should be sent to the Divisions in sufficient time to allow of discussion, especially with regard to any special services required.
6. That no contract should compel doctors to take confinements. (M. 25, No. 61.)
7. That these extra services be not included as to payment or capitation. (M. 25, No. 63.)
8. Protest against resumption of pre-war record keeping, and that clerical work be reduced to the minimum.
9. That any complaint to be considered should be sent to the Insurance Committee and doctor concerned within one week of its occurrence.

A resolution in favour of trade unionism was adopted.

The meeting passed a resolution of sympathy with the family of the late Dr. E. O. Price, and recorded its appreciation of his great services to the Division.

SOUTHERN BRANCH.

A MEETING of the Southern Branch of the British Medical Association was held at Winchester on July 8th, when an address was given by Dr. ALFRED COX, O.B.E., on "What the British Medical Association can do for the medical profession and what it cannot do."

The following resolution was subsequently carried:

That this meeting of the Southern Branch is of opinion that the British Medical Association, as at present constituted, has been proved incapable of adequately assisting the profession with regard to the Insurance Acts. It therefore suggests that the Association should so alter its constitution as to be able effectively to deal with this and any similar legislation in connexion with national health, and, if this be impossible, that these matters should be left to a body possessing trade union power.

SOUTH MIDLAND BRANCH: BUCKINGHAMSHIRE DIVISION.

THE annual meeting of the Buckinghamshire Division was held at Aylesbury on June 27th, when Dr. DUNBAR DICKSON was in the chair. The report of the Division was received.

The following officers were elected:

Chairman: Dr. Bradbrook. *Vice-Chairman:* Dr. Kennish. *Secretary and Treasurer:* Dr. Larking. *Representative in Representative Body:* Dr. Bradbrook. *Deputy Representative:* Dr. Rose. *Committee:* Drs. Benson, S. Bailey, Churchill, Dickson, Huggins, and Rose.

The annual report of the Central Council was discussed.

Two resolutions sent up by the Bournemouth Division were discussed and it was resolved:

That in view of the facts concerning the attitude of the Medico-Political Union known of all of us, we leave it to our Representative to vote in accordance with the views of the British Medical Association.

The following resolution was passed and is to be sent up to the Representative Meeting:

That the Council of the British Medical Association take steps to consider the inadequate fees paid for life assurance examination by certain companies, and that a scale of minimum fees be fixed. Also that the fee of 2s. 6d. now paid for industrial cases be refused.

The following resolution was adopted:

That the Central Council of the British Medical Association be requested to institute an inquiry into the salaries paid to whole and part time medical officers engaged in public services, with a view to their being raised to a standard to meet present conditions and expenses, and placed on an equitable footing.

STAFFORDSHIRE BRANCH: MID-STAFFORDSHIRE DIVISION.

THE seventeenth annual meeting of the Division was held on June 25th.

The report of the Executive Committee was read and adopted, and the following were elected as officers for the coming year:

Chairman: Dr. A. E. Hodder, D.S.O. *Vice-Chairman:* Election to this office was deferred. *Honorary Secretary:* Dr. R. W. Dale Hewson. *Representative in Representative Body:* Dr. Clendinnen unanimously re-elected.

Dr. HODDER spoke on the subject of the propaganda of the Medico-Political Union, and it was the opinion of the meeting that this should be strongly opposed. A vote of thanks was accorded to Dr. Rowland for his great services to the Division as chairman during the period of the war. The annual report of Council was discussed and adopted.

During the war the quarterly meetings of the Division have been suspended, but will now be resumed.

SUSSEX BRANCH: BRIGHTON DIVISION.

AT a meeting of the Division held on June 17th the following officers were elected:

Chairman: Dr. Uthoff. *Vice-Chairman:* Dr. Helen Boyle. *Secretary and Treasurer:* Dr. E. H. Burchell. *Assistant Secretary:* Dr. Parry. *Representative in Representative Body:* Dr. E. R. Fothergill. *Deputy Representative:* Dr. Gordon Dill.

The Representative was instructed to move the following at the Representative Meeting:

1. With reference to Annual Report of Council, paragraph 91, as a rider:

That the Representative Body of the British Medical Association views with grave concern the present day tendency to rely on Orders in Council in bills for legislative purposes, and is of opinion that, should it be necessary to do this, such Orders should be submitted in full by a Minister to both Houses of Parliament for approval, and not, as at present, leaving it to any member of Parliament who cares to take the responsibility to draw the attention of the House to them in the short space of time available. That a copy of this resolution be forwarded to the Prime Minister, the President of the Ministry of Health, and the Leader of the House of Commons.

2. As a rider in respect to paragraphs 170 and 179:

In view of the fact that the purchasing power of the sovereign has been reduced at least 33 per cent., and is not likely in the near future to be greatly increased, it be an instruction to the Council to reconsider the salaries and fees approved of from time to time by the Representative Body for medical services and to take all possible steps to have these adjusted proportionately.

3. As a rider to Central Medical War Committee's Report, paragraphs 17 to 42:

That it be an instruction to the Council to inquire and report in what ways this Association could assist in keeping junior medical practitioners acquainted with Army Medical Service conditions and thus allow the medical profession to help more effectively in any national emergency which may arise; with power to take action in the meanwhile.

4. Amendment to proposal in paragraphs 166 to 168:

That this Representative Body cannot approve the proposed National Insurance Defence Fund and refers it back for further consideration.

ULSTER BRANCH: BELFAST DIVISION.

THE annual meeting of the Belfast Division was held on June 19th. The following officers were elected for 1919-20:

Chairman: Dr. R. W. Leslie, LL.D. *Treasurer and Secretary:* Dr. W. L. Storey. *Representatives in Representative Body:* Drs. A. G. Robb and G. St. George.

The Chairman, Dr. BOYD, read an interesting and practical paper on goitre which led to a very general exchange of views on the subject. A vote of thanks to the Chairman, on the motion of Dr. ST. GEORGE, seconded by Dr. RENTOUL, was passed with acclamation.

INSURANCE.

MEETINGS OF THE PROFESSION.

CONFERENCES IN SCOTLAND.

CONFERENCES of the profession in Scotland to consider document M. 25 and the memorandum of discussions issued by the Insurance Commissioners have been held in Edinburgh (2), Aberdeen, Perth, Dumfries, and Glasgow (2). Dr. Cox attended the first of the Edinburgh meetings, and Dr. Drever, on behalf of the Insurance Commissioners, presented the report at the others. Dr. J. C. McVail was present at the Edinburgh and Aberdeen meetings, and Dr. J. R. Currie attended at the other centres.

The report was generally well received, but several of the proposals were adversely criticized; in particular, paragraphs 15 and 16 were objected to, and representatives of holiday resorts indicated a preference for the retention of the present method of payment for temporary residents. Representatives of rural practitioners pressed a demand for a greatly increased mileage grant and for payment for mileage beyond one mile from the nearest doctor. The proposals with regard to midwifery were generally accepted in their amended form, but the Edinburgh meeting resolved, by a majority, to disapprove of "obstetrical practice being included within the range of National Insurance." The additional services for the present insured were welcomed, but the Edinburgh meeting resolved, by a majority, "that free choice of consultants by attending practitioner and patient without the formation of a panel is the only satisfactory method of providing such services." The same meeting also expressed opposition to the extension of services beyond the range of present insured. With that exception the recommendations in paragraph 112 were everywhere unanimously approved.

CONFERENCE AT CARDIFF.

A CONFERENCE of members of the medical profession practising in the area of the South Wales and Monmouthshire Branch was held at the Old University Buildings, Cardiff, on July 9th. Representatives from the Cardiff, Glamorgan, Monmouthshire, Newport, Swansea, Brecon, and Merthyr Tydfil Panel Committees were present, and there was a total attendance of 85. Dr. THOMAS WALLACE, the chairman of the Cardiff Panel Committee, took the chair.

After a brief introduction of the report of the Insurance Acts Committee (M. 25) by Dr. CRAWFORD TREASURE, a member of the Committee, and an explanation of the object of the Conference, Dr. COX, the Medical Secretary, addressed the meeting.

Dr. Cox commenced by referring to resolutions which had been sent in by the Monmouthshire Panel Committee, which stated that no mandate had been given to the Insurance Acts Committee to negotiate on the matters set forth in M. 25, and pointed out that the Conference of Local Medical and Panel Committees held in London had authorized the Insurance Acts Committee to undertake this work. He further explained that the document M. 25 was not to be taken as a record of negotiations, but simply as that of a series of discussions which had taken place, with recommendations based thereon by the Insurance Acts Committee. The question of remuneration had been purposely left out, as they were not in a position to negotiate terms until it was known what duties were to be imposed on the panel practitioners and the conditions of service had been defined. On the question of the retention of the poundage system alluded to in representations from Glamorganshire he explained that he was personally in favour of this as being perhaps the most equitable system of payment, but that it did not arise on the matters for discussion.

After some further explanations the meeting proceeded to discuss the summary and recommendations on page 16 of M. 25 in detail:

Paragraphs i, ii, v, vi, vii, x, xi, xii, xiii, xiv, xvi, xvii, and xviii were agreed to. Objection was taken to iii and it was rejected. An amendment, "That anaesthetics and miscarriages should be paid for out of a special pool, and not be a first charge on the general pool," being carried.

Paragraph viii was rejected by a large majority, and ix was rejected unanimously, the feeling being strong against it. On paragraph x an addendum was carried that "No insured person removing from one area to another should be removed from the doctor's list until he had chosen another doctor in his new area."

On paragraph xiv a discussion arose on the withholding of an Exchequer grant from an Insurance Committee on a complaint against a panel practitioner, and a resolution was adopted that no grant should be withheld until the actual amount had been considered by the Medical Service Subcommittee.

On paragraph xv strong objection was taken by many to the keeping of records, but after an appeal by Dr. Cox, who referred to the necessity of having records of work done for use by the profession in conducting negotiations with the Government, and the disadvantages experienced in the past through the want of accurate data, the section was agreed to by a considerable majority.

During the discussions many questions were answered by Dr. COX and the representatives of the Commissioners who were present—Drs. MEREDITH RICHARDS and McCLEARY—and one point which was brought out clearly was that the Government put a full 7s. in the pool for every insured person who had ceased to contribute by reason of his being over 70 years of age.

The meeting closed with votes of thanks to Dr. Cox and Drs. Meredith Richards and McCleary, and to the Chairman for his able conduct in the chair.

CONFERENCE AT NOTTINGHAM.

Dr. ADAM FULTON presided at a group conference at Nottingham on July 4th. The Insurance Acts Committee was represented by Dr. Linnell and the Insurance Commissioners by Dr. Smith Whitaker. The proposal by the Leicester Panel Committee that a representative of the National Insurance Commission should attend the meeting only at such times as he was called on to assist in the elucidation of any points arising in the discussions, was not carried.

In reply to Dr. FRYER, Dr. SMITH WHITAKER said that the Commissioners had no responsibility for M. 25; it did not represent their views, but he could not say that it represented anything with which they disagreed.

Dr. WALLACE HENRY asked whether there was any opportunity given to members of the Insurance Acts Committee to express disagreement with the views put forward in M. 25, and also whether there was a minority report. Dr. LINNELL said that the Insurance Acts Committee was wholly responsible for M. 25. It was not a fighting manifesto, but merely an attempt at a constructive policy with reference to the future of the panel service. An extended and improved service must be offered to the public. He did not know of any request for a minority report. The Insurance Acts Committee would not consider the matter of remuneration until the Government had stated what it wanted the profession to do; but the remuneration must be adequate.

Dr. SMITH WHITAKER said that Mr. Bonar Law had stated early in 1918 that the Government would not consider any permanent change in the remuneration for insurance service except after the revision of all the conditions of service. In March last year the Government authorized the Commissioners to enter into preliminary discussions with representatives of the profession; these had been going on for the past twelve months. The conferences were not to settle the matter, but for discussion. During the autumn negotiations would be entered into with the Ministry of Health as to the future terms of service and as to remuneration. In reply to Dr. TOBIN, he added that the Government last year recognized the fall in the value of money and gave a war bonus, applying to the profession the same principles as were applied to the Civil Service; so long as the value of money remained low he did not think the Government would depart from that principle.

With regard to the limitation of numbers, Dr. WALLACE HENRY stated that Leicester was in favour of limitation of panel lists to 3,000, and after some discussion the meeting decided in favour of some limitation.

Dr. FOSTER (Leicester) stated that the meeting should protest against any form of special service as distinct from the general practitioners' service being a first charge on the pool, and that a separate fund should exist for the payment of purely special services. Dr. Smith Whitaker said that it was not proposed that a special service should be a charge on the pool; a fund would be constituted to defray the cost of all general practitioners' services.

With regard to the range of service a considerable discussion took place, and it was finally resolved that the obligation to be undertaken should not include midwifery. Dr. SMITH WHITAKER said that a partnership would be placed on the list provided it was not an assistantship; assistants would be placed on the panel, but patients would not be assigned to them. He stated also that it was not proposed to continue the present form of record; it was proposed to appoint a committee, including some representatives of insurance practitioners to advise as to the most useful form of records of attendance.

Dr. WALLACE HENRY suggested that specialist services should only be provided for insured persons, and Dr. WHITAKER stated that he did not know whether the Government intended to bring in a specialist service for

dependants. After further discussion it was agreed that referees should decide whether a person should have a second opinion or not, and that there should be a list of medical men willing to act as consultants.

Dr. WALLACE HENRY stated that in the Public Medical Service of Leicester there was accommodation for a consultant at a small hospital with ten beds, where operations could be performed. The fee was one guinea an hour. As twelve patients could be seen in two hours, he considered that a fee of 5s. a case would be fair. Dr. BIRKITT suggested two guineas for a session of one and a half hours.

The meeting was of opinion that a general practitioner should not be required to attend the consultation, but that he and the consultant should exchange notes. It was agreed that a system of referees was indispensable.

Dr. WALLACE HENRY stated that the system under which a number of general practitioners attended at one centre worked well in Leicester. He urged that the opportunity should be taken of pressing the authorities to provide beds in hospitals, so that a general practitioner could keep a patient under observation and also continue to attend him.

LOCAL MEDICAL AND PANEL COMMITTEES.

SURREY.

At a meeting of the Local Medical and Panel Committees on June 13th document M. 25 was further considered. Many of the paragraphs were discussed in detail, and opinions for or against the various recommendations were expressed. Objection was taken to the discussion of any extension of the medical service to any other section of the community until the result of extensions to the insurance population was known.

The Committee was not in favour of the extension of benefits to the dependants of insured persons. It was resolved that no representatives of the Insurance Commissioners should be present at conference meetings; that medical referees should not have power to interfere with clinical treatment of the patient by the general practitioners; that the present definition of the range of service should be continued; that all conditions of insurance medical benefit respecting labour should remain as at present—for example, confinement to be excluded; and that vaccines and serums should be provided free of cost to the practitioner for the use of panel patients when the doctor considers they are necessary.

It is not possible within the limits of the present report to give in detail all the conclusions which the meeting arrived at.

WEST RIDING OF YORKSHIRE.

At a meeting of the Local Medical and Panel Committee held on June 27th circular M. 25 of the Insurance Acts Committee was discussed, and it was resolved:

1. That this committee strongly opposes any scheme for contract midwifery.
2. That payments for special services, such as anaesthetics, etc., should not be a prior charge on the Local Medical Fund, but should be paid for out of a special fund.
3. That the income limit (of insured persons entitled to medical benefit) be not raised to £250 unless the (doctors') capitation fee be at the same time proportionately increased.
4. That the reintroduction of record keeping (which has been in abeyance during the war) is not acceptable to us.
5. That there should be no compulsion for a panel practitioner to attend in an emergency for another panel practitioner.
6. That there be no limit to the size of panel lists.
7. That we oppose the introduction of any practitioners brought in to fill the gaps in areas supposed to be inadequately served.

Dr. A. WELBY, General Secretary of the Medico-Political Union, writes with reference to the current note headed "Medico-Political Union Conference" in the SUPPLEMENT of July 12th: The "Honorary Secretary of a Panel Committee" is wrong in assuming that all Local Medical and Panel Committees were not invited to the above conference. An invitation was sent from this office to all secretaries of Local Medical and Panel Committees, and the non-receipt of the same is not the fault of this Union.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following notifications are announced by the Admiralty: Surgeon Commanders H. R. H. Denny to the *St. Margaret of Scotland*, F. J. McKenna to the *Fivid*, for R.N. Barracks. Surgeon Lieutenant Commanders M. E. Mason to Haulbowline Hospital and Dockyard; G. O. M. Dickenson to the *Delhi*, J. H. B. Martin to the *Damascus*, F. G. Goble to the *Grafton*, C. H. L. Petch to the *Colombo*, P. M. Rivaz to Milton Mount Sick Quarters, D. S. Prentice to the *Sandown*. Surgeon Lieutenants: A. R. Price to the *Scarab*, A. E. Malone to the *Moth*. Surgeon Lieutenants (temporary): J. S. Farries to the *Powerful*, for duty at Travoy Sick Quarters; J. A. B. Snell and W. S. Adams to R.N. Hospital, Haslar; W. P. Vicary to the *Caesar*, R. S. Collings to the *Royal Arthur*, J. A. Hamilton to the *Berberic*, F. G. Hunt and S. R. Johnston to the *Colombo*, C. E. Leake, M.C., to Milton Mount Sick Quarters; G. Aubrey has been transferred to the permanent list for Surgeon Lieutenants, R.N., with original seniority of January 24th, 1917; E. D. Granger, temporary commission and appointment terminated on transfer to R.A.F. (October 1st, 1918).

ARMY MEDICAL SERVICE.

Colonel T. Du B. Whaithe, C.B., C.M.G., is placed on retired pay.
Colonel S. Guise Moores, C.B., C.M.G., relinquishes the temporary rank of Major-General on ceasing to be employed as D.M.S. of an Army.

Temporary Colonel A. Fullerton, C.B., C.M.G., relinquishes his commission and retains the rank of Colonel.

Temporary Colonel Sir Hugh M. Rigby, K.C.V.O. (Brevet Lieutenant-Colonel R.A.M.C.T.F.), relinquishes his commission on ceasing to be specially employed and on reposting.

Temporary Colonel Henry McI. W. Gray, K.B.E., C.B., C.M.G. (Major R.A.M.C.T.F.), relinquishes his temporary commission on reposting.

Temporary Colonel A. H. Tubby, C.B., C.M.G. (Lieut.-Colonel R.A.M.C.T.F.), relinquishes his temporary commission on reposting.

Major and Brevet Lieut.-Colonel W. C. Smales, D.S.O., from Deputy Assistant Director-General, to be Assistant Director of Hygiene at the War Office, and to be temporary Lieut.-Colonel whilst so employed (June 1st, 1919, substituted for notification in the *London Gazette*, June 30th, 1919).

ROYAL ARMY MEDICAL CORPS.

The following Lieutenant-Colonels relinquish the temporary rank of Colonel on ceasing to be specially employed: E. W. W. Cochrane, D.S.O., L. N. Lloyd, C.M.G., D.S.O.

Major and Brevet Lieut.-Colonel M. G. Winder, D.S.O., relinquishes the temporary rank of Lieutenant-Colonel on reposting.

The following relinquish the acting rank of Lieutenant-Colonel on reposting: Majors R. E. U. Newman, M.C., R. F. M. Fawcett, D.S.O., W. J. Waters, H. H. A. Emerson, D.S.O. Captains: G. P. Taylor, D.S.O., M.C., H. A. Harbison, M.C., C. Clarke, D.S.O., F. R. Laing, A. J. Hickey, M.C., T. A. Weston, J. R. Hill. Temporary Captains:

J. G. Johnston, M.C., K. G. Fraser. On ceasing to command a Field Ambulance: H. H. Leeson, M.C. On ceasing to command a Medical Unit: Major L. V. Thurston, D.S.O.

To be acting Lieutenant-Colonels whilst commanding Medical Units: Major and Brevet Lieut.-Colonel C. W. Holden, D.S.O.; Majors A. S. Williams, E. M. O'Neill, D.S.O., A. M. Rose, D.S.O. Captain E. A. Sutton, M.C. from October 16th, 1918, to March 18th, 1919. Temporary Captain (acting Major) R. S. Dewar (from March 15th to 26th, 1919). Whilst specially employed: Major E. E. Parkes.

Temporary Captain F. F. Middleweek relinquishes the temporary rank of Major on ceasing to command troops on a hospital ship.

Temporary Captain J. B. Butler to be acting Major whilst specially employed.

Temporary Captain H. F. Mullan relinquishes the acting rank of Major on reposting.

Late temporary Captains to be Captains: H. W. M. Kendall, S. B. Faulkner, J. E. English.

To be Captains, but not to reckon for pay or allowances prior to July 1st, 1919, with precedence as stated: Captain W. H. Cornelius, from S.R., March 30th, 1918, next below C. de W. Gibb. Temporary Captains R. H. Lucas, M.C., June 2nd, 1918, next below W. E. Adam; P. J. S. O'Grady, September 19th, 1918, next below G. H. Haines.

To be Lieutenants, and to be temporary Captains, but not to reckon for pay or allowances prior to July 1st, 1919, with precedence as stated: Captains P. A. Stewart, from S.R., July 5th, 1917, next below K. Masson; M. C. Paterson, M.C., from S.R., April 8th, 1918, next below G. E. MacAlevy. Temporary Captains C. H. Colclough Byrne, February 4th, 1916, next below T. C. Bowie; A. J. Bado, August 25th, 1916, next below R. J. Daunt; G. W. B. Shaw, July 25th, 1917, next below J. C. Collins.

Temporary Lieutenants to be temporary Captains: D. D. Farquharson, F. H. Nixey, D. H. Vickery, A. H. Marsh, W. H. W. McWhirter, F. P. Hearder, J. Butterworth.

The notifications regarding temporary Lieutenants G. A. Thompson, J. C. Bell, and Rupert C. Redman in the *London Gazette* of January 14th, May 19th, and June 30th, 1919, respectively, are cancelled.

ROYAL AIR FORCE.

MEDICAL BRANCH.

A. G. Graham is granted a temporary commission as Captain (July 18th, 1918, substituted for notification in the *London Gazette* of July 19th).

Transferred to unemployed list: Major F. H. Horne, Captain (acting Major) A. H. Todd; Captains M. R. Dobson, T. R. F. Kerby, F. Irvine, J. C. H. Allan, J. A. Gordon, D. Cameron (R.A.M.C.T.F.); Lieutenants A. G. Graham, H. W. Toms, O. F. Conoley.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Captain W. R. Gardner, S.O., relinquishes the acting rank of Lieutenant-Colonel on reposting.

Captain (acting Major) J. F. W. Sandison to be acting Lieutenant-Colonel whilst commanding a medical unit.

Captain W. S. Wallace, M.C., relinquishes his commission on account of ill health caused by wounds and retains the rank of Captain.

GENERAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Major A. F. Heaton relinquishes the acting rank of Lieutenant-Colonel on ceasing to command a convalescent dépôt.

Major J. W. Jennings, D.S.O., to be Lieutenant-Colonel.

Late Captains R.A.M.C. to be Captains: J. A. Andrews, M.C., J. A. W. Edden, C. J. O'Reilly, M.C.

OVERSEAS CONTINGENTS.

CANADIAN ARMY MEDICAL CORPS.

Temporary Lieutenant-Colonels (acting Colonels) to be temporary Colonels: W. T. M. MacKinnon, F. Guest.

Temporary Major (acting Lieut.-Colonel) A. H. Taylor, M.C., relinquishes the acting rank of Lieutenant-Colonel on ceasing to be Officer in Charge of Troops, H.M.A.T. *Essequibo*.

Temporary Majors (acting Lieutenant-Colonels) to be temporary Lieutenant-Colonels: S. R. Harrison, C. Hunter, E. R. Selby, W. A. G. Hand, D.S.O., J. G. W. Johnson, F. H. Mackay, A. E. H. Bennett, W. M. Harl, M.C., D. A. L. Graham, A. L. Johnson, R. St. J. MacDonald, R. H. M. Hardisty, M.C., T. H. McKillip, D.S.O., H. E. MacDermott, F. A. C. Scrimger, V.C., G. A. Platt, G. S. Strathy, G. Musson, J. T. Hill.

Temporary Major R. M. Filson to be acting Lieutenant-Colonel (January 1st, 1919, substituted for notification in the *London Gazette*, June 6th, 1919, incorrectly describing rank as temporary Lieutenant-Colonel).

Temporary Captains (acting Majors) to be temporary Majors: F. B. Howman, A. B. Schinbein, M. H. Allen, W. Ross, W. G. Cosbie, M. C. C. E. Anderson, C. W. Waldron, F. V. Woodbury, H. W. Wadge, M. C. T. R. Little, E. L. Pope, R. R. Barker, H. G. Wood, J. J. Thomson, H. O. Boyd, A. Blais, A. W. Jagball, H. C. Mersereau, J. Seager, H. K. Bates, H. H. Argue, M.C., L. A. Richmond, J. McCulloch, F. T. Campbell, M.C., H. M. Barrett, M.C., F. H. Pratten, F. W. Lees, M.C., E. Douglas, M.C., L. C. Palmer, M.C., A. P. Chown, F. J. Tees, M.C., W. V. Lamb, D. P. Hanington, R. N. W. Shillington, W. J. MacKenzie, J. H. Moore, W. A. Wilson, S. R. Johnston, T. M. Creighton, P. F. Dunham, M.C., A. G. MacLeod, D. A. Clark, C. E. Preston, F. W. Blakeman, V. N. MacKay, J. A. Murray, J. A. M. Hemmeon, F. B. MacLutosh, K. A. MacKenzie, G. W. A. Aitken.

Honorary Captains (acting honorary Majors) to be honorary Majors: A. E. Clifton, H. J. Testar, J. W. White.

Temporary Captain A. B. James to be acting Major while employed at No. 11 Canadian General Hospital.

Honorary Lieutenants (acting honorary Captains) to be honorary Captains: J. F. Christie, H. T. Cameron, D.C.M., A. P. Ross, W. R. Duff, H. G. Iliffe, F. White.

The following retire in the British Isles: Temporary Major J. McW. Taylor, temporary Captain H. A. Mitchell.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonel (acting Colonel) E. B. Dowsett, D.S.O., relinquishes his acting rank on vacating the appointment of A.D.M.S.

Captains to be acting Majors whilst specially employed: A. Rankine, E. G. T. Poynder, H. T. Jones, F. R. Humphreys, K. I. S. Smith.

Captain A. Fordyce relinquishes his commission on account of ill health caused by wounds and retains the rank of Captain.

Captain J. A. Parsons is restored to the establishment.

The following officers relinquish their acting rank on ceasing to be specially employed: Majors (acting Lieutenant-Colonels) D. F. Todd, J. O. Summerhayes, D.S.O., J. Gray, O.B.E., T.D.; Captain (acting Lieutenant-Colonel) H. E. S. Richards, M.C.; Captains (acting Major) E. C. Plummer, R. S. Taylor, D.S.O., H. J. D. Smythe, M.C., A. L. Sharpin, A. W. Stott, P. R. Bolus, H. W. Bayly, M.C., J. H. Lloyd.

1st Eastern General Hospital.—Captain C. H. Budd, M.C., is restored to the establishment.

2nd Eastern General Hospital.—Captain (acting Major) R. Whittington relinquishes his acting rank on ceasing to be specially employed.

3rd London General Hospital.—Captain (Brevet Major) A. H. Gosse is restored to the establishment.

1st Scottish General Hospital.—Captain (acting Major) C. Kerr relinquishes the acting rank of Major on ceasing to be specially employed.

3rd Scottish General Hospital.—Captain (acting Major) R. Fullarton relinquishes his acting rank on ceasing to be specially employed.

5th Southern General Hospital.—Captain (acting Major) P. H. Green relinquishes the acting rank of Major on ceasing to be specially employed, and is restored to the establishment.

TERRITORIAL FORCE RESERVE.

ROYAL ARMY MEDICAL CORPS.

To be Captains: Captain E. S. Taylor, from 2nd London Casualty Clearing Station; Captain E. G. Gauntlett, D.S.O., from 1st London Field Ambulance.

APPOINTMENTS.

BAXTER, Charles B., O.B.E., F.R.C.S. Edin., Honorary Assistant Surgeon to the Royal Berkshire Hospital.

FORSYTH, J. A. Cairns, M.Sc., M.B., F.R.C.S., Surgeon to the French Hospital, London.

LAKE, Norman C., M.D., M.Sc., D.Sc., F.R.C.S., Assistant Surgeon to Charing Cross Hospital.

MATHIESON, D. Morley, M.A., M.D. Edin., Ch.B., D.P.H., Medical Officer of Health, County Borough of Birkenhead.

WHITE, H. V., M.D. Manchester, Honorary Ophthalmic Surgeon to the Salford Royal Hospital.

COUNTY BOROUGH OF SOUTH SHIELDS.—Assistant Medical Officer (Venereal Diseases, etc.): W. Campbell Lyons, M.B. Edin., D.P.H. Assistant Medical Officer (Tuberculosis): Douglas Martin, M.B. Edin., D.P.H., D.T.M. Assistant Medical Officer (Diseases of Children): A. W. Wear, M.B. Durh., D.P.H.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

DEATHS.

COLLINS.—On July 9th, at Sproxtown, New Wanstead, Frank Collins, M.R.C.S., L.R.C.P., suddenly, after many months of ill health.

EDWARDS.—At Taiyuanfu, Shansi, N. China, after two days' illness, of cerebro-spinal meningitis, George Kemp Edwards, M.B., Ch.B. Edin., only surviving son of Dr. E. H. Edwards, of Taiyuanfu, Shansi, N. China, aged 30 years.

FEILE.—On July 14th, at Phillimore, Sidmouth, William Hall Poile, M.D., D.P.H., sometime Medical Officer of Health for Sidmouth, aged 50.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
	JULY.
23 Wed.	Annual Conference of Secretaries, 423, Strand, London, W.C.2, 2.30 p.m.
24 Thur.	OPENING OF ANNUAL REPRESENTATIVE MEETING, Connaught Rooms, Great Queen Street, London, W.C.2, 10 a.m.
25 Fri.	ANNUAL GENERAL MEETING, 2 p.m.
	AUGUST.
8 Fri.	East York and North Lincoln Branch, Hull Royal Infirmary, 4 p.m.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, JULY 26TH, 1919.

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SPECIAL CONFERENCE OF REPRESENTATIVES OF LOCAL MEDICAL AND PANEL COMMITTEES.

London, Thursday and Friday, July 17th and 18th, 1919.

A CONFERENCE of representatives of Local Medical and Panel Committees, called by the British Medical Association, was held at the Connaught Rooms, London, on Thursday, July 17th. Dr. J. A. MACDONALD, LL.D., Chairman of Council of the Association, presided, and 153 representatives attended, representing 154 insurance areas, together with 6 or 7 members of the Insurance Acts Committee other than those present in a representative capacity. Of the 127 insurance areas in England 109 were represented; of the 56 in Scotland 32 were represented, and of the 17 in Wales 13 were represented.

THE CHAIRMAN called attention to the heavy agenda, which included more than 140 motions and amendments. Most of the questions at issue had been threshed out in the group conferences, and he hoped representatives would express themselves tersely.

CONDITIONS OF SERVICE.

Dr. H. B. BRACKENBURY (Chairman Insurance Acts Committee) moved the approval of the Committee's report on the revision of conditions of service and possible extensions of service (M. 25). He said that the document was the result of discussions undertaken at the direct mandate of the April, 1918, Conference. A more recent document (M. 38) had been circulated, in which one or two paragraphs in M. 25 had been revised in the light of experience of the grouped conferences; there were no essential alterations, but an endeavour was made to render more clear the intention of the original. The questions raised in the report as a whole were very serious and must be approached in the right spirit. A service that was satisfactory to the country—which involved a service satisfactory to the profession—must be secured. In certain respects there might be further restrictions upon the insurance practitioner, and they would all agree that there must be increased remuneration for the doctor, but if these were taken as the only things to be considered, not much good would issue from the Conference. In certain ways the service must be improved. On their side they had not been blind to its deficiencies from the public point of view. Doctors were also citizens, and could see better than any other class what ought to constitute a good health service. Six years' experience from the medical as well as the administrative side revealed imperfections in the service from the public point of view which must be altered. The suggestions of M. 25 might not be the best suggestions, but they had to find some solution of certain of the problems. In nearly all the group conferences the discussions had

been most advantageous and exactly on the right lines. He dealt with certain points which called for solution, such as the provision of general anaesthetics; the existence of large lists, even of 6,000 or 8,000 persons; the fact that in some populous centres there had been queues waiting outside the surgeries during the last winter, and in isolated cases failure to secure emergency treatment. Practitioners did not like the present arrangements with regard to anaesthetics, the uncertainty as to what particular services were included in the agreement, and the lack of proper facilities for specialist treatment and pathological examination. But they had also felt all along that the payment was inadequate. M. 25 did not enter into the question of the figure of remuneration; it did not prejudice in any degree the consideration of that question. They wanted to determine that day on general lines the conditions of the service which they were ready to undertake, and then as early as possible afterwards to decide what remuneration they were willing to do these services for. Presently he would have three announcements to make on behalf of the Insurance Acts Committee: the general programme for discussion of the actual amount of remuneration; the understanding arrived at with regard to rural and semi-rural practitioners; and, finally, the actual increase in remuneration for 1919. While viewing with sympathy certain amendments on the agenda, there were others which were not constructive, and it was at the present time very necessary to put forward constructive proposals.

Dr. P. MACDONALD (York) sought to obtain an alteration of the order of the agenda, whereby certain motions involving large principles should be discussed first, and he was supported by Dr. C. P. LANKESTER (Surrey), but it was decided on a show of hands to take the order as it stood. Dr. W. H. PIMBLETT (Preston) requested that Dr. Brackenbury should not be allowed to take up too much time. THE CHAIRMAN said that Dr. Brackenbury would be subject to the same time limit as other representatives and subject to the wishes of the meeting.

Distribution of Local Pool.

Dr. P. MACDONALD (York) moved that, with reference to the paragraph ii of the summary of M. 25, the distribution of the local pool should not be later than the last day of the quarter. He said that they were tired of the "as soon as may be" phraseology. As chairman of a subcommittee of his local Insurance Committee he had gone into the matter with the clerk, who assured him that he saw no difficulty in this suggestion, and that it would not interfere

with administration, seeing that the central pool was to be made up on the data of the year before.

The CHAIRMAN said that the amendment seemed reasonable enough, and it was adopted.

Limited Liability.

Dr. I. G. MODLIN (Sunderland) urged that paragraph 9 of M. 25 should be qualified by the addition of the words:

Provided that such differentiation shall not involve any practitioner being credited with less than the normal capitation fee for each insured person on his list.

Dr. BRACKENBURY said that this really meant putting the persons with limited lists in a privileged position. He hoped the departure would not be sanctioned.

The amendment was lost.

Temporary Residents.

Dr. E. W. LEWIS (Southport) moved:

That arrangements for temporary residents be left as at present, because ascertained facts are simpler and more accurate than actuarial calculations.

He said that this matter affected practitioners in health resorts to an extent which practitioners from industrial districts could scarcely realize. At present patients coming from industrial centres to health resorts did not to any large extent apply to practitioners in health resorts for treatment under the Act. In Southport he did not believe that more than 50 per cent. of the insured temporary residents took advantage of the panel service. But if that service was made more popular to the insured class, a far larger proportion of these people would seek the aid of insurance doctors, who would in large health resorts be "bombarded" with temporary residents, for whom they would only receive on the actuarial basis something like 3s. 6d. per person, whatever the attendance might be. They felt in Southport that in such cases payment per attendance should be continued. He maintained that, as the "case value" was fairly well established, it might be taken for the previous year when the calculations were made, so that the distribution of the central pool need not be hindered by the arrangement.

Dr. E. BURCHELL (Brighton) said that his constituents also strongly objected to this proposed new method of paying for temporary residents.

Dr. H. T. BARTON (Blackpool) said that in his area they probably attended as many insured visitors as insured residents, but very few of the visitors came in under panel conditions. As soon, however, as the panel got greater credit, instead of attending about 2,000 temporary residents each year in the area, the Blackpool practitioners would have to attend four or five times that number. He described the system obtaining in Blackpool, and said that in 1917 1,750 temporary residents were attended, and 6,941 items of attendance, including night and special visits, were put in, for which they were paid £689, or about 7s. 10d. per patient.

Dr. F. COKE (Kent) said that any uniform system of capitation fee would necessarily be unjust, because in one place there would be a convalescent home where a doctor could attend to fifteen people (getting the same capitation fee for each) in the time that another man took in attending one patient day and night for three months. The whole amount of money paid for temporary residents in Kent in 1917 worked out at 13s. 3d. per head. The scheme suggested in the paragraph of the report should not be accepted.

Dr. J. HOLMES (Bury), speaking for a manufacturing district, wished the present system to continue, as it seemed to him that it was fairer than any other. Dr. R. A. HENDLEY (Isle of Ely) also supported a continuance of the present system.

Dr. D'EWART (Manchester) said that in Manchester, where they had payment per attendance, they found themselves treating people during the acute stages of an illness for a much smaller payment than the practitioner in a health resort received for continuing the treatment—often doing little more than signing the certificate—of those same patients when convalescent.

Dr. BRACKENBURY said that the proposal before the meeting, if carried, would upset the decision of the Special Conference in April of last year. It would do away with the whole system whereby they knew at the beginning of

the year the sum they were to receive in that year. It was not the calculation of the "case value" which delayed the payment, but the sending in of individual accounts for temporary residents. The amendment would throw them back on the existing state of affairs, whereby they could only get an emergency settlement eight months after the conclusion of the year and a full settlement fifteen to eighteen months after the conclusion of the year. The inter-areal system of distribution was a matter of local option, and could be continued on the present basis if desired.

Dr. F. RADCLIFFE (Oldham) asked that the health resort areas should be fair to the industrial areas. In the industrial areas of Lancashire they got somewhere about 10d. for attendance on a patient, and in Blackpool 2s.

Dr. FOTHERGILL (Insurance Acts Committee) said that Dr. Radcliffe's argument appeared to be that because he got an inadequate capitation fee in his own industrial centre, therefore the temporary residents in a health resort should not be adequately paid for. ("No.") If the health resorts were going to be subject to a scheme based on data of which nothing was known a great injustice would be done to the doctors. The matter ought to remain as it was at present for two or three years, when data under post-war conditions would be forthcoming.

Dr. IVOR SANKEY (Great Yarmouth) spoke in support of the Southport resolution, and referred to the difficulties arising out of the treatment of Scottish fishermen at places like Yarmouth and Lowestoft. He did not see how this could be done under the ordinary capitation fee.

Dr. H. G. DAIN (Birmingham) disputed Dr. Fothergill's contention that they had no data. They had all the data necessary. A great many of the criticisms of the suggestion in the report were dictated by a fear of actuarial calculations.

Dr. E. W. LEWIS replied, and reiterated his view that with the increasing popularity of the panel system, practitioners in health resorts would suffer by the change proposed in regard to temporary residents.

The Southport amendment was lost.

Dr. F. COKE (Kent) then moved an amendment simply declaring against the change in the method of paying for temporary residents advised in M. 25. The payment must be by attendance, not a capitation fee.

Dr. H. F. OLDHAM (Lancashire) said that under the proposal in M. 25 the payment for temporary residents would practically be the same as before if the local areas chose to make it so. If they did not choose to make it so it would be for them to devise some other means of paying the men in the health resorts.

The Kent amendment was lost.

Dr. H. G. DAIN (Birmingham) moved:

That in considering the question of remuneration it is essential (1) that a sufficient sum be provided in the central pool to pay adequately for services to invalided sailors and soldiers and to demobilized men whose health has suffered from the service; and (2) that in the division of the local pool additional credit may be given in the manner suggested for temporary residents for the invalided sailors and soldiers on each doctor's list and for all demobilized men who receive pensions.

This was brought forward to draw attention to a fact, nowhere stated in M. 25, that the present method of payment for discharged and invalided men would be done away with under the new arrangement and they would be paid for by an actuarial method like temporary residents. His Panel Committee thought it most important that the matter should be realized now, so that it should not afterwards be said that the question had never been faced and that practitioners had taken it for granted that payments for discharged men were to continue as at present.

Dr. G. G. GENGE (Croydon) supported the amendment because it instanced the demobilized men, who often required quite as much attention as the discharged disabled men, and ought to be paid for at least at the same rate.

Dr. F. RADCLIFFE (Oldham) was in favour of part (1) only of the amendment. If, whether they liked it or not, the arrangement for discharged men was purely a temporary matter which now had to cease, they must demand a sufficient sum to meet it. But if part (2) were accepted, it would be harder than ever to find out how the amounts of their cheques were arrived at. Yet they had been pleading that the calculations should be simplified.

Dr. BRACKENBURY said that in matters in which unification throughout the country was not essential he hoped they would be in favour of giving as much option as possible to individual Panel Committees. If any Panel Committee wished to adopt the method proposed, there was no reason why it should not do so.

Dr. E. R. FOTHERGILL hoped that so big a proposal as that invalided soldiers should come in under the capitation rate would not be accepted as a side issue. The war had just ceased, and they hardly knew what their liabilities were. Was it well to take in, on the capitation rate, large numbers of men, many of whom were totally incapacitated, and others—not discharged, but demobilized—who needed continuous medical service, as a result of malaria, dysentery, and neuroses of all kinds? If these men were taken on without any data whatever, in a few years practitioners might all be grumbling at what they had agreed to do.

It was agreed to postpone further consideration of the amendment until a later stage when the question of an increased capitation grant would come under review.

Limitation of Lists.

Dr. T. W. H. GAISTANG moved, on behalf of Stockport:

That this Conference is opposed to the proposition to limit individual panels to 3,000 insured persons as being contrary to the spirit of the National Insurance Act as to free choice of doctor, and also inimical to the interests of panel practitioners who have acquired their practices by purchase.

Without further discussion the amendment was put to the meeting, and, after two counts, the result was announced as follows:

For amendment	...	...	...	62
Against	...	...	...	55

Dr. T. CAMPBELL (Huntingdonshire) moved that the limitation should be subject to the discretion of the Panel Committees; but Dr. BRACKENBURY said that Panel Committees at present had the option of placing a limitation on their lists, and probably about one-third of the committees had done so. The amendment was withdrawn.

Dr. H. J. CARDALE (London) moved:

That there should be no limit fixed as to the number of insured persons a practitioner should accept on his list, but that on a practitioner exceeding 3,000 the Panel Committee shall satisfy themselves as to the adequacy and efficiency of the services rendered by him if it should be brought to their notice; that in calculating the limit number allowance shall be made for the average list inflation in his area; that the total so arrived at, if in excess of 3,000, be divided by the total man-power engaged in the practice, part-time assistants being calculated at a fraction directly proportionate to the number of hours of service.

The London Committee was of opinion that when criticism was levelled against very large lists there should be some means of looking into the efficiency of the service, and the proper body to carry out that duty was the Panel Committee. It might be an objectionable duty, but that was no reason why it should not be undertaken.

Dr. JOHN DIVINE (Hull) gave general support to the proposition. The circumstances of localities differed much, as did in any one locality the circumstances of individual doctors. The question of limitation of a particular panel should only arise when there was a distinct grievance voiced by insured persons as to the adequacy of the treatment.

Dr. B. A. RICHMOND (London) said that to wait for grievances did not help matters. It was really a question of getting rid of inefficiency which the profession itself would desire to be rid of. Hence his committee had put into the amendment the words "if it be brought to their notice," deliberately leaving the matter vague so that any one interested in the service could bring it to the notice of the Panel Committee.

Dr. P. MACDONALD (York) was generally opposed to the limitation of lists, but he did not think he would be misrepresenting his Panel Committee if he supported what he conceived to be the intention underlying the rather obscure wording of the London amendment.

Dr. CRAWFORD TREASURE (Cardiff) hoped the amendment would not be carried. It might be all very well for a large Panel Committee like London to sit in judgement, but for small committees up and down the country the practice would be invidious and difficult.

Dr. F. RADCLIFFE (Oldham) asked the Conference to consider what would happen in any particular area if the

Panel Committee did not see fit to do this work. His own committee conceived it to be its duty to defend the practitioner, not to charge him.

The CHAIRMAN, in reply to Dr. Tobin, said that at present the only thing that could be done if a man's list was considered to be too long for efficiency of service was to bring forward a case for striking him off the panel altogether, but no compulsion could be brought to bear upon him to reduce his list.

Dr. BRACKENBURY said that some solution had to be found. A large number of practitioners had more than 5,000 on their list, a considerable number had more than 6,000, and one practitioner had 8,000. For that position there was at present no remedy. The Insurance Acts Committee's proposal had already been rejected by the Conference. Some Panel Committees had established limitation in practice, but this did not avail fully to meet the grievance. He thought the Conference would do well to support the spirit of the London resolution in order that there might be a legitimate answer to those who said it was intolerable that there should be doctors who were able to add to their lists without check.

Dr. C. F. T. SCOTT (Middlesex) thought that natural causes, such as resettlement after the war and further experience of insurance under conditions approaching normal, would diminish these excessive lists; and in view of that, it did not seem wise to set up a system of artificial curtailments.

Dr. C. H. PANTING (Essex) gave an instance of a practitioner in East London with a panel of 8,000, in an area the conditions of which were so bad that no English doctor would practise there. The profession had no remedy against such a state of things as that. He supported the London amendment.

Dr. CARDALE, replying, said that "3,000" was merely an index, not a definite figure. It was well known that there were grounds for the complaints which had arisen, and this method was a simple way of meeting the case.

The London amendment was carried, and became the substantive motion.

Dr. D'EWART (Manchester) said that his was one of the first committees to introduce stringent limitation. It did so under duress, and dropped the condition at the first opportunity, and had seen no reason to reintroduce it. He moved an amendment which had the effect of specifying the complainants. It should not be within the province either of an individual or of an approved society to bring a charge against a practitioner simply on the ground that the number on his list was above a certain level. Therefore, to the words in the London resolution "brought to their notice" he moved to add "by the Insurance Committee on the grounds of inefficiency."

Dr. I. G. MODLIN (Sunderland) seconded this amendment, and Dr. P. MACDONALD (York) supported the principle.

Dr. J. J. TOBIN (Derby) objected to the Insurance Committee being made the vehicle of complaint.

Dr. G. G. GENGE (Croydon) said that the Insurance Committee at present had power to refer any such matter to the Medical Services Subcommittee, and the only effect of the amendment would be to send it on to the Panel Committee.

Dr. J. ORTON (Warwickshire) thought the Insurance Committee must be trusted to see that it had a *prima facie* case to put forward.

Dr. D'EWART, replying on the discussion, said that an objection had been raised to giving Insurance Committees more power. But he would rather give power to the Insurance Committee as a body than to any aggrieved member of it. The suggested procedure would be a good protection to the Panel Committee.

The amendment was declared carried by a two to one majority, and the London amendment with this interpolation was then adopted.

Dr. F. COKE (Kent) moved that there should be no reduced capitation fees for larger lists. What would be their position when dependants came in if that principle were admitted?

Dr. A. FOSTER (Leicester) said that in Leicester the principle of reduced capitation fees for the higher thousands had found support as an alternative to limitation; and Dr. BRACKENBURY thought it might be left purely to local option.

Dr. E. BURCHELL (Brighton) said they must not suggest

that any member of the profession might be allowed, in consideration of a large list, to give cheap and inefficient service. The idea that a larger number meant a cheaper service must be anathema.

Dr. F. COKE's amendment was carried by a large majority.

Minimum Assured Payments to Entrants into Practice.

Dr. E. W. M. HIGGS (Oxford and Oxfordshire) moved an amendment disagreeing with the proposition in paragraph 15 of M. 25 relating to the making of minimum assured payments to entrants into practice. There were similar amendments by Stockport, Essex, Cheshire, and Kent.

Dr. BRACKENBURY had no doubt that this amendment would be carried, but the Conference should remember that under existing regulations, in an area with deficient doctor power, the Commissioners were at liberty to do exactly as they liked without consulting anybody. What they had done in some half-dozen areas was to suspend the panel, and forbid the practitioners to import others into those areas. The paragraph was put in the report because it seemed to offer a better alternative; it would compel the consultation of the Panel Committee. If that Conference did not agree, then it was a matter on which the Insurance Acts Committee had no particular feeling.

Dr. W. HODGSON (Cheshire) supported the resolution of Oxford. His constituents objected to anything resembling a State subsidy to new panel practitioners on entering practice.

Dr. CANDLER-HOPE (North Riding) thought the exceptional position mentioned by Dr. Brackenbury might be met by insisting that the Commissioners should first consult the Panel Committee before taking such action.

Dr. F. RADCLIFFE (Oldham) said he represented one of the few Panel Committees which at first sight was strongly opposed to M. 25, but on being reasoned with became of a different opinion. If the Commissioners in any area closed the panel the position became extremely awkward.

Dr. C. P. LANKESTER (Surrey) and Dr. GENGE (Croydon) were strongly opposed to the proposition in M. 25.

The amendment was carried.

Special Services: Anaesthetics.

Dr. J. W. SMITH (Durham) moved, on paragraph 16 of M. 25, that payment for special services and the administration of general anaesthetics should be made on a capitation basis with no first charge on the pool. (Similar motions came from other areas.) Dr. Smith said that if payment for anaesthetics were made out of the pool, and also payment for attendance at miscarriages as suggested, one thing after another would become a charge on the pool, and, finally, there would be little left for attendance for ordinary purposes.

Dr. BRACKENBURY made a general statement on the subject of anaesthetics. The paragraph in the report, he said, had nothing to do with the services of consultants or specialists. But insured persons, for services within the practitioner's contract, were entitled to have general anaesthetics. Some provision had to be made under a proper insurance scheme by which the insured person should have general anaesthetics for minor operations. There were several conceivable solutions. That adopted so far had not worked very satisfactorily. There were objections to the plan of so calculating the capitation fee as to include within it the employment by the insurance practitioner of a colleague to give general anaesthetics when that was judged necessary. It had objections from the side of the insured person in that it deprived him of anaesthetics in some cases, or that it led to the insurance doctor himself both giving the anaesthetic and doing the operation. They were agreed that the present capitation fee was not sufficient to cover the liability which, in fact, they had under the agreement. But if that were recognized as one of their liabilities and an adequate capitation fee were calculated (the central pool containing enough money to cover this service), it would be possible to have either a single pool, upon which fees for anaesthetics would be a charge, or to have two separate pools, one for general services and one for anaesthetics. If both pools were adequate, the result would be the same as having the single pool, with a first charge upon it for anaesthetics. An alternative solution, however, was to

make anaesthetics a special service—that is, that there should be a separate arrangement, an unlimited liability, if they liked, upon the Treasury to provide from some separate source for the administration of general anaesthetics to insured persons for minor operations. (Hear, hear.) Between these alternatives the Conference would have to decide. Supposing they said anaesthetics were to be taken out of the contract, and that the Treasury paid for the services of anaesthetists in these cases—and the Treasury was not very keen upon agreeing to unlimited calls—the Treasury would require guarantees as to those who were going to give the anaesthetics. There were two ways by which this separate service outside the general practitioner service could be arranged for: (1) two or three doctors might be picked out by the Ministry of Health as anaesthetists for an area, and paid either a salary or an agreed fee; (2) there might be a separate panel of anaesthetists. In the latter case there would be an opportunity for the general practitioner who considered himself a specialist in anaesthetics to put himself on this panel, but in these circumstances it would be a panel of men whose services could be called upon, not merely for minor, but for all kinds of operations. In rural practice he could well believe that every man would consider himself able quite properly to put his name down on this special panel, and to give anaesthetics in any operation, because he had been in the habit of doing so. But in towns there were many general practitioners quite willing to give gas, ether, or chloroform for minor operations, but not willing to accept the liability to give anaesthetics for any and every operation. Therefore, if this alternative were accepted, anaesthesia for minor operations would be taken out of the hands of the ordinary town practitioner. He thought that to take this or that out of the hands of the general practitioner and put it in the hands of the specialist was unfortunate. (Hear, hear.) He wanted these things kept within the sphere of the general practitioner, and the present arrangements improved by getting an adequate capitation fee, calculated with this object in view.

The Conference then returned to the consideration of the Durham amendment.

Dr. P. MACDONALD (York) thought that it would be preferable to have payment of an agreed fee for anaesthetics, attendance at miscarriages, and any one or more of a number of other specified services as a first charge on the local pool if the practitioners of any area so wished. This was eminently a case for local option. Local option by Panel Committees was generally advisable wherever it did not interfere with the general principle of management. Panel Committees were fairly homogeneous bodies, and in certain areas, particularly rural areas, it might be an advantage to have the payment for these special services on a capitation basis, while in urban areas—his own, for instance—many practitioners would not wish to give anaesthetics. Dr. RADCLIFFE (Oldham) expressed his entire agreement with this speaker.

Dr. G. C. ANDERSON (Fifeshire) held that the giving of general anaesthetics was a special service, and should come under the same head as the performance of major operations. He opposed the amendment.

Dr. W. HODGSON (Cheshire) said that his county objected to payment for any of these special services coming out of the areal pool. The result of so many calls upon the pool was already to bring down the 7s. to 5s. 10d.

Dr. BRACKENBURY, in reply to Dr. Candler-Hope, said that the provision of anaesthetics was part of the present contract, as was evident from a reading of the contract and from what passed between the Commissioners and Treasury and those who were negotiating on behalf of the doctors in 1912. The administration of anaesthetics for cases within the insurance contract was paid for in the existing capitation fee, and was one of the practitioner's liabilities.

The CHAIRMAN said he was one of those engaged in the negotiations at the beginning, and this was one of the points prominently brought forward. He told Mr. Lloyd George personally that he (Mr. Lloyd George) was putting the alternative upon the insurance practitioner either of refusing to give an anaesthetic for an operation that was necessary or of giving the anaesthetic and paying for it out of his own pocket. The giving of anaesthetics was undoubtedly included in the duties paid for under the capitation fee. To clear up a confusion of issues, the

Chairman added that by special services in this connexion was meant not specialist services, but services now required of a general practitioner. There was no question of major operations.

The Durham amendment was put to the meeting and lost.

Dr. C. H. PANTING (Essex) moved an amendment on behalf of his committee that special services should not be a first charge on local pools, but that a special fund should be arranged for.

Dr. E. BURCHELL (Brighton) strongly supported this amendment. Anaesthetics ought to be considered a special service. It was all very well to tell them what the regulations at present in force meant, but it was generally understood that next year they would be working under new terms and regulations. He doubted very much whether the giving of a general anaesthetic was any part of a panel practitioner's duty if it involved the presence of a second doctor. They were required to give all the service to their panel patients which a general practitioner would give, but not that which two general practitioners would give. When the new service was arranged for he could see no reason why the giving of general anaesthetics should not be ruled out.

Dr. G. C. ANDERSON (Fifeshire) said his committee had sent in a similar amendment which mentioned anaesthetics, as the Essex amendment did not, and which urged that payment for anaesthetics should not be a prior charge on the medical benefit fund, and that the administration of a general anaesthetic should be considered a special service.

Dr. J. R. DREVER (Glasgow) said that the amendment suggested by Essex would result in a diminished capitation fee. Before any special pool could be set up the total amount spent on medical benefit would have to be calculated, and a proportion of it would go to the payment of the general practitioner and another proportion to payment for special services. Did it not occur to the Conference that in discussing the possibilities of new contracts under the capitation system they might be faced sooner or later—and they would be faced with it some time or other—with some simplified system of service, as distinct from the present capitation panel system? The strongest argument they could use to counter a salaried service was to give the best possible and the least grudging service, and the service which was simplest in administration. The more they multiplied the machinery the stronger would they make the argument appear to Parliament that the simpler thing would be to pay a salary and have done with it.

Dr. E. H. EZARD (Cambridgeshire) said that in paragraph 16 of M. 25 there had been a jumble of ideas. All the services enumerated in that paragraph, with the exception of the administration of general anaesthetics, were services which could reasonably be performed by one man. One man could attend a miscarriage or set a fracture, but it was generally admitted to be unsafe for one man to give a general anaesthetic and at the same time do the operation.

Dr. J. ORTON (Warwickshire) said that the attempt to whittle down their services and to seek less liability under the next contract was surely not consistent with the demand for an increased capitation fee. Some of them had come up from their committees with the instruction to vote for a special fund, but he thought that they were faced with the logic of facts. He could not reconcile an increased capitation fee with a diminished service. He must vote against the amendment.

Dr. J. B. CANDLER-HOPE (North Riding) dealt with certain aspects of the question as it affected the rural practitioner. Referring to a later motion to include dental treatment, he asked whether this would mean that the practitioner would have to go to the dentist's and give a general anaesthetic to his patient there. They were going further and further into the mire. The line must be drawn somewhere, and he thought it might be drawn at the administration of general anaesthetics.

Dr. D'EWART (Manchester) accepted Dr. Brackenbury's view that they were there to endeavour, in 1920 and subsequently, to give the best possible service to the insured person. With regard to these special services—he spoke of special services generally, not the administration of general anaesthetics alone—they recognized that under the present capitation system the granting of

special services to insured persons had been largely a failure. Every available opportunity had been taken to cut down the amount of work required. In Manchester they adopted in 1913 the system of payment for special services. The insured persons had treatment on those occasions when they required special services, a fee was paid to the practitioner, and the payment became a prior charge on the pool. In 1913, 192 insured persons received a general anaesthetic (this out of an insured population of 250,000). In 1914 the practitioners were beginning to discover that the amount of money in the pool did not satisfy their ideas of what they ought to have, and that year the number of administrations went down to 55; in 1915 it dropped to 15; in 1916 it was 22; in 1917, 20; and in 1918—although the practitioners still received a special fee for giving it—the general anaesthetic was given only in 8 cases. In 1913, again, 1,400 operations were done by practitioners and paid for as a prior charge on the pool; in 1914 the number had fallen to 357, and in 1918, to omit intervening years, it was 118. The administration of anaesthetics and the doing of operations were more or less matters within their own option, but it was curious to find the same thing in the case of fractures and dislocations. In 1913, 202 fractures and dislocations were treated under the insurance scheme, and in 1918 that number had dropped to 80, a larger proportion of such cases, of course, being sent to hospitals. These were the results of the working of the Insurance Act in Manchester, and he did not suppose they differed materially from the results in capitation areas. The moral was that for additional services they must have additional payment. If they were required to give an anaesthetic in dentistry, were they going to make that a charge on their pool from the beginning? A special fund must be created, without entrenching on the capitation fund, for work of a special kind, requiring special knowledge and skill.

Dr. BRACKENBURY said that the argument from Manchester was the best he had ever heard for one solution of the difficulty. But the Conference must not come to a decision with a confused idea of the point at issue. They could retain all these services within the purview of the general practitioner, and then the problem was as to the best method of paying for general practitioner services. If the amount was adequate there was no difference between having two pools and making a first charge on a common pool. Against this it was stated that it would be the natural tendency of the insurance practitioners, if all were in one pool although the pool was adequate, to shirk the special services, shifting them on to the hospitals or getting rid of them in some other way. If that was inherent in the insurance practitioner, Dr. D'EWART had found the right solution; but if it were not, he thought the state of affairs described had been largely brought about by the total inadequacy of the remuneration paid to them. (Hear, hear.) There were disadvantages in dividing the remuneration into two lots, one for ordinary and the other for special services. If they could trust the insurance practitioner, assuming he was adequately paid, to do the whole of the services conscientiously and seriously for which he was paid, then he (the speaker) was strongly in favour of one pool, with a first charge upon it for certain services. If they could not trust the insurance practitioner to do that, however well he was paid, then the alternative was a separate pool for special services, with all its disadvantages. They wanted some form of words which would express their opinion very definitely. If these things were not to be taken out of the hands of the general practitioner, would they prefer to have one pool for comprehensive services, adequately calculated of course, or to have two pools, one for general and one for special services? If the latter was their preference, it would take away from those who had to conduct negotiations one of the most powerful arguments for an increase in the capitation fee.

Dr. SCOTT WILLIAMSON (Bristol) said that special services were clearly understood by the general practitioner, but specialist services were another matter altogether. The point brought out by Manchester was that the general practitioner did not want to be saddled with something he could not calculate. He could not calculate the amount of work he would be called upon to do, and that was why he wanted special services—or services paid for specially—to be in a separate fund apart from the capitation pool.

Dr. A. E. LARKING (Buckinghamshire) supported the setting apart of a special fund so that remuneration for these special services could be assured.

After some further discussion,

The CHAIRMAN again drew attention to the fact that the services under discussion were not specialist services: they were services within the competence of the ordinary general practitioner. Specialist services would require a panel of specialists. They knew that the Government was only going to pay a certain amount for these insured persons on all lines. Two separate funds might be created if they liked, but they would not get unlimited credit for the general treatment of these people or for special services.

The Essex amendment (declaring in favour of a special fund for special services) was then put to the meeting, and lost by 53 votes to 61.

Treatment in Absence of Proof of Title.

Dr. G. C. ANDERSON (Hampshire) moved:

That until proof is forthcoming that he or she is an insured person a patient shall be treated as a private patient and pay fees which shall not be returnable, and that the onus of proof that a patient is an insured person shall be on the patient.

The time had come when the insured person should be held responsible for producing his title to medical benefit. The whole trouble of proving that a man was entitled to medical benefit really rested upon the shoulders of the doctor. If the insured person was penalized he would act or see that his approved society acted more efficiently.

Dr. B. A. RICHMOND (London) thought it only fair that the fee should be returned if it turned out afterwards that the person was entitled to medical benefit at the time the fee was charged, although at that time he was unable to prove his title.

A discussion ensued upon the exact meaning of the amendment. Dr. ANDERSON explained that he wanted the insured person to be charged fees right up to the time he brought forward his medical card, and that such fees should not be returnable.

Dr. WILLIAMS-FREEMAN (Hampshire) said that by this amendment the patient would be made to pay a fine for not having a card (and to that he did not object), but the doctor also would get paid twice (and that he could not support).

Dr. H. G. DAIN (Birmingham) did not think the amendment, as interpreted by Dr. Anderson, could be honestly accepted. They could not put it to a responsible Government department that the doctor should be paid twice over.

The amendment was lost.

Dr. F. RADCLIFFE (Oldham) moved that the Insurance Committee be compelled to withhold the whole or part of the fees returnable to an insured person who through his own negligence failed unreasonably to produce evidence of his title to treatment. Although Insurance Committees would at any time put the penalty on the doctor, they would never put a penalty on an insured person. The committee that ever fined an insured person for a vexatious complaint should be put in a glass case.

Dr. BRACKENBURY hoped the meeting would pass the amendment; the insured person who sinned in this way should be subject to some penalty.

The amendment was carried.

Dr. P. MACDONALD (York) had an amendment (which he subsequently withdrew):

That when the doctor attends a patient who produces no title to benefit, the fee charged shall be for advice, and the practitioner shall give the patient a prescription on a specially marked insurance form; the dispensing doctor to receive payment at an agreed rate.

Dr. BRACKENBURY said that this point was omitted from M. 25, but he could say authoritatively that in these cases of doubt it would be legitimate for the doctor, although he took fees, to write his prescription on the ordinary form, and this would be met out of the drug fund; in the new circumstances the charge upon the drug fund would be an unlimited charge on the Treasury, and would not affect the practitioner at all.

The "Floating Sixpence."

Dr. P. MACDONALD having moved an amendment (which was lost) disagreeing with the statement in M. 25 (summary) that the necessity for minute correctness in doctors' lists

would become relatively less important than hitherto, went on to move a further amendment that in the event of the abolition of the "floating sixpence," the whole of this sum should be added to the capitation fee. If this proposal were not accepted, areas which had been careful in dispensing would suffer relatively to areas which had not.

Dr. BRACKENBURY said that in spirit he was all in agreement. The "floating sixpence" was a matter which must be taken into consideration in connexion with the capitation fee. He gave an assurance that the Insurance Acts Committee fully intended to bring it to the fore, and thereupon the amendment was withdrawn.

Change of Doctor.

Dr. E. W. M. HIGGS (Oxford) moved:

That more frequent right of change of doctor is not necessary, as a patient can always get a transfer by consent if not satisfied.

He did not know of any instance in which a doctor refused to sign a transfer. If the change were made more frequently it would only lead to muddle.

Dr. P. MACDONALD (York) thought that if they were going to make one of their battle cries against a whole-time salaried service the existence of free choice of doctor, they must make it really effective, and to do that it was necessary to provide for a much easier change of doctor than at present. It could not do any harm to the doctor, and it might be a great advantage to the patient. The only people who might suffer, possibly, were the approved societies, who were perfectly well able to look after their own interests. He strongly opposed the amendment.

Dr. G. G. GENGE (Croydon) said that many patients desired a change, but were reluctant to take the transfer form to the doctor from whose list they wished to take themselves. Something should be done to make things easier for the man who was starting a practice.

Dr. C. F. T. SCOTT (Middlesex) thought it salutary for the profession to have a frequent change if the patient desired.

The Oxford amendment was lost.

Dr. H. G. DAIN (Birmingham) moved:

That insured persons be given the opportunity to change their doctor twice a year, and that it shall be possible for an insured person desiring to make a change to notify his intention of so doing at any time to the Local Insurance Committee, such notice to take effect at the next opportunity. The same privilege to be extended to doctors as to patients.

The Conference had decided against subsidizing new entrants into practice, and something ought to be done to make it more easy for men who were starting to get patients on their panels.

Dr. E. R. FOTHERGILL supported the amendment, which was carried.

Dr. F. RADCLIFFE (Oldham) thought the words "at any time" might lead to a person with some little temporary grievance taking action which he would afterwards regret.

Dr. H. J. CARDALE (London) said that a practitioner who was strict in the matter of giving certificates would find difficulties with patients who were annoyed by a certificate stating fitness for work, and who would go and give notice at once.

Dr. J. L. SPEIRS (Gateshead) thought a more frequent change of doctor might tend to subservieny. The man might get the largest panel who pleased the friendly societies, or gave in too easily to the patient who was not fond of work.

Dr. I. G. MODLIN (Sunderland) moved the omission from the Birmingham amendment, which had now become the substantive motion, of the clause proposing a notification of change at any time, and this was agreed to, the resolution as finally adopted reading:

That insured persons be given the opportunity to change their doctor twice a year; the same privilege to be extended to doctors as to patients.

An amendment by York proposing a three-monthly right of change was lost.

The Drug Fund.

On reaching several amendments touching the drug fund, a representative moved that the Conference proceed to the next business, as too much time was already being spent over little points. Dr. CANDLER-HOPE (North Riding), however, complained that every time any matter

affecting rural practitioners was brought forward it was buried.

An amendment by York—

That the payment for emergency drugs must contain remuneration for drugs dispensed by the practitioner when no pharmacist is available.

—was accepted by Dr. BRACKENBURY on behalf of the Insurance Acts Committee. A further amendment in the name of York was:

That in place of the present arrangement by which the divisor of the total money spent in drugs is now (1) the total number on the prescribing doctor's list *plus* (2) the whole of the unallocated persons, there should be substituted an arrangement by which the divisor should be (1) *plus* the proportion of (2) which (1) bears to the whole number of insured persons in the area.

Dr. CANDLER-HOPE suggested that the words "total money paid to chemists for drugs" be substituted for "total money spent in drugs," and the alteration was accepted by the mover. Dr. BRACKENBURY undertook that the Rural Practitioners' Subcommittee should give this suggestion consideration, along with the various alternative methods suggested in M. 25. Dr. WILLIAMS-FREEMAN, however, said that the subcommittee met seldom and its business was much hurried, and he urged that the amendment go to the vote of the Conference. Several other rural practitioners spoke in support of the amendment, which was carried, and was then again amended on a motion by Dr. DREVER, that after the word "arrangement" the words "where it is in force" be inserted.

Further amendments were agreed to, on the motion of North Riding, Derbyshire, and London respectively, suggesting alternative methods of calculating the amount due to dispensing doctors for drugs; calling the attention of the Ministry of Health to the preferential treatment of medical institutes over panel practitioners in the matter of dispensing; and referring to the hours of dispensing by chemists in industrial areas.

Dr. J. L. SPEIRS (Gateshead) moved that chemists on the panel should collectively be responsible for the supply of medicines to insured persons at all times.

Dr. W. H. PIMBLETT (Preston) said that in his district no chemist lived over his shop, and after 8 p.m. it was impossible to get medicines. Dr. MUIR SMITH spoke of the same difficulty at Eastbourne, where it was got over by the payment of 3d. extra per prescription dispensed between 7 p.m. and 11 p.m., and 6d. extra between 11 p.m. and 8 a.m. Dr. E. W. M. HUGGS (Oxford) said that in Oxford, by the payment of an extra 3d., they got the medicines at night and on holidays. Dr. J. ORROR (Warwickshire) said that in his area there was a local arrangement whereby in each district it was agreed that a chemist should be open for certain hours. Dr. R. R. W. LOGAN (Leicestershire) said that these local arrangements were easily made in large urban areas, but in semirural areas, where there were only two or three chemists and three or four doctors, it was more difficult. He thought the Conference should deal with the matter centrally, and not trust to local arrangements. Dr. CUMING ASKIN (East Suffolk) said that in his district a difficulty arose with certain chemists, and in that case the solution was an agreement to dispense on the part of the doctors. The Gateshead amendment was withdrawn on the CHAIRMAN undertaking to send a notice from the Conference to the Commissioners on the subject, and on Dr. F. COKE's suggestion, it was agreed to write also to the Pharmaceutical Society. An amendment by Lanark, that the method of payment for the supply of drugs in rural areas should be decided by the Panel Committee, was agreed to.

Range of Services.

Dr. I. G. MODLIN (Sunderland) moved the non-approval of paragraph 54 in M. 25, on the ground that the arrangements at present in force were a sufficient safeguard to the insured person. He objected to so much power being given to Insurance Committees.

Dr. BRACKENBURY said that the Insurance Committees had power under the existing law. At present there were disputes, quite as annoying to the doctor as to anybody, as to whether or not a particular service should have been performed under their contract. The present method of settling these things was rather vague and irritating. They wanted some well-defined procedure so that it would be clear what was the right thing to do. As it was, at any

time after they had performed a service for a patient which was maintained to be outside the contract, and charged a fee for it, the patient might raise the matter with the Insurance Committee, and the Insurance Committee might give the opinion that the fee must be returned. The dispute might eventually go to the Commissioners, who would appoint a tribunal of two doctors and a lawyer to inquire into it. All this was most unsatisfactory and irritating. Something should be embodied in the regulations.

The CHAIRMAN said that the Commissioners and the medical profession had tried for five years to define the services which were within the contract, and had not succeeded in doing it, and he did not think they ever would.

After some further discussion the Sunderland amendment was lost.

Differences in Professional Skill.

Dr. G. C. ANDERSON (Fife-shire) moved:

That the practice of the district shall not be taken into consideration in regard to what comes within the category of ordinary professional skill and competence, and a practitioner shall not be expected to employ, at his own expense, another doctor to render any service to which an insured person is entitled as part of medical benefit, but which he himself prefers not to undertake.

It might happen that the practice of a district was for practitioners to perform all major operations. In Fife six out of seven practitioners were in the habit of performing every operation, from the removal of ingrowing toenail to hysterectomy. His motion was a direct negative to the paragraphs (55 to 58) in M. 25 which dealt with this subject.

Dr. BRACKENBURY said that if Fife-shire could find a form of words that would meet such a situation the Insurance Acts Committee would be very glad. He endorsed the general lines of Dr. Anderson's remarks, and hoped the Conference would leave it to the Committee.

Dr. ANDERSON said he would be satisfied if the Committee fulfilled the intention of his amendment.

Dr. F. COKE asked the feeling of the Conference as to whether a practitioner was expected to find a substitute to perform an operation which he was unable to do himself. He would like the range of service kept as it was now.

Dr. BRACKENBURY said that if there were certain things they had contracted to do, and preferred not to do them themselves but to get the help of a colleague, then they would be considered to be fulfilling their contract.

Dr. COKE asked as to salvarsan, and Dr. CARNALE said that he took it that when these additional things were brought into the contract there would be additional payment.

Dr. H. L. RUTTER (Newcastle) moved:

That the Insurance Acts Committee be instructed to negotiate for the salvarsan treatment of syphilis (occurring in insured persons) to be under the medical officer of health in each insurance area.

In Newcastle area practically all practitioners had undergone a post-graduate course. The Insurance Committee had asked them whether the administration of salvarsan did not legitimately come under general practitioner treatment. They had come to the conclusion that, owing to the time occupied by this treatment, the necessary risks, and the provision of apparatus, etc., it would be better to have the salvarsan treatment placed under the M.O.H., who was the administrative head of the venereal clinics. The M.O.H. would be responsible for payment, and could employ the local practitioners.

After discussion the amendment was lost.

Dr. P. A. HENDLEY (Isle of Ely) moved that salvarsan administration should be considered as a specialist service outside the contract. Dr. WITHERS GREEN, on the contrary, urged that the work should be done by general practitioners, and should not be relinquished into the hands of specialists.

Dr. BRACKENBURY said he did not want all their arguments for an increase of the capitation fee to be taken away from them. Even within the last six or seven years the level of the general practitioner's skill had been raised in various respects, and these were arguments for an increased capitation fee.

Dr. HENDLEY replied that it was not a question of the competence of any practitioner, but simply a statement that the administration of salvarsan should not be looked upon as something they now had to give inside their contract.

With the addition of the words "at present," Dr. Hendley's amendment was accepted by Dr. BRACKENBURY on behalf of the Insurance Acts Committee and agreed to.

Conditions of Pregnancy and Labour.

Several amendments were on the paper dealing with this question. Dr. BRACKENBURY, however, drew special attention to the paragraph 61 of M. 25 as revised in M. 38. This read:

The Committee is of opinion that it would be preferable that treatment for all conditions of labour, as well as those of pregnancy, should be included among the benefits to which an insured woman was entitled. If such an arrangement were made in the future, insurance practitioners should be liable to give attendance during, or shortly after, labour only on the following conditions: (a) That there should be an efficient service of midwives; (b) that there should, wherever possible, be institutional provision for all patients whose home conditions make confinement unusually dangerous, and institutional and specialist treatment for those who require operative treatment of a major character; (c) that payment for such attendance should be met by a special fee or scale of fees payable from a fund unconnected with the central or local pool; (d) that any practitioner should be at liberty to decline all liability to give such attendance without prejudice to his right to accept all women patients on his list for treatment for the purpose of medical benefit as now understood.

In view of this amended form of the paragraph, most of the contrary amendments were withdrawn. Dr. T. G. MILES (Gloucestershire), however, pressed an amendment that the inclusion of midwifery in medical benefit, under any conditions whatever, would be an unwise and reactionary step. On a show of hands the amendment was defeated.

Preventive Treatment.

Dr. I. G. MODLIN (Sunderland) moved that preventive treatment be not included in the capitation fee.

Dr. BRACKENBURY said that no specific proposal was made in the report. The opinion was expressed that if circumstances made it possible they might desire that all they were able to do for their insured patients properly as general practitioners should be included within one comprehensive scheme. That was a pious aspiration for the future, but it had no immediate bearing on the terms of service for 1920.

In reply to Dr. F. B. THORNTON (Surrey), who asked if insurance practitioners were to be called upon to supply serums or vaccines free of charge, Dr. BRACKENBURY said it was made clear that any cost of that kind falling on the practitioner would be paid for from the drug fund according to the arrangements made.

Dr. HENDLEY objected to the amendment; to exclude certain services would be a grave mistake from the point of view of securing an increase in the capitation fee. Dr. H. F. OLDHAM (Lancashire) said that, whether they liked it or not, most of them were dealing with preventive treatment, and therefore it should be included.

The amendment was withdrawn.

Surgery Accommodation.

Dr. J. ORTON (Warwickshire) moved an amendment objecting to Insurance Committees being given any power to order alterations and additions to surgery and waiting-room accommodation.

Dr. BRACKENBURY said the present intention was that Insurance Committees should have the right to say whether practitioners were doing their work in proper premises and with proper equipment. The paragraph on this subject was introduced into the report for the protection of the medical man. They agreed that it was their business to have adequate surgery and waiting-room accommodation, and they wanted to limit the possibility of any interference in this direction, and to make the raising of any such question a subject of proper inquiry.

Dr. R. R. W. LOGAN (Leicestershire) urged that it should be laid down that the Panel Committees were to be the sole arbiters, and Dr. D'EWART held that the paragraph in the report was too indefinite. If there was to be any control over waiting-room accommodation the doctors themselves must undertake it.

Dr. ETHEL BENTHAM (London) related particulars of two cases of inadequate accommodation which came before the Medical Service Subcommittee of the London Insurance Committee. In one of them the doctor saw most of his patients in the presence of all the others who were waiting.

Such cases could not be withdrawn from the subcommittee's purview.

With the addition of words suggested by Dr. E. R. FOTHERGILL, "except on the report of the Panel Committee," the amendment was carried.

Emergency Treatment.

Dr. H. J. CARDALE (London) moved that the suggestions in paragraph 74 of M. 25 afforded no adequate solution of the difficulty of providing for urgent cases. Emergency treatment concerned the district as a whole and could not be tinkered with. What was needed was a local emergency service, taking the hospital or clinic as the fixed place where the person in search of emergency aid could always be sure of finding a medical man.

Dr. J. J. TOMIX (Derby) said that many practitioners in the neighbourhood of large factories were "briefed" for emergencies occurring in the works. Was it proposed to exclude such arrangements?

Dr. BRACKENBURY argued that the Conference must suggest some remedy for a state of affairs which had occasionally arisen and of which he gave an instance. Assuming a proper definition of emergency, it would be incumbent upon the insurance doctors in a given area to see that if any one of them was available he should attend. This was an entirely new liability, and it was necessary to see that it was not abused. Subsequent developments of hospital and ambulance service would assist towards a solution, and when it was embodied in a draft regulation they proposed to see that the word "emergency" was properly defined and the liabilities explicitly set out.

Dr. B. A. RICHMOND (London) said that the difficulties in such a great area as London were considerable, and the position would be just as difficult in an extensive rural area. Their reading of the suggestion of the Insurance Acts Committee was that every practitioner in the insurance area should be responsible for attending emergency cases among insured persons. The difficulty was that that collective liability might bear hardly upon a doctor who was physically unfit for the extra calls. The Panel Committees perhaps might arrange a series of rotas of deputies who should form part of a definite scheme, and some portion of the pool should be reserved for those practitioners who were willing to do this emergency work. He hoped also that even in country areas an effective ambulance service would be forthcoming.

Dr. D'EWART said that in Manchester in 1913 they undertook collective responsibility straight away, and accordingly they felt great sympathy with the Insurance Acts Committee in attempting to draft any regulation which would define an emergency. In four cases out of five the matter was not so urgent as the patient imagined. They had not been able to arrive at any solution of the difficulty, but they still continued to act upon their collective responsibility, and made no bones about it. But they found that the elderly and more delicate practitioners must be protected in some way.

Dr. J. DIVINE (Hull) had had experience of local arrangements of this nature since the end of 1913. The difficulties were more theoretical than practical. It was quite as hard to define an emergency as to define what was within the ordinary competence of a practitioner. They came to an agreement whereby in every emergency each doctor on the panel acted as deputy for any other, the nearest to the one originally summoned being taken if possible. As between the two practitioners concerned in the case there was a passing of fees on the temporary resident scale. In the course of five years, as secretary of the committee, he had never found a single hitch in the working of this agreement. Once the spirit of reasonableness was infused, a working scheme was easily practicable.

The London amendment was withdrawn.

Dr. G. G. GENGE (Croydon) urged the Conference to accept a resolution that the primary obligation to attend should be upon the nearest insurance practitioner available, and that fees for attendance should be on a scale to be settled by the Panel Committee of the area.

Dr. W. H. PIMBLETT (Preston) held that they must be on their guard against adoption of the principle of liability by one practitioner for another's patients. Dr. C. J. PALMER (Insurance Acts Committee), on the other hand, said that emergencies were one of the ordinary risks of the profession; they must take these cases as they came.

After further discussion the Croydon proposition was put

to the meeting and resulted in a tie, 29 voting in favour and 29 against. Dr. A. E. LARKING then moved an amendment in the name of Gloucestershire against the introduction of the plan of making each practitioner liable for all patients in emergencies. This was lost.

Dr. BRACKENBURY thought it might be a way out of the difficulty to undertake to have a regulation that each Panel Committee should make such arrangements for emergency treatment as it could, leaving it to the committees to carry it through either by a voluntary arrangement or a compulsory arrangement with the Insurance Committee. Dr. GENGÉ moved an amendment in the sense of this suggestion, which was carried.

Dr. R. R. W. LOGAN (Leicestershire) desired to make it plain that in dealing with these emergencies a considerable obligation was laid upon the Ministry of Health to provide sufficient ambulance service throughout the country to deal with emergencies. On his proposition, a rider was added to the previous resolution dealing with this point.

PAYMENTS FOR 1919.

Dr. BRACKENBURY here intervened to make certain announcements. The first had to do with the payments to panel practitioners for 1919. Last year certain emergency payments on the ground of increased cost of living were made to practitioners. They also had the promise that this year they should be placed upon conditions of payment comparable with those of civil servants. The arrangements proposed were embodied in a communication from the Ministry of Health, dated July 16th, and were such as the Insurance Acts Committee, at a meeting held the previous night, decided to recommend the Conference to accept. They were that for the year 1919 every insurance practitioner should, automatically and without application, receive an increase of 15 per cent. upon his payments under the Insurance Acts. If his net professional income was not more than £500 a year, and he made a statement to that effect, he would receive an additional 15 per cent., making 30 per cent. in all; and if his net professional income was between £500 and £1,200 he would receive an additional 5 per cent., making 20 per cent. in all. The arrangement was subject to the qualification that the maximum to be received by those with incomes of less than £500 was £150, and by the rest it was £300. In reply to Dr. RICHMOND, he said that the machinery would be exactly the same as last year.

[At this point Dr. Macdonald vacated the chair, and was accorded a hearty vote of thanks for presiding. His place was taken for the remainder of the Conference by Dr. J. R. DREVER.]

The offer of the Ministry of Health with regard to the payments for 1919 was agreed to *nem. con.*, after a few questions had been asked and answered.

Grant in Respect of Increased Practice Expenses.

The MEDICAL SECRETARY then read communications from the Ministry of Health concerning the grant in respect of increased practice expenses to practitioners in rural and semirural areas; also a letter received from Mr. Harris, of the Ministry of Health, on the subject as affecting Scotland.

A first letter from the Ministry of Health stated that if it was the view of the medical profession that there should be differentiation between the remuneration of the urban practitioner and that of the rural practitioner in respect of the expenditure both of time and money which the latter necessarily incurred in travelling to his insured patients, Dr. Addison would be prepared to accept that view and to give effect thereto in connexion with the new terms and conditions of service.

Another letter stated that, in addition to the payment of war bonus on the above scale, a sum in respect of increased practice expenses in the case of doctors in rural and semirural areas would be available for distribution as in the case of 1918. The Minister would be glad to consider any representations which the Committee might wish to make as to the basis of distribution, and in the meantime he would be prepared to agree to a substantial instalment being paid of the annual special mileage grant for sparsely populated areas.

A further letter stated that the former announcements applied to England and Wales; that as regards the bonus there was every reason to suppose that the Scottish Board of Health would take the same line; and that as regards mileage, while the general principle was not likely to be called into question, the Scottish Board of Health made the reservation that it must not be taken as agreeing to accept as necessarily satisfactory for Scotland a scheme which might be regarded as meeting the circumstances of other countries.

Dr. BRACKENBURY said that the principle was that rural practitioners should receive, in addition to their ordinary capitation fee, such a sum, either by a mileage fund or otherwise, as would secure for them the equivalent of the extra travelling expenses (including the time occupied in travelling) which they were necessarily involved in, over and above those of urban practitioners.

THE MILEAGE FUND.

The order of the agenda was then varied to allow of certain motions on the subject of the mileage fund.

Dr. BRACKENBURY, in the name of the Insurance Acts Committee, moved:

That it is essential that rural and semirural practitioners should receive payment on an equitable basis from a special mileage or travelling fund constituted according to data which would aim at securing for them a payment equivalent to the extra cost of their travelling (including extra time spent) over that which is necessary for an urban practitioner.

Dr. D. O. TWINING (Devonshire) moved an amendment that for the computation of mileage the residence of the nearest doctor should be taken instead of the doctor of choice. Dr. R. A. HENLEY (Isle of Ely) supported this amendment if an exception could be made in the case of areas with certain special geographical features. Dr. BRACKENBURY said that this amendment put the Insurance Acts Committee in a very awkward position, because, obeying the instruction of the Conference, the Committee after much trouble had succeeded in getting the computation made from the residence of the practitioner of choice.

Dr. LEWYS-LOYD, Dr. WILLIAMS-FREEMAN, Dr. J. B. MILLER, Dr. A. E. LARKING, Dr. A. LINNELL, and other rural representatives referred to the conditions in their respective areas. Dr. BRACKENBURY said that there was evidently a difference of opinion, and if the Committee could go to the Commissioners and say that there was such a difference, and that it was quite evident that in some areas it would be a better method to compute the distance from the residence of the nearest doctor, he was prepared to ask for local option, and he hoped Devonshire would agree to this. Dr. TWINING, however, insisted on dividing the Conference, and on a show of hands his amendment was lost, and Dr. Brackenbury's motion carried.

Friday, July 18th.

The Conference resumed under the chairmanship of Dr. J. R. DREVER. Questions were asked of Dr. Brackenbury relating to his statement of the previous evening on the increased grants for 1919. Dr. R. PATERSON (Liverpool) asked whether, in view of the injustice to men whose income was just above the limits of £500 and £1,200 respectively, the same consideration as the income tax payer received in like circumstances might be afforded to them.

Dr. BRACKENBURY said that the cases were not exactly parallel. In these grouped incomes the percentages granted were really the mid-percentages of each group, so that the man with an income just below £500 was really grouped, to his advantage, with men whose incomes were much smaller, but the point would be put to the Ministry.

THE RURAL PRACTITIONERS' SUBCOMMITTEE.

Dr. CUMING ASKIN (East Suffolk), in a criticism of the mileage report, said that he was extremely dissatisfied with the work of the Rural Practitioners' Subcommittee, of which he himself was a member. The subcommittee had no power to initiate business; it simply considered matters which were passed on to it. One member of that subcommittee had intimated to him his intention of resigning because the body had not sufficient power. He wished the rural practitioners to know that their interests were not properly looked after.

Dr. BRACKENBURY said that nearly every one of Dr. Cuming Askin's statements was untrue. (Dr. Cuming Askin rose in protest, but Dr. Brackenbury explained that he was not charging him with saying what he knew to be untrue, but that the statement was not in accordance with the facts.) Dr. Askin, in the course of his attack on the subcommittee, had stated that one member was about to resign. This member—he was one of the most effective of the members—had had the opportunity of attending three meetings, and had attended one. Of the subcommittee

as a whole the speaker was bound to say that a more powerful team of rural practitioners could hardly be imagined. The subcommittee had not held many meetings, but the meetings had not been hurried. That accusation could only properly be levelled against one meeting, and that was only hurried at the end owing to a meeting of the full committee. The other meetings had lasted a very long time.

Dr. CUMING ASKIN said that he had no fault to find with the personnel of the subcommittee; all that he maintained was that its powers were limited. Dr. BRACKENBURY held that it was not limited, and that it had full power of initiation.

THE MILEAGE FUND.

Further discussion was taken on the memorandum M.19.

Dr. WILLIAMS-FREEMAN (Hampshire) complained of a statement that the Rural Practitioners' Subcommittee was very expensive to the British Medical Association. But the rural practitioners were perfectly willing to pay all expenses themselves, and if the Association undertook the work of the profession it must not put off anything which was considered desirable simply because it was expensive. Anything the Conference could do to strengthen the machinery by which the rural members of the Insurance Acts Committee were supplied with facts and figures would be very welcome.

Dr. LEWIS LLOYD (Merionethshire) commented upon the tardiness of rural practitioners in furnishing information. However able the committee might be, if the rural practitioners generally did not put their backs into the business there would be failure. It was unjustifiable to attack the Insurance Acts Committee for things beyond its power to accomplish.

Dr. P. A. HENDLEY felt, as a rural member, that they had never been properly represented on this mileage question. They had never been asked, except in the way of providing figures, to afford any help to the subcommittee.

Dr. A. E. LARKING (Buckinghamshire) said his own difficulty had always been to get information from practitioners which involved a great deal of clerical work. He thought it would be a very serious matter if the limit of two miles instead of three were accepted.

Dr. A. LINNELL (Northamptonshire) said it was necessary to get some system which was as fluid as possible, and in which the details could be worked out according to local conditions.

Dr. WOOD LOCKET (Wiltshire) said that what the Rural Practitioners' Subcommittee had chiefly done was to create an atmosphere of knowledge and interest as to the way in which rural practitioners were carrying on their work.

Several other rural representatives continued the discussion.

The CHAIRMAN, speaking as a representative, said that the scheme as it stood did not refer to Scotland, and he would like a rider added to the effect that the special conditions of Scotland required separate consideration, and that the Insurance Acts Committee should be instructed to refer to the Scottish Insurance Acts Subcommittee the whole matter of the constitution of a proper mileage fund for that country. The whole of Scotland outside the towns was a sparsely populated area. There were also the special difficulties of the Highlands and of some of the Lowlands. All the information which was now being sought had been obtained long ago from insurance practitioners in Scotland.

With the addition of this rider memorandum M.19 was approved.

Dr. BRACKENBURY said that it was very gratifying that the Insurance Acts Committee should have received so strong a commendation of M.19, for the gathering together of the material had given the committee more trouble than any other single question from the beginning of its history. From some counties they had received almost complete information, but from others the information had not been forthcoming. The committee had done its best with the material at its disposal.

CONDITIONS OF SERVICE (continued).

The Keeping of Records.

Dr. F. COKE (Kent) moved an amendment refusing to recommence the keeping of the old record cards. The Kent cards, he said, had been sold as waste paper.

Dr. BRACKENBURY put forward as a tentative proposition that the record card should be completely altered as devised by an expert committee of insurance practitioners, as well as the other side, and that this should be a continuous record, kept for reference as long as the patient was under their care. These cards, while in their possession, should be open for reference to any medical representative of the Ministry of Health.

The Kent amendment was agreed to, as was an amendment by Sunderland opposing any complex system of record keeping, involving a multiplicity of forms, and an amendment by London affirming that the most valuable form of record was one which was continuous from birth. Dr. LEWIS LLOYD said that there was a scheme before his own county health authority whereby a continuous medical history would be obtained.

Certificates.

Dr. B. A. RICHMOND moved for an inquiry into the whole question of certification, particularly as to chronic cases and the demand for certificates on special days of the week.

Dr. BRACKENBURY said that these difficulties had been pressed on the Commissioners. An undertaking ought to be arrived at that the approved societies should not insist on having certificates on a particular day of the week.

The amendment was withdrawn on the understanding that the point raised was appreciated by the Insurance Acts Committee. An amendment by Kent, adding a clause to the present certificate, whereby the doctor could state that a further certificate would not be necessary for a certain period, was lost after a brief discussion.

Agreement for Service.

Dr. P. A. HENDLEY moved an amendment declaring that the new agreement should be in the form of a contract legally binding on both parties—namely, the practitioner and the Ministry of Health—and subject to appeal to the ordinary courts of law. Practitioners were not satisfied with the present legal position. The non-accessibility of the profession to the courts of law had been a constant source of irritation, and if that right could be re-established they would have in the future at least some safeguard as to their personal freedom of action even under contracts.

Dr. H. G. DAIN said that if they accepted service of any kind they must accept it under conditions; that was not to sign away their freedom.

Dr. G. G. GENGE said the grievance was that the interpretation of the agreement was in the hands of one of the contracting parties, who had power to alter its terms during the year.

Dr. G. E. HASLIP (Insurance Acts Committee) said he strongly objected to the present agreement, the form of which was keeping many practitioners out of the service. What he wished to see was the present form of agreement abandoned, and the adoption of the routine which was followed in most other appointments.

Dr. F. COKE said that the Commissioners had declared that they were at liberty under the law to bring in any regulation at any time without consulting anyone.

Dr. BRACKENBURY said that in the group conferences held throughout the country no interest had been shown in the legal form of agreement, except in two or three areas. Such areas had the opportunity of discussing with the Commissioners and the Conditions of Service Subcommittee the points they wanted emphasizing, and in the light of these discussions the paragraph in M.25 was revised. It was proposed in that document that the form of agreement should be done away with and the contract take the form of a letter from the practitioner accepting the published terms and conditions. The main point urged was this question of accessibility to courts of law. Practitioners had that accessibility. There was not one question of a generic character which had not been taken into a court of law. With regard to Dr. Genge's point, if there was one thing that could be taken into a court of law by anybody without let or hindrance it was the interpretation of the agreement.

Dr. C. F. T. SCOTT (Middlesex) wished to ask the Solicitor whether they could take the present agreement into a court of law on any other question than that of procedure.

The SOLICITOR TO THE ASSOCIATION replied as follows:

The question put to me by Dr. Scott is this: Is it only on questions of procedure that we can appeal to the courts? My answer to that is in the negative. As I take it, "procedure" means procedure under the agreement. We can go to the courts on the construction of the agreements, and we have the right of access to the courts in order that we may say to them, "This or that is required of us, and we are sought to be mulct in penalty if we do not do it. Does the agreement cast this obligation upon us?" That was the point raised in Dr. Salter's case. Dr. Salter was required to sign prescriptions in duplicate. We said that he was under no obligation to do it. He was not allowed to continue on the panel. We got an order from the courts that Dr. Salter's contention was correct, that the agreement did not cast that obligation upon him, and that he had a right to the continuance of his name on the panel. The courts incidentally referred to the procedure which is laid down under the regulations for the removal of a name, and they found that natural justice had been denied him, and they gave their decision in his favour. Therefore it is perfectly clear that the courts do recognize that when a question arises as to whether any of you under agreement are under obligation to do this, that, or the other, it is for them to see that justice is not denied you. The other cases have mainly been in reference to questions of surcharging. We did try in the case of Dr. Moore to get a ruling as to the regulations being *intra* or *ultra vires*, but Mr. Justice Rowlatt very dexterously waived that point, and said that he would assume for the purpose of the judgement he gave that the regulation was *intra vires*. You who have signed an agreement have subjected yourselves to the regulations for the time being, but that is your own deliberate act, and the courts will not grant you relief when you went into an arrangement with your eyes open, and then complain of being bound by the terms of it. In the case of Dr. Moore—which illustrates the extent to which the courts are disposed to go—they had to consider—and the onus of proof lay upon us—as to whether or not he had been surcharged at all, and as to whether or not he had been rightly surcharged. The amount was, roundly, £40, and we were in a position to show to the courts that the regulations had not been properly followed, that justice under these circumstances had been denied him, and that the amount sought to be surcharged upon him was not rightly found. We obtained an injunction on the Insurance Committee as to withholding that sum from him. But the general position in the mind of the courts is this: If you have entered into an agreement in connexion with which the regulations provide that any questions arising upon any particular head shall be dealt with upon a certain line of decision, then you are bound by the tribunal which you have agreed to accept as deciding that matter, provided always that that tribunal acts in a proper manner, judiciously, and with justice to yourselves. But if it can be shown on your part that the procedure laid down has not been properly followed, so that the procedure if adopted has not been justly administered towards you, then the courts will come to your protection. (Applause.)

Mr. Hempson added, on a further point, that it was beyond his comprehension to appreciate the subtle distinction that was sought to be drawn between the admission that it was an agreement and the denial that it was a contract. He understood Dr. Hendley to admit that it was an agreement, but not a contract.

Dr. HENDLEY said that he thought it inequitable that the interpreters of the agreement should be their judges. He differed also from the opinion of Dr. Brackenbury that the general body of the profession did not take an active interest in this matter.

Dr. Hendley's motion was lost.

Dr. C. F. T. SCOTT (Middlesex) moved:

That in the opinion of this Conference no medical practitioner should be deprived of the right to continue in insurance practice without a final right of appeal to an independent, judicial, administrative body or court other than His Majesty's Insurance Commission or Ministry of Health.

In calling upon the Conference to support his resolution he said that every vote given in its favour was a vote against State service.

Dr. H. T. BARRON (Blackpool) seconded, and the resolution was carried by 28 votes to 22.

Additional Services.

Dr. C. P. LANKESTER (Surrey) moved:

That there be no acceptance of the principle of extension of the medical benefits under the Insurance Act till the remuneration of the medical profession is decided and the range of services defined.

His Committee thought it undesirable to go on discussing what services might be included without any statement as to remuneration. It was felt, moreover, that the Government must know approximately the amount it intended to offer. In the *BRITISH MEDICAL JOURNAL* of July 12th (p. 52) Major Astor was reported as stating that the rates of remuneration for the future had been discussed. Why had they not been told of these discussions?

Dr. BRACKENBURY said that he understood what Major Astor had in his mind, but the interpretation placed upon his words by Dr. Lankester was not correct. There had been no discussions undisclosed to the profession.

The MEDICAL SECRETARY said that there was a contradiction in his own name in the *JOURNAL* of July 19th (p. 91).

Dr. BRACKENBURY said that the Insurance Acts Committee came deliberately to the conclusion that they must know what services they were going to render before they could be in a position to say what amount of money they were going to accept. They also wanted to have defined the conditions under which those services would be rendered. The programme they proposed to carry out would be finally determined by them in October next. If the Committee was authorized by the Conference to negotiate directly with the Government, those negotiations would be entered upon at once with a view to the early publication of draft regulations. In the course of negotiations the actual amount of remuneration was bound to be touched upon, and from the beginning the Local Medical and Panel Committees would be kept informed as to the way in which the matter was being dealt with. By the third week in September an idea as to the definite sum demanded by the profession or offered by the Government should be forthcoming, so that it would be possible to determine the matter finally by the October Conference. If it should be found impossible within the time to consult the profession fully, the final decision would have to be postponed to a somewhat later date, and the new agreements would not be brought into operation until April 1st next, but it was still to be hoped that there would be time to bring them into operation by the New Year. It appeared evident to the Committee that the remuneration under the new conditions must be on a considerably higher scale than at present—that the capitation fee must be materially greater than 7s. 6d.

The points which the Committee would bring forward would be (1) that the cost of living and of carrying on practice had greatly increased since 1912; (2) that discharged disabled sailors and soldiers were included, as well as large numbers of persons who had been demobilized in seriously impaired health, so that they needed much more medical care than the average; (3) that the war had left serious effects upon the health of the civil population, especially as concerned the nervous system; (4) that there was a rising standard of professional skill among general practitioners, concurrent with an advance in medical and scientific knowledge; (5) that several services which should be much more freely available than had hitherto been the case—as, for example, the administration of anaesthetics and of serums and vaccines—were of a class for which special fees were ordinarily charged in private practice; and (6) that the new conditions which were contemplated necessitated longer time, on the average, being given to each patient, and involved definite new liabilities.

The Committee invited comment upon these points, while urging that the whole matter of remuneration should not bulk disproportionately or unreasonably in their discussions. That general statement was the Committee's view of the kind of case they ought to put up to the Government. At the October Conference it was hoped to be able to formulate a definite resolution that insurance practitioners should or should not accept these conditions of service, accompanied by the particular amount of remuneration. The Committee meant to have the profession properly consulted by October, if possible, but if such consultation was not then possible, they would prefer to postpone the bringing into force of the new contracts until after the consultation.

Dr. LANKESTER withdrew his amendment, upon Dr. Brackenbury's assurance that the question of payment for extra service, as distinct from panel service, would be put to the Panel Committees.

Dr. VALLANCE (East Sussex) moved, on behalf of Brighton:

That as the proposals to extend medical service to the non-insured population, as specified in the memorandum of the National Health Insurance Commissioners, concern the

interests of the whole profession, the question be referred to the British Medical Association to deal with in consultation with other representative bodies.

He wished to avoid any possibility of friction between those who were on the panel and those who were not, and the position of the latter should be thoroughly discussed.

Dr. BRACKENBURY said that the establishment of this service and its remuneration concerned all sections of the profession. There were four essential conditions apart from which they were not prepared to countenance these extra services:

(1) They should be established upon a basis of general practitioner treatment. (2) In so far as the general practitioner was himself a specialist, he should be allowed to take part in the work of the clinics. (3) Even if the general practitioner was not thus skilled, he should have free access to the extra clinics, perhaps as clinical assistant, at an appropriate fee, so that he could make himself more proficient in the specialty. (4) In starting the clinics an important or even the chief part in the selection of the staffs should be taken by a professional committee; the local authority ought not to select from amongst the general body of practitioners those who should be employed.

The Brighton amendment was agreed to.

Dr. R. A. RICHMOND moved that the additional services should as early as possible be made to include dental treatment, and this was agreed to.

Medical Referees.

A Huntingdonshire motion, that the official referee must be a bona fide consultant, with no direct or indirect interest in general practice, was lost. Dr. RADCLIFFE (Oldham) moved that the official referees should not be whole-time officers, but, accepting Dr. Brackenbury's assurance that the Insurance Acts Committee was alive to the difficulties to which he had drawn attention, he withdrew his amendment. Dr. COKE (Kent) had an amendment deprecating the introduction of officialdom into panel practitioner service, and maintaining that supervision should only be exercised after due grounds of complaint. Dr. BRACKENBURY, with a slight verbal change, accepted the amendment, which was agreed to. Dr. SCOTT (Middlesex) thought the profession in an area should have some voice as to who was appointed clinical adviser. Dr. BRACKENBURY replied that if the local administrative health body had an expert adviser and paid him his fees that body would have the appointment. What they did suggest was that the local authority should first of all consider a report from the Local Medical Committee acting as an advisory body. Dr. SCOTT said that this would meet his case. Dr. BRACKENBURY, in answer to further questions, said the appendix to M. 25 contained the resolutions passed by the British Medical Association with regard to the local administrative arrangements under a Ministry of Health, and these had received the approval of all sorts of professional bodies.

General Practitioner Clinics.

Dr. I. G. MODLIN (Sunderland) moved an amendment disapproving, under present conditions of general practice, the general practitioner clinics suggested in M. 25.

Dr. BRACKENBURY said he spoke on this, not for the Insurance Acts Committee, but for one section of it, which viewed the establishment of general practitioner clinics with hesitation and suspicion. He did not want to do anything which led by even a step or two towards a State medical service.

Dr. CUMING ASKIN thought that this matter might be left to the discretion of local practitioners, and Dr. R. PATERSON (Liverpool) held that a decision on such a matter should not be taken in the closing stage of a Conference by this time greatly thinned in numbers. The amendment, however, was carried.

The Report as a Whole.

The Conference then authorized the Insurance Acts Committee to negotiate definitely with the central Government department for new terms and conditions of service for 1920 on the lines of the report (M. 25) as amended and of the two interim reports already issued, subject to full consideration of any suggestions from Local Medical and Panel Committees and to the resolutions of the Conference.

Dr. C. P. LANKESTER welcomed Dr. Brackenbury's announcement that he was strongly against a whole-time State medical service.

The CHAIRMAN: He speaks absolutely for the whole Committee

Dr. LANKESTER referred, however, to paragraph 105 of M. 25, which said that a complete public provision of every kind of medical service for the whole community would probably not be unwelcome. His own committee of Surrey looked upon that as, if not State service, next door to it, and begged him to draw attention to the matter. He had two amendments, one declaring that M. 25 did not represent the views of the profession as a whole and that if its proposals were carried out they would make for State control, the other urging a postal vote of the profession on the question of State control.

The CHAIRMAN said that at that stage of the discussions he must rule the amendments out of order.

An amendment by Liverpool—

That this Conference is of opinion that the Insurance Acts Committee can no longer be trusted to represent the profession in the negotiations with the Commissioners, and is of opinion that an *ad hoc* committee be appointed to lay the profession's views before the Commissioners—

was withdrawn by Dr. R. PATERSON, with the consent of the Conference, on the ground that it was a resolution by a meeting of the Liverpool profession, was not endorsed by the Panel Committee, and had been sent to the Association for its information only.

An amendment by Dr. COKE demanding to know the capitation fee for 1920 by August 16th, 1919 (two months before the October Conference), was lost. It was agreed to instruct the Insurance Acts Committee throughout the negotiations to keep in touch with Local Medical and Panel Committees and other professional organizations, with a view to a decision on remuneration at the October Conference.

The Organization of the Profession.

Dr. I. G. MODLIN had two amendments, one asking the British Medical Association to organize the profession to refuse service if its terms were not obtained, the other declaring that the interests of panel practitioners required a society which possessed the powers and immunities of a trade union. The mover wished to withdraw the first of these amendments, but the Conference refused to let him, and the Chairman pointed out that if the first were carried, the second would fall to the ground.

Dr. G. C. ANDERSON disclaimed any spirit of antagonism, but asked what steps the Association meant to take if the capitation rate did not satisfy the demands of the insurance practitioner.

Dr. BRACKENBURY could not then state the detailed steps which had been agreed to by previous conferences, but the British Medical Association was going to organize the profession with a view to refusal of service if satisfactory terms were not obtained. It would be for them in October to say whether or not the terms were satisfactory.

Dr. COKE said that after October, whatever the Conference might decide, the Insurance Acts Committee would have to go to the Commissioners, and the Commissioners to the Exchequer, and time would slip away with astonishing rapidity.

Dr. BRACKENBURY accepted the first of the Sunderland amendments after the words "with a view to refusal of service" had been substituted for "to refuse service."

Sailors and Soldiers.

The Conference here resumed discussion of the Birmingham amendment partly considered on the previous day:

That a sufficient sum be provided in the central pool to pay adequately for services to invalided sailors and soldiers and to demobilized men whose health has suffered in the service.

Dr. BRACKENBURY, in reply to a representative who preferred the present arrangement, said that it would be ended whether they liked it or not. It was an experimental and temporary arrangement, at their own risk. The Insurance Acts Committee got into serious trouble at one Conference because it asked for the arrangement at all. The profession had demanded an increased capitation fee because of the discharged and disabled men, and as a figure could not be stated they were put on the present basis as an experiment, with the Treasury's unlimited guarantee. Major Astor was asked a fortnight ago what surplus was left in the Treasury last quarter as a result of the arrangement, and replied that there was a considerable deficit. That helped to prove their case for a greatly increased capitation fee.

The amendment was carried.

Recommendations by Insurance Acts Committee.

Two other motions by the Insurance Acts Committee were then adopted without discussion as follows:

That it is important that, as from early in 1920, the establishment for insured persons of the additional services of a consultant or specialist character referred to in paragraph 106 of the report, should be regarded as an essential condition of the whole service, though in practice these services might be developed only gradually.

That the Ministry of Health should determine, as soon as possible, through its Medical Consultative Council, the order in which and the method by which such services should be established for insured persons and extended to the non-insured population; but that in this connexion it is essential (a) that a general practitioner service should be established for any class of persons before such additional services are made freely available for that class; (b) that general practitioners, if possessed of the necessary qualifications, should be eligible to render such additional services; (c) that the clinical staff of any such additional service should be engaged on a part-time basis, and should be remunerated on a time basis, and that a medical committee should play an important part in its selection.

Dr. W. DAVIDSON (Bournemouth) suggested changing the words of the latter motion to read "extended to such sections of the non-insured population as may be agreed," and Dr. Brackenbury accepted the alteration. A motion by Surrey was agreed to, objecting to a whole-time salaried State service.

The final motion of the Insurance Acts Committee on this subject, completing the five original recommendations, was:

That the Insurance Acts Committee be authorized on behalf of Local Medical and Panel Committees, and in conjunction with other professional organizations, to continue to hold "round table conferences" with the central Government department with regard to the extension of the service to the dependants of insured persons, the provision of residential institutional treatment, and the administrative arrangements which should be established for the proper provision and supervision of the service.

The motion was carried, as was a rider by Cardiff, moved by Dr. BRACKENBURY in the absence of the representative:

That in any extension of the insurance service to dependants it be an instruction to the Insurance Acts Committee to press for the imposition of an income limit for all insured persons whether manual labourers or not.

He was afraid they would not get this, but it was a thing to aim at.

This completed the discussion on the conditions of service.

Actuary's Report on Calculation of Central Pool.

The Conference then received the report by the actuary as to his investigations of the suggested new method of calculating the central pool (M. 34).

The CHAIRMAN ruled out of order a discussion on the method of calculation, as the method had been approved by the Conference of October, 1918.

NATIONAL INSURANCE DEFENCE TRUST.

Dr. BRACKENBURY, in presenting the report as to the action taken to establish this fund, said that so far 64 Panel Committees had approved, 2 had disapproved, and there remained 131 to be heard from. Dr. LEWIS-LLOYD asking whether a smaller sum than the $\frac{1}{2}$ d. levy was permissible, Dr. BRACKENBURY said they did not want to give official benediction to anything less, but it would not be refused.

The MEDICAL SECRETARY said he had listened with interest to the protestations about delay in organizing the profession, coming as many of them did from those who had neglected the first step towards such organization. Until this fund was set going, and had the great majority of the profession behind it, there could be no effective organization.

Dr. SCOTT held that the British Medical Association ought to be properly supported in this matter; and Dr. ANDERSON said he had secured about fifty out of eighty in the county of Fife, but he could not get a penny until he knew whether these other thirty were going to pay.

Dr. HENDLEY raised the question of combined action with other organizations, and thought that the British Medical Association might join forces with the Medico-Political Union.

Dr. BRACKENBURY said that a large enough minority could undo the whole profession. Accordingly he had

felt that every effort ought to be made to bring about as much unity as possible at that stage of the proceedings. He had moved in the Council of the British Medical Association that these bodies should be invited into conference, and the conferences had been held, but, he was afraid, not with complete success. The Council of the Association and the Insurance Acts Committee had made serious efforts to arrive at as much unity as possible, but when the report was issued the profession would judge for itself. He thought an arrangement had been come to with all the organizations except possibly the Medico-Political Union.

Dr. COKE said that he believed that the two organizations should join together, but the terms of alliance were not acceptable to the Medico-Political Union.

A motion by Brighton, omitting "insurance" from the name of the Trust and opening its management to all recognized medical organizations, was lost. The CHAIRMAN, in answer to Dr. Cuming Askin, said that legal advice had been taken throughout as to the position of the Trust.

INCOME LIMIT.

Dr. BRACKENBURY moved approval of the Report (M. 37) on the Government's proposal to raise the income limit of insured persons from £160 to £250.

Dr. J. HOLMES (Bury) opposed approval of the report. Dr. MODLIN moved an amendment opposing extension of the income limit. The original proposal at the beginning of insurance was, he said, for a limit of £104, and £160 was agreed to in order to meet administrative convenience. The matter was serious for those who had working class practices, and would be still more serious when dependants came in.

Dr. BRACKENBURY said that they accepted as inevitable the raised limit for persons already insured, but opposed the introduction of persons not insured before. He appealed for the middle course; otherwise hundreds of thousands would be removed from insurance.

The Sunderland amendment was lost, and the report was approved by a majority.

The Chairman and Deputy Chairman were then authorized to settle the form of the minutes on behalf of the Conference, and hearty votes of thanks were accorded to Dr. Drever for taking the chair during the later stages of the Conference, and to Dr. Brackenbury for his skilful conduct of the business. The Conference sat on the first day from 10.30 a.m. to 9.30 p.m., and on the second day from 10 a.m. to 4.30 p.m.

British Medical Association.**CURRENT NOTES.****Salaries of Public Appointments.**

QUESTIONS of salaries paid to medical officers holding public appointments arising in connexion with the great increase of the cost of living were considered by a joint subcommittee of the Medico-Political and Public Health Committees of the British Medical Association on July 15th. The subcommittee was instructed to consider the advisability of recommending the Council and the Representative Body to revise the policy of the Association as to the minimum salaries of whole-time officers in accordance with the action taken by the Council in recommending local authorities to increase the pre-war salaries of their medical officers by at least 33½ per cent. The subcommittee, after fully considering the matter, along with a resolution of the Society of Medical Officers of Health, adopted the following recommendations:

(a) That the minimum salary to be paid to any principal whole-time medical officer in administrative charge of a public appointment should be not less than £800 per annum, exclusive of travelling expenses, clerical assistance, postage, etc.

(b) That the minimum salary to be paid to any assistant whole-time medical officer to any principal whole-time medical officer in administrative charge of a public appointment should be not less than £500 per annum, exclusive of travelling expenses, clerical assistance, postage, etc.

(c) That in the case of resident posts the minimum salaries be £100 less than for non-resident posts.

(d) That in the case of assistant asylum medical officers the minimum salary for the first year of probation should be not less than £450 exclusive of official expenses.

Clinical Medical Officers.

The same subcommittee resolved to request Sir George Newman, Chief Medical Officer to the Ministry of Health, to receive a deputation with respect to the Government's attitude on the question of whole or part time medical officers for the treatment of disease, and to point out that the scheme of the Ministry of Health put forward by the Association contained an expression of the view that medical officers engaged in giving advice and treatment to individual persons should be part-time officers.

Retired Officers (Civil Employment) Bill.

This bill, which was read a second time on July 18th, provides that any retired officer in receipt of a salary over £400 a year who has hitherto had 10 per cent. deducted as a civil servant will in future be able to get both civil salary and pension in full. He will thus be placed on the same footing as men who are not officers, a reform which has been urgently required for some time. The bill was committed to a committee of the whole House for July 21st.

Association Notices.**ELECTION OF COUNCIL, 1919-20.**

IN consequence of a vacancy for a Representative of the Lancashire and Cheshire Branch on the Council, 1919-20, nominations were invited, and Dr. WILLIAM FLETCHER SHAW, of 20, St. John Street, Manchester, being the only nomination, he is hereby declared duly elected a member of the Council for 1919-20.

W. E. WARNE,

Acting Financial Secretary and Business Manager.

July 26th, 1919.

CHANGE OF AREA.**NEW WILLESDEN DIVISION.**

THE following change has been made in accordance with the Articles and By-laws, and takes effect from the date of publication of this notice:

That a Willesden Division of the Association be formed, coterminous with Willesden urban district, the new Division to form part of the Metropolitan Counties Branch, and the area of the Harrow Division to be modified accordingly.

Representation in Representative Body: For the year 1919-20 the area of the new Division is represented as part of the Harrow Division. The representation of the Willesden Division in the Representative Body, 1920-21, will be such as shall be determined by the Council.

SUGGESTED CHANGES OF AREAS.**PROPOSED DISCONTINUANCE OF EAST ANGLIAN BRANCH, AND FORMATION OF ESSEX, NORFOLK, AND SUFFOLK BRANCHES.**

NOTICE is hereby given under Article 12 and By-law 77 to all concerned of a proposal made by the East Anglian Branch that the Branch be discontinued, and that new Branches as follows be substituted therefor:—

1. Essex Branch.—*Area:* The county of Essex—namely, such portion thereof as at present lies within the area of the East Anglian Branch, or such other portion of the county as may be arranged.
2. Norfolk Branch.—*Area:* Norfolk.
3. Suffolk Branch.—*Area:* Suffolk.

—the Divisions of the new Branches to be those included at present in the respective counties, subject as above in the case of Essex.

The matter will be determined by the Council of the Association in due course. Any member affected by the proposed change and objecting thereto, is requested to write, giving reasons therefor, to the Medical Secretary, 429, Strand, W.C.2, not later than August 26th, 1919.

PROPOSED NEW BRANCH.

NOTICE is hereby given to all concerned of the following proposal made by the Cleveland Division:

That a new Branch of the Association be formed, to include the Divisions of Darlington, Hartlepool, Stockton, and Cleveland.

Written notice of the proposal has been given to the Divisions and Branch concerned, and the matter will be determined in due course by the Council. Any member

affected by the proposed change, and objecting thereto, is requested to write, giving reasons therefor, to the Medical Secretary, 429, Strand, W.C.2, not later than August 26th, 1919.

BRANCH AND DIVISION MEETINGS TO BE HELD

METROPOLITAN COUNTIES BRANCH: WILLESDEN DIVISION.—Dr. R. Cruden, acting Honorary Secretary (3, Anson Road, Cricklewood, N.W.2), gives notice that the inaugural meeting of the Division will be held in the St. Andrew's School, Willesden Green, on Wednesday, July 30th, at 9 p.m.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: MONMOUTHSHIRE DIVISION.—Dr. R. J. S. Verity, Honorary Secretary (Rosemoderis House, Gardiffaith, near Pontypool), gives notice that the annual meeting of the Division will be held at the Royal Gwent Hospital, Newport, Mon., on August 16th, at 3.15 p.m.

EAST YORK AND NORTH LINCOLN BRANCH.—Mr. H. L. Evans (101, Princes Avenue, Hull) gives notice that the annual meeting of the East York and North Lincoln Branch will be held in the Board Room of the Hull Royal Infirmary, on Friday, August 8th, at 4 p.m. Business: Annual report, financial statement, etc. The President-elect, Dr. J. Divine, who has chosen for his address "The immediate future of the medical profession," will entertain members at tea after the meeting.

Meetings of Branches and Divisions.**DUNDEE BRANCH.**

THE annual meeting was held on June 18th, when Dr. C. MACVICAR was in the chair. The following officers were elected:

President: Dr. H. C. Colman. *President-elect:* Dr. T. F. McFarlane. *Vice-Presidents:* J. S. Y. Rogers, A. D. Yule. *Honorary Secretaries:* R. C. Buist, G. H. S. Milln. *Honorary Treasurer:* D. M. Greig.

The Secretary was instructed to ask the members of Parliament for the district to support the Nurses' Registration Bill promoted by the Central Committee.

The agenda was considered and the representative was instructed.

The members and guests dined in the Royal Hotel, when Dr. H. C. Colman, president, was in the chair. The toast of the Association was proposed by Lord Provost Sir WILLIAM DOX, K.B.E., and acknowledged by Dr. J. R. DREYER, Chairman of the Scottish Committee.

GLASGOW AND WEST OF SCOTLAND BRANCH: GLASGOW CENTRAL DIVISION.

At the annual meeting of the Division, held on June 20th, the following officers were elected:

Chairman: Dr. J. F. Fergus. *Vice-Chairman:* Dr. W. S. Syme. *Representative in Representative Body:* Dr. Arthur Innes. *Honorary Secretary and Treasurer:* Dr. Arthur Innes.

It was agreed that the Division enter wholeheartedly into the proposed golf and bowling inter-divisional competition, and a small committee was formed to arrange details with the other Divisions and with Dr. A. K. Glen, the originator of the scheme.

GLASGOW AND WEST OF SCOTLAND BRANCH: LANARKSHIRE DIVISION.

THE annual meeting of the Lanarkshire Division was held, on June 20th, in Glasgow, when, in the absence of Dr. John Goff, Dr. MILLER of Bishopbriggs presided. A letter from the Medical Secretary was read, and the CHAIRMAN drew particular attention to the facilities offered by the Library of the Association. The SECRETARY read the annual report, which was adopted, and showed that the number of members was 117 and that there was a credit balance of £4 8s. 8½d. The following officers were appointed:

Representative on Central Council: Dr. John Goff. *Representative in Representative Body:* Dr. Miller, with Dr. Little as Deputy, if necessary. *Chairman:* Dr. Miller. *Vice-Chairman:* Dr. Mackenzie. *Secretary:* Dr. Livingstone Loudon (Hamilton). *Treasurer:* Dr. J. Murray Young (Hamilton).

The meeting instructed their representative in view of his attendance at the annual meeting in July.

KENT BRANCH.

THE sixth annual meeting of the Kent Branch was held at Chatham on June 18th.

The President-elect, Mr. J. GODFREY TAUNTON, entertained the members to luncheon at the Town Hall, Chatham, which was kindly lent by the Corporation. After lunch the members were conducted over the dockyard. Tea was provided by the local Division and afterwards the Mayor of Chatham welcomed the members of the Branch in the council chamber.

The following officers were declared elected for 1919-20:

President: Mr. J. Godfrey Taunton. *Vice-Presidents:* Dr. Claude Wilson, Dr. Arnold Shelley. *Honorary Secretary and Treasurer:* Dr. E. A. Starling.

The report of the Council and the financial statement were received and adopted. It was announced that the Isle of Thanet Division had invited the Branch for the annual meeting, 1920.

The PRESIDENT then read a paper on "Chronic intestinal stasis in children." A number of members carried on the discussion and thanked the President for his interesting address. Subsequently members and friends dined together at the Bull Hotel, Rochester.

LANCASHIRE AND CHESHIRE BRANCH: BURY DIVISION.

At a meeting of the Division held on July 7th the following officers were elected for the year 1919-20:

Chairman: Dr. J. C. Turnbull. *Vice-Chairman:* Dr. Saville (Radcliffe). *Representative to Representative and Branch Council Meetings:* Dr. I. W. Johnson. *Deputy Representative:* Dr. J. W. Smith (Radcliffe). *Honorary Secretary:* P. F. Braithwaite. *Local Honorary Secretaries:* Drs. Compston (Rawtenstall), Harrison (Haslingden), Lawrie (Ramsbottom), and Smith (Radcliffe).

The following resolution was forwarded for the inclusion in the agenda of the forthcoming Representative Meeting:

Any Division which includes two or more townships may form, subject to the veto of the Council, one or more subdivisions. A local honorary secretary shall be appointed for each subdivision who shall receive direct from the Secretary of the Association information on all matters submitted to the consideration of Divisions.

A resolution with regard to the formation of permanent sections was forwarded to the Organization Committee for their consideration and opinion.

OXFORD AND READING BRANCH.

A MEETING of the Oxford and Reading Branch was held at the Radcliffe Infirmary, Oxford, on July 1st. The following officers were elected for the ensuing year:

President: Sir William Osler, Bt., F.R.S. (re-elected). *Vice-President:* Dr. A. Edge. *Honorary Secretary and Treasurer:* E. W. Squire, M.B.

A vote of sympathy was directed to be sent to the relatives of the late Colonel Freeman, Treasurer of the Branch for many years, together with an expression of appreciation of the excellent work he had done for the Association.

All the votes for the Epsom Charity were accorded to the relatives of the late Dr. Harvey, of Witney.

The following resolution was unanimously carried:

In view of the great advantages to the efficiency and well-being of the nation and to public health and order which have followed the restrictions placed on the sale of intoxicating liquor during the war, we earnestly request His Majesty's Government to maintain reasonable restrictions until a permanent measure of reform has been enacted by Parliament.

At the close of the meeting twenty-five sat down to dinner at the Clarendon Hotel.

SOUTHERN BRANCH: PORTSMOUTH DIVISION.

THE annual meeting of the Portsmouth Division was held on June 19th, when Dr. F. C. H. MUGGLETON was in the chair.

The HONORARY SECRETARY reported that the sum of £117 ls. 6d. had been subscribed for the widow and children of the late Dr. H. W. Dun of Copnor.

The retiring chairman (Dr. F. C. H. Muggleton) and honorary secretary (Dr. J. H. F. Way) were thanked for their services.

The following officers were elected for 1919-20:

Chairman: Dr. A. E. Marwood. *Vice-Chairman:* Dr. H. S. Thomas. *Honorary Medical-Political Secretary and Treasurer:* Mr. C. A. Scott Ridout. *Honorary Clinical Secretary:* Mr. C. P. Childs. *Honorary Librarian:* Dr. W. Carling. *Representative in Representative Body:* Dr. D. A. Sheahan.

WILTSHIRE BRANCH: TROWBRIDGE DIVISION.

THE annual meeting of the Trowbridge Division was held on May 24th, when Dr. F. E. TAYLER was in the chair. The financial statement was read and approved.

The following officers were elected:

Chairman: Dr. Laurence. *Vice-Chairman:* Dr. Locket. *Honorary Secretary:* Dr. Bond. *Representatives on Branch Council:* Drs. Rumbold, Tubb-Thomas, and Laurence. *Executive Committee:* Drs. T. Briscoe, H. C. Taylor and Wright.

The meeting recommended that the fee for operations for school children at cottage hospitals should be 30s., with an additional fee of 5s. to the hospital.

The annual report of Council was considered and approved. The suggestion headed "British Medical Association Lecturers on Clinical and Scientific Subjects" was referred to the Executive Committee.

Drs. Flemming and Locket were recommended for nomination to the Consultative Council under the Ministry of Health Bill.

With reference to the question of certificates for the War Pensions Committee, the following resolution was adopted:

That many complaints having been made that no fee is paid by the Local War Pensions Committee for medical certificates, this meeting considers that when any examination or opinion is asked for a fee of 5s. should be paid by the Ministry of Pensions.

The Secretary was instructed to send a copy of this resolution to the Secretary of the County War Pensions Committee.

The meeting considered that a fee of one guinea should be paid to referees for each examination and report, with mileage at the rate of 1s. per mile each way, over two miles.

It was resolved to call a meeting of the whole profession resident in the Division to discuss circular M. 25.

YORKSHIRE BRANCH: HUDDERSFIELD DIVISION.

At the annual meeting of the Huddersfield Division, held on June 20th, the following office-bearers were elected for the ensuing session:

Chairman: Dr. H. G. Tansley. *Vice-Chairmen:* Dr. G. W. K. Crosland, D.S.O., and Dr. W. H. Smailes. *Honorary Secretary and Treasurer:* Dr. A. L. McCully. *Representative in Representative Body:* Dr. Edward Walker. *Deputy Representative in Representative Body:* Dr. R. H. Rigby.

It was decided to recommend to the members of the Division that medical fees should be increased by 33½ per cent. on pre-war rates, and that a notice to this effect be sent to all members and non-members in the area of the Division.

INSURANCE.

MEETINGS OF THE PROFESSION.

At a meeting of the medical practitioners residing within the area of the Hyde Division of the British Medical Association held on July 18th the following resolution was passed unanimously:

That this meeting agrees with the resolution passed by the Liverpool medical profession at their meeting on June 12th—namely, that the Insurance Acts Committee can no longer be trusted to represent the profession in the negotiations with the Commissioners; and further that in our opinion the Conference of Panel Committees should meet together under their own auspices, elect their own chairman, and appoint and instruct a committee of themselves to approach the Government department in all matters arising under the Insurance Acts, and that this is the only correct course of procedure under the Insurance Acts.

* * As will be seen from the report of the Conference of Local Medical and Panel Committees published this week, the Liverpool motion was not endorsed by the Liverpool Panel Committee, and was withdrawn by the Liverpool Representative with the consent of the Conference.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following appointments are announced by the Admiralty: Surgeon Lieutenant Commander G. A. S. Hamilton to H.M. Dockyard, Chatham; Surgeon Lieutenant M.B. Macleod to the *Scarab*. Surgeon Lieutenants (temporary): J. D. Brown to the *Hearty*, A. J. Pollock to the *Columbine*, A. Ritchie to the *Vindictive*, D. Stuart to the *Shakespeare*, W. M. Anthony to the *Clematis*.

ARMY MEDICAL SERVICE.

Temporary Major-General Sir Bertrand F. Dawson, G.C.V.O., C.B. (Captain R.A.M.C.T.F.), relinquishes his temporary commission on reposting.

Temporary Colonels R. Davies-Colley, C.M.G., and John H. Parsons relinquish their commissions and retain the rank of Colonel.

Colonel C. C. Reilly, C.B., is placed on retired pay.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonel Fitz G. FitzGerald, D.S.O., relinquishes the acting rank of Colonel on reposting.

The notification of the relinquishment of the acting rank of Lieutenant-Colonel by Major P. T. C. Davy, C.M.G., in the *London Gazette* of June 12th, 1919, is cancelled.

The following relinquish the acting rank of Lieutenant-Colonel on ceasing to be specially employed: Major J. E. Carter, A. E. S. Irvine, D.S.O.; temporary Major A. P. Hurst.

To be acting Lieutenant-Colonels whilst specially employed: Major E. C. Phelan, D.S.O., M.C., temporary Major C. E. Ligertwood, D.S.O., Captain R. M. Dickson.

The following relinquish the acting rank of Major: Captain and Brevet Major F. C. Cowtan. Captains: C. T. V. Benson, E. G. H. Cowen, C. Russell, M.C., R. A. Hopple, M.C., E. B. Marsh, M.C., R. Ellis, M.C., A. P. O'Connor, M.C., N. Cantlie, M.C., F. R. H. Mollan, M.C. Temporary Captains: C. M. Kennedy, G. R. E. Colquhoun, A. G. McLeod, N. M. Grace, P. W. Dove, R. M. Fenn, R. Edwards, W. J. D. Bromley, W. F. Dunlop, J. E. Power, C. Clyne, M.C., P. L. Hope, J. W. Applegate, G. S. Mill, G. J. Arnold, F. J. Thorne, B. Sweeten, N. F. Norman, A. C. Parsons, C. C. Lord, R. E. F. Pearse, P. A. Leighton, A. E. Sellar, J. V. Bates, M.C., R. R. Wallace, H. T. Mant, W. T. Hodley, M. McLeod, B. Hart, F. E. Fielden, A. Dingwall-Fordyce, G. T. Gifford, G. H. Darlington, W. A. Wheelton, J. F. Veables, J. P. Lowson, A. E. Marsack, G. A. Skinner, A. Feiling (April 3rd, 1919; substituted for notification regarding this officer in the *London Gazette*, May 27th, 1919), J. W. Tocher, M.C., J. G. Ackland, J. S. Doyle, A. P. Saint, M.C., C. A. R. McCay, W. C. Douglass, M.C., T. Bragg, H. B. Day, M.C., A. W. D. Coventon, J. R. Collins, B. W. Armstrong, M.C., H. F. Warwick, M.C., A. L. Robinson, C. A. Weller, A. Poole, T. Kelly. Temporary honorary Captain O. H. Stansfield. Temporary Lieutenant J. E. G. Calverley, C.M.G.

To be acting Majors: Captain and Brevet Major J. D. Kidd, M.C., Captains C. E. L. Harding, A. I. Stevenson, temporary Captains H. H. Dunmore, M.C., A. L. Lockwood, D.S.O., M.C., R. K. Robertson, W. C. Sharpe, A. Grant, C. B. Tudhope, J. Buchanan, W. D. Cruickshank, A. Mathieson, A. K. H. Pollock (from November 22nd, 1918, to January 15th, 1919), D. Cowin, J. V. Grant, T. V. Somerville, M.C., E. G. D. Pinceo (from December 22nd, 1918, to March 30th, 1919), A. H. Macklin.

The notifications regarding temporary Captains John Buchanan and John Wells in the *London Gazette* of March 6th and May 28th, 1919, respectively are cancelled.

The following officers relinquish their commissions: Temporary Lieutenant Colonels and retain the rank of Lieutenant-Colonel: J. W. W. Stephens, A. Balfour, C.M.G., E. G. Gauntlett, D.S.O. (on ceasing to be specially employed and on reposting), D.S.O. honorary Lieut.-Colonel W. J. Richard (on ceasing to be employed at the Merryflats War Hospital and retains the honorary rank of Lieutenant-Colonel, Major W. C. Devereux and retains the rank of Major, Temporary Majors and retain the rank of Major: J. M.

Crocker (on ceasing to serve with the Keighley War Hospital), G. Schofield, J. C. Pouden, F. M. R. Walshe. Temporary honorary Major G. Dodge, on ceasing to be in charge of Springburn and Woodside Central Red Cross Hospital, and retains the honorary rank of Major. Temporary Captain H. E. S. Stiven, and is granted the rank of Lieutenant-Colonel. Temporary Captains, and are granted the rank of Major: R. E. F. Pearce (March 25th, 1919—substituted for notification in the *London Gazette*, May 23rd, 1919), H. F. Warwick, M.C. (March 31st, 1919—substituted for notification in the *London Gazette*, May 24th, 1919), W. C. Horton, E. T. Williams, D. O. Riddell, D.S.O., H. B. Graham, D.S.O., M.C., R. K. Birnie, J. H. Jones (April 26th, 1919—substituted for notification in the *London Gazette*, May 29th, 1919), J. G. Heath, D. M. Morison, M.C., R. Edward, R. Felton, M.C., N. F. Norman, J. E. Davies, M.C., P. W. Dove, H. B. Day, M.C., J. B. Alexander, G. Rankine, M.C., T. Bragg. Captain H. A. Harbison, M.C. Temporary Captain H. Greenwood (on transfer to the R.A.F.). Temporary Captains and retain the rank of Captain: L. D. Saunders, G. S. Brown, E. P. Scott, E. H. Udall, E. W. Smerdon, A. J. Beadell, A. N. Hodges, W. J. Henry, G. H. Steven, R. R. Armstrong, H. Parncombe, J. L. Pearce, W. McAlpine, C. W. J. Dunlop, R. B. Radcliffe, T. J. D. Quigley (on account of ill health), P. C. Leslie, P. S. Turner, W. R. H. Smith, C. G. Adams, H. A. C. Swartz, E. A. Runtling, H. Graham, R. W. Ironside, N. MacLeod, F. C. Matthews, A. Rhodes, W. F. Waller, P. W. Grant, H. W. Smart, A. F. Rendie, M.C., C. F. Drow, M.C., H. Keighley (on ceasing to serve with the Staincliffe War Hospital), C. B. Davies, M.C. (on account of ill health caused by wounds), C. E. Fenn, D. Macintyre, M.B.E., E. Morgan, P. E. Rostant, A. M. Ross, C. L. Sproule, O. C. Gruner, J. E. Rees, W. Robinson, R. Park, T. Milling, E. N. Russell, A. F. Galloway, J. M. Johnson, C. A. Lawrence, H. E. Scooner, J. H. Sutcliffe, J. A. Vennig, A. J. Rae, D. E. Roberts, D. Smith, G. B. Kennedy, P. J. Maguire, G. C. F. Roe, E. C. A. Smith, E. E. Paget-Tomlinson, W. L. Stuart, J. F. Paul (May 9th, 1919, substituted for notification in the *London Gazette*, April 22nd, 1919), T. H. Campbell, M.C., F. H. McCaughey, A. L. Robinson, T. F. Dillon, J. F. Nunan, A. Langwill, C. H. Burgess, H. G. Freeman, A. B. Cheves, M.C., L. R. G. de Glanville, N. Matthews, J. Healey, A. W. D. Covenon, L. J. Landy, K. McLeay, T. F. Griffin, D. Watson, E. O. Stedman, C. Bennett, K. J. Yeo, J. L. B. Dixon, A. L. Krogh, J. Appleyard, J. G. Forbes, B. G. Klein, H. V. Deakin, W. Bain, M. Scott, E. Wordley, M.C., A. F. Ross, W. Roche, M. Davidson, J. Goss, G. T. O'Donnell, O. P. N. Pearn (on ceasing to be employed at the Lord Derby War Hospital), F. W. Rowland, R. J. Hutchinson, G. Deery, V. E. Somerset, J. J. Delaney, F. J. Waldmeier, T. G. Wakeling, J. W. Sutherland, J. A. N. Scott, J. T. Bowman, D.S.O., A. Davies, J. N. L. Thoseby, T. W. R. Strode, L. R. King, H. A. Rond, M.C., E. P. H. Vickery, H. Mohan, B. E. A. Batt, S. P. Bedson, A. G. Winter, P. L. T. Bennett, J. B. Hunter, M.C., J. S. Coldwell, W. A. L. Dunlop, A. W. Gill, F. C. Macdonald, E. L. Steele, M. J. Macaulay (on account of ill health caused by wounds), W. J. Nisbet, J. A. Delmege, O.B.E., T. W. Heywood, T. J. Lyons, S. G. Billington, J. A. MacLeod, G. N. Montgomery, C. M. Forster, E. C. Myott, H. Cardin, H. Ainscow, F. W. Daniels, A. Evans, G. B. Charnock, J. H. McAllum, J. S. Bookless, D. Fisher, H. C. D. Miller, J. P. Macdonald, T. R. Phipps, A. C. Major, J. B. Fairclough, W. Leggett, A. N. Fell, E. S. Johnson, M.C., P. H. Young, H. L. Burton, J. Ross. Temporary Captain J. C. Drysdale. Temporary honorary Captain (acting Major) O. H. Stansfield, and is granted the honorary rank of Major. Temporary honorary Captain D. E. Carter, and retains the honorary rank of Captain. Temporary Lieutenant F. G. McGuinness, and is granted the rank of Captain. Temporary Lieutenants and retain the rank of Lieutenant: E. Ringrose, A. Prentice, J. C. Loughridge, E. W. Dewey, C. H. Lee, E. D. Townroe, C. M. Halsall.

ROYAL AIR FORCE. MEDICAL BRANCH.

Major F. H. Stephens (Staff Surgeon, R.N.) relinquishes his commission on reverting to Royal Naval Medical Services (February 11th—substituted for notification in the *London Gazette*, March 21st). E. W. Craig, M.C. (temporary Captain, acting Major, R.A.M.C.), is granted a temporary commission as Captain, October 1st, 1918, and to be acting Major, with seniority from May 10th, 1918 (substituted for notification in the *London Gazette* of January 1st). The notifications concerning Captains A. E. McCulloch and T. E. Mulvaney published in the *London Gazette* of February 14th and April 4th respectively are cancelled. Transferred to unemployed list: Captains N. F. Stallard, A. L. H. Rackham, F. Roberson, A. E. P. Parker, J. Lawson. Lieutenants E. S. Sharpe, R. W. Stephenson, N. C. Cooper.

INDIAN MEDICAL SERVICE.

The services of the following officers have been placed permanently at the disposal of the Government of Bengal with effect from the dates specified: Brevet Lieut.-Colonel F. A. F. Barnardo, C.I.E. (January 24th, 1919), Major R. E. Lloyd (March 11th, 1919). The services of Major W. Gillitt, C.I.E., have been re-placed at the disposal of the Government of Bihar and Orissa (May 5th, 1919). The services of Major C. A. Gourlay, D.S.O., have been re-placed at the disposal of the Government of Bengal (April 4th, 1919). Lieut.-Colonel J. G. Hulbert (retired), who was re-employed, has been permitted to resign (March 23rd, 1919).

GENERAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

H. A. Harbison, M.C., late Captain R.A.M.C., to be Captain.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Captains relinquish the acting rank of Major: C. S. Staddon, M.C., I. D. Dixon, H. T. Chatfield, M.C., J. W. Malcolm, M.C., T. F. Corkill, M.C., F. Cook, J. W. Cannon. Captain (acting Major) A. H. Habgood, D.S.O., to draw the pay and allowances of his acting rank. Captain F. G. Flood, M.C., to be acting Major.

OVERSEAS CONTINGENTS.

CANADIAN ARMY MEDICAL CORPS.

Temporary Major T. F. Cotton and Temporary Captain G. J. Preston retire in the British Isles. Temporary Major W. J. McAlister, M.C., to be acting Lieut.-Colonel while employed in command of C.C.O.H., Matlock Bath, April 28th, 1919, to June 3rd, 1919. Temporary Captain (acting Major) J. A. M. Hemmeon retains the acting rank of Major.

The following temporary Captains (acting Majors) relinquish the acting rank of Major: J. S. Hudson, M.C. (on ceasing to be employed at No. 16 C.S.H.), T. W. Sutherland (on ceasing to be employed at No. 8 C.S.H.).

Temporary Captain (acting Major) L. F. Jones relinquishes the acting rank of Major on ceasing to be employed with No. 3 C.S.H.

SOUTH AFRICAN MEDICAL CORPS.

The following relinquish their temporary commissions and retain the rank of Major: Major (temporary Lieut.-Colonel) A. Edington, on ceasing to be employed with the Union Imperial Service. On account of ill health: Majors H. S. Flook, H. P. Veale.

Captain W. R. Chew relinquishes his commission and retains the rank of Captain.

Captain C. T. D. Urquhart relinquishes his commission on account of ill health, January 4th, 1917, and retains the rank of Captain (substituted for notification in the *London Gazette*, December 3rd, 1918).

Temporary Captains relinquish their commissions and retain the rank of Captain: D. Drew, C. M. N. May (December 12th, 1918—substituted for notification in the *London Gazette*, January 23rd, 1919).

TERRITORIAL FORCE.

ARMY MEDICAL SERVICE.

Captain Sir James Purves Stewart, K.C.M.G., C.B., from 4th London General Hospital, to be Colonel.

ROYAL ARMY MEDICAL CORPS.

The announcement regarding Lieut.-Colonel J. S. Warrack which appeared in the *London Gazette* of December 19th, 1918, is cancelled.

Captain (acting Lieut.-Colonel) J. Bruce, O.B.E., to be Major and to retain the acting rank of Lieutenant-Colonel.

Captain (acting Major) C. B. Baxter to be Major.

To be acting Majors while specially employed: Captains G. Davidson, J. Muir, O.B.E.

The following officers relinquish their acting rank on ceasing to be specially employed: Major (acting Lieut.-Colonel) T. A. Barron, D.S.O. Captain (acting Lieut.-Colonel) P. Moxey (January 24th, 1919—substituted for notification in the *London Gazette*, March 27th, 1919), Captains (acting Majors) C. E. W. McDonald, H. M. Calder, D.S.O., M.C., C. Burrows, W. J. Hirst, M.C., T. W. H. Downes, T. C. Britton. 2nd Eastern General Hospital.—Captain H. Gervis is restored to the establishment.

2nd London General Hospital.—Lieut.-Colonel (honorary Major-General) Sir G. H. Makins, G.C.M.G., C.B., is retired, having attained the age limit.

1st Southern General Hospital.—Lieut.-Colonel H. G. Barling, C.B., is restored to the establishment on ceasing to hold a temporary commission in the A.M.S. Captain (acting Major) A. R. Bearn relinquishes the acting rank of Major on ceasing to be specially employed.

3rd Scottish General Hospital.—Lieut.-Colonel A. G. Hay is restored to the establishment.

EXCHANGES.

COLONEL, Army Medical Service, under orders for India during ensuing trooping season, desires to exchange with an officer on the home establishment or with one proceeding to a Mediterranean station.—Apply, Messrs. Holt and Co., 3, Whitehall Place, London.

Colonel under orders for India early this trooping season desires exchange to remain at home.—Apply, Colonel, 52, The Common, Woolwich.

APPOINTMENTS.

FRENCH, G. J., M.R.C.S., L.R.C.P., Superintendent Medical Officer of the Birkenhead Union Institution.

OATES, Geoffrey E., M.D., B.S., M.R.C.P.Lond., D.P.H.(Camb.), Medical Officer of Health to the Metropolitan Borough of Bethnal Green.

DISTRICT MEDICAL OFFICERS.—S. J. A. Beale, M.B., B.S. (Bradfield Union), D. Bell, M.B., Ch.B. (Huddersfield Union), T. W. Castarins, M.B., Ch.B. (Glasgow, South Shields Union), H. W. Cooke, M.R.C.S., L.R.C.P. (South Sloneham Union), J. Cowan, M.R.C.S., L.R.C.P. (Bolton Union), E. L. Elliott, M.B. (Wycombe Union), G. B. Gill, M.B., B.S. (Billesdon Union), H. M. Mills, M.B., Ch.B. (Rotherham Union), L. W. Mortimer, M.R.C.S., L.R.C.P. (East-hampstead Union), D. Penman, M.B., Ch.B. (North Bierley Union), H. H. Prentiss, M.B., B.Ch., B.A.O. (Cranbrook Union), A. H. Sevier, M.B., C.M. (Thirsk Union), F. L. Spalding, F.R.C.S. (Worcester Union).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

SMITH.—On July 14th, at Olton Crest, Olton, Birmingham, to Dr. and Mrs. Herbert Smith (née Sydenham), the gift of a daughter.

WYLIE MOORE.—On June 28th, at Ivy House, Weaverham, Cheshire, to Dr. and Mrs. Wylie Moore, a son.

DEATHS.

ELLIS.—On May 16th, at Rhyllech, Pwllheli, North Wales, suddenly, Philip Mackay Ellis, Major-General A.M.S.(ret.), O.B.E., J.P., County Director B.R.C.S., Carnarvonshire, aged 64.

STEVEN.—At Devonport Military Hospital (of appendicitis), on July 1st, Captain W. S. R. Steven, R.A.M.C., son of the late John Steven, Sligo, and the late Mrs. R. Steven, Belfast. Belfast address: Barden Towers, Strandtown.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be held.
	JULY.
30 Wed.	London: Standing Subcommittee of Central Ethical Committee, 3 p.m. Willesden Division: Inaugural Meeting, St. Andrew's School, Willesden Green, 9 p.m.
	AUGUST.
8 Fri.	East York and North Lincoln Branch, Hull Royal Infirmary, 4 p.m.
16 Sat.	Monmouthshire Division: Annual Meeting, Royal Gwent Hospital, Newport, Mon., 3.15 p.m.

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, AUGUST 2ND, 1919.

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EIGHTY-SEVENTH ANNUAL MEETING

OF THE

British Medical Association.

LONDON, 1919.

ANNUAL REPRESENTATIVE MEETING.

Dr. T. W. H. GARSTANG (Chairman of Representative Meetings) in the Chair.

The proceedings of the Annual Representative Meeting began on Thursday, July 24th, at the Connaught Rooms, London. The number of Representatives present was 145, and in addition 19 members of Council attended. The return of Representatives for constituencies for 1919-20 was received and the notice of appointment of substitutes was also received and entered on the minutes. The standing orders of the last Representative Meeting were adopted, as was the report of the Agenda Committee dealing with the order of business, save that, on the proposition of Dr. E. R. FOTHERGILL, the sections of the reports of Council dealing with the Ministry of Health and with National Insurance were given precedence.

THE PRESIDENTSHIP.

Dr. J. A. MACDONALD (Chairman of Council) moved the reception of the Annual and Supplementary Reports of Council (published in the SUPPLEMENT of May 3rd and July 5th respectively), and this having been agreed to, he moved:

That Sir Thomas Clifford Allbutt, K.C.B., LL.D., F.R.S., be elected President of the Association for 1919-20.

He was sure this recommendation would meet with the hearty support of all. The meeting over which Sir Clifford Allbutt had been expected to preside at Cambridge in 1915 would, it was expected, be held in 1920.

The motion was carried by acclamation.

HONOURS TO PAST AND PRESENT OFFICERS.

Dr. MACDONALD, after mentioning that the ceremony of presenting two gold medals of the Association, the one to the relatives of Captain N. G. Chavasse, V.C., and the other to Major Arthur Martin-Leake, V.C., would be deferred until the Cambridge meeting next year, went on to refer to recent honours given to past and present officers of the Association, in particular to the knighthood conferred upon Sir Jenner Verrall—(loud applause)—a former chairman of that meeting, and chairman of the Central Medical War Committee, in which latter capacity he had done great work for the profession and the country.

FINANCE.

Dr. G. E. HASLIP, the Treasurer, then presented the balance sheet of the Association. The finances, he said, had still been adversely affected by the war, and in particular by the high prices of paper. There was, however, some encouragement to be found, in spite of a deficit of

£1,300, in the far larger stocks of paper in hand at the end of the year than was the case at the end of 1917, and in the fact that their securities also had risen in value. The advertisement pages in the JOURNAL had been fewer, though this loss had been counter-balanced to some extent by the additional receipts from the sale of the JOURNAL to non-members. The expenses of the Central Medical War Committee had been heavy, but, speaking quite unofficially, he had every reason to believe that they would receive a grant from the Treasury of £5,000 to meet its expenses as an official tribunal under the Military Service Acts. They had, of course, asked for a larger amount, but to receive as much would be a very satisfactory ending to the work of the Committee.

Salaries of Officers of the Association.

Dr. J. D'EWART (Manchester) asked why there was a reduction under the head of central staff expenses. The TREASURER said this was partly due to the non-appointment as yet of a successor to the late Financial Secretary and Business Manager, and to the reduction in staff. Dr. D'EWART asked what war bonus was paid to the staff. The TREASURER said that this had been gradually increased by the Council upon a certain scale; the staff were quite satisfied. As to the medical officials of the Association, 20 per cent. increase was granted to date from last January.

Dr. D'EWART thought the medical officers on the staff should be more highly remunerated, and he moved that they should receive such an addition to their salaries as would raise them 50 per cent. above the 1914 level, such increment to date from July 1st, 1918. He considered that the economy of the Council had been carried to the length of parsimony. The Association's servants ought not to be paid less than the best officials in this country.

The CHAIRMAN drew attention to the standing order relating to motions which involved additional expenditure, and asked Dr. D'EWART to modify his resolution so that it became a reference to the Council. Dr. D'EWART agreed.

Dr. W. F. DEARDEN (Manchester) seconded Dr. D'EWART's motion. Surely the Association ought not to be pressing public bodies to increase salaries by 33½ per cent., and content itself with a 20 per cent. addition to the salaries of its own officers, dating only from January of this year.

Mr. BISHOP HARMAN denied that the Council were hard taskmasters; he believed that under the Manchester resolution some of their officers would receive less than they did now.

Dr. J. A. MACDONALD said the motion had been made under a misunderstanding. The additional 20 per cent. was not upon the 1914 remuneration. The Council had to exercise economy. Were representatives prepared, if this was carried, to go back to their constituents and recommend an increase of subscriptions by 50 per cent.?

The TREASURER then gave details of the salaries of individual officers, and trusted that the explanation he had given was satisfactory. (Applause.)

Dr. D'EWART said his motion had to do with salary; the Treasurer was talking about salary *plus* bonus.

The TREASURER answered that the figures he had given related to the remuneration for 1919. This would be reconsidered in 1920, and would remain or be altered in accordance with the cost of living.

On being put to the vote the motion appeared only to be supported by the mover and seconder, and the financial report was then approved.

THE JOURNAL.

MR. ALBERT LUCAS, Chairman of the Journal Committee, moved on behalf of the Council:

That the Supplementary Report of the Council under the heading "Journal" be approved.

There was, he said, no need for him to emphasize the difficulties they had experienced in carrying on the JOURNAL, including difficulties with the Paper Controller. They had to reduce the number of pages of literary matter to about thirty, and the advertisements they kept up to forty or sometimes forty-two. Advertisements submitted kept up extremely well, and they had to turn down advertisements practically every week. When the paper question became easier they increased the number of pages—both literary matter and advertisements. They would like to insert freer reports of Divisions, etc., but were obliged to keep them down. If they could not keep the JOURNAL to the present size they would have to pay increased postage, which would involve an additional expense of £30 to £50 a week, and they thought that was hardly necessary if they could avoid it. They were endeavouring to increase the number of original articles dealing with clinical matters. (Applause.) Last year they gave an undertaking that they would insert more such articles which would interest the general practitioner if they could get them, but the Editor, in spite of striving, had only been able to obtain a few. Mr. Lucas, in conclusion, desired to take the opportunity of expressing, as chairman of the Journal Committee, his appreciation of the work of the Editor and Assistant Editor in the very difficult and trying conditions of the past year.

Dr. G. ST. GEORGE (Belfast) moved on behalf of Belfast the following amendment:

That in the opinion of the Representative Body the BRITISH MEDICAL JOURNAL does not give Irish affairs—for example, reports of meetings, addresses, communications, etc.—that prominence to which they are entitled, with the result that there is a flagging of interest in the JOURNAL amongst many of the Irish members of the Association.

Dr. St. George said they found, certainly in the north of Ireland, a very great difficulty in inducing new members to join the Association on the ground stated in the amendment.

MR. ALBERT LUCAS, replying on behalf of the Editor and the Journal Committee, said they were only too pleased to insert any letters or communications of medical interest which came from Ireland. They received information from various quarters, such as the University of Dublin, the College of Physicians of Ireland, the Conjoint Board in Ireland, and others, but particularly they relied on the Irish Medical Secretary. He had a letter from that gentleman in which he said: "I have on all occasions sent in medico-political news I have received from Belfast and elsewhere for insertion in the JOURNAL." This had invariably been inserted. Ireland had about 600 members of the Association at the present time, and he found that Ireland had received this year about her share of the number of pages according to the membership she possessed. If Belfast thought it had not been properly treated, it had only to send more information, and if it were suitable it would be inserted.

The amendment was lost, and the approval of the report was agreed to.

MINISTRY OF HEALTH.

Dr. J. A. MACDONALD, Chairman of the Ministry of Health Committee, moved approval of the annual report of Council under the heading "Ministry of Health." They had, he said, no recommendations to bring forward, but the report gave an account of what had taken place. A special committee was appointed, and had interviews with Dr. Addison. A question that had to be raised was how they could deal with alterations or amendments to the bill. The tendency of modern legislation was to do most things by Order in Council, any suggested alteration of a bill remaining on the table of the House for a certain length of

time, and becoming part of the Act if no exception was taken to it. They did their best to get this altered, and to a large extent they succeeded. New matter introduced would not be dealt with in that way, but must have the distinct approval of both Houses before it became effective. The report was approved.

Question of Orders in Council.

Dr. E. R. FOTHERGILL (Brighton) moved the following amendment:

That the Representative Body of the British Medical Association views with grave concern the present-day tendency to rely on Orders in Council in bills for legislative purposes, and is of opinion that, should it be necessary to do this, such Orders should be submitted in full by a Minister to both Houses of Parliament for approval, and not, as at present, leaving it to any member of Parliament who cares to take the responsibility to draw the attention of the House to them in the short space of time available.

Dr. Fothergill said Orders in Council up to the present practically were used for administrative purposes only. That was, if a principle was settled that by Act of Parliament a certain thing should be done, the details under which it should be done become administrative, and an Order in Council was placed on the House of Commons table. If a private member objected to that the only chance he had of doing it was about eleven o'clock at night, and then he would at once be in opposition to the Government. They had had experience of legislation by regulations. When the Insurance Act was passed in 1911 and 1912 they went home pretty happy on certain points, but subsequently they found there were others. With regard to this measure one of the Association's members had fought for them. It was a great advantage to have medical men in Parliament who knew what they were talking about. (Hear, hear.) They wanted to show the Government that if they did these things they would have the medical profession against them. Other bodies had adopted resolutions similar to this amendment. The same difficulty in raising objections might happen in regard to other bills which Dr. Addison would probably be bringing in.

Mr. BLUP HARMAN (Marylebone) said this amendment would cut both ways. The very thing the medical profession agreed upon with the Government might be turned down by a Labour member or someone who did not understand the medical position. They might by this amendment give away as much as they got.

Dr. JOHNSON SMYTH (Bournemouth) said that some Order in Council might suddenly be imposed on them, or upon those doing State service—some new regulation that would burn their very hearts out. The resolution simply implied that things should not be done behind their backs.

Dr. J. A. MACDONALD objected that the latter remark was hardly a fair statement of what happened. These documents were put clearly and definitely on the tables of both Houses; members of Parliament were not attending to their business if they did not see them at once. (Hear, hear.) He had no sympathy with legislation by Orders in Council himself, but at the present time it was almost a necessity.

Dr. W. F. DEARDEN (Manchester) pointed out that the amendment referred not to all Orders in Council, but to those "for legislative purposes."

Dr. A. C. FARQUHARSON, M.P., said that all that Orders in Council under the present statute could do was to absorb in the Ministry of Health certain existing mechanisms or organizations. For example, they had a very strong fight on the question of the absorption of medical treatment of children. Then lunacy administration was sought to be taken in at some future time by Order in Council. What could the Government do by Order in Council within this bill? All they could do was to put the Order on the table, and it must lie there thirty days, and there must be a resolution of the House before it became effective. The matter was safeguarded in every way; both parliamentary authority and professional interests were safeguarded to the full.

Dr. FOTHERGILL said Dr. Farquharson referred to the present bill. His amendment referred to future bills and future action.

The amendment was lost by a very small majority.

Conditions for Extra Services under Insurance Acts.

Dr. J. A. MACDONALD then moved to discuss separately the sub-paragraphs in paragraph 106 of the Report of the

Insurance Acts Committee on the Revision of the Conditions of Service (M. 25). These dealt with extra services. It was possible that the Government might attempt to introduce some of these extra services in 1920, but they could not be dealt with in the regulations for the new year.

Dr. C. BUTTAR urged that the real amendment to this motion was one which stood in the name of Kensington, as follows:

That before any further steps are taken with regard to an extension of medical services to the insured or to any portion or the whole of the community, the Government shall be requested to appoint an independent committee of inquiry, consisting of well known medical men, for the purpose of examining the present panel system and any alternative proposals that have been made or may be made.

Dr. J. A. MACDONALD said that this could not be a decision of the Association in the technical sense; it had not been before the Divisions.

Dr. A. C. FARQUHARSON, M.P., pointed out that there would be no extension of medical services until the Medical Consultative Council established under the Ministry of Health could be convened. The personnel of that Council would lie very considerably in the hands of the British Medical Association. One of the first things the Council would have to consider would be the panel system and its possible extension. Nothing could happen until this Consultative Council had decided.

The Kensington amendment was postponed until the Chairman of Council's motion was disposed of, and this motion was then agreed to, Dr. J. A. MACDONALD expressing his astonishment at a remark of Dr. Buttar's to the effect that the Association was proceeding too fast; Dr. Buttar was the most powerful accelerator he knew, and to find him appearing as a retarder was a great surprise.

Dr. MACDONALD then moved subparagraph (i) of paragraph 106 of M. 25.

Dr. BUTTAR here moved his amendment already given. He expressed surprise at both M. 25 and the Memorandum of Discussions. For M. 25 he doubted whether much excuse could be found; the whole document appeared to him to be written on behalf of the Government, and not by an independent body such as the British Medical Association should be. It seemed to him that they were trying to hurry the Government into a hasty and patched-up action under the Ministry of Health. The Kensington motion had nothing to do with the new agreement for 1920. It was really put forward on the question of the Ministry of Health. His constituents were not in a position to know whether the panel system was a good or a bad system, or whether it met with the approval of the community or not, and it was with a view to getting these questions answered that they had brought forward this amendment. Did the Association desire a medical service open to all or limited to certain classes, like the Insurance Act? Before taking any more steps towards further extension of service, the community and the profession ought to be informed of the true position with regard to the panel system, and the Government should be requested to appoint an independent committee of inquiry.

Mr. E. B. TURNER (Kensington) said that his Division was practically unanimous in sending in this amendment. The panel system had been on trial since the year the Act came into force, but there had really been no authoritative outside investigation into it. If under the Ministry of Health there was a quick, sudden, and large extension of the system it might act most prejudicially to large numbers at present outside the Act, and whatever happened under the Ministry of Health would be stereotyped for many years. If the profession generally thought that the only way of avoiding a State medical service was to continue to extend the panel system, compelling other men into its ranks, let it say so, and let the matter be thoroughly understood. If, on the other hand, any present doubted whether that was the best way, and thought there was a possibility of combining a form of free private practice with part-time work paid on a time basis, let that also be said. It was extremely important that the Representative Meeting should arrive at an opinion.

Dr. E. J. DOMVILLE (Exeter) said that as Chairman of the Public Health Committee he was bound to acknowledge that whatever the virtues of the panel service might be, it had the defects indicated in the paragraph under discussion.

For the proper carrying out of the service, hospital accommodation, nursing provision, bacteriological facilities, all needed to be made available, as well as consultative service when necessary.

Dr. BUTTAR agreed that the expression "before any further steps be taken" should not preclude further discussion at that meeting if the amendment were carried.

Sir BERTRAND DAWSON thought they were running a serious risk of ruining, by the red tape of procedure, perhaps the most important discussion that could take place in the profession at the present time. He urged that the subparagraphs of paragraph 106 in M. 25 should be, without further punctilio, made the subject of a useful second-reading debate which would crystallize professional opinion.

Dr. KEENAN (City) thought the matter should first go for discussion to the Divisions.

The CHAIRMAN did not accept this argument, because to do so would be to destroy the right of Representatives to bring up resolutions on the spur of the moment, which they constantly did, and would be very reluctant to lose the right to do.

Dr. D. F. TODD (Sunderland) said there was a feeling amongst the profession in the country that the Association was not running on straight lines. He would express no opinion as to that, but he warned the meeting that the step they were taking might confirm that suspicion. Why was this matter not submitted to the Divisions? They were getting back to normal conditions; could they not have a Special Representative Meeting?

Dr. Buttar's amendment was lost by a large majority.

The Scope of Insurance Medical Service.

After some further discussion on procedure, the meeting returned to consider the first subparagraph of paragraph 106, which expressed the opinion that the scope of insurance medical service should be extended to include consultant or specialist non-residential services, laboratories, and nursing service.

Mr. BISHOP HARMAN (Marylebone) spoke of the steady increase in the work of out-patient departments. At his own hospital about 60 per cent. were insured persons. It was not satisfactory that necessary medical work for people engaged in industry should be palmed off on to a charity, and at such a rate that the surgeon could not do it efficiently.

Dr. CRAWFORD TREASURE (Cardiff) wanted a report of the decisions of the Special Conference of Local Medical and Panel Committees held the previous week; and Dr. D. F. TODD made the same request.

Dr. BRACKENBURY said that at the Conference this paragraph was accepted without opposition, as the result partly, he had no doubt, of an alteration which the Insurance Acts Committee had made in the second paragraph of the same section, and partly because he was able to explain what the Committee conceived to be the essential ideas underlying it. These were, first, that additional services would be an advantage to the profession and to the health of the nation; secondly, that these extra services of consultants and pathologists should be part-time services, paid for on a time basis; thirdly that the relationships of the general practitioner to these services should be properly defined. The aim of the whole paragraph was to lay down four essential principles to govern the relationship of the general practitioner to these services of consultants and pathologists. The first was that these services should be dealt with upon the basis of a general practitioner treatment, not available for the whole population to make use of just as they liked, but only for those recommended thereto by a general practitioner. But if the State established such services, and would let nobody take advantage of them unless recommended by a general practitioner, the State must make some provision also for the uninsured who would also be contributing through rates or taxes to these services. Again, the services at these clinics should not be confined to specialists, but in so far as the general practitioner might be himself a specialist he should have the right to take part in them. The third principle was that general practitioners, even if not professed specialists, should have complete access to these extra clinics and services—say as clinical assistants—so that eventually they might be eligible for the principal positions. Finally, these appointments should not be made at the sweet will of town and county

councils, but a purely professional body should have the predominant voice in the selection. These sections of this much-debated paragraph meant this and nothing else, and if the meeting adopted them, that was what it would be understood to be adopting.

Dr. T. F. KERNAN (City of London) thought this was clumsy machinery, and when put in motion it would not do much good. Eventually the Ministry of Health would take over all hospitals in the country and nationalize them; there would then be no picking and choosing between one man and another. They should not deal with the matter in the piecemeal manner Dr. Brackenbury had suggested. The work of hospitals should be decentralized, so that all the work should not go to one hospital and patients have to travel five miles to get there. Panel practitioners should be able to follow their patients to the hospital and see them there.

Dr. E. H. M. STANCOMB (Southampton) said he was not surprised that they of the medical fraternity were badly paid and badly thought of by the Government if they could not get through their business any better than this. All they could do now was to give a useful opinion. They could say that if they were called upon under the Ministry of Health to perform certain services, they should have some limitations removed and some advantages given to them. If some one came along and said, "A penny a week," they could say, "Nothing doing," but this was not the point now. They only wanted to give a pious opinion, for the benefit of themselves and of the Ministry of Health.

Residential Institutional Services.

Dr. C. E. S. FLEMMING (Salisbury) proposed an amendment, adding at the end of the paragraph the words "residential institutional services for general practitioners." He could not see how the general practitioner could do his work efficiently and effectively without the provision of a certain amount of institutional service. Now was the proper time to press this matter.

With Dr. Fleming's consent it was decided to take, instead of his amendment, an amendment on the agenda by Bournemouth:

That in any scheme of medical reconstruction, arrangements should be made for auxiliary hospitals in which general practitioners could treat their own patients.

Dr. BRACKENBURY said that neither the Ministry of Health nor any Government department, nor, he thought, the profession, was ready at this moment with a complete scheme, or even an outlined scheme, for the provision of residential institutional treatment for the population of this country, and subparagraph (viii) suggested that was one of the things that must be put out of their immediate purview and left till a later stage after further discussion. ("Agreed.")

Dr. E. K. LE FLEMING (Bournemouth) said the Bournemouth amendment was based on an article that appeared in the JOURNAL in the spring by Dr. Bottomley. They had in mind the overcrowding of their hospitals and also the fact that if the insured patient got to a certain stage of illness he passed out of their hands when he went to the ordinary hospital. They wanted an auxiliary type of hospital to deal with the kind of cases that were not serious enough to go into the big hospital, but could not be properly dealt with in the patients' homes. During the war they had had the great organization of auxiliary nursing in the shape of the V.A.D.'s. It was a great pity this service should be entirely lost, and surely it was possible to create auxiliary hospitals, something on the lines of the V.A.D., to which insurance practitioners might remove their patients when the latter could not properly be nursed at home.

Lieut.-Colonel WALLACE HENRY (Leicester) remarked that three years ago a proposal was made that in large general infirmaries certain beds should be available for patients of the kind referred to.

The Bournemouth amendment was carried.

Extension of Medical Benefits.

Dr. ROBERT THIN (Edinburgh and Leith) moved:

That this meeting is opposed to any extension of the medical benefit section of the National Insurance Acts, except consultant's advice for the present insured.

He said that in Edinburgh the Insurance Act had not been held in great favour. It was, naturally, not liked by non-panel practitioners, who composed half of the general

practitioners; it was not favoured by many of the panel men themselves, nor was it in favour with a great number of the insured. Insured people felt that under the contract system they did not get the full value of what they might expect. Contract practice was apt to be a little slipshod. Altogether they did not wish the panel system extended. In Edinburgh some who were rather restricted in financial position, while themselves insured, had a private doctor to attend other members of their families. Moreover, a wide extension of insurance would mean that large numbers who could pay for their own doctor would not have to do so, and it was not the business of the Government to provide medical treatment for those who could obtain it for themselves.

Dr. C. O. HAWTHORNE (Marylebone) said that this amendment involved a very much wider principle than would appear from the way in which it had been advocated. Dr. Brackenbury had just said that in the paragraphs of the report before them the proposition was either expressed or implied that the extra services contemplated should be free to persons who were not under the Insurance Act. If that was the case, the speaker submitted that they were passing away from the question of insurance altogether and were approaching a much larger and more serious proposition. Under any insurance scheme the persons who received benefit contributed something towards the benefits which were their right. But they were now proposing—and it was to this that the Edinburgh Division took exception—to provide gratuitous medical services for persons who were not insured, and who made no contribution towards the particular kind of service set up. He did not know any term to apply to such a proposition other than that of national medical service. For if it were conceded that it was the duty of the State to provide certain kinds of gratuitous medical service they could not stop there; it would become the duty of the State to provide all kinds of medical service.

Dr. H. G. DAIN (Birmingham) opposed the Edinburgh amendment. It took a narrow view of the present circumstances by wanting to limit the scope of the service provided for insured persons. He hoped a Representative Meeting of that character would turn down any such suggestion. It was not their business to decide for whom the State proposed to provide, either partially or completely, a medical service.

Dr. BRACKENBURY said that there were certain things beyond those covered by the present insurance practice which the State was going to provide for the population, and they would be provided partly out of imperial and partly out of local funds. All that was said in the paragraph was that if these extra services were set up then certain essential conditions should be laid down.

The Edinburgh amendment was lost by a very large majority.

General Practitioner Service.

The MEDICAL SECRETARY then read the amended form of paragraph 106 (ii) as follows:

That general practitioner domiciliary attendance and treatment is the only foundation on which any systematic provision of other kinds of treatment can properly be based; that therefore, speaking generally, it should be only on the recommendation of a general practitioner that such additional service should be available; and that (seeing that at present, apart from the Poor Law, there is universal provision of general practitioner treatment for insured persons alone) a general practitioner service should be provided, under proper conditions, for persons other than insured persons as at present defined whose economic position makes this desirable.

It was agreed, on Mr. BISHOP HARMAN's suggestion, to take the proposition in two parts, the first reading down to the word "available." The first part was forthwith agreed to *renime contradicente*.

Dr. J. STEVENS (Edinburgh), speaking on part two, said that a large section of the profession maintained that there ought to be no extension of the Insurance Act to other persons or classes so long as the present conditions of service were unsatisfactory and unacceptable to a large section of the profession. Many of the persons brought in under the new arrangement would be dependants of persons earning very large incomes, and there was not the slightest excuse for extending the Act to them.

Dr. J. ORTON (Coventry) said that many people were not insured because they were in business in a small way for themselves; these had every right to the same treatment as insured persons.

Mr. BISHOP HARMAN moved the deletion of the words in the paragraph which were placed in brackets, and this was agreed to.

Dr. NOY SCOTT (Plymouth) considered that the extension proposed was simply the thin end of the wedge of a free national medical service.

Dr. T. B. HEGGS (Canterbury) held that the Association ought to be beforehand with a clear national medical service of its own, in which all the various services should be co-ordinated.

Dr. BRACKENBURY drew the distinction between a national medical service and a whole-time State salaried clinical service. The State would decide as to the economic position of the persons to be included, but it was for the profession to say under what conditions it would accept service.

Dr. FOTHERGILL moved that "whose economic position makes this desirable," should be changed to "whose total income is £250 and under."

Dr. J. J. TISDALL (Liverpool) seconded.

Dr. C. O. HAWTHORNE regarded it as a mere subterfuge to say that because the State gave a special grant every citizen must have the benefit of it. The State gave a special grant already under the insurance scheme, but only a limited number of citizens enjoyed the benefit. By these clauses, many of them intricate in their wording, the meeting was being led into a position it would not really desire to take up. Dr. BRACKENBURY rejoined that they were not now dealing with those who should be at liberty to avail themselves of the additional services, but with how general practitioners were to be provided by the State for necessitous persons not otherwise provided for.

Dr. T. B. HEGGS thought this matter ought to be referred to the Council and that the opinion of Divisions throughout the country should be obtained.

Dr. MACDONALD said he was prepared to withdraw this matter if they liked, down from the word "available," and it was agreed that the first part of the subsection only should be adopted.

Paragraph 106 (iii), to the effect that the provision of some kinds of advice and treatment at clinics, etc., should be brought into proper relationship with the domiciliary attendance of general practitioners, was agreed to, Dr. MACDONALD stating that they did not want this business to be exploited by whole-time medical men, and they wanted the general practitioner to do it if possible.

With regard to paragraph 106 (iv), to the effect that clinical and pathological laboratories should be provided for suitable areas, as proposed in 1914, for the whole population "where the local health authority is prepared to contribute, and for the insured where the local health authority will not contribute," Mr. BISHOP HARMAN suggested that the latter lines, from the word "where," should be deleted; and, Dr. MACDONALD agreeing, this was carried.

Paragraph 106 (v), which laid it down that the clinical medical staffs of these services should (unless in a few exceptional cases) be appointed on a part-time basis, and that a medical committee should play an important part in their selection, was agreed to without discussion.

Free Choice of Consultant.

Dr. J. STEVENS (Edinburgh) moved:

That free choice of consultant without the provision of a panel be given to practitioners and patients under the proposed expert medical service in each area.

The amendment was lost.

Subparagraph (vi), which defined the relationship of general practitioners to the services, as already described by Dr. Brackenbury, was approved, and Subparagraph (vii) was postponed.

NAVAL AND MILITARY.

The order of the agenda was varied to admit of the report of the Naval and Military Committee being here taken.

Royal Air Force Medical Service.

Lieut.-Colonel R. H. ELLIOT, I.M.S. (Chairman of the Committee), moved, and it was agreed, to make certain amendments in the by-laws to admit of representation of the Royal Air Force Medical Service on the Council, and of applications by officers of that service for membership of the Association.

Indian Medical Service.

Lieut.-Colonel ELLIOT then moved:

That the Association place on record its appreciation of the action of the Government in increasing the pay of officers of the Indian Medical Service, and otherwise improving the conditions of service, and its approval of the undertaking given by the deputation from the Association to the Secretary of State for India on February 10th, 1919, that the Association should use its influence in securing officers for the service.

He said that the efforts of the Association had been enormously appreciated by the officers of the Indian Medical Service. The Secretary of State for India was wholly on their side, and Sir Havelock Charles, also at the India Office, was supporting them in every possible way. It was recognized that what had saved the situation for the service was the British Medical Association. At the meeting with the Secretary of State, he (Mr. Montagu) made them certain generous offers, but he laid before them very clearly from start to finish the fact that they were his personal recommendations. Much pressure had been brought to bear upon them from India and elsewhere to go ahead, and not wait any longer, but if they did that they would put themselves in a position like that of some bodies in this country—bodies with whom it was not possible again to negotiate. The Secretary of State must be given time to put things right.

Dr. C. BUTTAR asked whether any particular steps had been taken to get officers for the service. Lieut.-Colonel ELLIOT replied that everything which took place had been published.

Sir JAMES BARR said he believed that a certain number of medical men in India were not satisfied with the new scheme. Although they were getting a rise in their salaries, certain privileges were being taken away from them. Lieut.-Colonel ELLIOT replied that a number of officers had not taken the trouble to master the scheme.

Mr. BISHOP HARMAN asked whether anything was being done for the temporary officers under the Government of India; they seemed to have very substantial grievances. Lieut.-Colonel ELLIOT said that the R.A.M.C. (Temporary) officers serving in India did not come into this arrangement, but he could assure the Association that his committee would not neglect their interests. He accepted an alteration suggested by Dr. JOHNSON SMYTH whereby the last clause read: "The Association should use its influence in securing officers for the service on a satisfactory completion of the scheme," and in that form the motion was carried.

Representation of Services on Council.

In moving:

That Colonel G. Nixon Biggs, of the Royal Air Force Medical Service, be appointed to represent that service on the Council, 1919-20,

Lieut.-Colonel ELLIOT spoke of the pleasure of bringing into the Council the son of the Chairman of the Ethical Committee. The motion was agreed to.

Lieut.-Colonel ELLIOT then proposed the name of Major-General Sir William Babbie, V.C., to represent the Army Medical Service on the Council. This was carried.

R.A.M.C. Territorial Force.

Dr. F. TODD moved, as a reference to the Council, that a Territorial R.A.M.C. Subcommittee be formed. He said that at the present time the Territorial Force was undergoing reconstruction, and it would be well if through a special committee the Association drew up a scheme. Dr. A. C. FARQUHARSON, M.P., seconded.

Dr. FOTHERGILL said that a special subcommittee was to be appointed to consider this very matter, as stated in the supplementary report of Council. Dr. TODD said that he was the mover in that proposal.

It was resolved to proceed to the next business.

Junior Medical Practitioners and Army Medical Service.

Dr. FOTHERGILL moved:

That it be an instruction to the Council to inquire and report in what ways this Association could assist in keeping junior medical practitioners acquainted with Army Medical Service conditions and thus allow the medical profession to help more effectually in any national emergency which may arise; with power to take action in the meanwhile.

Lieut.-Colonel ELLIOT accepted the instruction with the omission of the word "junior," to which the mover agreed.

The remainder of the reports under the heading of "Naval and Military" were approved, and the Chairman of the Committee was heartily cheered as he left the dais.

MINISTRY OF HEALTH (*continued*).

Conditions for Extra Services.

The meeting then resumed consideration of paragraph 106 of M.25, coming to subparagraph (viii), which read:

(viii) That as it seems evident that there must on public grounds—questions of finance, authority, and the like—be delay in providing a residential institutional service, and in extending the whole service (including general practitioner service) to the dependants of insured persons or other classes of the community, these two matters should be considered at further conferences with a view to the conditions under which they should be provided being agreed upon.

Dr. J. A. MACDONALD said this simply recorded the Committee's opinion that there was no prospect of these two things being carried out in the near future, and therefore there was an opportunity for further discussions throughout the country.

Dr. C. BUTTAR proposed and Dr. E. H. M. STANCOMB seconded that the subsection should end at the word "conferences," and this Dr. Macdonald accepted.

Extension of Service to Dependants.

Dr. J. STEVENS (Edinburgh) moved the deletion of the part relating to extension of the service to dependants and others. Dr. BRACKENBURY replied that the purpose of the paragraph was to ask for further consideration, whereupon Dr. STEVENS said that his point was that the question of including the dependants of insured persons should never be considered at all.

Dr. Stevens's amendment was lost; as also was a rider by him urging that the proposed provision of expert services should be limited to the present class of insured persons.

Further Conferences.

Mr. BISHOP HARMAN considered that much of the objection to subparagraph (viii) arose from the manner in which it was drafted. This series of resolutions was part of a longer document, and, deprived of its setting, it bore an implication not justified on a reading of the whole document. He moved:

That no steps should be taken for the provision of residential institutional service and for extending any State provision for the dependants of insured persons or for other classes of the community without further conferences.

Sir BERTRAND DAWSON pointed out that a portion of this amendment was overruled by what the meeting had already passed. The meeting was asked to limit all these extensions of service to insured persons only. It decided that it would not do so, and the amendment in its second half went over the same ground as the previous motion.

Dr. MACDONALD said he was willing to accept this revision, and added, in reply to a suggestion by Dr. FOTHERGILL, that the whole of this matter would have to go to the Divisions in any case.

Dr. C. O. HAWTHORNE (Marylebone) preferred the earlier ruling that this subparagraph embodied a very important proposal. The importance dwelt in the suggestion that they should authorize certain people to go into conference, and that this should include discussion of the extension of medical service to two classes: first, the dependants of those already insured, and secondly, the indefinite class of "other persons." That might mean any group of persons, and therefore possibly the whole community. He wanted to limit the possibility of any extensions.

Dr. HEGGS seconded Mr. Bishop Harman's amendment, which was carried and became the substantive motion, and it was agreed that the words "and adequate opportunity being given for discussion by Divisions" be added at the end.

Dr. HAWTHORNE then moved that the motion should read as follows:

That no steps should be taken for the provision of residential institutional service or for extending any such provision for dependants of insured persons, or to persons requiring or in receipt of relief from any public authority, without further conferences and an adequate opportunity being given for discussion by Divisions.

Dr. BRACKENBURY said they could not prevent proposals being made to give State medical assistance to this or that person. An amendment of this kind would only tie their hands in general discussions that would certainly take place

among other people. They ought to be ready and willing to discuss any proposals.

Dr. FOTHERGILL objected that by the very fact of their discussing certain probabilities they, by inference, suggested to the Government they were not unfriendly to the suggestion. (Hear, hear.) The Association should say definitely whether they were or not. They should be willing to go to the Government and explain their attitude. If they went on with discussions without expressing an opinion they would be landed in an undignified position afterwards. They were always being turned down for want of logical tactics.

Dr. HAWTHORNE said that Dr. Brackenbury had complained that he was proposing to send him to conference and reduce him to silence. He must confess his imagination was not able to compass that picture. (Laughter.) On the contrary, he would not only send Dr. Brackenbury freely to conference, but he would provide him with the speech he was to make. (Laughter.)

Dr. Hawthorne's amendment was lost by a large majority, and the original resolution moved by Mr. Bishop Harman was adhered to.

Reference to Divisions.

The subparagraph (viii) as amended was then agreed to, as was a motion by Lieut. Colonel WALLACE HENRY instructing the Council, after any conferences had taken place, to refer the matters in this whole section to the Divisions, and, if necessary, to convene a Special Representative Meeting to take action on the decisions.

Income Limit.

Dr. FOTHERGILL then moved:

That in the opinion of the members of this Representative Body no State medical service should be provided for any person whose total income from all sources exceeds £250 a year, and who would not already be provided for under the National Health Insurance Act.

Dr. BUTTAR seconded. The motion embodied, he said, the most important matter that was before the meeting. It was the one question on which the Government wished to be informed of the opinion of the medical profession. Was the profession willing to face a service which was available for everybody, from the duke to the dustman, or did it wish to limit the service to certain classes of the community?

Dr. I. W. JOHNSON (Bury) proposed and Dr. D. A. SHEAHAN (Portsmouth) seconded an amendment making the figure £160 instead of £250.

Dr. BRACKENBURY said that he thought he knew what Dr. Fothergill and Dr. Buttar meant, and he was in absolute agreement with them if that was so, but the resolution as proposed could not achieve what they had in mind, because the matter was obscured by the ambiguous phrase "State medical service." If that meant a whole-time State clinical service, they all practically ruled that out, but if it meant that nobody with more than £250 a year was to have anything at all done for him by the State in a medical way it was an impossible proposition.

Dr. COODE ADAMS (Hampstead) said that the meeting had already decided to refer the matter to the Divisions, and was now prejudging the whole issue itself. The meeting was now asked to tell the Divisions what they were to say and what they were to think. Dr. Fothergill's resolution was inconsistent with what the meeting had already agreed to do.

The amendment to substitute an income limit of £160 for that of £250 was lost by 53 votes to 35.

Dr. BRACKENBURY here stated that Dr. Fothergill and he had agreed to the following wording:

That in the opinion of the members of this Representative Body no State medical general practitioner service should be provided for any person whose total income from all sources exceeds £250.

Sir BERTRAND DAWSON said that one of the dangers was that many people were misunderstanding what doctors meant by a State medical service. Dr. Fothergill's original resolution meant something totally different from what he had now substituted. His original resolution stated that there should be no State medical service for anyone with over £250 a year. But anything was a State medical service which was an extension of the present services. If they provided an x-ray equipment, that was a State medical service. Were they against the extension of

such facilities to members of the community other than the insured person or those who had less than £250 a year? That was the question they would be expected to answer in a very short while. Anything which extended their equipment was not only for the benefit of the public but for the benefit of the profession. What was wanted above everything else was the power of the general practitioner to do his own work in the best possible way and to his own satisfaction. They were up against certain scientific facts: diagnosis and treatment of disease were daily becoming more complex, daily becoming the result of collective rather than individual effort. As he conceived it, no reasonable limitation could be placed on the extension of equipment. What it meant was that the insured person would get such an advantage in the way of equipment that there would be a state of ever-increasing demand on the part of the outside public to come in, because otherwise they would be so much worse off than the insured community. They had to distinguish between medical service—that is, advice—and equipment. They wanted the State to provide the best possible equipment. Equipment got more and more expensive. Every time the service was extended there was addition to the cost of upkeep. Did it not follow that on the one hand they had an ever-increasing costliness of efficient medical service and, on the other, an ever-decreasing number of people who could afford to pay for it? If the middle-class man was to be kept among private patients there must be some endowment of equipment. The effect of Dr. Fothergill's original motion would be to give the best possible equipment to the insured person, while the man in reality not so well off—the private patient—was not to have recourse to such equipment. If the State provided the equipment it would be for the service of most of its citizens.

Dr. A. C. FARQUHARSON, M.P., did not think there was any urgency to come to a definite decision that day. From what he knew, there was quite sufficient time for the matter to go down to the Divisions and be thoroughly discussed. He knew, because he had put the question to Dr. Addison the other day, that the extension of the medical service could not take place without a definite Act of Parliament. The extension of medical services could not be proceeded with by other means. He was also informed that there was not the slightest likelihood of such a bill being presented to Parliament before the autumn session. It was not regarded by the Ministry of Health as an urgent matter. It could not be discussed until nearly Christmas. In his view that meeting was proceeding to a decision which was not entirely a professional decision, but perilously near a political one. It was not desirable or necessary that that Representative Body should say what section of the community should or should not have the benefits of medical advice and equipment. What they should say was that if the Government decided to extend medical service to every individual in the community, then that professional organization should have a voice in determining the mechanism of the service.

Dr. J. A. MACDONALD disagreed. It was their principle to keep general practitioner service away from Government hands as far as possible. He thought, too, that the Representative Meeting would not exceed its functions if it gave the Divisions a lead. The Divisions would benefit from an expression of opinion by that body, and he hoped, therefore, that Dr. Farquharson's advice would not be taken.

Lieut.-Colonel WALLACE HENRY (Leicester) supported the Chairman of Council. If the matter was not sent to the Divisions because it was a political rather than a professional question, it would simply drive men to other organizations which were less chary of the political point of view.

Dr. FOTHERGILL, replying, said that on the question of the middle class, hospital accommodation and full equipment should be provided for everybody whose income was over £250. The time was coming when the voluntary hospitals and their equipment would be kept for those people. He again submitted his motion in this form:

That in the opinion of the members of this Representative Body no State general practitioner medical service should be provided for any person whose total income from all sources exceeds £250 a year.

The motion was carried by a very large majority.

At this point the CHAIRMAN of the Committee asked that the remainder of his report should be agreed to, and this was formally passed.

Riders.

Dr. J. STEVENS (Edinburgh) moved the following riders, which were agreed to without discussion:

That when the doctor and patient are agreed that a second opinion is desirable, it should be obtainable by the doctor at once and directly, without reference to the referee.

That when a patient desires a second opinion and the doctor does not think it necessary, the question should be referred to the referee.

That in submitting a patient for a second opinion the doctor should furnish a statement of the case, as is done in private practice.

That cases in which practitioners, patients, or societies are alleged to have made excessive demands upon expert services should be investigated by medical committees chosen by the profession and not by a lay or mixed committee.

The Conference of Local Medical and Panel Committees.

The CHAIRMAN said that the next rider on the agenda: "That the extra services—for example, anaesthetics—should not come from the Insurance Pool," had been withdrawn. He understood the reason was that it was discussed at the Conference last week. A report of that Conference would appear in the JOURNAL. The two meetings had never before been held so near together.

Dr. BRACKENBURY said that the Representative Body had agreed last year that those things which were matters of interest to insurance practitioners only should be dealt with by the Conference of Local Medical and Panel Committees and need not come to the Representative Body. It had not been possible to get the minutes of the Conference circulated in time for that meeting, but they would be before the Association in the JOURNAL. He took it they did not want to go all over the ground covered by the Conference. (Hear, hear.) It was agreed, he said, that anaesthetics would have nothing whatever to do with the general practitioners' pool. (Hear, hear.)

Dr. TODD said he did not know when the resolution referred to by Dr. Brackenbury was passed. They did not want to hand over their powers to any other body. There was not the least doubt all these discussions and results were conveyed to certain quarters, which were on the alert to get all the information they could as to the attitude of the profession.

A rider by Dr. BUTTAR, objecting to the payment of fees to consultants or specialists out of money allocated to the payment of capitation fees to practitioners was agreed to.

Dr. J. A. MACDONALD explained, with regard to the Advisory Committee to be set up to advise the Ministry of Health, that the Association had at first supposed that they might nominate thirty names. The question was sent out to the Divisions, and from the returns the Ministry of Health Committee selected thirty. The Ministry, however, afterwards made it clear that that was more than any one body would be allowed to send in, and the Association was asked to send ten. In order to get the ten from the thirty the method of the transferable vote was employed. He could not say that the Committee was satisfied with the result. The ten names sent in were not entirely representative of the interests which should advise the Minister, and therefore it was decided to send in the other twenty also, so that the Minister might exercise his judgement.

The thirty names were:

Drs. T. Ridley Bailey, R. A. Bolam, J. W. Bone, H. B. Brackenbury, C. Butler, H. J. Cardale, J. W. Clegg, H. G. Cowie, Sir Bertrand Dawson, Drs. H. G. Dain, J. Divine, A. C. Farquharson, M.P., C. E. S. Flemming, E. R. Fothergill, P. V. Fry, A. Fulton, T. W. H. Garstang, R. Wallace Henry, G. E. Haslip, J. Kennish, A. Linnell, A. Lyndon, J. A. Macdonald, Frank Radcliffe, G. Soutar, C. F. Sydenham, Mark R. Taylor, E. B. Turner, J. P. Williams-Freeman, Sir T. Jenner Verrall.

In reply to Dr. LEWIS-LLOYD, the MEDICAL SECRETARY said that they had had a request from the Board of Health in Wales to send four names from Wales in order that the Board might select two. Four had been submitted by the Welsh Committee as follows:

Drs. Hugh Jones (Dolgelly), E. Lewis-Lloyd (Towyn), W. B. Thomas (Ystrad), and W. B. Crawford (Treasure) (Cardiff).

The remainder of the report of Council under the heading of "Ministry of Health" was approved.

PUBLIC HEALTH AND POOR LAW.

Dr. E. J. DOMVILLE, Chairman of the Public Health Committee, moved to increase the number of members elected to that Committee by the Representative Body and

the Council respectively to six each instead of four each, and this was agreed to. The reports under the heading "Public Health" were then approved. Dr. DOMVILLE accepted a rider by Buckinghamshire requesting the Council to institute an inquiry into the salaries paid to medical officers engaged in public service, with a view to their being raised to a standard to meet present expenditure conditions. He said that this had been covered by the action already taken. In reply to Lieut.-Colonel WALLACE HENRY, he said that the position of part-time school medical officers had also been considered.

Dr. FOTHERGILL moved that, in view of the reduction in the purchasing power of the sovereign by at least 33½ per cent., the Council should be instructed to reconsider the salaries and fees approved from time to time by the Representative Body for medical services, and to take all possible steps for proportionate adjustment. His resolution covered every kind of medical service, not merely public health.

The resolution was agreed to, after leaving out the reference to 33½ per cent.

NATIONAL INSURANCE.

Constitution of Committee.

Dr. BRACKENBURY, Chairman of the Insurance Acts Committee, moved the lengthy recommendation (SUPPLEMENT, May 3rd, p. 81) relating to the constitution of the Committee and the method of appointment of its twenty-eight elected members, making it possible for non-members of the Association to be returned as direct representatives of Panel Committees.

Dr. LEWYS-LLOYD (South Carnarvon and Merioneth) had amendments to ensure that Wales had its distinct representation both among the practitioners elected by the Representative Body and those selected from among the nominations of Local Medical and Panel Committees. Dr. BRACKENBURY said that in the nominations on a territorial basis it was difficult so to arrange the constituencies that Wales was a complete unit, but if a plan could be submitted it would have very sympathetic consideration. The Welsh amendments, not having had the requisite notice, were taken as references to the Council, and Dr. Brackenbury's motion was agreed to.

Friday, July 25th.

Remuneration of Rural Practitioners.

The Annual Representative Meeting resumed at 9.30 a.m., under the chairmanship of Dr. T. W. H. GARSTANG. The Chairman made an appeal for terseness in discussion in order that the heavy agenda might be completed if possible on that day. The report of Council under National Insurance was further considered. Dr. H. B. BRACKENBURY, Chairman of the Insurance Acts Committee, submitted the recommendation of the Council that the mileage or travelling fund should be calculated according to data which would aim at securing for rural practitioners an amount corresponding as nearly as possible with the excess cost (including time) of their necessary travelling over that of the urban practitioner. Since this motion was put on the agenda an assurance had been received from the Government that the principle of this calculation would be accepted. In reply to Dr. D. A. SHEAHAN, he said that the remuneration did not come out of the general pool; it was separate altogether. The recommendation was adopted.

Dr. E. R. FOTHERGILL raised other questions, which the CHAIRMAN of Representative Meetings said had been exhaustively dealt with by the Conference of Local Medical and Panel Committees the previous week, whereupon Dr. FOTHERGILL protested against what he took to be the suggestion that the Representative Meeting was governed by the proceedings of another body.

New Agreement for 1920.

Dr. J. STEVENS (Edinburgh and Leith) protested against the action of the Council in approaching the Commissioners with any policy that affected the interests of the profession before ascertaining the views of members on the question. He said that his motion was originally intended to apply to the bill lately before Parliament, but it also applied to the portions of the Council's report relating to the extension of the income limit. Short as the time was, that matter ought nevertheless to have been

referred to the Divisions. Many of them thought that even under the present conditions the limit of £160 was sufficiently high. It would have strengthened the Association had a firm attitude been taken upon this matter of an extended limit, even though the result had been unsuccessful.

Dr. BRACKENBURY said that on this matter he could state definitely that the Committee had not approached the Commissioners or the Ministry of Health with any policy. The Committee had been having discussions, the results of which were before the meeting and before the recent conference, and that policy, if authorized, would be put before the Ministry. That was all.

Dr. NOX SCOTT (Plymouth) wished that this last statement of Dr. Brackenbury's might be reported in prominent type in the JOURNAL, as it would put an end to the misunderstandings which were current. Dr. BRACKENBURY said he would be glad if the statement received all possible prominence. The Committee had been accused of doing things prematurely, but it had done nothing yet in this matter of presenting policy to the Government.

The amendment by Edinburgh and Leith was lost.

Remuneration of Insurance Practitioners.

Dr. D. A. SHEAHAN (Portsmouth) moved:

That we repudiate the policy of accepting quasi-financial doles in satisfaction of the just financial claims of the profession; that it is unjust to acknowledge and accept unequal remuneration for similar work done; and that we fail to see why the policy of the Association of equality of payment to male and female practitioners for the performance of equal duties should not apply also to panel medical officers.

The mover said that last year, and again this year, of two practitioners, who might be neighbours, one would be paid 8s. or 8s. 6d. for each panel patient, and the other 7s. or 7s. 6d. The distribution of a 30 per cent. "dole" to one man and a 50 per cent. to another was unfair. Insurance practitioners should receive payment on a uniform basis.

Dr. A. FULTON (Council) said that in the civil service, which was taken as offering a parallel case, the amount of remuneration was not based on the amount of work done by the individual, but largely upon the length of his service; in the case of panel practitioners the degree of responsibility corresponded directly with the size of the panel. Those of them who had large panels, again, had to pay a great deal more for assistants, whose salaries had risen about 80 per cent. No consideration was given to these points by the Insurance Commissioners or the Insurance Acts Committee.

Dr. BRACKENBURY said that as from the beginning of the year 1920, if the new arrangements went through, the point in this motion would have no applicability, for there would then be no question of differential percentages. They were only dealing with a temporary arrangement in 1919, following upon a similar arrangement in 1918; none of them pretended to like it. He then gave the information regarding the all-round increase of 15 per cent., and the additional 15 per cent. for those with incomes under £500 and the additional 5 per cent. for those with incomes of between £500 and £1,200, which he had given to the Conference the previous week (SUPPLEMENT, July 26th, p. 31). The acceptance of this grant or "war bonus," he said, in no way invalidated their demand for a permanently increased remuneration.

The Portsmouth amendment was lost.

National Insurance Defence Trust.

Dr. FOTHERGILL moved an amendment disapproving of the proposed National Insurance Defence Trust and referring it back for further consideration. In 1913, he said, the Council was instructed to take steps for starting a defence fund for the profession, and at the Aberdeen Meeting in 1914 certain resolutions were adopted. Since 1914 the committee had not been called together to proceed with the fund, but the Panel Committees in their Conference held that they ought to have a fund for the same purpose and a scheme was elaborated for their use. He believed the scheme had never been before the Divisions for their approval, and therefore, except for a reference in the report of Council, the Representative Body officially knew nothing about it. He urged the need for a fund for the whole profession, and one which, according to legal opinion given in 1914, must be entirely separate from the Association. The fund at present under con-

sideration was controlled by the Insurance Acts Committee, which was a part of the Association, and thereby involved the Association in liability. The policy of the fund would be shaped by the Panel Committees in their Conference, and the Association as a whole would have no voice. He objected to the fund being in the name of the Insurance Acts Committee, which, he said, did not now consider that it took its mandate from the Representative Body or the Council of the British Medical Association.

Mr. BISHOP HARMAN reminded the Representatives of the reason for the establishment of the original fund, at a time when the profession was stirred by the possibility that a large section of it would be put under the harrow by the Government. His point was that it was very unsatisfactory to use a fund to defend men who were on the panel, which fund was originally started to help men who would not go on the panel.

Dr. BRACKENBURY described Dr. Fothergill's speech as most mischievous. Dr. Fothergill had been in a minority of one on this matter in the Insurance Acts Committee, and in a very small minority on the Council. The proposal for a National Insurance Defence Trust was adopted by the Council by an overwhelming majority. At every stage from beginning to end the highest legal advice had been sought. They were quite sure the fund would be effective if properly supported. Moreover, it was a matter of most urgent necessity. Without a big fund in hand by the autumn of this year the position of the profession in relation to the Government might be seriously jeopardized. The Council had commended the fund to the profession and particularly to the Panel Committees. Replies had been received so far from seventy committees heartily supporting the fund, and in some cases sending subscriptions; only two Panel Committees had replied opposing the fund. He hoped the replies from the remaining 120 or so, when forthcoming, would be favourable in that proportion. There was no parallel between the fund of which Dr. Fothergill had spoken and the fund now under consideration. He was quite prepared to admit that in the future the lines of demarcation in the matter of national insurance and State health would be much less marked than they were now. With extra services coming in under the Ministry of Health it would be more and more difficult to say that one question affected insurance practice and another did not. He could quite conceive of a position in the future in which it might be well to alter the name of the fund by leaving out the word "Insurance" and making it "The National Medical Defence Trust." That could not be done now because the money was wanted urgently for a particular purpose, agreed upon on the advice of their solicitor. He hoped Dr. Fothergill would do nothing to destroy the harmony which existed between this and other bodies.

In reply to Lieut.-Colonel WALLACE HENRY, Dr. BRACKENBURY said it was not a British Medical Association fund in the ordinary acceptance of the word. The Representative Body appointed ten out of the thirty-one trustees, and the matter had been before the Divisions, for it was in the original report of Council.

The SOLICITOR to the ASSOCIATION, on being asked to give an opinion on the points at issue, said that the opinion given in 1914, and quoted by Dr. Fothergill, was not given in reference to this matter at all, although the principles on which that opinion was based might apply here also. The present matter was first submitted to him in August of last year. Certain detailed questions were put to him upon which his opinion was desired, with a view to formulating the lines upon which this trust should run. His answer was given in detail to those questions, and was very much upon the lines that Dr. Fothergill had stated. He had never heard it suggested that this fund should be mixed up with the assets of the Association. He had always enjoined upon those responsible for these matters that any funds raised in the nature of a trust must be kept wholly and distinctly apart from the Association's assets. Among the detailed answers he had given, one was directed to that very point—namely, that as the moneys came in, prudent provision should be made for their investment and for conserving the benefit of the interest that might arise from them in the names of certain people as a separate entity. The most able opinions of the Bar had been taken on this general question: Could the Association through any of its officers or constituent bodies become trustees for funds which were raised? They had been told that this

was possible, but that the one essential of a trustee in this matter was to avoid mixing up the trust money with moneys which belonged to himself personally. Many of the speaker's own profession had ceased to be on the rolls as a result of their failure in this fundamental respect. (Laughter.) In this case he took it that the members of the Insurance Acts Committee would be individual trustees of this fund. It would not be a fund of the British Medical Association; it would be a fund stamped with the impress of a trust, and held to be applied within the terms of that trust in the document in which those terms were set out.

Dr. H. G. DAIN (Birmingham) described the amendment as mischievous in character in that it struck at the success of a fund on which the Insurance Acts Committee was depending in order to secure improved conditions of service this coming year.

Dr. S. T. LORD (Rochdale) said that Dr. Brackenbury had suggested the possibility of some further extension of this fund to other purposes. Was it quite legal to collect money now for a specific purpose and then alter the basis of its distribution?

Dr. T. F. KEENAN (City) supported the amendment.

Dr. FOTHERGILL said he had no wish to defeat the fund or to have the money returned as Dr. Orton had suggested. The fund was in being. All he wanted to do was to bring 1914 up to date. The Council was instructed five years ago to draft a fund on certain principles; the motion was carried by a two-thirds majority. The fund as now drafted did not carry out the mandate of the Representative Body. Before it could be adopted it would have to be enlarged and its name and organization changed. He suggested that the Council should proceed with an expanded fund, and should then see if the present fund could not be incorporated in the larger undertaking, the latter meanwhile having the approval of the meeting as being the fund it had in mind five years ago.

Dr. Fothergill's amendment was then put to the meeting and lost; there voted:

In favour	...	...	...	18
Against	...	...	...	69

Capitation Fee.

The CHAIRMAN formally moved, on behalf of Mid-Cheshire, "That the remuneration of panel practitioners be not less than 12s. 6d. per head per patient." Dr. BRACKENBURY suggested that the mention of specific sums at this moment would do more harm than good, and it was resolved to proceed to the next business. A motion by Dr. BLAIR, that the Association forthwith take action to secure a material increase in the capitation fee, was agreed to.

Insurance Income Limit.

A group of amendments on this subject were on the agenda, but in view of the fact that the bill had passed the third reading in the House of Commons, it was suggested from the platform that they might be withdrawn. Dr. PRYTHEN (North Carnarvon) thought that a protest might, nevertheless, be made. The CHAIRMAN of COUNCIL said that the Council resolved to enter no protest against raising the income limit for persons already insured, but to protest against other persons who had not been insured coming in under the raised limit. Dr. BRACKENBURY said that the Committee had done its best to carry out the policy which had been formulated. It had got an amendment proposed and very actively pressed in the House of Commons by Dr. Farquharson, but this was not carried.

Dr. COODE ADAMS (Hampstead) held that the passing of such amendments would weaken the position of the profession. By raising the income limit the Government had not altered in the least the principles upon which the Act was founded and which had been accepted by the Association. If it was urged that, the changed economic conditions notwithstanding, there should be no corresponding change in the insurance arrangements, how could practitioners use the same economic argument when they came to demand an increase of capitation fee?

An amendment protesting strongly against the proposed increase of income limit for insured persons was lost by a considerable majority.

New Agreement for 1920.

Dr. J. STEVENS (Edinburgh and Leith) moved an amendment protesting against the whole tenor of the report of

the Insurance Acts Committee on the revision of conditions of service (M. 25) in that it failed to take account of the strong desire of at least a large section of the profession to restrict as far as possible the range of contract practice. To get contract practice limited as much as might be, he said, had always been the unwritten, if not the written, policy of the Association. There was no evidence that the profession generally desired development along the lines indicated in the report.

Dr. C. P. LANKESTER (Guildford) supported the amendment, and referred in particular to paragraph 105 of document M. 25, which suggested that "a complete public provision of every kind of medical service for the whole community would probably not be unwelcome." He hoped the Insurance Acts Committee would recognize the mass of opinion against State service.

Dr. BRACKENBURY replied that the Committee was still unanimously opposed to a whole-time State medical service, and had directed all its efforts to avoiding that solution of the question. If the meeting would pass, as the recent Panel Conference did, a resolution against such a State medical service no one would be better pleased than himself.

The amendment was rejected, 38 voting for it, and 43 against.

A further amendment by Dr. STEVENS declaring that resolutions bearing on part of the Committee's report and the memorandum of the Insurance Commissioners ought not to be dealt with only by a special conference of Local Medical and Panel Committees, but by a body representing the whole profession, was agreed to.

Mr. E. B. TURNER (Kensington) pointed out that in all these conferences with regard to increased services there was not one representative of those practitioners who were doing industrial work but were not on the panel. The CHAIRMAN OF COUNCIL said he would see to it, as far as he could, that non-panel practitioners were properly represented. In reply to a protest by Dr. D. F. TODD against the holding of the Conference and the Representative Meeting so close together that a report of the former was not available, Dr. BRACKENBURY said that the situation which compelled the holding of the Special Conference in July was not likely to recur.

It was agreed, without discussion, that in any contract of service under the altered conditions the forms should be sent to the Divisions in sufficient time to allow of discussion, especially with regard to extra services.

Medical Referees under the Insurance Act.

Motions by Edinburgh and Leith that medical referees should be appointed by the Commissioners, and should be practitioners with a wide experience of general practice, were agreed to; a further motion from the same constituency was that the duties of a medical referee should be restricted to checking claims for incapacity for work and to deciding whether an expert opinion was desirable.

Dr. BRACKENBURY said that the Representative Body in 1914 and subsequently had affirmed that the medical referee should be the adviser to the "local clinical health authority." Under the Association's scheme for a Ministry of Health it was proposed that there should be a chief administrative officer to the local authority, and under him two medical officers of equal status, one representing the clinical and the other the sanitary side. The clinical officer, whom they had hitherto known by the term "medical referee," was, as adviser, to be brought into intimate contact with the practitioners of the locality, and to confine his work, as suggested, ruled him out from acting as official expert adviser to the clinical health authority.

Dr. THIN, the mover of the amendment, said that if they could be assured that the referee was not to interfere between doctor and patient his Division would waive the amendment. Dr. BRACKENBURY gave that assurance so far as he understood the intention of those responsible, and the amendment was lost.

Dr. C. E. S. FLEMMING (Trowbridge) moved that a fee of one guinea should be paid to referees for each examination and report, with mileage at the rate of a shilling a mile each way over two miles. The referees whose case he had in mind, he said, were the men appointed from time to time by the approved societies, and the fees often paid at present were quite ridiculous. Dr. BRACKENBURY said that the Representative Body had previously tried to

secure a fee of half a guinea and had failed. Moreover, under the new arrangements, if they matured, the referees would be appointed by the Commissioners and paid whole-time salaries. Dr. FLEMMING withdrew his amendment.

The Question of Records.

The CHAIRMAN moved on behalf of Mid-Cheshire a rider protesting against the reimposition of records and other clerical work without increased remuneration.

Dr. BRACKENBURY said that the idea was that they should never go back to the old records; that the exact form of the new records should be settled by an expert scientific committee, and that it should be a continuous medical history of the individual.

Dr. TODD said that Dr. Brackenbury could know little of the record system in the army if he thought that any such scheme was practical and workable.

The amendment was withdrawn.

Attendance at Confinements.

A series of riders were accepted which declared that it should be optional for any doctor working under the Insurance Act to decline attendance on midwifery cases.

Preventive Treatment.

Dr. PRYTHERCH (North Carnarvon) moved that the extra services indicated in paragraph 63 of M. 25 under the heading of "Preventive Treatment" should not be included as to payment or capitation. Dr. BRACKENBURY reported the views of the recent Conference on this point, and the rider was lost.

Relinquishment of Medical for other Benefit.

Dr. J. STEVENS (Edinburgh and Leith) moved:

That insured persons should have the right to relinquish their medical benefit in exchange for some other form of benefit as nearly as possible financially equivalent to it.

He said that a large proportion of insured persons would much prefer to return to the private arrangements they had before they were brought into insurance. He added that in ten states in America an attempt had been made to introduce a national insurance Act and in every one of them it was thrown out.

Dr. C. O. HAWTHORNE (Marylebone) urged that the proposal involved a gross, material, and commercial view of the value of medical benefit. It suggested that a certain amount of medical benefit might be exchanged for some other commodity, like a certain number of pounds of tea. That such a proposal should emanate from the modern Athens surprised him. Perhaps the hands were the hands of Edinburgh, but the voice was the voice of Leith.

Dr. NOY SCOTT (Plymouth) supported the motion. He knew how difficult it was for the insured person to make voluntary arrangements. If an insured person could by some means obtain another form of medical benefit it would do much to popularize insurance among the people.

Dr. J. D'EWART (Manchester) also supported the motion, especially in view of the raised income limit. Although the original Act permitted the insured person to obtain some other form of benefit from his own private practitioner, the Commissioners by regulation practically made that impossible. In Manchester about one person in every 40,000 was allowed to make his own arrangements. The greater number of complaints that came before the Insurance Committee arose from charging fees to persons who wished to be treated apart from the Insurance Act, but who, when they got the bill, forgot about the previous arrangement and desired to have the treatment as part of the benefit. If the insured had greater freedom to make his own arrangements there would be far fewer complaints.

Dr. W. E. THOMAS (North Glamorgan) thought the rider most dangerous from the experience they had had in South Wales of the dangers of contracting out.

Dr. E. E. BRIERLEY (Cardiff) wished to move that the time had come to insist that insured persons should be allowed to contract out; but this gave place to a similar amendment by

Dr. J. DON (Hexham, Newcastle), who moved:

That the Insurance Acts Committee be urged to use its influence to secure that insured persons should have better facilities for "making their own arrangements."

Dr. DON said that this system had to a certain extent, as a result of persistent effort, been adopted in Newcastle, and

he could assure the meeting from personal experience that it was a satisfactory system. It allowed the old relationships between doctor and patient to exist in a way that panel practice did not altogether accomplish. One objection to the system, however, was the form of agreement between the Insurance Committee and the practitioners in these cases. A great many totally unnecessary questions were asked of the insured person, and a less formidable document should be substituted.

Major W. J. GREER (Deputy Chairman, Representative Meetings) thought the proposition dangerous. If five hundred men contracted out, they would immediately form a cheap club and easily get a doctor to work it. Dr. E. LEWIS-LOYD expressed agreement.

Dr. G. E. HASLIP (Westminster) thought that the obstacles in the way of contracting out were most unfair and unjust. Many in London would not take the trouble to make this application, and consequently had no panel practitioner, and simply subscribed for the benefit of the Government. He understood the danger of combination, to which South Wales representatives particularly had referred, but combination by insured persons could be met by combination of doctors. ("No.") The case would be met by professional unity.

Dr. J. ORTON (Coventry) referred to local experience, which showed the difficulty of keeping out men who would come in to take appointments, whatever the remuneration.

Dr. DON'S amendment was lost, whereupon Dr. I. W. JOHNSON (Bury) moved as a compromise:

That non-manual workers who are insured persons should be allowed to make their own arrangements.

Dr. BRACKENBURY said that the term "non-manual workers" was open to misunderstanding. He had thought that it meant mainly clerks. But it included such people as ticket examiners and conductors on public vehicles, and these, on slightly varying the nature of their employment, became at any time temporarily manual workers.

The CHAIRMAN OF COUNCIL asked whether they could imagine the Commissioners granting this concession to one body of men and not to another.

Dr. C. H. PANTING (South-West Essex) did not think that all these applications came from the patients; many were encouraged by a certain type of panel doctor. In his own county there was a tendency on the part of a certain type of panel practitioner to tell patients that they could not get the same treatment under the panel system as they would get by paying for it. The patients were told that if they contracted out they would get better treatment. That spirit must not be encouraged.

Dr. JOHNSON'S amendment was lost, and the original rider by Edinburgh and Leith was then put to the meeting and lost also.

Before the discussion on National Insurance concluded Dr. FOTHERGILL asked for a report of the decisions of the Conference of Local Medical and Panel Committees on the extension of midwifery services and the inclusion of disabled service men and other "damaged lives" under the capitation grant. Dr. BRACKENBURY, in reply to the first question, read the amended paragraph 61 (BRITISH MEDICAL JOURNAL SUPPLEMENT, July 26th, p. 30), which Dr. FOTHERGILL said was satisfactory. He also gave the decisions of the Conference on the second point. The reports of Council under National Insurance were then approved.

CENTRAL MEDICAL WAR COMMITTEE.

Sir JENNER VERRALL moved approval of the annual report of the Council under Central Medical War Committee. At previous Representative Meetings during the war period he was able to claim that the matters arising under this head were amongst the most important, if not actually the most important, with which the Representative Body had to deal. But with the end of the war there had come, of course, an end to the Committee's work. Two days after the armistice tribunal business was suspended, and later on an intimation was received that the Ministry of National Service was coming to an end so far as it related to the matters with which the Committee had to do. It became evident also, with the adoption by the Government of a particular system of demobilization, that the Committee could not continue its work of selecting the men who, on the ground of personal and local considerations, should be demobilized. The Committee continued as far as it could, attending to questions which were

referred to it and keeping an eye on the situation, and the Committee of Reference took the same course. An amendment was on the agenda with regard to minimum fees for members of pensions boards, and it might be well for him to say that the figure the Committee suggested, of 1½ guineas per session for a maximum of four sessions per week, and one guinea per additional session if the number in one week exceeded four, had not yet received an answer from the Ministry in spite of many applications. The matter so far as the Committee was concerned rested in an unfinished condition. As to the scheme for the disposal of surplus medical and hospital material as proposed in the report, this had not in the end been carried out, the authorities preferring to put all the goods on the open market. As to the work of the Committee generally, he claimed that the letter of thanks from Sir Auckland Geddes received in March last was no more than it had fairly earned. He felt he must congratulate the Association on having carried out a scheme which could only have been initiated by a body constituted as was the British Medical Association, and a scheme which was accepted by the Government. There was no doubt that the Government might have set up an equally effective scheme, but the Government acted reasonably and wisely in accepting the arrangement of the Association, and he thought that the work all through, in spite of the difficulties naturally arising as between departments and committees such as theirs, was altogether satisfactory. With quite negligible exceptions, the decisions of the Committee, acting as a tribunal—exceedingly difficult and delicate decisions—were accepted by the appellants without question. The report mentioned the good work of Dr. C. Buttar and Dr. T. W. Shore, chairman of the Executive and the Local Arrangements Sub-committees respectively, but in addition he wanted to mention Mr. E. B. TURNER, one of the vice-chairmen of the Committee, who devoted an enormous amount of time to the Committee's work all the way through, and acted as chairman of a section of the tribunal. He wished to say how much the Committee was indebted to Mr. Turner. (Applause.)

Mr. E. B. TURNER said it was just four years ago that he proposed the Committee at that meeting, and the Representative Body was to be congratulated in that, in starting this Committee, it performed a piece of work which redounded so greatly to the prestige and credit of the Association. The Committee was backed up by the Local Medical War Committees all over the kingdom. To himself it had become increasingly apparent what a sportsmanlike profession the medical profession was; the men fought their appeals like gentlemen, and took the decisions like sportsmen. He thought the Representative Meeting should in some way record its congratulation to the whole profession for the patriotic way in which it had responded to the call of the country. (Applause.)

Fees for Pensions Boards.

Dr. J. F. FALCONER (Cleveland) moved:

That this meeting is of opinion that the minimum fee for each member of a Pensions Board should be two guineas for a session not exceeding two and a half hours.

His Division was satisfied with what the British Medical Association proposed, but not with what the Government had done.

The CHAIRMAN OF COUNCIL supported the proposition. The payment of members of these medical boards was altogether inadequate from the start, in view of the responsible nature and the difficulty of their work.

Dr. W. F. DEARDEN (Manchester) also spoke in support. Hitherto, the view of the Central Medical War Committee had been that this was one way in which civilian doctors could do work of national importance, and that the remuneration must not be altogether regarded as payment for work done. But now the policy with regard to pensions boards was that civil practitioners who had been doing the work should give way to men who had been serving overseas, and in Manchester an almost complete replacement had been made in that direction. These returned practitioners, now serving on the boards, had done their work of national importance by serving in the army, and now they were back again, finding their practices impoverished to a certain extent, in spite of the efforts of their colleagues, and were doing this work on pensions boards as a means of providing themselves with ready

money until their practices could be pulled together. In view of these changed circumstances, and of the fact that the plea regarding work of national importance could no longer be urged, he thought two guineas a session was little enough to pay to such men.

Sir JENNER VERRALL pointed out that they had not even yet secured the acceptance of the fee of 1½ guineas which the Committee proposed, but at the same time Dr. Dearden's argument was perfectly sound.

Dr. A. FULTON remarked that if this scale of two guineas a session—he did not think it too much—were adopted, it meant that in a board holding ten or eleven sessions a week each member would be making £1,200 a year, whereas the Ministry of Pensions was beset by applicants willing to take on work at from £600 to £700 a year.

The Cleveland amendment was carried, with the addition—proposed by Dr. C. A. STIDSTON (South Staffs)—that the number of pensioners examined at one session should not exceed eight.

Local Medical War Committees.

Lieut.-Colonel WALLACE HENRY (Leicester) said that the Local Medical War Committees were still being made use of by the Ministry of Pensions, and the MEDICAL SECRETARY, on being appealed to, confirmed this.

Sir JENNER VERRALL said that the Central Medical War Committee would cease with the meeting that day, although, the Military Service Acts remaining in force, the Committee could conceivably be called together again to act as a tribunal. The Local Medical War Committees might, of course, be continued without the Central Committee, but that seemed hardly likely. The Naval and Military Committee would deal with the military side of any question arising, and there was the Medico-Political Committee to take up purely civil questions.

Dr. J. TISDALL (Liverpool) and Dr. BARTON (Blackpool) said that their Local Medical War Committees were constantly having to deal with inquiries. Dr. W. F. DEARDEN thought that the committees might be allowed gradually to fulfil their obligations without being hampered by a definite resolution terminating their existence.

No resolution on this subject was taken, and the report of Council was approved.

ORGANIZATION COMMITTEE.

Mr. RUSSELL COOMBE (Chairman of the Organization Committee) presented a recommendation of the Council to adopt a standing order empowering the Council to prescribe the grouping of the Branches and Divisions for the purpose of election of members of Council, provided that the Council should not, without the consent of the Representative Body, make any change in the numbers of members of Council at present allotted to parts of the United Kingdom. This was agreed to.

The Profession and Trade Unionism.

Dr. E. K. LE FLEMING (Bournemouth) moved:

That, although the Council of the Association should be given every opportunity of circulating its reasons against the organizing of the profession on trade union lines, it should not endeavour to prevent such members of the Association as may not be convinced by the arguments used from joining any other body which is attempting to combine the profession on such lines, and should encourage conferences with all bodies, representing members of the profession, to secure joint action to obtain satisfactory conditions of practice.

At first sight, he said, it might be imagined that this amendment opened up the whole question of trade unionism and the position of the British Medical Association and the Medico-Political Union. He hoped the chairman would rule that a discussion of that sort did not arise on the motion. The Bournemouth Division was a most loyal Division of the Association, and the only object of the amendment was to secure a better organization of the profession in general. Some believed in trade unionism, others did not, but none of them could be unaware that a certain number of men within the ranks of the Association did believe in a trade union organization for the profession. The policy of his Division was not to repress those who believed in trade unionism, but to endeavour to co-operate with them. Personally he did not believe in medical trade unionism, but he thought they would get on better if they tried to join forces with those who did. That was the purport of the resolution. The

object to aim at was a single expression of their views as a profession, and that could only come about by co-operation on the lines indicated. He believed that if the Association would adopt such a course it would only be a matter of time before the parent Association would swallow up most of the others.

Mr. BISHOP HARMAN remarked that the wording of the amendment suggested that there had been attempts on the part of the Council to prevent members joining other bodies.

Dr. LE FLEMING said that they were told by Dr. Cox in Bournemouth that if a member of the Association joined a trade union organization his action was such as to militate against the Association, and that in towns where trade union propaganda had been successful the activities of the Division of the Association had correspondingly suffered.

Dr. E. R. FOTHERGILL argued that if there were two associations or unions representing the interests of the whole profession in any district each must be defeating the ends of the other.

Dr. C. H. PANTING (S.-W. Essex) held that the Association was perfectly right in defending itself against attack. The Association was quite willing to co-operate with loyal bodies, but it was otherwise with a body which issued pamphlets containing nothing but a series of "inexactitudes." (Laughter.) The particular body which had been attacking the Association was bitten by the virus of trade unionism, and in his own Division it had caught a few members by specious arguments, and especially by the idea that there was a short cut to the millennium. Perhaps after all the best thing to do would be to leave that body alone; nevertheless, he thought the British Medical Association was quite justified in doing all it could to point out the fallacies underlying the propaganda of that organization.

Dr. D. A. SHEAHAN (Portsmouth) said that personally he was not of opinion that trade unionism could do very much for the profession, but a large number of medical men thought it could. In the JOURNAL for the current week there was an article on trade unionism, doubtless intended to anticipate that discussion; but, after all, if the profession was to fight the Government, the bed-rock position was that it must be prepared to cease work, and if there was any trade union organization which had the power to solidify opposition to the Government in such a case, those of their number who thought it well to be armed with such power ought not to be punished.

Dr. COODE ADAMS (Hampstead) said that the task ahead was to organize the whole profession. Was there any single body, trade union or otherwise, which had been organized out of material all of one pattern? On the contrary, every great trade union was an association of smaller unions which owed their origin to differences of opinions and interest within the area they covered. The danger to the profession at the present time was in the number of men who remained outside all organizations. (Hear, hear.) It was never known how such men were going to stand in a crisis, or to what policy they would give adherence. He himself belonged both to the Association and to the other body which figured in that discussion, and he was one of those responsible for the formation of the latter. The thing to be done was to gather into association the men who were at loose ends. There were men in that room who did not believe in trade unionism, and who would not join a trade union in any circumstances. But why should they try to prevent men who thought differently from joining another body? There was a class of men who believed that if they went into political warfare they must be equipped with political weapons. It had been abundantly proved that if trade unionism did not avail to protect the funds of any political society, nothing else would avail to do so.

Mr. BISHOP HARMAN said that the Association had had experience of conference with such bodies as those suggested. It had gently, even tenderly, tried to explore any common ground between the bodies, and it discovered that the particular body to which implied reference had been made was absolutely irreconcilable to any form of argument.

Lieut.-Colonel R. A. BOLAM said that the resolution suggested that the British Medical Association was intolerant of any other associations which were working for the weal of the profession. Those who had followed the Association's work, as set out in its records, would know

that they had been conferring with other bodies quite recently. But they found that the Association was expected to give all and receive nothing. He went to one of those conferences at which it was understood amongst them that there should be an end to the warfare which had been going on upon paper. Yet at that moment there was in the post a wretched document from the same quarter attacking the Association. It was out of the question to deal with people like that. (Applause.) There might be much good in trade unions, but the good would not be achieved if those running them acted on lines such as that. Only two things would enable the profession as a section of the community to get what it wanted. One was that practically all its members should be organized, and when in an organization should stay there, and the other—a subsidiary thing—was that the profession should pay for the work it wanted done. The procedure of bargaining with the Government and with the sections of the community naturally took away from the aloofness of the professional standard, but he did think they should not descend to use the weapons which were associated with trade unionism. The more the profession could do to maintain its dignity the better. The status of the profession could be raised without resort to the trade union weapon, but unity was a necessary condition.

Dr. C. P. LANKESTER (Guildford) opposed the amendment. Were they to try and co-operate with the men who issued the document already characterized? They were tired of receiving letters week after week telling them that it was their duty to join a trade union.

Dr. E. H. M. STANCOMB (Southampton) said that to most of those present the idea of trade unionism in the profession was new and somewhat repulsive. He had himself gone through that stage. There was no need for him to point out that trade union power was real power, however much the methods by which it was used might be deprecated. There was no reason why the profession should not adopt a constitutional method of action which the Government recognized. Trade unionism was indeed the only thing which could bring influence to bear upon a recalcitrant Government. In the present industrial struggles, however deplorable the methods might seem to be, it would be found that the difficulties would be settled solely as a result of the courage of the trade unionists in adopting the only method by which they could gain their ends. If there was anything in legal, constitutional trade union activity, if the law gave some protection to a trade union in charges of libel and conspiracy, if it protected the central funds of an organization, if the knowledge that there was power behind them put more strength into their arm and more hope into their heart, then he put it to them that it was not wise or right to throw away any such opportunity. He had always worked for unity himself, and he was certain it could be brought about. If the British Medical Association decided to take strong action it would have no more loyal supporters than the members of this other organization to which he also belonged. That organization had no wish to injure the British Medical Association, to damage its valuable JOURNAL, to diminish its membership or its funds. All that he urged was that the protection afforded by trade unionism would be a great advantage, and he hoped that no feeling on the matter, no tactics adopted on the one side or the other at this juncture, would lead to that advantage being thrown away.

The CHAIRMAN of COUNCIL complimented Dr. Stancomb on his admirable speech; he was a perfect master in the advocacy of a lost cause. But he surely went too far in quoting the action of trade unions as a means of obtaining the objects of their members. The speaker's own reading of the newspapers suggested to him that the members of trade unions ignored their own executives. One statement which Dr. Stancomb made he wanted to contradict flatly. Dr. Stancomb had said that there had been ill speech of the Association only on one point. That was not true. There was scarcely a single line of activity in which the body Dr. Stancomb was connected with had not vilified the Association. As to getting what the profession wanted, if the British Medical Association could not get it, he did not believe a trade union could. The British Medical Association could not see its way to sink the whole of its principles for the purpose of this kind of co-operation. There was a certain line beyond which it could not go.

Dr. STANCOMB asked Dr. Gurslang, who had been

present at the conferences in question, whether he endorsed Dr. Macdonald's statement as to the attitude of the Medico-Political Union.

The CHAIRMAN: I am not sure as to what you refer. Everything that you said, Dr. Stancomb, was beautiful; everything that Dr. Weply said to us was exactly as Dr. Macdonald has characterized it.

Dr. LE FLEMING, replying on the discussion, said that much of it had been irrelevant to his amendment. His Division was more concerned with the organization of every member of the profession than with anything else, and they believed, whether trade unionism was accepted or not, that the profession would be better combined if the Association worked with it rather than against it.

A close count was made, and there voted:

For the Bournemouth amendment ...	17
Against ...	75

Dr. LE FLEMING moved a subsequent amendment urging a united appeal to practitioners who belonged to no organization by all the societies representing in any way professional interests. This amendment was also lost by a very large majority.

Visitation of Divisions and Branches.

Dr. J. F. FALCONER (Cleveland) moved a resolution, which was agreed to in a slightly amended form, referring it to the Council to consider the expediency of securing closer touch and more personal interchange of views between head quarters and Divisions and between individual Branches and Divisions, on all matters affecting the policy of the Association. He referred to a most successful meeting at Cleveland at which the Medical Secretary had spoken, and urged that more could be done by conference than by any amount of correspondence and circularizing.

Mr. RUSSELL COOMBE said that the speaker was only expressing what the Organization Committee had been striving after for years, but had been prevented from doing by depletion of staff owing to the war.

Subdivisions.

Dr. I. W. JOHNSON (Bury) proposed that any Division which included two or more townships should form, subject to the veto of the Council, one or more subdivisions, each with its honorary secretary. In a Division like his own, with two townships about fifteen miles apart, it was difficult to knit up the organization over the whole of the area.

The rider was withdrawn after the CHAIRMAN of the Organization Committee had drawn the proposer's attention to by-law 21, and also to the desirability of having one secretary for an entire Division.

Representation of Wales on the Council.

Dr. E. LEWIS-LOYD (South Carnarvon and Merioneth) had a motion amending the by-laws so as to add to the Council four representatives specifically for Wales under by-law 26 (a), and two under by-law 46 (c), instead of including the Welsh with the English representation as hitherto. He did not propose to reduce the representation of other parts of the kingdom; hence his proposal entailed an increase in the membership of the Council. In proportion to its medical population, Wales had the largest number of members in the British Medical Association. Only one practitioner in his own Division was not a member. In Scotland there was one member of Council for every 314 members; in Ireland, one for every 106. In Wales they had 867 members, and only one representative on the Council. It was flattering to their national pride, but they were reluctant to believe that one Welshman was equal to more than two Scotsmen or eight Irishmen.

Dr. TOON was against an increase in the total number of members of the Council, and suggested that the Council instruct the Organization Committee to take the whole question into consideration.

Dr. CRAWFORD TREASURE, the one Welsh representative on the Council, referred to the distinction between North and South Wales—the one practically all agricultural, the other industrial.

Dr. LEWIS-LOYD accepted a suggestion from the Chairman of Council that the matter be left to the Organization Committee. It was also agreed to change the phrase "Wales and Monmouthshire" to "Wales, including Monmouthshire." Dr. Lewis-Lloyd had a further motion to

ensure that no Division or Branch would consist partly of members resident in England and partly of members resident in Wales. The CHAIRMAN OF COUNCIL said that alterations in the boundaries depended to a great extent upon local initiative. Mr. RUSSELL COOMBE agreed to the reference of this also, through the Council, to the Organization Committee, with a promise of sympathetic consideration.

Decisions on Matters of Urgency and Importance.

Dr. NOY SCOTT (Plymouth) had a motion that the by-laws be so added to or amended as to make it possible to take more prompt and active steps in matters of urgency and importance. He deprecated the tardiness of referring such matters to and from Divisional, Branch, and Council meetings, by which much valuable time was lost. It was possible, he said, under the existing system, for six months to pass before a resolution became effective. The Representative Body, elected by the Divisions, controlled the Association, and the Council was its executive. A decision of the Representative Body, by a two-thirds majority, was deemed a decision of the Association. The existing Articles required that within three months of the date of such decision the Council should consider it; the Council might approve or disapprove, or demand a referendum; it had to arrange to obtain a decision from the Divisions within eight weeks of its meeting, and each Division had to hold a meeting within four weeks of the Council's decision and transmit the result of such meeting to the Council. He suggested that the period be shortened by the use of the postal referendum, by requiring that the decision of the Representative Body should be considered by the Council within one month of the date of the Representative Meeting, that the Council's decision should be referred to the Divisions within one week, and that, also within one week, the secretary of each Division, warned by early notice, should be compelled to call a meeting. A further suggestion was that there should be two statutory meetings of the Representative Body each year.

On the proposition of Dr. C. J. PALMER, it was agreed to refer the matter to the Council for consideration.

Progress of the Association.

Dr. E. R. FOTHERGILL had a long rider on the agenda containing proposals to secure the further progress of the Association in confidence, influence, and membership. Among his suggestions were:

(1) The issue to members of a registered newspaper, apart from the JOURNAL, which would deal with medico-political and medico-sociological subjects; (2) a system of greater devolution of responsibilities and duties in the medical department, with a linking up of individual members with the head office; (3) the encouragement of co-operation in medico-political and medico-scientific subjects with recognized medical societies; and (4) the further development of the Organization Standing Committee by an extension of its reference and an increase of its usefulness.

He said that the matter had been under consideration for some months, but those concerned thought that an expression of opinion from that meeting would strengthen the hands of the Council. The postal vote, in place of the circumlocutory methods of reference to Divisions, was strongly urged in the provinces.

Mr. BISHOP HARMAN moved as an amendment:

That during the ensuing year the Council of the Association shall make a scrutiny of the existing central and local machinery of the Association and the rules governing the same with a view to the discovery of the possible defects and deficiencies and correction of the same, and report with recommendations.

The CHAIRMAN OF COUNCIL said that if it was proposed to enter into all the details of the work of the Association and examine all its possibilities it would be a big business. But Dr. Fothergill's motion presumably meant altering the articles of association.

Dr. G. E. HASLIP remarked that if the ideas of the Propaganda Subcommittee which Dr. Fothergill and Mr. Harman had voiced were really to be carried out it meant much labour for the body to which it was entrusted. He did not wish to say, however, that it should not be done, and he went further, and thought that it was open to the Council to consider very seriously the views which had been put forward.

Mr. Bishop Harman's amendment was carried, and was further agreed to as the substantive motion.

SCIENCE COMMITTEE.

The CHAIRMAN OF COUNCIL moved approval of the annual and supplementary reports of Council under the heading "Science," and this was agreed to without discussion.

MEDICAL ETHICS.

Dr. M. G. BIGGS, Chairman of the Ethical Committee, moved approval of the annual report of Council under "Medical Ethics," and this was agreed to. On his motion also the report of the Council as to the revision of the ethical rules of procedure was received, and the rules were approved. He further moved:

That all Divisions and Branches in the British Islands be urged to adopt the revised rules governing procedure in ethical matters as approved by the Representative Body, 1919, without modification, and in substitution for any ethical rules now in use by the Divisions and Branches respectively; and that the British Medical Association will not, after December 31st, 1919, accept responsibility for any ethical proceedings undertaken or conducted by a Branch or a Division otherwise than in strict accordance with the new ethical rules, which must be duly adopted by such Branch or Division before any such proceedings are commenced; and that a copy of this resolution be forthwith sent to every Branch and Division Secretary by registered A.R. post.

This was agreed to without discussion.

MEDICO-POLITICAL.

Remuneration for Medical Services.

Mr. E. B. TURNER, Chairman, Medico-Political Committee, moved approval of the annual report of Council under the heading "Medico-Political."

Dr. W. DOUGLAS (Maidstone) moved an amendment putting forward the view that the fees offered under the recent Midwives Act are inadequate.

Dr. C. E. ROBERTSON (Glasgow Southern) said it seemed as if Scottish practitioners were going to be forced without discussion to accept the English scale.

It was agreed to instruct the Council to approach the authorities with a view to an increase in the scale of midwifery fees, such fees being declared to be inadequate.

Several other motions on this part of the agenda dealt with remuneration, and Dr. R. C. BUIST moved that all these be referred to the Council for consideration and action. This was agreed to.

Postal Medical Officers.

Dr. J. PATTON (Gateshead) referred to the grievances of postal medical officers, who received a capitation fee up to this year of 8s., now increased to 9s., this poor addition coinciding with added responsibilities, because many postal servants, in consequence of war damage, now needed much more attention.

Dr. C. H. PANTING asked by whose authority the Postal Medical Officers' Association had refused co-operation. Mr. TURNER replied that an official letter, signed by the secretary, conveyed a refusal to co-operate. The Committee then tried to get details of grievances from individual officers.

The MEDICAL SECRETARY said that the Association had a grievance here against both postal officers and its own divisional secretaries. Many attempts had been made, through the JOURNAL and by letters to divisional secretaries, to get information, but these had failed. He was told that the position of postal medical officer was jealously guarded by the man who had it, and in such demand when vacant that it was impossible to put up anything like a fight on this matter.

Mr. TURNER promised that another attempt would be made to secure the necessary information and action.

The British Federation of Medical and Allied Societies (formerly the Medical Parliamentary Committee).

Mr. TURNER then moved approval of the report of the Council upon the invitation to the Association to join the Medical Parliamentary Committee.

Sir JENNER VERRALL, who had attended the conference called by the Committee on May 7th, said that the Council had decided not to send a representative to the later conference on July 11th, but at the same time had informed the Committee that its action was subject to the approval or otherwise of the Representative Body.

Dr. FOTHERGILL moved:

That the Representative Body of the British Medical Association, whilst declining the invitation of the British

Federation of Medical and Allied Societies, takes this opportunity to reaffirm its adopted policy—namely, at all times to be willing to co-operate with bodies representative of sections of the medical profession and allied societies, either individually or collectively; it cannot disregard, however, the fact that its constitution and organization are such that, if loyally supported by the whole medical profession, it is in a position to carry successfully into effect all the aims and objects of the Federation, and therefore to merge in any way its individuality in the Federation as suggested would only tend to defeat the objects for which the British Medical Association has existed since 1832.

He said that the report of the latest conference, as given in the *JOURNAL* of July 19th (p. 86), showed that the Federation had gone a considerable way towards organizing itself by means of a powerful and representative executive committee. Therefore, the Association should not send to this body a simple negative, but some resolution of a reasoned nature. If the whole profession loyally supported the British Medical Association the need for such a federation would not exist, but if the Association included numbers of dissatisfied individuals complaining that they could not get it to do what they wanted, and if at the same time there was another powerful body with plenty of money behind it, which claimed to be the spokesman for all the societies and bodies—forty-seven at present—which had sent in adherence, it would obviously be an important matter for the Association to consider. The Association ought to make it plain that it could carry into effect all the objects of the new Federation.

The CHAIRMAN OF COUNCIL supported Dr. Fothergill's arguments. The body of which they were speaking established itself on very modest lines as the Medical Parliamentary Committee. Its ostensible object was to deal with members of Parliament, and possibly to assist in the selection of parliamentary candidates and endeavour to secure their return. It had now gone further, and was proposing by this latest development practically to take up all the work done by the British Medical Association. He thought this was a case in which those who were not with them were against them. The body was certainly not formed for the purpose of assisting the British Medical Association. No very full report was available as to what its object was, but the development of its organization showed clearly what it had in mind, and he hoped that the Association would uphold the decision not to join a body in which its identity would be sunk.

Mr. BISHOP HARMAN agreed with the sense of the resolution, but it was not plain and simple enough to meet the circumstances. He moved that the Association simply decline the invitation inasmuch as it was itself in a position to carry into effect all the aims and objects of the Federation. It had done so in the past, and would do so in the future. He himself had watched the chameleon-like antics of this Federation.

Dr. C. P. LANKASTER seconded Mr. Bishop Harman's amendment, which he thought clear and concise.

Dr. C. BUTTAR (honorary secretary of the new Federation) expressed gratitude to Dr. Fothergill for the way in which he had moved his resolution. He wished to emphasize three things: the need of the hour; the way in which the Medical Parliamentary Committee (as he would still call it) would meet that need; and the fact that it did not interfere with the position or prestige of any other body. Dr. Fothergill had urged that the unity of the profession ought to be attained through the British Medical Association. But in the present temper of the profession was that possible? He was afraid that, for some reason or other, there was enough dissatisfaction to prevent the Association within any reasonable period attaining some measure of professional unity. In those circumstances there were two possibilities before the Association. Either it could continue to assert that it represented the medical profession—and up to a point that was true—or it could recognize frankly the other position, that it could not be said fully to represent the profession, and this second alternative would leave the way open for the attempt to find some rallying point from which that unity might be achieved. The Medical Parliamentary Committee existed for the promotion of a round table at which the bodies would be able to meet and to exchange ideas on subjects which affected them either corporately or as individual medical men; it would also establish a kind of reference library wherein would be accumulated the records of the actions of the Government and various authorities, also the opinions of the several bodies which constituted it. From

this source information would go out when required to any of the constituent bodies, who would be able to regulate their action in accordance with the attitude of the Government and the opinions expressed. He sincerely hoped that the Medical Parliamentary Committee would never indulge in the pastime of sending deputations to Government departments. The profession was represented by a vast number of bodies, some of which were medico-political in their activities, but there were only two bodies to his mind which ought to lead such deputations—the Royal Colleges and the British Medical Association. The organization of the Association satisfied him beyond measure, covering as it did the entire country. But he hoped the Association might see its way eventually to help this other body and thereby bring itself into connexion with the views of people some of whom had been antipathetic to its own activities. (Applause.)

Dr. C. O. HAWTHORNE said that the position was one of extreme simplicity, and he would have been inclined to deal with it on a perfectly plain issue. As they would have expected, Dr. Fothergill had wished to be polite, but what he was going to say to this British Federation of Medical and Allied Societies was in substance what the Council had already said. The so-called Federation came into existence at a meeting in Steinway Hall, and in the course of a very little time they heard that the committee then formed was calling itself the Medical Parliamentary Committee. Now the Medical Parliamentary Committee had disappeared, and they encountered the British Federation of Medical and Allied Societies. This was an organization which was not born great. It sought to achieve greatness by calling itself the Medical Parliamentary Committee; and now someone had thrust greatness upon it by calling it the British Federation. (Laughter.) When that committee was formed it gave a distinct pledge that nothing would be done until the scheme it evolved was submitted to another meeting of the profession. That was nine or ten months ago, and the British Federation had never yet appeared before its constituents to ask any approval. It had entertained medical members of Parliament to dinner. It had appointed an expert lobbyist. And it had threatened to send a deputation to the Prime Minister. (Laughter.) A representative was sent to the Steinway Hall committee by a body calling itself the Scottish Universities' Parliamentary Association. A few months before the general election there appeared a statement in the press that a Scottish Universities' Parliamentary Association had been formed, and that its address was 37, Russell Square, London, which was the home of the Royal Institute of Public Health, a body, again, with its representative on the Steinway Hall committee. The Royal Institute of Public Health was directed by Professor W. R. Smith, and by a coincidence he was elected as the particular candidate of the Scottish Universities' Parliamentary Association! (Laughter.) Here were two entirely separate bodies worshipping in the same temple and bowing down to the same idol. (Laughter.)

Mr. Bishop Harman's amendment was lost, and Dr. Fothergill's motion was carried with a few dissentients.

Co-operation with other Societies in Medico-Political Activity.

Dr. FOTHERGILL moved, at a later stage:

That it be an instruction to the Council to appoint a committee, formed of nominated members of such medical and allied societies as shall be selected by the Council, to which reference should be made in order to obtain the opinions of the various societies and so ensure co-operation in dealing with medico-political subjects.

Dr. J. R. DREVER seconded. Dr. BRACKENBURY suggested that the matter be referred to the Council. There had been sitting for some weeks a conference of various bodies, called by the British Medical Association; this conference had not been able to report to that meeting, but it was reporting to the meeting of the Council on the morrow, and it would be well to await that report before passing a resolution of this kind.

Dr. FOTHERGILL agreed to make it a reference to the Council.

MEDICAL REPRESENTATION IN PARLIAMENT FUND.

Mr. BISHOP HARMAN, as Chairman of the Parliamentary Elections Committee, moved approval of the annual report

of the "Medical Representation in Parliament Fund." He said that the attempt had been on the whole very successful, but stronger support must be forthcoming from the Divisions. The three or four areas which had been most active were those in which there was one man who took a keen personal interest in putting the matter through. The report was approved.

Membership of Local Public Bodies.

Mr. TURNER moved a resolution instructing the Council, in view of the necessity for adequate medical representation on local bodies, to take all necessary steps to urge the various Divisions to bring before the members the need for serving on such bodies when possible.

Mr. RUSSELL COOMBE said that from his experience of county councils, the only proper method was to secure the adequate co-option of medical men.

Dr. BRACKENBURY said that there was no co-option on county councils save for the chairs of aldermen, and aldermen were mostly selected from among the councillors. Medical men, in order to obtain their proper place in public affairs, must be prepared to stand for election, and this was by no means so hopeless as Mr. Russell Coombe had suggested. Dr. C. E. S. Flemming, who had recently been elected to the Wilts County Council, was a witness to the contrary.

The motion was agreed to.

HOSPITALS.

Payment of Voluntary Hospital Staffs for Treatment of ex-Service Men.

Lieut.-Colonel BOLAM, in the absence of the Chairman of the Hospitals Committee, moved:

That in the light of the past year's experience of the working of Minute 118 of the Annual Representative Meeting, 1918 (as to hospital treatment, either as in-patients or out-patients, for discharged soldiers and sailors for whom a public authority is liable), the Representative Body is of opinion that, in the case of the larger hospitals, not less than 25 per cent. of the amount paid to the institution, and in the case of the smaller hospitals not less than 15 per cent. of such amount, should be placed at the disposal of the medical staff.

Dr. G. PARKER thought it not desirable to make the resolution the policy of the Association, but rather to make it the aim towards which they worked. Mr. ALBERT LUCAS supported Dr. Parker.

Dr. J. W. BONE (Bedford) spoke in support of an amendment by Mid-Cheshire:

That for all work for soldiers and sailors, whether discharged or not, for any diseases or injuries connected with the war, undertaken at voluntary hospitals, the medical staffs should be adequately remunerated.

This was agreed to, and the remainder of the report under "Hospitals" was approved.

SCOTLAND, IRELAND, AND OVERSEAS BRANCHES.

Dr. J. R. DREVER, Chairman of the Scottish Committee, moved approval of the report of the Council under the heading "Scotland," and in the absence of representatives from Irish and Overseas Branches, the CHAIRMAN of COUNCIL moved approval of the reports under those headings, and this was agreed to.

ELECTIONS.

The MEDICAL SECRETARY announced the following results of elections:

Chairman of Representative Meetings: Dr. T. W. H. GARSTANG.
Deputy Chairman of Representative Meetings: Lieut.-Colonel R. WALLACE HENRY.
Treasurer: Dr. G. E. HASLIP.

Twelve Members of Council elected by Group Representatives.

Dr. A. C. FARQUHARSON, M.P., North of England, North Lancashire and South Westmorland, Yorkshire.
Dr. I. W. JOHNSON, Lancashire and Cheshire.
Dr. ADAM FULTON, East York and North Lincoln, Midland, Cambridge and Huntingdon, East Anglian, South Midland.
Dr. H. C. MACTIER, Birmingham, Staffordshire, North Wales, Shropshire and Mid Wales, South Wales and Monmouthshire.
Mr. N. BISHOP HARMAN, Metropolitan Counties (Inner Group).
Dr. J. A. P. BARNES, Metropolitan Counties (Outer Group).
Dr. W. JOHNSON SMYTH, Bath and Bristol, Gloucestershire, West Somerset, Worcestershire and Herefordshire, Dorset and West Hants, South-Eastern, Wiltshire.
Dr. E. R. FOTHERGILL, Oxford and Reading, Surrey, Southern, Sussex, Kent.
Dr. C. M. PEARSON, Aberdeen, Northern Counties, Dundee, Perth, Edinburgh, Fife.

Dr. C. E. ROBERTSON, Glasgow and West of Scotland, Border Counties, Stirling.
Dr. J. S. DARLING, Munster, Ulster.

(There was no nomination for the Connaught, Leinster, and South-Eastern of Ireland Group.)

Four Members of Council under By-law 46 (1) and S.O. 37.
Dr. R. L. LANGDON-DOWN. Mr. E. B. TURNER.
Mr. ALBERT LUCAS. Sir JENNER VERRALL.
(There were five nominations.)

Six Members of Insurance Acts Committee.

Dr. H. G. DAIN, Dr. J. DIVINE, Dr. E. R. FOTHERGILL, and Dr. CRAWFORD TREASURE, England and Wales.
Dr. J. HUNTER, Scotland.

(No nomination from Ireland.)

Four Nominations by the Association for the forthcoming General Medical Council Election.

Lieut.-Colonel R. A. BOLAM (Newcastle).
Dr. J. A. MACDONALD (Taunton).
Mr. E. B. TURNER (London).
Sir JENNER VERRALL, LL.D. (Bath).

The CHAIRMAN pointed out that it was expected that all loyal members of the Association would support in their own constituencies and among their friends the four candidates selected by the Representative Meeting for direct representation of the profession in England and Wales upon the General Medical Council. (Hear, hear.)

Lieut.-Colonel WALLACE HENRY expressed his thanks for the honour done him in electing him Deputy Chairman. His regret was that a better man, Dr. A. C. Farquharson, M.P., had been ousted in the contest.

The minutes having been read and approved,

Mr. E. B. TURNER moved a vote of thanks to the Chairman of Representative Meetings, which was seconded by Lieut.-Colonel WALLACE HENRY, and carried with acclamation.

Dr. GARSTANG, in reply, said that he believed he had been out of order oftener than anybody else in the meeting; but he had only one defence—the meeting had got through its agenda, and there had not been a cross word. (Applause.)

Dr. C. O. HAWTHORNE moved a vote of thanks to the staff of the Association, by whom the successful conduct of the business had been ensured. This also was carried by acclamation, and was acknowledged by the MEDICAL SECRETARY.

The proceedings then concluded.

BRANCH AND DIVISION MEETINGS TO BE HELD.

SOUTH MIDLAND BRANCH: BUCKINGHAMSHIRE DIVISION.—Dr. Arthur E. Larking, Secretary (Stoneleigh House, Buckingham), gives notice that a meeting of the Buckinghamshire Division will be held at the Borlase Grammar School, Marlow, on Thursday, August 7th, at 2.30 p.m. After the usual business, addresses will be given by Major L. Joyce, R.A.M.C., on "Recent methods of investigating diseases of the genito-urinary tracts," and by Dr. O. F. Leyton on "Diabetes in children." Tea will be provided by Marlow members in the grounds or cloisters of the Borlase School at 4.30 p.m. Lunch (price 3s. 6d.) will be supplied at the Greyhound Hotel at 1.30 p.m. Members proposing to attend the tea and lunch are requested to notify Dr. Dunbar Dickson, of Marlow, two days beforehand, also how many visitors will accompany them.

EAST YORK AND NORTH LINCOLN BRANCH.—Mr. H. L. Evans (101, Princes Avenue, Hull) gives notice that the annual meeting of the East York and North Lincoln Branch will be held in the Board Room of the Hull Royal Infirmary, on Friday, August 8th, at 4 p.m. Business: Annual report, financial statement, etc. The President-elect, Dr. J. Divine, who has chosen for his address "The immediate future of the medical profession," will entertain members at tea after the meeting.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

FERGUSON.—On July 23rd, at Saxstead, Marshall's Road, Sutton, the wife of John Ferguson, M.B., B.S.Lond., Park Road, Cheam, Surrey, of a son.

HARRISON.—On July 15th, at Hazelwood, Haslingden, Lancs, to Mrs. and Dr. J. A. Harrison, M.B., O.B.E., a son.

WILLAN.—On the 25th July, 1919, at 23, Claremont Place, Newcastle-upon-Tyne, to Dorothy (née Shawyer), wife of R. J. Willan, M.V.O., F.R.C.S., a daughter.

DEATHS.

ELLIS.—On May 16th, at Rhyllech, Pwllheli, North Wales, suddenly, Philip Mackay Ellis, Major-General A.M.S.(ret.), O.B.E., J.P., County Director B.R.C.S., Carnarvonshire, aged 64.

HUBBARD.—On July 23rd, Daniel Lovett, M.B., dearly beloved husband of Margaret (née Daisy) Hubbard, daughter of the late E. C. Fernihough, Esq.

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British Medical Association.**CURRENT NOTES.****Effect of the National Insurance Bill raising the Income Limit.**

In reply to many inquiries as to the position of persons who are brought into insurance by the recent National Insurance Bill (now an Act), the following official statement has been received from the Ministry of Health:

The effect of the proviso to subsection (1) of clause 1 of the bill is that any person whose rate of remuneration exceeds £160 a year and does not exceed £250 may apply for a certificate of exemption which will relieve him from any deduction from his wages, though his employer will be required to pay the employer's share of the contribution, as in the case of other exempt persons. In other words, any person who comes within the scope of the bill may, if he wishes, apply for exemption provided that he makes such application before January 1st, 1920, or such later date as the Minister may, in any particular case, allow. It is not necessary for a person who applies for exemption under this proviso to prove anything beyond the fact that his rate of remuneration lies between the limits indicated. So long as application is made within the period named in the proviso, the applicant has an absolute right to a certificate without reference to whether he has a right to exemption on any of the other grounds set out in Section 2 of the 1911 Act, or Section 5 of the 1913 Act.

It should be added that under proviso (b) to Section 9 (1) of the 1913 Act, an exempt person whose total income from all sources exceeds £160 a year is required to make his own arrangements for receiving medical attendance and treatment. It follows from this that persons coming within the scope of the new bill who exercise the right to claim exemption will automatically become "own arrangers," and doctors will not be required to take them as ordinary panel patients, except in the case of the very small number of persons whose rate of remuneration exceeds £160, but who, by reason of their employment being a part-time employment only, have not an income exceeding £160. The number of such persons is so small as to be negligible.

Restriction on Sale of Intoxicating Liquor.

The memorial to His Majesty's Government, adopted by the Council of the British Medical Association as announced in its Supplementary Report, has now been circulated to Divisions, and members are invited to sign it. The memorial is in the following terms:

In view of the great advantages to the efficiency and well-being of the nation and to public health and order which have followed the restrictions placed on the sale of intoxicating liquor during the war, the undersigned earnestly request His Majesty's Government to maintain reasonable restrictions until a permanent measure of reform has been enacted by Parliament.

State Medical Service.

In the report of the recent Conference of Local Medical and Panel Committees, published in the SUPPLEMENT of July 26th, there was a brief record of the motion by Surrey

objecting to a whole-time salaried State medical service (p. 35). The wording of the resolution as moved by Dr. Thornton of Surrey and carried by the Conference *nemine contradicente* was as follows:

That this Conference objects to any suggestion that the State should further interfere between the medical profession and the general public by the establishment of a whole-time salaried State medical service.

ANNUAL GENERAL MEETING.

The eighty-seventh Annual General Meeting of the British Medical Association was held in the Connaught Rooms, London, at 2 p.m., on Friday, July 25th. Sir CLIFFORD ALLBUTT, K.C.B., F.R.S., President of the Association, was in the chair.

The Financial Secretary and Business Manager read the notice convening the meeting, and also the minutes of the last Annual Meeting, which were confirmed.

THE PRESIDENCYSHIP.

The CHAIRMAN of COUNCIL announced that the Representative Meeting had re-elected Sir Clifford Allbutt President of the Association for 1919-20. (Applause.)

Sir CLIFFORD ALLBUTT said that he greatly appreciated this continued honour, and thanked the members for their cordial reception of him that day.

APPOINTMENT OF AUDITORS.

The CHAIRMAN of COUNCIL then proposed that Messrs. Price, Waterhouse, and Company be reappointed auditors of the Association. He said that the remuneration fixed last year was 150 guineas, but the Council, which had the right to act during the interim, had found it necessary to advance the remuneration to 200 guineas; and accordingly, in moving the appointment of the auditors, he moved also that their remuneration be 200 guineas.

Dr. T. R. BRADSHAW (Liverpool) seconded, and the proposition was agreed to *nemine contradicente*.

This concluded the business of the Annual General Meeting.

CONFERENCE OF HONORARY SECRETARIES.

A CONFERENCE of Honorary Secretaries of Divisions and Branches of the British Medical Association was held in the Council Room at 429, Strand, on July 23rd under the chairmanship of Dr. R. C. BUIST (Dundee). About ninety secretaries were present.

The MEDICAL SECRETARY gave an address on current topics, which was followed by discussion. Dr. Cox expressed the general pleasure at meeting in another conference after five years of abeyance. The men he saw in front of him were the backbone of the Association. No amount of paid work could ever compensate for the loyal and devoted service of the honorary officers. He went on to make certain suggestions for increasing the effectiveness of the Association. The technical foundation of an organization was effective lists of

members and non-members, and one of the most important things a secretary could do was to correct and return the quarterly list of members and non-members in his area. In a large Division this was a duty which ought to be shared among the members of the Executive Committee. Again the *Handbook* could be made a great deal more useful if secretaries would send in suggestions. He had been delighted in the course of his recent visits to some centres to find how very much alive the Association was. It had been spending most of its necessarily restricted energies on the work of the country during the war, but it had in front of it a lease of renewed vigour which would astonish their candid friends. One of the essentials of local efficiency was the holding of regular and frequent meetings; a Division which met only four times a year was working under a great disadvantage. Pains should also be taken to make the agenda attractive. New members should be made to feel at home. More attention should be given to social functions. He recommended the giving of a dinner to the men who had returned from army service. Advantage should be taken of the new scheme of Association lecturers. Many of the Divisions did not take enough interest in local medical politics, that is, in matters of medical interest affecting local administrative bodies. Some Divisions had no organization rules; others—or the same—looked no interest in the Annual Representative Meeting, as instanced by the lack of motions from them on the agenda, thus depriving the Association of a source of initiative it had a right to expect. A deplorable thing to him was the absence of interest in the election of any kind of officer; contests were a healthy sign. The system of postal nomination and voting might be developed. In these and other ways he urged that more vigorous steps might be taken to stimulate pride and interest in the Association.

In the discussion that followed Dr. NOY SCOTT (Plymouth) suggested that one reason for absence of motions from Divisions was that members had the idea that the by-laws were unchangeable. Dr. J. R. RATCLIFFE (Birmingham) referred to co-operative arrangements among practitioners of a locality; in his district each medical man was enabled to have two free evenings a week and annual holidays. Dr. J. M. MOIR (Inverness) pointed out that while a co-operative system might work well in urban areas, it would hardly be workable in the north of Scotland. Dr. JONES (North Glamorgan) thought it would be well to call upon every Division to hold meetings regularly, at least once every two months. Dr. J. F. WALKER (South Essex) emphasized the fact that the membership of the Association depended to a large extent upon the Divisional and Branch Secretaries, by whose actions—and not merely official actions—the Association was judged. Dr. J. L. LOUDON (Lanarkshire) urged that in the matter of getting new members every man on the executive should canvass his own district. Dr. JOHN HUME (Perth) wanted to know what was the experience of other secretaries with regard to the voluntary fund for social purposes. Dr. J. STEVENS (Edinburgh) pointed out the difficulty of proper revision of lists in the larger cities, and particularly in the teaching centres where many of the addresses were nominal and temporary. Dr. H. C. TERRY (Gloucester) said that in his area meetings were held regularly once a month, always on the same day of the week, and always followed by a supper. Mr. BISHOP HARMAN (Marylebone) said that one of the chief functions of the Branches was to exercise influence, by deputation or otherwise, on local public affairs, and instanced what the Metropolitan Counties Branch had done in regard to the London County Council. Dr. E. W. SQUIRE (Oxford and Reading) thought it very important to have a deputy secretary in each Division, also to have a great deal more devolution, both of responsibility and finance. Dr. A. E. LARKING (Buckinghamshire) drew attention to the small number of meetings announced in the *JOURNAL* every week, due to the fact that secretaries did not send in notices.

The CHAIRMAN OF COUNCIL, in closing the discussion, said that this splendid meeting of secretaries showed what keenness was in the Association. One of the best indices to prosperity was the number of meetings held locally. The system of visits from organizing secretaries would have to be developed. The visits paid by the Medical Secretary recently had had a great effect in the country. For his own part he would not be satisfied until the membership of the Association was coterminous with the profession.

The MEDICAL SECRETARY, in reply, said that this year the names of non-members on the lists would be printed in larger type, and it was hoped soon to have the same type for the member lists. He quite understood that in uni-

versity towns the lists could not be accurately kept, but he urged that everywhere it should be done as effectively as possible. With an organization of over 23,000 members all over the world professing to represent the medical profession generally, it was necessary to take action in an orderly and constitutional way, and make sure that the Council and Representative Body carried with them the opinion of the great body of its members. Yet the constitution, cumbersome as it might seem to those who had not studied its working and possibilities, was such that either prompt or deliberate action could be taken. He demurred to the suggestion of a paid secretariat of Divisions and Branches; it would be preferable to make such allowances to secretaries as would enable them to secure more clerical assistance and thus retain the honorary workers whose enthusiasm and status as voluntary workers were, in his opinion, invaluable, and at the same time lighten their merely routine and clerical labours. He referred, in closing, to the departure of Dr. James Neal, his loyal colleague for seven years.

On the motion of Dr. RATCLIFFE, seconded by Dr. NOY SCOTT, a resolution was carried thanking Dr. Neal for his services, regretting his severance from the official work of the Association, and congratulating him on his new appointment. Dr. NEAL acknowledged the compliment.

Dr. T. W. H. GARSTANG opened a discussion on the desirability of making the Division and Branch areas correspond with local government areas. Branches might be taken to correspond with counties and parts of counties, but in the case of Divisions the matter was more complicated. Members' lists might be analysed with a view to reclassification in Ministry of Health areas, so that any resident practitioner could receive his Division notices from the secretary of the Division in the central area, and his summons to any meetings in other areas which concerned him, as a result of overlapping of areas, from the respective secretaries. Some such system of analysis and subdivision appeared to him preferable to an attempted redistribution of Divisions so as to identify them completely with the Ministry of Health areas.

Dr. A. E. LARKING wished to see the Divisions coterminous with the National Insurance areas, but Dr. E. BURCHELL (Brighton) gave a local instance to prove that it was impracticable to make the Division conform to the panel area; and others spoke to the same effect.

The MEDICAL SECRETARY said that he was alive to the difficulties, but he hoped the problem would not be shelved. He had been afraid of the interest in medico-political work getting out of the hands of the Divisions and into those of Local Medical and Panel Committees. Gloucestershire was a perfect example of the way in which the matter might be dealt with by an arrangement of the Branch areas. On the suggestion of the CHAIRMAN OF COUNCIL, the Council was requested to send the matter to the Organization Committee.

Dr. JAMES DON (North of England Branch) opened a discussion on the suggestion that a travelling organizing secretary be appointed. He referred to the extraordinary difference in Association activity as between contiguous Divisions, faced with the same problems. Such an official was needed to stir up dormant Divisions. Dr. J. HUDSON (Newcastle) said that such a secretary would feel the pulse of the profession. The MEDICAL SECRETARY said that the feeling of the Council, when this matter was mooted, was that no man could spend the whole of his time travelling and remain in touch with the matters at issue; close contact with central committee and Council work was vital. He said the intention of the Council, once the central staff was at its normal level, was to do much more visitation by means of the central staff; and if this were not sufficient the Council would, he was sure, be willing to reconsider the matter.

Mr. A. E. MORISON (Sunderland) moved: "That efforts be made by Divisions or Branches to develop their scientific work by holding post-graduate courses and meetings for practitioners in the nearest available hospital." His idea was that in the summer months post-graduate classes might be arranged to which men from surrounding districts should be invited. Men gravitated for scientific meetings to the hospitals to which they sent patients, and arrangements might be made with the hospital staffs to give a series of demonstrations. Furthermore, men from different areas might be invited to read papers on cases of special interest in their practices. The CHAIRMAN OF COUNCIL said he was delighted to hear Mr. Morison's remarks, and hoped the plan would mature. Mr. MORISON agreed to write a memorandum on the subject to accompany the reference of this matter to the Council.

After a session of more than four hours the Conference came to an end with a vote of thanks to the Chairman.

Meetings of Branches and Divisions.

EAST ANGLIAN BRANCH.

THE annual meeting of the East Anglian Branch was held at Ipswich on July 10th under the presidency of Dr. HERBERT H. BROWN.

It was decided to recommend that the date for the dissolution of the East Anglian Branch be September 30th, and that the exact boundaries of the Essex Branch should be left for determination of the Essex and Metropolitan Branches, and that the area of the new Branches should be coterminous with the county areas as far as possible. The arrangements for forming the new Branches were left in the hands of the present secretaries.

The sum of £65 7s. 5d., belonging to the old Branch (before the reorganization of the British Medical Association) was directed to be divided between the three new Branches proportionally to their membership on September 30th, as was also the present balance of the Branch.

The President, Dr. HERBERT H. BROWN, gave a short address and then showed a case of subclavian aneurysm treated by ligation of the second part of the subclavian artery after removal of the inner half of the clavicle. Sir HAMILTON BALANCE read an interesting paper entitled "Surgical fragments from France," illustrated by lantern slides; and Mr. A. J. BLAXLAND, M.S. (Norwich), showed specimens.

METROPOLITAN COUNTIES BRANCH: WILLESDEN DIVISION.

THE inaugural meeting of the Willesden Division was held at St. Andrew's School, Willesden Green, on July 30th. Lieut.-Colonel MCADAM ECCLES, member of the Central Council, who was called to the chair, expressed his pleasure at the formation of a Division in such a large and important area and wished the members all success.

The notice of the appointment of the Division was then read by Dr. CRUDEN, Acting Honorary Secretary.

Dr. C. WHITEHALL COOKE was unanimously elected Chairman of the Division, and, after thanking the members, proceeded to read the model rules, which were completed and adopted and directed to be sent to the Council for confirmation.

The following officers were appointed:

Vice-Chairman: Dr. C. T. F. Scott. *Honorary Secretary:* Dr. Wm. Paterson. *Representative on Branch Council:* The Chairman. *Executive Committee:* Dr. Auty (Harlesden), Dr. Faber (Cricklewood), Dr. Snowman (Brondesbury), Dr. T. Wilson (Kilburn), Dr. Cruden (Willesden Green).

It was resolved to apply to the Council for independent representation in the Representative Body, 1920-21.

It was left to the Executive to arrange for meetings, the general opinion being that these should be held every two months on the first Tuesday of the month.

On the motion of Dr. WHITEHALL COOKE, a hearty vote of thanks was accorded to Lieut.-Colonel McAdam Eccles for his kindness in coming to the meeting and for his valuable assistance and advice.

SOUTH-WESTERN BRANCH: EXETER DIVISION.

A MEETING of the Exeter Division was held on July 17th, with Dr. G. G. GIDLEY in the chair.

The annual and supplementary reports of the Council were considered, and the representative was instructed as regards voting at the Representative Meeting with regard to the election of four direct representatives on the General Medical Council in November.

Dr. GORDON moved:

That the remuneration of all medical men employed under the Insurance Act be increased so as fully to compensate the altered value of money.

This was carried unanimously.

Opinion was unanimously expressed as to the inadequacy of the present payments to practitioners to cover the value of time and cost of transport involved in visiting patients in isolated houses in the country parts of the Division, and the importance of a complete reorganization of these payments. The Secretary of the Division was instructed to communicate to the clerks of local authorities the contents of paragraph 293 of the Supplementary Report dealing with the suggested 35 per cent. increase in remuneration of medical officers in public health services, asking them what steps they had taken or intended to take in the matter.

After considerable discussion with regard to the payment of staffs of voluntary hospitals for the treatment of discharged disabled soldiers and sailors it was carried unanimously:

That this meeting considers that 10 per cent. is quite inadequate, and that the subject should be reconsidered with a view to medical men obtaining an adequate proportion of the amount paid to these institutions. That in discussing the matter the question of "in-patients" and "out-patients" should be separately considered, and that the representative be instructed to bring this before the Representative Meeting.

Association Notices.

SOUTH WALES AND MONMOUTHSHIRE BRANCH: MONMOUTH SHIRE DIVISION. Dr. R. J. S. Verity, Honorary Secretary (Rosemodor House, Garndiffaith, near Pontypool), gives notice that the annual meeting of the Division will be held at the Royal Gwent Hospital, Newport, Mon., on August 16th, at 3.15 p.m.

INSURANCE.

INCREASED GRANTS TO INSURANCE PRACTITIONERS.

THE following further letter has been received by the Medical Secretary of the British Medical Association. An earlier letter was published in the SUPPLEMENT of June 28th (p. 140):

Ministry of Health,
Whitehall, London, S.W.1,
31st July, 1919.

Sir,—I am directed by the Minister of Health to refer to the conference with members of the Conditions of Service Subcommittee held at this office on the 26th inst., and to your letter of the 28th inst., and to state in reply to the first point mentioned in the letter that the arrangements contemplated for the payment of the war bonus to insurance practitioners in respect of the year 1919 are briefly as follows:

The flat-rate payment of 15 per cent. payable to all insurance practitioners, whatever their income, will be made by Insurance Committees. The additional sums payable to those practitioners whose net professional incomes from all sources, as assessed for income tax purposes for the year 1919-20, do not exceed £1,200, will be made direct to the practitioners concerned by this department.

A circular letter will be issued shortly to Insurance Committees instructing them—

(1) To make a payment at once of 15 per cent. of the sums advanced to practitioners for treatment in respect of the first six months of the year 1919;

(2) Immediately after January 1st, 1920, to make a further payment of 15 per cent. of the amount advanced for treatment in respect of the second six months of 1919; and

(3) As soon as the settlement with doctors in respect of the year 1919 has been effected, to make a final payment of 15 per cent. of the amount payable on the settlement.

With regard to the additional 5 or 15 per cent. payable to those practitioners whose net professional incomes do not exceed £1,200, arrangements are being made with inspectors of taxes for the issue of certificates similar in form to those issued in connexion with the payment of the war bonus for the year 1918. These certificates will be numbered Form 191 A.I.C., and will be available after September 30th. Insurance practitioners will, at an early date, receive a memorandum informing them of the steps which they should take if they desire to claim this additional percentage. On receiving from the practitioner the necessary certificate and claim the Ministry will

(1) make an immediate payment of 5 or 15 per cent., as the case may be, of a sum estimated to represent a full year's instalments of remuneration for the year 1919; and

(2) as soon as Insurance Committees have effected a settlement with practitioners in respect of 1919, make a final payment of 5 or 15 per cent. of the difference between the instalments, as estimated, and the doctors' remuneration for the year as finally ascertained.

The bonus will be calculated on insurance fees for treatment, including those payable in respect of the treatment of temporary residents. Payments in respect of drugs and mileage, and in respect of the treatment of invalided soldiers, will not be included for the purposes of the calculation of the bonus.

I am, Sir, your obedient servant,

(Signed) E. J. MAUDE.

The Medical Secretary,
British Medical Association,
429, Strand, W.C.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following announcements are notified by the Admiralty:—Surgeon Commanders placed on retired list: G. Borrett, C. B. Fairbank. With the rank of Surgeon Captain: P. E. Maitland, J. Andrews, H. B. Marriott, O.B.E. Surgeon Commanders: P. H. M. Star to the *Highflyer* as Fleet Medical Officer, East Indies Station, J. Martin to Haslar Hospital, E. R. Grazebrook to the *Berberie*, Surgeon Lieutenant Commanders: A. R. Fisher to the *Pembroke*, A. B. Cox to the *Firid*, J. H. McDowall to the *Princess Margaret*, Surgeon Lieutenants H. E. V. White to the *Renoise*, G. S. Harvey to the *Scarab*, Surgeon Lieutenants (temporary): T. F. Reason to the *Caledon*, L. L. Fotheringham to the *Pembroke*, S. H. Waddy to M. 22, W. H. Sarra to the *Firid*, for R.N. College, Keyham; A. H. Richardson to the *Harpenden*, S. W. F. Underhill to the *Pembroke*, D. A. Inare to the *Firid*, J. T. Wylie to the *Indictive*, J. Donald to the *Pembroke*, for R.N. Hospital, Chatham; J. W. McK. Nicholl to Haslar Hospital, A. E. Wyatt to the *Hecla*, S. W. F. Underhill to the *Boadicea*.

ROYAL NAVAL VOLUNTEER RESERVE.

Surgeon Lieutenant Commander J. E. Johnston to the *Cordelia*, Surgeon Lieutenant (temporary) D. L. Baxter to the *Crescent* for Rosyth Dockyard.

ARMY MEDICAL SERVICE.

Colonel (temporary Major-General) Sir Samuel Hickson, K.B.E., C.B., is granted the honorary rank of Major-General on ceasing to be employed.

Colonel A. I. F. Bate, C.M.G., retires on retired pay.

Colonel W. H. Gratton, C.B.E., D.S.O., to be Deputy Director of Hygiene at the War Office.

Temporary Colonel Sir Thomas Myles, C.B., relinquishes his commission and retains the rank of Colonel.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonels retire on retired pay: J. C. Jameson, R. C. Lewis.

The following officers relinquish the acting rank of Lieut.-Colonel on reposting: Major and Brevet Lieut.-Colonel C. R. Sylvester-Bradley, Major H. W. Farebrother, Captain A. C. Hammond-Searle, M.C., temporary Captain J. C. Sproule.
Major J. W. S. Seacombe to be acting Lieut.-Colonel whilst commanding a medical unit from December 28th, 1918, to April 11th, 1919.
Major A. E. Smithson is placed on retired pay.

Temporary Major J. Dalrymple, C.M.G., O.B.E., relinquishes the acting rank of Colonel on reposting.

Captain F. W. M. Cunningham, D.S.O., retires, receiving a gratuity. J. A. Wood, late temporary Captain, is granted the rank of Captain.

To be Captains, but not to reckon for pay or allowances prior to July 1st, 1919, with precedence as stated:—Captains: F. K. Tomlinson from T.F. (February 5th, 1918), next below R. E. Barnsley; H. S. Griffith from S.R. (February 8th, 1918), next below J. H. Ward; R. O'Kelly from S.R. (February 28th, 1918), next below E. T. Burke; T. Young from S.R. (October 23rd, 1918), next below R. McKinlay. Temporary Captains: C. L. G. Powell, M.C. (November 7th, 1918), next below A. E. Richmond; L. A. J. Graham (November 10th, 1918), next below H. E. P. Yorke; W. G. D. McCall, M.C. (February 2nd, 1919), next below R. A. Mansell; J. M. Ryan (May 8th, 1919), next below R. D. Newland; A. E. S. Pringle-Pattison (February 15th, 1918), next below H. D. F. Brand.

Captains from S.R. to be Lieutenants, and to be temporary Captains, but not to reckon for pay or allowances prior to July 1st, 1919, with precedence as stated: J. W. Hyatt (January 1st, 1917), next below J. P. MacNamara; R. D. Hennessy (September 21st, 1916), next below G. G. Drummond; T. Parr (January 2nd, 1917), next below H. Stanton; J. D'A. Champney (May 1st, 1918), next below M. C. Paterson; D. F. Panton (January 29th, 1918), next below E. P. K. Craigh.

Temporary Captain J. K. Holland to be Lieutenant and to be temporary Captain from June 1st, 1917, but not to reckon for pay or allowances prior to July 1st, 1919, with precedence next below T. H. Twigg.

Temporary Lieutenant E. T. C. Hughes to be temporary Captain. The notification in the *London Gazette* of April 11th regarding Lieutenant (temporary Captain) G. R. Sharp is cancelled.

The following officers relinquish their commissions:—Temporary Lieut.-Colonels and retain the rank of Lieut.-Colonel: G. B. Price, H. L. Eason, K.C.B. Temporary Majors and retain the rank of Major: C. D'O. Grange (on ceasing to be employed with the Northumberland War Hospital), H. Irving (on ceasing to be employed at the Brook War Hospital), W. H. Thompson and James Phillips (on ceasing to serve with the Bradford War Hospital), E. R. Fothergill, C. S. Read, T. M. Frood, O.B.E. (on ceasing to serve with the South African Native Labour Corps). Captains: H. G. Trayer, St. J. D. Buxton. Temporary Captains and are granted the rank of Lieut.-Colonel: J. G. Johnston, M.C., E. R. Hunt. Temporary Captain W. H. Bryce and retains the rank of Major (March 23rd, 1919—substituted for notification in the *London Gazette*, May 1st, 1919). Temporary Captains and are granted the rank of Major: J. E. Power, R. B. Blair, A. Grant, J. Alexander, W. K. McIntyre, M.C., A. T. Todd, F. J. O. King, A. C. Renton, S. Brown, A. C. Bryson, J. H. Legge, M.C., R. R. Wallace, T. W. Buckley, R. Millar, T. E. R. Branch, A. T. Edwards, A. C. S. Courts, W. H. Welsh, J. A. Doull, J. S. Stewart.

ROYAL AIR FORCE.

MEDICAL BRANCH.

Major E. M. W. Hearn and Major A. Fairley (Surgeon Lieutenant Commander R.N.) relinquish their commissions on ceasing to be employed.

Captain R. L. Roe to be acting Major while employed as Major.

T. C. Backhouse (Captain A.A.M.C.) is granted a temporary commission.

Transferred to unemployed list: Lieut.-Colonel T. Philp, Major H. Pritchard. Captain (honorary Major) D. Wilson. Captains: I. I. Waddell, N. R. Williamson, J. L. Whatley, H. M. Holt, J. Freeman, C. C. O'Malley, A. Sutcliffe. Lieutenants: E. P. Williams, L. C. Broughton-Head, C. H. Vernon, A. J. Swanton.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Captains relinquish the acting rank of Majors on reposting: D. J. Valentine, M.C., D. Colombos.

The names of the undermentioned are as now described and not as in the *London Gazette* of July 19th, 1919: Reginald H. Sanderland, Samuel P. Castell.

Lieutenants to be Captains: B. G. Derry, J. C. McGregor, J. K. T. Mills.

GENERAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Late Captains R.A.M.C. to be Captain: St. J. D. Buxton, H. G. Trayer.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

The announcement regarding Lieut.-Colonel W. B. Mackay, C.M.G., which appeared in the *London Gazette* of May 9th, 1919, is cancelled.

Major R. B. Purves, D.S.O., to be acting Lieutenant-Colonel whilst specially employed.

Captain (acting Major) A. Leggat, D.S.O., relinquishes the acting rank of Major on vacating appointment as D.A.D.M.S.

Captain M. S. Double to be a D.A.D.M.S. and to be acting Major whilst so employed.

Captains to be acting Majors whilst specially employed: M. Brannan, J. P. Milton, A. W. Paterson, H. J. Blackler.

The following officers relinquish their acting rank on ceasing to be specially employed: Lieut.-Colonel (acting Colonel) J. Mackinnon, D.S.O., Captains (acting Lieut.-Colonels) G. C. E. Simpson, R. A. Stark, M.C., T. A. Green, D.S.O., W. B. Keith, M.C., T. H. Richmond. Captains (acting Majors) H. J. A. Longmore, T. C. Buchanan, G. R. Buchanan, A. C. Tibbits, H. Foxton, M.C., H. J. Blackler, D. R. Kilpatrick.

1st *London Sanitary Company*.—Lieutenant R. Wood to be Captain.
2nd *London Sanitary Company*.—Lieutenant S. G. Reed to be Captain.

4th *London General Hospital*.—Major (acting Lieut.-Colonel) W. G. Spencer, O.B.E., relinquishes the acting rank of Lieut.-Colonel on ceasing to be specially employed. Captain (acting Major) C. Gibbs relinquishes the acting rank of Major on ceasing to be specially employed. Captain W. Turner to be acting Major whilst specially employed (September 26th, 1918).

1st *Northern General Hospital*.—Major T. M. Allison is restored to the establishment.

3rd *Northern General Hospital*.—Major H. R. Dean is restored to the establishment.

2nd *Scottish General Hospital*.—Captain (acting Major) A. A. S. Skirving, C.M.G., relinquishes the acting rank of Major on ceasing to be specially employed.

1st *Southern General Hospital*.—Lieut.-Colonel F. W. Ellis is seconded for duty with the 21st Southern General Hospital.

2nd *Southern General Hospital*.—Major (Brevet Lieut.-Colonel—acting Colonel) A. B. Prowse and Major J. Swain, C.B., to be Lieut.-Colonels. Majors (acting Lieut.-Colonels) George Parker and R. G. P. Lansdown relinquish the acting rank of Lieut.-Colonel on ceasing to be specially employed. Captain (acting Major) J. L. Firth relinquishes the acting rank of Major on ceasing to be specially employed.

3rd *Southern General Hospital*.—Captain N. B. Clowes is restored to the establishment.

1st *Western General Hospital*.—Major (acting Lieut.-Colonel) R. W. Murray relinquishes the acting rank of Lieut.-Colonel on ceasing to be specially employed.

TERRITORIAL FORCE RESERVE.

ROYAL ARMY MEDICAL CORPS.

The announcement regarding Captain (acting Lieut.-Colonel) G. C. E. Simpson which appeared in the *London Gazette* of December 30th, 1918, is cancelled.

Captain M. W. K. Bird relinquishes his commission on account of ill health contracted on active service and retains the rank of Captain.

APPOINTMENTS.

HIGGINS, Thomas Twistington, O.B.E., F.R.C.S., Surgeon to the Hospital for Sick Children, Great Ormond Street, W.C.

JAMES, Surgeon-Colonel W. Culver, M.D., Consulting Physician to the Westminster General Dispensary.

RALPHS, F. Gerald, M.B. Vict., F.R.C.S.E., Honorary Assistant Surgeon, Ashton-under-Lyne Infirmary.

ROSS, James A., M.A. St. And., M.B., Ch.B. Edin., Honorary Ophthalmic Surgeon, Cumberland Infirmary, Carlisle.

MATHEWSON, Douglas, M.B., F.R.C.P. Edin., Assistant Physician to the Edinburgh Royal Infirmary.

NEWSHOLME, H. P., M.D., M.R.C.P., B.Sc., D.P.H., County Medical Officer of Health, North Riding of Yorkshire.

WOODMAN, Musgrave, M.S. Lond., F.R.C.S. Eng., Honorary Aural Surgeon and Laryngologist, General Hospital, Birmingham.

LEEDS GENERAL INFIRMARY.—Honorary Physician: George W. Watson, M.D., F.R.C.P., vice Dr. Clunton, retired. Surgeon in Charge of Out-patients: L. R. Braithwaite, M.B., Ch.B., F.R.C.S.

Honorary Ophthalmic Surgeon: Harry Lee, M.B., B.C., F.R.C.S. Honorary Assistant Physician: J. Le Fleming Burrow, M.B., Ch.B., M.R.C.P.

LEITH HOSPITAL.—Surgeon: Henry Wade, D.S.O., M.D., F.R.C.S.E. Assistant Surgeon: A. Pirie Watson, Ch. M., F.R.C.S.E. Assistant Surgeon and Registrar: W. W. Carlow, M.B., Ch.B., F.R.C.S.E.

Assistant Physician: A. Mathison Stewart, M.B., Ch.B. Edin.

MILLER GENERAL HOSPITAL, Greenwich.—Surgeon: Cecil A. Joll, M.S., F.R.C.S. Eng., vice J. Keogh Murphy, M.B., B.C. Camb., F.R.C.S., deceased. Ophthalmic Surgeon: Montague L. Hine, M.D., vice W. H. McMullen, O.B.E., M.B., F.R.C.S. Eng., resigned.

ROYAL FREE HOSPITAL, W.C.—Consulting Surgeons: Willmott H. Evans, B.S. Lond., F.R.C.S.; Miss Aldrich-Blake, M.S. Lond., with care of patients. Dermatologist: Haldia Davis, M.B. Oxon., F.R.C.S.

SALFORD ROYAL HOSPITAL.—Honorary Assistant Surgeon: Geoffrey Jefferson, M.S., M.B. Lond., F.R.C.S. Eng. Honorary Ophthalmic Surgeon: Henry V. White, M.D., Ch.B. Manch. Honorary Surgeon for Diseases of the Ear, Nose, and Throat: A. A. Smalley, M.B., Ch.B. Vict., M.R.C.S. Eng., L.R.C.P. Lond.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea.—Surgeons to Out-patients: John Everidge, F.R.C.S., C. A. Joll, F.R.C.S., Chas. Jennings Marshall, F.R.C.S. Ophthalmic Surgeon: Chas. Bernard Goulden, F.R.C.S. Dental Surgeon: Val. Kay, L.D.S.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

MACFIE.—On July 31st, at the Bognor Nursing Home, Clarence Road, Bognor, to Dr. and Mrs. Macfie, a daughter.

MACKENZIE.—At 18, Carlton Street, Edinburgh, on July 28th, the wife of Captain R. N. Mackenzie, R.A.M.C. (née Elsie Collinson), of a daughter.

WALKER-BRASH.—To Gloria Lilian, wife of John Walker-Brash, M.R.C.S., L.R.C.P., at 10, All Souls Avenue, Harlesden, N.W.10, a son.

MARRIAGE.

GREENISH—WRIGHT.—On July 29th, at All Saints Church, Warlingham, Surrey, by the Rev. H. Seymour-Isaacs, M.A., Vicar of St. Saviour's, Wood Green, N., assisted by the Rev. Eden Davies, B.A., Curate of Warlingham, F. Harold S. Greenish, M.A., M.R.C.S., L.R.C.P., only son of Dr. and Mrs. F. R. Greenish, of "The Laurels," Warlingham, to Edith Marjorie, only daughter of Mr. and Mrs. Duncan Wright, of "Sidbury," Warlingham.

DEATHS.

ELLIS.—On May 16th, at Rhyllech, Pwllheli, North Wales, suddenly, Philip Mackay Ellis. Major-General A.M.S. (ret.), O.B.E., J.P., County Director B.R.C.S. Carnarvonshire, aged 64.

PARK.—On July 27th, at Southport, died as the result of an accident, Susan, the dearly loved daughter of Dr. R. L. and Mrs. Park, aged 19 years.

TAYLOR.—On July 30th, at Wilton Court, Hushwaite, Mowbray, second son of the late M. W. Taylor, M.D., of Penrith.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, AUGUST 16TH, 1919.

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British Medical Association.

CURRENT NOTES.

Educational Help for Men who have Served.

As early as last January the Central Medical War Committee took steps to obtain Government assistance for medical men who on demobilization wished for a course of instruction to refresh their knowledge of civil medicine and surgery. In the statement published by the Committee on March 1st it was said that it had suggested that those who applied for such a course of training should either retain their commissions and pay during the course, or should receive adequate maintenance. We now learn that the Board of Education is able to give financial help to officers and men of suitable educational qualifications who have served during the war and are in need of assistance to enable them to take full-time courses of higher education. Officers and men of British nationality who have served during the war in the navy, army, or air force, or in certain contingents paid out of funds provided by the Parliament of the United Kingdom, including the South African contingents, may apply for grants. Men who served in the Canadian, Australian, or New Zealand forces, or other forces not so paid, are not included within the scope of the scheme. Grants may be made to help applicants to take full-time courses at universities and other public educational institutions in England and Wales. The courses include, amongst others, full-time university degree or diploma courses, some post-graduate courses, and full-time refresher courses. The amount of a grant that may be made to a suitable applicant will be enough to provide for his maintenance during the course, including the vacations, and for the payment of his tuition fees after taking into account his means from other sources. We understand that the scheme applies in certain circumstances to medical students and to medical men who joined the service immediately after obtaining their first qualification and whose complete courses were thus interrupted by the war. The intending applicant should in the first place communicate with the head of the educational institution at which he wishes to take his course, who will be able to advise him on the subsequent procedure. Grants may also be made to a limited number of specially selected applicants to enable them to pursue courses at university institutions in the British Oversea Dominions or in foreign countries. Those who desire British Oversea Dominions institutions should communicate with the Secretary, the Imperial Education Committee (S.D. 8), War Office. Those who wish to attend universities in foreign countries should

communicate with the Secretary, Service Students Bureau, Board of Education, Whitehall, London, S.W.

National Insurance.

On August 9th letters were addressed on behalf of the Association to the secretaries of Local Medical and Panel Committees (and to secretaries of Divisions and Branches for information) dealing with the following matters:

1920 Agreement and Revision of Remuneration.

The Insurance Acts Committee has already conveyed to the Ministry of Health the decisions of the recent conference, and has discussed with it questions arising therefrom which will hereafter take the form of regulations. The draft regulations will, it is hoped, be available for Panel Committees early in September. The question of future remuneration is dealt with in the letter, and the Committee gives the points which it proposes to put to the Government in support of its contention that the remuneration under the new conditions must be on a considerably higher scale than at present. The points are, briefly: Increase in cost of living and carrying on practice; the inclusion of discharged disabled service men among insured persons, and the inclusion also of large numbers who, though not technically "disabled," have been discharged in deteriorated health; the effect of the war on the general health of the civil population; the rising standard of skill demanded from the practitioner; the proposed inclusion under the new agreements of conditions which will make a greater call on the time and skill of practitioners. Local Medical and Panel Committees are urged to hold a special meeting in the first week of September to discuss these matters and report their opinions to the Insurance Acts Committee by Monday, September 8th.

Election of Insurance Acts Committee for 1919-20.

The Panel Committees have been reminded of the timetable for the election of the eighteen direct representatives from Local Medical and Panel Committees on the Insurance Acts Committee for the ensuing session. It is to be noted that not only are the direct representatives in an absolute majority on the Committee (eighteen out of thirty-two) but that by the recent decision of the Representative Body these direct representatives need not necessarily be members of the Association. The eighteen representatives are elected by thirteen groups; nominations are to be received by the Medical Secretary by October 6th. On or about October 9th the list of candidates will be circulated and on October 16th voting papers will be posted from the head office direct to each member of each Local Medical and Panel Committee in every group where there

is a contest. The voting is by the transferable vote system. All voting papers are to be returned by October 24th, and the result will be announced on October 27th. Voting papers will only be sent to those officially notified by the secretaries as being the present members of Local Medical and Panel Committees.

National Insurance Defence Trust.

Panel Committees are reminded that a considerable number of such Committees have as yet done nothing to show whether they intend or not to support this fund. They are reminded that such action is probably the best test of their interest in the matter and of the determination of the local profession to secure improved terms for the future; the decision later on as to whether insurance practitioners shall or shall not be advised to decline to enter into the new agreement will be greatly influenced by the number of Panel Committees that have declared their adherence to the Trust. The Committees are informed, *pour encourager les autres*, that one practitioner, who prefers to remain anonymous, has promised an individual subscription of £100 in four instalments as required.

Medical Men in Public Life.

The British Medical Association has for a good many years past urged medical men to take their share in public life, not only by entering the House of Commons, but by becoming members of local bodies. The matter came up again at the recent Annual Representative Meeting, when Dr. Brackenbury observed that medical men, in order to obtain their proper place in public affairs, must not rely upon being co-opted to committees of county or town councils. They must be prepared to stand for election. It was a mistake, he said, to suppose that their prospects were hopeless in county areas, and he mentioned the recent election of Dr. C. E. S. Flemming, of Bradford-on-Avon, to the Wilts County Council as an instance to the contrary. Another instance is afforded by Dr. T. G. Miles, of Ruardean, Gloucester, who has been led by the reference we have quoted to send Dr. Brackenbury a letter, showing how his own case supported the view that medical men need not fear to become candidates. Dr. Miles was asked to stand for election on the Gloucestershire County Council as a member for the Mitcheldean Division. He had less than a fortnight, and the division was a wide one, sparsely populated, with ten villages and hamlets. Two other candidates were in the field, both well known and much longer resident in the district. Dr. Miles held six meetings, all in the evening, did no personal canvassing, did not neglect his practice in any way, and was finally returned by a majority of 79 over the next candidate. Of those who voted for him, many gave as the reason: "A medical man knows more than anyone the needs of the people, as he goes into their houses at all hours and under all sorts of conditions." The experience of Dr. Flemming in Wilts and Dr. Miles in Gloucestershire may, we hope, encourage other members of the profession to consent to become candidates for the councils both of counties and county boroughs and urban districts.

Medical Fees.

It may be recalled that the Council of the British Medical Association, at its meeting in October, 1917, expressed the opinion that, without prejudice to the sufficiency or otherwise of medical fees before the war, it considered that under the then conditions individual or collective action in the direction of securing an increase in medical fees was justified. There can be no question of the propriety and reasonableness of such a decision. Apart from the greatly increased cost of living, medical practitioners now have to pay more for everything used in connexion with their work. Several Divisions took action some time ago, and we have recently received reports from Sheffield and Exeter showing that action has been taken at meetings of the medical profession in those places.

At a special general meeting of the medical profession in the Sheffield area held on August 8th, under the chairmanship of Dr. Alexander Forbes, the following resolution was, on the motion of Dr. H. Nutt, seconded by Dr. Mark, unanimously adopted:

That this meeting of the members of the medical profession believes that the time has now arrived when the scale of fees should be raised at least 50 per cent. above pre-war rates to meet the increased cost of living and practice expenses.

At an adjourned meeting of the members of the medical profession at Exeter, on July 24th, the question led to considerable discussion, after which the following resolutions were carried unanimously:

1. That fees for medical attendance should be raised 50 per cent. above the pre-war basis;
2. That where examinations for life insurance, etc., have previously been made for fees of less than a guinea, double these fees be now demanded; and
3. That the honorarium offered for the post of medical officer to the Royal Albert Memorial College, Exeter, is too small to attract a competent medical man.

Meetings of Branches and Divisions.

DORSET AND WEST HANTS BRANCH.

THE summer meeting, to which all local members of the profession were invited, was held at Wimborne on July 16th, the President, Dr. E. K. LE FLEMING, in the chair.

Dr. A. D. EDWARDS, Vice-President, contributed a paper on "Some problems of clinical medicine." A very interesting exhibition of old medical instruments, books, etc., lent by members of the Association, was on view at the meeting.

It was proposed to hold the autumn meeting at Weymouth on September 24th.

GLOUCESTERSHIRE BRANCH.

AT a special meeting of the Gloucestershire Branch, held on July 29th to discuss the remuneration of medical officers for attendance at pensions boards, it was resolved, on the motion of Dr. MOORE, seconded by Dr. MEYRICK JONES:

That the rate of payment should be (1) One guinea per session dealing with not more than five cases; or (2) two guineas per session lasting 2½ hours.

KENT BRANCH: DARTFORD DIVISION.

AT a meeting of the Dartford Division the following resolution was, on the motion of Dr. J. DAWSON CRAWFORD, J.P., seconded by Dr. MURISON, unanimously carried after a full discussion following the report on the recent Annual Representative Meeting by Dr. M. W. Renton, representative of the Dartford, Rochester, Chatham, and Gillingham constituency:

That this meeting considers the irreconcilable attitude adopted towards each other by the older body (the British Medical Association) and the younger (the Medico-Political Union) is detrimental to the best interests of the profession at a crisis when unity is so necessary, and that a *rapprochement* must be made without delay. That the wasted efforts and expenses involved through having to pay overlapping sets of officials, literature, and machinery is to be very much deprecated. That strenuous efforts, however, be now made to achieve the unity of the whole profession by roping in at once into one or other body all registered men and women, and that these bodies should either amalgamate or co-operate in every way for the common good.

MIDLAND BRANCH: NOTTINGHAM DIVISION.

THE annual meeting of the Nottingham Division was held on July 11th.

The following officers were elected for the year 1919-20:

Chairman: Dr. C. J. Palmer. *Vice-Chairman:* Dr. E. H. Houlton. *Honorary Secretary and Treasurer:* Mr. A. M. Webber. *Representatives in Representative Body:* Dr. C. J. Palmer and Mr. A. M. Webber. *Representatives on Branch Council:* Drs. G. T. Tate, W. R. Smith, A. Fulton, and W. Tibbles.

With regard to the colliery clubs in the Division, Dr. Houlton reported that, as the result of the negotiations with the Nottingham Division of the British Medical Association, all the colliery clubs in the district with the exception of two had agreed to 25 per cent. advances. The doctors were therefore getting on an average 16s. 3d. per family and 5s. for juveniles; this, of course, being exclusive of insured persons.

NORTHERN COUNTIES OF SCOTLAND BRANCH.

THE annual meeting of the Branch was held at Inverness on June 28th, when Dr. T. C. MACKENZIE was in the chair.

It was resolved to hold the next annual meeting of the Branch at Elgin, and, if possible, to arrange a joint meeting with the Aberdeen Branch.

The following office-bearers were elected for 1919-20:

President-elect: Dr. John Taylor. *President:* Dr. T. C. Mackenzie. *Vice-President:* Dr. Fergusson. *Honorary Secretary:* Dr. J. Munro Moir.

It was unanimously resolved to instruct the representatives to oppose the proposed increase in the income limit, and also to support the proposal for an increase in the capitation rate.

Association Notices.

NORTH OF ENGLAND BRANCH.—Dr. James Don, Honorary Secretary (1, Grove Street, Newcastle-upon-Tyne), gives notice that the annual meeting of the North of England Branch will be held at Newcastle-upon-Tyne on September 4th.

INSURANCE.

MEETINGS OF THE PROFESSION.

CONFERENCE AT SOUTHELD.

A MEETING of the medical men in the South Essex area was held at the Victoria Hospital, Southend-on-Sea, on July 15th, Dr. A. F. BLAKE (Grays) in the chair. There was a good attendance (nearly forty), many men making a long journey in order to be present.

Dr. JAMES NEAL (Deputy Medical Secretary of the British Medical Association) was present, and at the commencement gave a brief summary of the situation brought about by the proposed alteration in medical practice under the Ministry of Health.

The summary at the end of document M.25 was then discussed clause by clause, Dr. Neal explaining and making clear any doubtful points. The meeting offered strenuous opposition to the "squatter's subsidy" clause, and considered that as regards limitation of lists, the exact numbers should be left to local arrangement, while opinion was nearly equally divided as to whether fees for special services should come out of a raised capitation fee or from a special pool. In this and all other questions of like nature it was felt strongly that everything depended on the adequacy of the capitation fee. The meeting ended with a cordial vote of thanks to Dr. Neal, the proposer laying stress on the loss which the British Medical Association will sustain when Dr. Neal severs his connexion with the Association.

EXETER.

A general meeting of the medical profession in Exeter was held on July 17th, with Dr. VIELAND in the chair.

Dr. EAGER reported that, as Honorary Secretary to the Exeter Division of the British Medical Association, he had been handed a letter, dated June 20th, 1919, from the Secretary of the National Insurance Commission, referring to correspondence with the Department in 1914 on the constitution of a Local Medical Committee for the County Borough of Exeter. The letter pointed out the views of the Commissioners that it would be the general desire of practitioners in the area that a Local Medical Committee should be established on a regular footing as soon as possible, owing to the fact that important questions connected with the revision of the terms of medical service and with the possible extension of health service were likely to come under review at an early date.

A copy of the memorandum on the subject, issued by the Commissioners in 1914, together with their model schemes, was brought to the notice of the meeting, and after considerable discussion it was unanimously resolved, on the motion of Dr. PICKARD, seconded by Dr. STEELE PERKINS, that the constitution of the Committee should be as follows: 3 panel practitioners, 2 general practitioners, and 2 consultants. Dr. Duncan, Dr. Pereira Gray, and Dr. Kelly were elected as representing the panel practitioners, Dr. Steele Perkins and Dr. F. Roper as representing the general practitioners, and Dr. Gordon and Dr. Pickard as consultants. The voting was carried out by ballot.

It was further decided that the Committee as above constituted should also serve as a Medical Advisory Board in connexion with the working of the Ministry of Health Act in the Exeter City area, and that the Honorary Secretary of the Exeter Division of the British Medical Association be the Honorary Secretary of this Committee.

The questions of raising fees in private practice and the working of the Educational and Child Welfare Acts were brought before the meeting as matters urgently requiring consideration by the profession. Owing to the lateness of the hour the discussion was postponed till July 31st.

LOCAL MEDICAL AND PANEL COMMITTEES.

ESSEX.

AT the first meeting of the Local Medical and Panel Committees (Essex) after the recent elections Mr. BURROWS, Chairman of the Insurance Committee, presided by invitation, while Mr. WYLIE, the Clerk to the Insurance Committee, in the capacity of returning officer, announced the names of those elected and gave account of the vacancies.

Notwithstanding that a postal vote was arranged in conformity with the expressed desire of nearly all the areas in Essex (made in 1916, when the matter was discussed) there were many areas in which no election was completed, or where not the proper number of seats was filled.

In accordance with the scheme of election most of the vacancies were filled by "appointment." Dr. Brunton was elected by the newly formed committees as chairman and Dr. Panting as vice-chairman.

A specially elected subcommittee was requested to go fully into the matter of the working of the committees, printing and circulation of agenda (not hitherto thought necessary), and the former secretary was asked to continue the work pending decisions on these points.

Mr. BURROWS made an excellent speech, going over the relations of the medical and insurance committees since the inception of the Act, and was warmly thanked for his speech, his conduct of the meeting, and the friendly attitude he had in the past adopted towards the committees in the many little difficulties that cropped up.

RENEW COUNTY.

At a meeting of the Panel Committee held at Paisley on June 26th a letter was read from the Pharmaceutical Committee, directing the attention of the Panel Committee to the serious drain on the drug fund occasioned by the high cost of drugs, the increased number of prescriptions, and the prescribing of dietetic preparations. The Panel Committee considered that the high cost of the drug supply was mainly due to the abnormal demand caused by recent epidemics, and suggested that the Insurance Committee should endeavour to procure a grant from the Special Drug Fund.

M.25 of the British Medical Association was considered, and two amendments were submitted to the Conference of Local Medical and Panel Committees.

COUNTY OF LONDON INSURANCE COMMITTEE.

The Misconduct Rule and Medical Benefit.—The London Insurance Committee, at its meeting on July 24th, decided that the misconduct rule, whereby a deposit contributor is suspended from benefit when his incapacity for work is the result of his own misconduct, should not apply in the case of any insured person suffering from any form of venereal disease. A recommendation has previously been before the committee, in similar terms to the resolution passed by a prominent approved society, that the suspension should not be enforced in cases where the venereal disease was in an early stage and for which qualified medical advice was being sought and treatment undertaken; but the wider suggestion made by the Ministry of Health, that the rule should not apply to any form of venereal disease, has in the end been accepted.

Deposit Contributors.—The number of deposit contributors in the London insurance area in 1918 was 76,840, and certificates issued for payment of sickness benefit numbered 9,100, and for maternity benefit 1,039.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following appointments are announced by the Admiralty: Surgeon Lieutenants (temporary): W. S. Adams to the *Bea*, A. H. Richardson to the *Kendal*, D. H. Cameron to the *Blenheim*, H. S. Bryan to the *Imprégnable*, A. J. Copeland to the *Royal Sovereign*, W. Michael to the *Berberic*.

ARMY MEDICAL SERVICE.

Major-General Sir M. W. O'Keefe, K.C.M.G., C.B., retires on retired pay.

Major-General Sir M. P. C. Holt, K.C.B., K.C.M.G., D.S.O., is appointed Honorary Surgeon to the King, vice Major-General (Temporary Lieutenant-General) Sir W. Babbie, V.C., K.C.M.G., C.B., K.H.S.

Brevet Colonel (acting Colonel) R. H. Moore is granted the rank of Colonel on ceasing to be employed.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonel L. F. F. Winslow retires on retired pay.

Major G. de la Cour to be acting Lieutenant-Colonel whilst commanding a medical unit (September 20th, 1918—substituted for notification in the *London Gazette*, November 9th, 1918).

The following relinquish the acting rank of Major:—Captain W. C. Hartgill, M.C. Temporary Captains: R. S. Dickie (on reposting), T. B. R. Branch.

To be Majors:—Captains (acting Lieutenant-Colonels): R. G. S. Gregg, B. A. Odum, O.B.E.; Captain (Brevet Major) F. T. Dowling; Captains (acting Majors): J. A. Renshaw, D. B. McGregor, R. F. O'T. Dickinson, A. E. B. Jones, J. R. Lloyd, J. F. Grant, C. Kelly, M.C.; Captains: A. W. Howlett, G. F. Dawson, M.C., H. S. Dickson, R. E. Todd, G. Petit, M.C., W. R. O'Farrell, W. A. Spong, H. P. Hart, M.C., J. C. L. Hingston, A. Hendry.

Temporary Captain R. P. Nash (Captain R.A.M.C., T.F.) relinquishes the acting rank of Lieutenant-Colonel on ceasing to command a medical unit.

Lieutenant (temporary Captain) T. C. Bowie to be Captain.

Temporary Lieutenant H. C. Hinwood to be temporary Captain.

The following officers relinquish their commissions: Temporary Lieut.-Colonel J. F. Woodyatt, on ceasing to be in charge of Halifax War Hospital, and retains the rank of Lieutenant-Colonel. Temporary honorary Lieut.-Colonel W. J. Richard, on ceasing to be employed at the Merrivale War Hospital, June 25th, and retains the honorary rank of Lieut.-Colonel (substituted for the notification in the *London Gazette* of July 17th). Temporary Captains, and retain the rank of Captain: R. W. L. Wallace, M.C. (March 14th, substituted for notification in the *London Gazette*, June 27th), H. E. M. Baylis, M. F. Emrys-Jones, J. MacKinnon, A. S. Holden, G. Fleming, R. Stipo, J. A. R. Wells, J. W. Pell, A. C. Parsons, R. L. Bell, R. M. Rowe, J. E. T. Jones, F. Corner, J. W. Coulter, A. Topping, D. J. Evans, W. F. Dunlop, F. D. Walker, J. P. Brennan, T. C. Findlater, F. W. Hayes, W. M. T. Wilson, S. P. Rea, J. G. Willmore, W. D. Wilkins, R. W. Russell-Jones, W. J. Spearling, J. M. Adams, S. M. Vassallo, S. D. Adam, R. R. Archibald, M.C., C. S. Tennant, F. M. Gardner-Medwin, D. H. Jones, C. D. Kean, C. Harris, M.C., B. W. Wibberley, M.C., H. S. Metcalfe, G. W. Pope, W. H. Duncan, P. G. Leeman, M.C. (May 2nd, substituted for notification in the *London Gazette*, June 4th), P. Asho (July 24th, substituted for notification in the *London Gazette*, April 22nd), E. O. Marks (on account of ill health), C. Garner, C. R. Young, M.C., G. MacDonald, L. L. Cassidy, A. Vella, T. A. Davidson, F. R. Dougan, M.C., H. T. Retallack-Moloney, T. C. Harte, J. A. H. Telfer, O. P. M. Kelly, C. I. Elderton, F. V. Hanratty, C. H. G. Gostwyck, R. Lewis, J. F. Venables, T. S. Reeves, H. J. Rawson, J. D. C. Swan, G. E. Charters, J. M. Richey, S. H. Kingston, I. D. Ramsay, H. C. Wert, M. Gross (on account of ill health contracted on active service), P. W. L. Andrew, N. J. Newbould, S. W. Fisk, J. P. C. O'Meara, W. H. Gibson, R. G. Gordon, R. M. Paterson, V. G. Ward, J. Cross, J. G. Lee, M.C., W. H. W. C. Cardon (April 10th, 1919, substituted for notification in the *London Gazette*, May 19th, 1919), D. A. Farquharson, M. C. R. Grahame (May 28th, 1919, substituted for notification in the *London Gazette* of June 25th, 1919), W. A. Wilson-Smith, A. J. D. Cameron, R. Vincent, E. A. O. Travers, O. A. Beaumont, G. C. Wells-Cole, G. H. Urquhart, P. A. Sergeant, W. A. Wheeldon, A. Brownlie, D. Kelly, M.C., J. Stephenson.

J. M. Biggs, M. A. C. Buckell, J. A. Dickson, T. L. Fleming, E. T. C. Hughes, G. F. Ridgen, M.C., J. D. Lyle, A. V. Craig, M.C., O. J. W. Adamson, F. H. Mosse, J. C. Neil, W. F. Hare, W. P. Philp, M.C., P. B. Belanger, M.C., N. B. Walker, R. W. Annison, C. H. Kipman, G. S. Banks, J. V. Grant, J. W. N. Roberts, V. T. P. Webster, H. M. Brown, J. F. Smith, A. S. Richmond, M.C., P. A. B. Clark, S. F. Cheesman, J. H. Glover, J. M. Johnstone, W. G. Fee, R. W. T. Clappett, L. W. Batten, H. F. Brice-Smith, F. P. Hearder, G. Robinson, A. C. Profeit, T. L. Butler, M. W. Shutte, J. B. Lester (May 30th, 1919—substituted for notification in the *London Gazette*, March 31st, 1919), A. G. Payne, J. F. Sheppard, J. N. Donnellan, M. A. McKeever (May 1st, 1918—substituted for notification in the *London Gazette*, July 1st, 1918), W. P. Over, B. J. Hackett, J. A. G. Sparrow (on account of ill health). Temporary Lieutenants and retain the rank of Lieutenant: J. E. G. Calverley, C.M.G., E. B. Bate, F. Aitken, W. Hickey, M.C. (May 20th, 1919, substituted for the notification in the *London Gazette*, June 26th, 1919), W. E. Thompson, W. Napier, W. P. McCowan, W. A. S. Magrath (March 29th, 1919—substituted for notification in the *London Gazette*, March 28th, 1919), W. E. Martin, R. R. MacGregor (April 3rd, 1919—substituted for notification in the *London Gazette*, March 31st, 1919), H. E. Thompson (April 3rd, 1919—substituted for notification in the *London Gazette*, March 28th, 1919).

ROYAL AIR FORCE.

MEDICAL BRANCH.

Lieut.-Colonel H. E. South (Fleet Surgeon R.N.) relinquishes his commission on ceasing to be employed.

Transferred to unemployed list: Captain (acting Major) C. J. G. Taylor, Captain T. H. James.

INDIAN MEDICAL SERVICE.

Lieut.-Colonel C. Duer, M.B., F.R.C.S., who was re-employed during the war, has been permitted to resign, with effect from May 13th.

Major-General P. Behr, C.B., C.M.G., C.I.E., M.D., has been retained in the service until further orders, with effect from May 27th, the date on which he was due to retire on attaining the age of 60 years.

Lieut.-Colonel C. R. Stevens, M.D., F.R.C.S., Professor of Surgery, Medical College, Calcutta, and Surgeon to the College Hospitals, has been granted combined leave for eight months, with effect from May 10th, and Major F. P. Connor, D.S.O., F.R.C.S., has been appointed to officiate in his absence.

Captain K. G. Pandalai, M.B., will take seniority in his present rank from January 28th, 1914, his previous forfeited service having been restored for good service in the field.

Major G. G. Hirst has been appointed a temporary Deputy Medical Storekeeper to Government, May 7th.

Majors permitted to retire from the service in consequence of ill health: P. Heffernan (April 3rd), W. H. Riddell, M.C. (April 4th).

Captain R. B. Sewell, Surgeon Naturalist, Marine Survey of India, has been appointed officiating Superintendent, Zoological Survey of India.

Dr. G. E. Malcomson has been promoted to the rank of Major, January 20th.

Captain C. A. Wood, M.C., M.B., will take seniority in his present rank from January 28th, 1914, his previous forfeited service having been restored for good service in the field.

The date of retirement of Lieut.-Colonel S. H. Henderson, M.B., is April 5th.

OVERSEAS CONTINGENTS.

CANADIAN ARMY MEDICAL CORPS.

Temporary Lieut.-Colonel (acting Colonel) T. C. D. Bedell to be temporary Colonel.

Temporary Lieut.-Colonel (acting Colonel) R. St. J. MacDonald relinquishes the acting rank of Colonel.

Temporary Lieut.-Colonel R. Raikes, O.B.E., ceases to be seconded for duty to Board of Pensions Commissioners for Canada (British Branch).

Temporary Majors (acting Lieut.-Colonels) relinquish the acting rank of Lieut.-Colonel: S. L. Walker, W. H. Lowry, R. M. Filson, E. A. Neff.

Temporary Captain J. K. Mossman, M.C., relinquishes his appointment as D.A.D.M.S.

The following officers retire in the British Isles: Temporary Colonel W. L. Watt, C.M.G.; temporary Lieut.-Colonels S. R. Harrison (April 19th, 1919 (substituted for *London Gazette* notification, May 9th, 1919), E. L. Pope; temporary Majors G. J. Gillam, A. B. Walter, S. G. Ross, D.S.O., M.C., H. W. Whytock, M.C., D. J. Cochrane; honorary Majors F. Lessore, I. D. Carson; temporary Captains R. D. Cowen, D. G. K. Turnbull, M.C., A. B. Roberts, R. H. Fisher, A. Keay, G. More, T. Campbell, L. C. Reid, M.C., M. Krolik, H. C. Watson, V. D. Davidson, J. W. Dorey, J. E. C. Henderson, M. G. Thomson, W. E. Jones, O. E. Kennedy, F. A. O'Reilly, G. W. M. Smith, T. G. Macdonald, R. G. Moffat, T. D. Wheeler, F. B. Sharp, R. MacKinnay, J. L. Poirier, J. W. Begg, G. B. Ferguson, D. Smith, R. F. Price, H. G. McCarthy, W. C. Lowry, M. F. D. Graham, V. K. O'Gorman, H. J. G. Geggie, B. Cohen; honorary Captain F. White; temporary honorary Captain A. V. Whipple.

Temporary Captains (acting Majors) relinquish the acting rank of Major: D. G. K. Turnbull, M.C., H. C. Allison, A. M. Yeates, J. N. Taylor, C. B. Kidd, H. B. Van Wyck, R. F. Slater, A. Sterling, H. G. Murray, G. S. Gordon, E. P. Lewis.

The correct spelling of the name of F. B. McIntosh is as now shown, and not as in the *London Gazette* notification, July 10th, 1919.

To be temporary Majors: Temporary Captains (acting Majors) J. H. Slayter, M.B.E., C. T. Wallbridge, C. A. Davies, P. D. Saylor, H. C. Davis, M.C., D. J. Millar; temporary Captain J. P. S. Cathcart, M.C.

Temporary Lieutenants to be temporary Captains: J. E. Wadsworth, M. A. Wittick.

SOUTH AFRICAN MEDICAL CORPS.

Temporary Captains relinquish their commissions and retain the rank of Captain: A. F. de Waal (May 5th—substituted for notification in the *London Gazette*, March 20th), I. W. Brebner, H. Symonds, J. Drummond, R. D. Kidd, J. de V. Meiring, H. Sterne-Howett, E. L. Reid, M.C., J. C. Caldwell, A. O. I. Browne.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Captain R. L. Impey, M.C., to be temporary Major for service with the King's African Rifles from May 20th to July 21st, 1918.

Captains to be acting Majors whilst specially employed: M. Stewart, R. D. Cameron.

The notification regarding Captains G. V. Stockdale, D.S.O., and Thomas M. Davie, published in the *London Gazette* C. March 6th and April 3rd, 1919, respectively, are cancelled.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonel Sir Wilmot P. Herringham, C.B., is retired on attaining the age limit, and is granted the honorary rank of Major-General.

Lieut.-Colonel (acting Colonel) H. Collinson, C.B., C.M.G., D.S.O., relinquishes the acting rank of Colonel on vacating the appointment of A.D.M.S.

Captain (acting Lieut.-Colonel) L. D. B. Cogan, D.S.O., to be A.D.M.S., and to be acting Colonel whilst so employed.

Captain H. B. Cunningham to be D.A.D.M.S., and to be acting Major whilst so employed.

The following officers relinquish their acting rank on ceasing to be specially employed: Majors (acting Lieut.-Colonels) A. W. Moore, O.B.E., J. Wood, O.B.E., Captains (acting Lieut.-Colonels) G. R. Rickett, O.B.E., F. G. Dobson, D.S.O., H. H. B. Cunningham, Captains (acting Majors) W. Scott, L. M. V. Mitchell, O.B.E. (June 11th, 1919—substituted for notification in the *London Gazette* of January 21st, 1919), A. E. Mackenzie, F. E. Stokes, J. W. Thomson, C. S. P. Black, M.C., J. W. McIntosh, A. L. Heiser, A. E. Ironside, M.C., S. H. Rentsch.

Captain D. Cameron is restored to the establishment.

1st Eastern General Hospital.—Captains (acting Majors) G. S. Haynes and J. C. W. Graham relinquish the acting rank of Major on ceasing to be specially employed. Captain P. N. B. Odgers is restored to the establishment.

1st London General Hospital.—Lieut.-Colonel Sir Anthony A. Rowby, K.C.M.G., K.C.V.O., C.B., is retired, having vacated his civil hospital appointment, August 9th, 1919, and is granted the honorary rank of Major-General.

1st London Sanitary Company.—Lieutenants to be Captains: J. Buckland, W. H. S. Dunn.

4th Northern General Hospital.—Major F. S. Genney (acting Lieutenant-Colonel) relinquishes the acting rank of Lieutenant-Colonel on ceasing to be specially employed.

3rd Western General Hospital.—Captain (acting Major) R. C. Elsworth relinquishes the acting rank of Major on ceasing to be specially employed.

TERRITORIAL FORCE RESERVE.

ROYAL ARMY MEDICAL CORPS.

The announcements regarding Lieut.-Colonel D. S. Davies, Major R. Thornton, Captains P. N. B. Odgers, S. F. H. Everill, R. Hitchings, and C. Corfield which appeared in the *London Gazette* of December 18th, 1918, January 11th, 13th, 23rd, 1919, December 21st, 1918, and January 27th, 1919, respectively are cancelled.

VOLUNTEER FORCE.

Middlesex R.A.M.C.(V.).—H. Tipping (late Captain and Medical Officer to 1st Volunteer Battalion, Middlesex Regiment) to be honorary Captain.

Northern Counties Highland R.A.M.C.(V.).—D. Macfadyen (late temporary Captain and Medical Officer, 1st Volunteer Battalion the Cameron Highlanders) to be honorary Captain.

Staffordshire R.A.M.C.(V.).—Temporary Lieutenant G. M. Fox to be temporary Captain.

APPOINTMENTS.

BERRY, William A., M.D.(State Med.), B.S.Lond., D.P.H.Oxon., Medical Officer of Health and School Medical Officer, Heston and Isleworth Urban District Council.

LIGHTBODY, John Henry, M.D.Vict., School Medical Inspector for the Honiton District under the Devon County Council.

ROY, Donald W., M.A., M.B., B.C.Cantab., F.R.C.S.Eng., Assistant Obstetric Physician to St. George's Hospital, London, S.W.

RUTHERFORD, Andrew, M.B., B.Sc.Edin., Assistant Pathologist to the Edinburgh Royal Infirmary.

DISTRICT MEDICAL OFFICERS: J. E. Ashby, M.R.C.S., L.R.C.P. (Barnet Union); J. Gillan, M.B., C.M.Glas. (Sunderland Union); J. M. Glasse, M.B., Ch.B.Edin. (Haltwhistle Union); E. A. Price, M.R.C.S., L.R.C.P. (Tiverton Union).

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone Road, N.W.—Obstetric Surgeon to Out-patients: Trevor B. Davies, M.D., M.R.C.P., F.R.C.S. Medical Officer to the Ante-natal Department: Miss Grace Dearnley, M.D. Pathologist and Registrar: J. Graham Willmore, M.R.C.S., L.R.C.P. (The designation of members of the staff has been altered from "Physicians to In-patients" and "Physicians to Out-patients" to "Obstetric Surgeon to In-patients" and "Obstetric Surgeon to Out-patients.")

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

LYDD-EVANS.—On August 10th, at 259, Hainton Avenue, Grimsby, the wife of V. Lloyd-Evans, M.B., F.R.C.S.Edin., of a daughter.

LOVELL.—On July 30th, at The Manse, Lymm, Cheshire, the wife of E. Richardson Lovell, M.R.C.S., L.R.C.P., of a daughter.

DEATHS.

KNIGHT.—On August 7th, 1919, at 23, Walter Road, Swansea (suddenly of heart failure), Frederick Knight, M.D.Lond., aged 59 years.

VICKERY.—On July 25th, at Royal Naval Hospital, Invergoron, of pneumonia, Samuel Henry Vickery, M.B., Surgeon Commander R.N., dearly loved and loving husband of Hilda M. Vickery, and eldest son of Dr. and Mrs. Vickery of Kinsale, Ireland.

YOUNGER.—On July 24th, at 2, Mecklenburgh Square, W.C., Edward George Younger, M.D., M.R.C.P., aged 69 years.

DIARY FOR THE WEEK.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End.—Wednesday, 4.15 p.m.: Haematogenous Infections of the Testicles and Bladder, by Frank Kidd, F.R.C.S.

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, AUGUST 23RD, 1919.

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British Medical Association.**CURRENT NOTES.****Appointments for Demobilized Medical Officers.**

In a statement issued by the Central Medical War Committee, and published in the SUPPLEMENT of March 1st, a hopeful view was taken of the prospects of medical officers then about to be demobilized. The opinion was expressed that on their return to civil life they would have little difficulty in finding work, though it might be difficult for them to find just the kind of work they would prefer. Before the war the annual supply of doctors was hardly keeping pace with the times, and in the five years of the war that normal supply had been flowing into the services. Consequently there were, it was believed, many openings in all kinds of practice, and particularly, of course, in general practice. The Committee suggested that men on the look-out for openings should apply to the usual channels—the deans of the medical schools, the columns of the medical journals, and the medical agents. The Committee stated further that it had written in December to all Government departments having medical work at disposal urging that preference should be given, wherever possible, to doctors who had served. The War Office, the Ministry of Pensions, and the Local Government Board all expressed cordial agreement with this principle and promised support. At the same time the Local Medical War Committees were asked to help any man to secure any such work who, on his return, expressed his desire for such, and it was pointed out that vacancies should be made wherever necessary by the retirement of those who had done no service. We have received a letter from Dr. T. B. Sellors (Westcliff-on-Sea) asking how far these expectations have been fulfilled. In the first place it may be noted that the Association asked the various Government departments to make only temporary appointments during the war, and the departments agreed to act on this principle as far as possible, and to urge local authorities over whom they had any control to follow their example. With regard to whole-time appointments the number of vacancies recently announced has been so considerable as to indicate that on the whole the policy desired was carried out, though we have heard of cases where the local profession has had to remind the employing authority and the doctor employed of the temporary nature of the appointment. With regard to appointments of medical referees under the Pensions Ministry, and any military work, the Association had a definite promise from the Pensions Ministry and the War Office that medical men who had served would be held to have the first claim. The Ministry of Pensions some time ago notified all its district commissioners that so soon as they thought all local practitioners had returned from medical service the appointment of medical referee should be thrown open, and this, we are informed, has been done in a number of areas. It is believed that most of the Pensions Boards now contain a majority of men who have served. It is understood that there is shortly to be a general revision of these appointments. Communications with regard to any specific cases should be addressed to the Medical Secretary.

Doctors' Motor Cars.

The Medical Secretary frequently receives letters from doctors asking that priority should be given to their orders for cars. It is therefore desirable that members should know exactly what the Association can do in this matter. When the Government priority scheme was in force, the Association succeeded in getting very favourable conditions for doctors; but that scheme is now abolished; the Government will not interfere, saying that doctors must take their chance with the makers along with other purchasers. A few weeks ago the Medical Secretary wrote a letter to the principal motor papers urging manufacturers to give favourable consideration to the orders of doctors, and it is believed that this letter has had a good effect. At any rate, several manufacturers since then, on being approached, have said that they would do what they could on receipt of certain particulars. Any member of the Association who has ordered a car and is experiencing what he considers to be undue delay in its delivery should inform the Medical Secretary of the make of the car, from whom and when it was ordered, and what promise he has had from the makers or from the agent; the Medical Secretary will then do his best to secure favourable consideration by the makers. Members must, however, make full allowance for the difficulties of motor manufacturers, who seem to be having at least as much difficulty as regards output as people in other businesses.

Medical Men in Public Life.

With reference to the paragraph published last week concerning medical men in public life, we are informed that Dr. H. N. Baron (Orford), Dr. P. L. Giuseppi (Felixstowe), and Dr. J. M. Taylor (Oulton Broad), all members of the East Suffolk Panel Committee, were elected to the East Suffolk County Council, and that two other members of the medical profession have been co-opted to the Maternity and Child Welfare Subcommittee.

Association Notices.**BRANCH AND DIVISION MEETINGS TO BE HELD.**

KENT BRANCH: MAIDSTONE DIVISION.—Dr. A. C. Black, Honorary Secretary (Strettit Place, East Peckham, Paddock Wood, Kent), gives notice that a meeting of the Division will be held at the West Kent Hospital on Thursday, September 4th, at 3.15 p.m., when Dr. C. Wilson will give an address on auricular fibrillation and other anomalies of cardiac rhythm.

NORTH OF ENGLAND BRANCH.—Dr. James Don, Honorary Secretary, 1, Grove Street, Newcastle-upon-Tyne, gives notice that the annual meeting of the North of England Branch will be held at Newcastle-upon-Tyne on September 4th.

INSURANCE.**NATIONAL INSURANCE ACT, 1919.**

THE Ministry of Health has issued a circular directing the attention of employers and others to the fact that by the National Insurance Act, 1919, which has just received the Royal Assent, the limit of remuneration up to which persons employed otherwise than by way of manual labour are liable to compulsory health insurance has been raised from £160 to £250 a year. Employers are accordingly

required for the future to pay health insurance contributions in respect of persons employed by them under a contract of service as follows:

For non-manual workers, where the rate of remuneration (including any regular bonus, etc.) does not exceed £250 a year.

For manual workers, irrespective of the rate of remuneration.

A non-manual worker whose remuneration is over £160 a year but not over £250 a year may, within a limited period and under certain conditions, claim a certificate of exemption, and on the grant of such a certificate the employer's contributions (3d. a week) are alone payable. Forms of application for exemption will be obtainable shortly at any Post Office.

LOCAL MEDICAL AND PANEL COMMITTEES.

WARWICKSHIRE.

At the meeting of the newly elected Panel Committee for Warwickshire, held in Coventry on July 30th, Dr. John Orton (Coventry) was re-elected chairman, and Dr. R. Latimer Greene (Stratford-on-Avon) vice-chairman, for the ensuing year. Arrangements were confirmed whereby a sum not exceeding £1d. should be collected voluntarily from each insurance practitioner for the county towards the expenses of the Panel Committee, and for the making of a substantial contribution towards the National Insurance Defence Trust. The chairman reported with regard to his attendances at the recent conferences of the Association and of the representatives of Local Medical and Panel Committees. The question as to the eligibility of a practitioner to charge a fee for performing an operation for appendicitis on his panel patient was raised by the Insurance Committee; a doctor had recommended the operation as an emergency measure, and had performed the operation at the local hospital with the consent of the honorary medical staff. The Panel Committee made no decision as to whether the operation came within the formula as to competence and skill in relation to the patient's best interests, but took the view that in the particular circumstances no fee should be charged by the practitioner, having regard to the general rules and customs of the hospital where the operation was performed. The Panel Committee took the view that the action of the Insurance Committee in vetoing the operation of the new local formulary was entirely *ultra vires*, and decided to make representations to the Ministry of Health.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

The following notifications are announced by the Admiralty:—Surgeon Commander J. Chambers, C.M.G., is promoted to the rank of Surgeon Captain. Surgeon Captain E. C. Lomas, C.B., D.S.O., is placed on the retired list (invalided). Surgeon Commander J. Whelan to the *Prince George*. Surgeon Lieutenant Commanders J. McA. Holmes to the *Crescent*, additional for Royal Naval Hospital, Peabees; W. P. Hingston to the *Castor*; D. Loughlin to the *Pembroke*, additional for Osea Island Naval Base; A. B. Fisher to Royal Naval College, Osborne; J. Bourdas to the *Temeraire*. Surgeon Lieutenants (temporary) J. L. Lammard and G. Balsillie to the *Sandhurst*; W. A. Gray to the *Maidstone*; A. Young to the *Inflexible*; A. Craig to the *Warspite*.

ARMY MEDICAL SERVICE.

Colonel C. H. Melville, C.M.G., retires on retired pay.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonel E. W. P. Marriott, D.S.O., retires on retired pay. Major and Brevet Lieut.-Colonel A. McFunn, O.B.E., relinquishes the temporary rank of Lieut.-Colonel on reposting.

Majors relinquish the acting rank of Lieut.-Colonel on reposting: A. C. H. Gray, O.B.E., C. R. Miller, D.S.O., S. M. W. Meadows, D.S.O. (March 17th, 1919, substituted for notification in the *London Gazette*, May 16th, 1919).

Captain N. T. Whitehead, M.C., relinquishes the acting rank of Lieut.-Colonel on ceasing to command a medical unit.

The following relinquish the acting rank of Major: Captain and Brevet Major R. E. Barnsley, M.C., Captains L. J. Sheil, M.C., C. H. Brennan, M.C., R. A. Austin, M.C. Temporary Captains: W. Haward, J. V. Grant, M. B. Mackay, M.C., W. T. Hessel, J. S. Stewart, A. C. B. McMurtrie, M.C., R. J. Vernon, H. M. Vickers, I. Jones, L. M. Smith, G. Jackson, G. E. Neligan, M.C., J. P. McG. Sloan, M.C., J. McDonnell, M.C., M. A. Power, M.C., L. G. McCune, C. G. McAdam, F. W. Wesley, O.B.E., T. M. Crawford, T. E. Amyot.

Temporary Captain K. B. Dickson to be acting Lieut.-Colonel whilst commanding a medical unit from January 10th to February 22nd, 1919.

To be acting Majors: Captains F. W. Matheson, W. E. Adam, M.C. Temporary Captains S. Stockman, R. S. S. Statham, R. E. H. Leach, P. P. J. Stewart, C. E. Walker.

Captain A. G. Harsant, from S.R., to be Lieutenant and to be temporary Captain, November 2nd, 1916, but not to reckon for pay or allowances prior to August 1st, 1919, with precedence next below W. M. Cameron.

Captain D. H. C. MacArthur relinquishes the acting rank of Major (March 17th, substituted for notification in the *London Gazette*, June 27th).

To be Captains, but not to draw pay or allowances prior to July 1st, 1919, with precedence as indicated:—Captain R. H. Graham from S.R., April 1st, 1919, next below M. B. King. Temporary Captains: R. N. Porritt, November 28th, 1918, next below L. W. Evans; A. R. Oram, M.C., May 10th, 1919, next below L. S. C. Roche.

The following Captains from the T.F. to be Captains, but not to reckon for pay or allowances prior to August 1st, 1919: G. F. Carr, M.C., June 11th, 1918, next below M. P. Power; C. M. Gozney, M.C., July 1st, 1918, next below S. Robertson.

Temporary Captain J. McP. MacKinnon to be Lieutenant, and to be temporary Captain, January 25th, 1919, but not to reckon for pay or

allowances prior to July 1st, 1919, with precedence next below J. D. A. Champney.

The notifications in the *London Gazette* of May 22nd and July 5th, 1919, regarding temporary Captain (acting Major) H. C. Watson are cancelled, as is also that regarding temporary Captain W. J. Woodman published in the *London Gazette* of July 2nd.

The notifications in the *London Gazette*, June 28th, 1919, regarding temporary Captains E. E. Frazer and P. J. Wheeler are cancelled.

Temporary Lieutenants to be temporary Captains: J. Paxton, V. D. Pennecfather, G. S. Livingston, N. B. Benjafield, J. McClellan, A. P. Mitchell, G. H. Dart, J. C. Warwick, A. E. Hodgkins, E. H. Milson.

Temporary Lieutenant J. E. Rea to be Lieutenant, October 3rd, 1918, but not to reckon for pay or allowances prior to August 1st, 1919, with precedence next below C. A. Whitfield.

ROYAL AIR FORCE.

MEDICAL BRANCH.

Major (acting Lieut.-Colonel) R. R. Bickford, D.S.O. (Staff Surgeon R.N.), relinquishes his commission on ceasing to be employed.

Captain T. E. Mulvaney relinquishes his commission on account of ill health contracted on active service, and is permitted to retain his rank.

Transferred to the unemployed list: Major C. F. Bainbridge; Captains R. Hall and K. B. Aickman; Lieutenant N. Homewood.

Lieutenants to be Captains: C. T. Costello, G. M. Mellor, H. C. Cox, G. Meadows, L. C. Broughton-Head, H. B. Troup, H. T. Prys-Jones, J. Coulter-Smith, R. Mugliston, P. E. Williams, C. Lambinudi, A. Kirkhope, P. M. Carroll, J. P. Horsford, A. K. Soutar, G. Dunderdale, J. P. Hennessey, G. W. Harbottle, M. J. Whelton, J. Valerie, J. P. Wells, A. St. J. Hennessey, G. W. J. Bonsfield.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonel (acting Colonel) F. W. Higgs, C.B.E., relinquishes the acting rank of Colonel on vacating the appointment of A.D.M.S.

Lieut.-Colonel G. C. Taylor, O.B.E., vacates the appointment of D.A.D.M.S.

Lieut.-Colonel R. Emmett relinquishes his commission on account of ill health and retains the rank of Lieut.-Colonel.

Captain (acting Major) M. B. G. Sinnott relinquishes the acting rank of Major on vacating the appointment of D.A.D.M.S.

APPOINTMENTS.

BARLING, Seymour, C.M.G., M.S. Lond., F.R.C.S., Honorary Surgeon to the General Hospital, Birmingham.

DICK, Maxwell, M.B., B.S., Medical Referee under the Workmen's Compensation Act for County Court Circuit No. 38, and to be attached more particularly to the Grays Thurrock and Southend County Courts.

HARDY, T. Lionel, M.B. Cantab., M.R.C.P. Lond., Assistant Physician to the General Hospital, Birmingham.

NICHOLSON, Ruth, M.B., B.S., B.Hy. Dunelm., Honorary Assistant Surgeon to the Samaritan Hospital for Women, Liverpool.

ST. THOMAS'S HOSPITAL.—The following appointments have been made:—Casualty Officers and Resident Anaesthetists: J. W. Wayte, M.C., M.R.C.S., L.R.C.P. (Ext.); E. N. Howell Rogers, B.A., M.B., B.Ch. Cantab., M.R.C.S., L.R.C.P.; A. H. J. Smart, B.A., M.B., B.Ch. Cantab., M.R.C.S., L.R.C.P.; E. P. Brockman, B.A. Cantab., M.R.C.S., L.R.C.P.; E. E. Carter, M.R.C.S., L.R.C.P.; F. Moor, M.C., M.A. Cantab., M.R.C.S., L.R.C.P.; R. A. W. Procter, M.C., M.A. Cantab., M.R.C.S., L.R.C.P. Resident House-Physicians: J. Forest Smith, M.R.C.S., L.R.C.P.; S. E. Amos (Ext.); C. Y. Eccles, M.R.C.S., L.R.C.P.; A. E. Thomas, B.A., M.B., B.Ch. Oxon. (Ext.). Resident House-Surgeons: W. E. Le Gros Clark, M.R.C.S., L.R.C.P. (Ext.); N. A. Sprott, B.A., M.B., B.Ch. Oxon., M.R.C.S., L.R.C.P. (Ext.); J. P. S. Walker, M.A., M.B., B.Ch. Oxon.; L. G. Higgins, M.B., B.Ch. Cantab., M.R.C.S., L.R.C.P. (Ext.). House-Surgeon to Block 8: J. F. Ryan, M.R.C.S., L.R.C.P. Obstetric House-Physicians: A. F. Potter, M.R.C.S., L.R.C.P.; W. G. Bigger, D.S.O., B.A., M.B., B.Ch. Cantab., M.R.C.S., L.R.C.P. Ophthalmic House-Surgeons: D. McE. Dickson, M.C., M.R.C.S., L.R.C.P.; H. L. Evans, B.A. Cantab., M.R.C.S., L.R.C.P. Clinical Assistants (Throat): F. Porter Smith, M.R.C.S., L.R.C.P. (Ext.); (Children's Medical) A. Viney, M.R.C.S., L.R.C.P. (Ext.).

CERTIFYING FACTORY SURGEONS.—J. Ferguson, M.D. Durh., M.R.C.S., L.R.C.P., Manchester (South-East) District, co. Lancaster; Dr. M. F. Lavin, Ballymore Eustace District, co. Kildare; W. H. Rees-Thomas, M.D. Brux., M.R.C.S., L.R.C.P., Basford Stoke District, co. Hants.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

DEATH.

SPOONER.—On August 9th, 1919, at his residence, The Gables, West Kirby, Cheshire, William Spooner, L.R.C.P., M.R.C.S., in his 81st year.

DIARY FOR THE WEEK.

LONDON HOSPITAL MEDICAL COLLEGE, Mile End.—Wednesday, 4.15 p.m., Intermittent Blood Infections and their Relation to General Medicine, by Frank Kidd, F.R.C.S.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
SEPTEMBER.	
4 Thur.	Maidstone Division: West Kent Hospital, 3.15 p.m. North of England Branch: Annual Meeting, Newcastle on Tyne.
6 Sat.	Scottish Committee: North British Station Hotel, Edinburgh, 2.30 p.m.
19 Fri.	London: Parliamentary Subcommittee, 2.30 p.m.

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, AUGUST 30TH, 1919.

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British Medical Association.

CURRENT NOTES.

The Annual Meeting, 1921.

An invitation to hold the annual meeting of the British Medical Association in 1921 at Newcastle-upon-Tyne has been accepted by the Council. The announcement will revive pleasant memories, for the meeting in Newcastle in 1893 was very successful, and those who then enjoyed Northumbrian hospitality have not forgotten its heartiness. The President that year was Professor (afterwards Sir) George Hare Philipson, who in his address recalled how the Association first met in Newcastle in 1870 under the presidency of Dr. Edward Charlton. It is interesting to remember that Sir George Philipson, speaking over a quarter of a century ago, called for the establishment of a Ministry of Health, which, he said, would save an enormous amount of public delay, vacillation, and disagreement on medical subjects between lay and public authorities, and help to instruct the legislators, for "good laws can only be applied and their effects ensured by well qualified agents under one responsible head" in the Ministry. Another evidence of the slow movement of practical affairs is that the address delivered by the President of the Section of Ophthalmology, Mr. G. E. Williamson, who was also general secretary of the meeting, dealt with medical education in ophthalmology.

Medical Men in Public Life.

We are glad to see that the notes published during the last few weeks on the importance of medical men taking their share in public work are attracting attention. Dr. H. A. Latimer, who now resides at Tunbridge Wells, writes to us that there is a crying necessity if our profession is to exercise its proper influence in the State—both imperially and locally.

"For many years," he continues, "I have preached this doctrine of public service, in meetings of medical men and in private conversations with them, ever since 1897, when I won a contested election for a seat on the school board at Swansea. I have, with a few intervals, taken places on the town council of that county borough, and, since my residence in Tunbridge Wells, on its town council. The work in Swansea was undertaken when I was a man busily engaged in practice. How can medical men expect to have influence in public matters when they studiously avoid the performance of public duties? They may address letters to the professional press and may speak at their professional gatherings, denouncing this and that piece of legislation which they consider is to their disadvantage. But such views, if not backed up by personal influence in Parliament or on local bodies, are unavailing; the only things that count are votes—votes which can be obtained as a result of the education of those bodies by men who can speak, and who know what they are talking about when they rise to take their places in debate. Of one thing I am sure: the electorate, whether parliamentary or municipal, has a very kindly regard for the doctor as a candidate for a seat on a public body. He is a person who, by virtue of his calling, is widely known in his town and neighbourhood, and it has generally been his lot to do a number of kindly actions in the course of his career—actions which have endeared him to a wide circle of people, for no one lives unobserved.

"But it is not this alleged difficulty in winning elections which is the real obstacle to medical men gaining seats on public bodies. All sorts of objections are urged by men when you ask them to come forward for these posts. One will say, 'I have no time to waste,' and I have always found that it is the busiest men who can find time to do what they want to do. Another will say, 'I shall incur hostility.' Nothing of the sort, if measures, not men, are attacked. Honest criticism is never resented. I hope that your comments upon this matter may bear fruit, and that an increasing number of medical men may come forward into public life, not only for the interests of our profession but for the welfare of our country, which appears to be more and more realizing the truth of the maxim, *Salus populi, suprema lex.*"

We are informed that Dr. A. G. Newell in April last contested one vacancy for the Harringay Ward of the Tottenham Urban District Council; he received 840 votes, the labour candidate was second with 579, whilst the other two candidates received 344 and 283 votes respectively.

Need for Unity.

Dr. S. Noy Scott, honorary secretary of the Plymouth Division, informs us that he recently received a circular from the Medico-Political Union asking for his help in arranging a meeting in the district. To this application Dr. Noy Scott replied as follows:

In reply to your circular of the Medico-Political Union I feel very strongly that I cannot in any way further the object referred to whilst the responsible officials of the Medico-Political Union indulge in the use of statements regarding the British Medical Association which are so full of untruths and so obviously prejudiced. I regret that the Medico-Political Union has thought wise to use such tactics, for I have a certain amount of sympathy with those of my profession who consider trades union organization useful. I attended the last meeting held here, but I am not convinced that the Medico-Political Union could do any more for the profession than what is already being done by the British Medical Association. On the other hand, I am one of those who want to see some amalgamation of forces, and I feel such amalgamation might be brought within the area of practical politics if you would prevent one or two of your official representatives using the methods they have hitherto indulged in.

Meetings of Branches and Divisions.

METROPOLITAN COUNTIES BRANCH: WIMBLEDON DIVISION.
At the annual meeting of the Wimbledon Division the following officers were elected:

Chairman: Dr. Lowder Hill. Vice-Chairman: Dr. F. Deas. Honorary Secretary: Dr. G. J. Farie. Executive Committee: Drs. Barton, Evans, Bentley, Harvey, Newton, Randall, and Cowie. Representative on Branch Council: Dr. Powell Evans.

SOUTH WALES AND MONMOUTHSHIRE BRANCH:
MONMOUTHSHIRE DIVISION.

At the annual meeting of the Division, held on August 16th, at Newport (Mon.), the following officers were elected for the ensuing year:

Chairman: Major W. J. Greor, R.A.M.C.(T.). Vice-Chairman, Honorary Secretary, and Treasurer: Dr. R. J. S. Vority. Assistant Honorary Secretary: Dr. E. Ryan. Representatives on Branch Council: Drs. T. L. Drapes, R. A. Cowie, J. D. O'Sullivan, R. J. Coulter. Executive Committee: Drs. G. R. Strong, T. Ryan, H. T. Evans, J. A. Leo, W. D. Steel, K. Mulligan, E. Ryan, S. Hamilton. Representatives on Branch Contracts Committee: H. S. Elworthy, E. M. Griffiths, A. W. Hayles.

Association Notices.

PROPOSED NYASALAND BRANCH.

NOTICE is hereby given to all concerned of a proposal made by members and non-members of the Association resident in the Nyasaland Protectorate for formation of a Branch of the Association of area coterminous with that colony, and to be known as the Nyasaland Branch.

The matter will be determined in due course by the Council. Any member affected by the proposed change, and objecting thereto, is requested to write, giving reasons therefor, to the Medical Secretary, 429, Strand, London, W.C.2, not later than December 20th, 1919.

BRANCH AND DIVISION MEETINGS TO BE HELD.

KENT BRANCH: MAIDSTONE DIVISION.—Dr. A. C. Black, Honorary Secretary (Strettit Place, East Peckham, Paddock Wood, Kent), gives notice that a meeting of the Division will be held at the West Kent Hospital on Thursday, September 4th, at 3.15 p.m., when Dr. C. Wilson will give an address on auricular fibrillation and other anomalies of cardiac rhythm.

NORTH OF ENGLAND BRANCH.—Dr. James Don, Honorary Secretary (1, Grove Street, Newcastle-upon-Tyne), gives notice that the annual meeting of the North of England Branch will be held at the Royal Infirmary, Newcastle-upon-Tyne, on September 4th, at 3.30 p.m. Business: To elect officers for ensuing year, to receive Branch Council's report and financial statement. Proposal to change ethical rules. Presidential address by Dr. A. Smith (Whickham).

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following notifications are announced by the Admiralty:—Surgeon Commanders H. P. Jones to the *Malabar* for Bermuda Dockyard; E. O. B. Carberry to the *Royal Oak*; J. S. Dadding to the *Crescent* for Royal Naval Hospital, South Queensferry. A. C. Bean to the *Tiger*. Surgeon Lieutenant Commander C. F. Willes, D.S.O., has been placed on the retired list. Surgeon Lieutenant R. W. Nesbitt to the *Thunderer*. Surgeon Lieutenant (temporary) D. J. Micah to the *Caledon*.

ARMY MEDICAL SERVICE.

Major-General (temporary) Lieut.-General Sir C. H. Burtchaeall, K.C.B., C.M.G., K.H.S., relinquishes his temporary rank on reposting (April 15th, 1919)—substituted for notification in the *London Gazette* of May 10th, 1919.

Colonels R. J. Copeland, S. F. Clark, and W. L. Gray, C.M.G., retire on retired pay.

Colonel E. M. Hassard is placed on the half-pay list, under the provisions of Article 351, Royal Warrant for Pay and Promotion.

ROYAL ARMY MEDICAL CORPS.

Temporary Colonel M. G. Foster, O.B.E. (Major, R.A.M.C., T.F.), relinquishes his temporary commission on reposting.

Lieut.-Colonels relinquish the temporary rank of Colonel on reposting: H. B. Fawcus, C.M.G., D.S.O., T. C. Mackenzie, D.S.O.

Lieut.-Colonel G. W. Brazier-Creagh, C.B., C.M.G., retired pay, is granted the rank of Colonel on ceasing to be re-employed.

Lieut.-Colonel M. Boyle, O.B.E., is placed on retired pay.

The following officers relinquish the acting rank of Lieutenant-Colonel:—On reposting: Major and Brevet Lieut.-Colonel R. B. Ainsworth, D.S.O. On ceasing to be specially employed: Major E. B. Booth. On ceasing to command a medical unit: Major F. L. Bradish, D.S.O., temporary Major A. J. Williamson, Captain W. W. MacNaught, M.C. On reposting: Majors G. De la Cour, R. J. C. Thompson, C.M.G., D.S.O., C. R. M. Morris, D.S.O., E. M. Middleton, C. Scaife, E. C. Phelan, D.S.O., M.C., W. J. Weston, D.S.O., W. E. C. Lunn, M.C., N. Low, D.S.O., W. J. E. Bell, D.S.O. Temporary Majors: H. M. Chasseaud, T. M. Carter, O.B.E. Captains: R. M. Davies, M. White, M.C.

Acting Lieut.-Colonel D. C. L. Fitzwilliams (Captain R.A.M.C.T.F.), relinquishes his temporary commission on reposting.

To be acting Lieutenant-Colonels whilst commanding medical units: Majors P. C. T. Davy, C.M.G., J. E. H. Gatt, temporary Captain (acting Major) A. E. Rayner (from December 11th, 1918, to February 3rd, 1919).

To be acting Lieutenant-Colonels: Temporary Captain (acting Major) R. Jamison, Major M. C. Beatty (whilst commanding a medical unit from May 5th to October 1st, 1918). Whilst specially employed: Temporary Captain and Brevet Major (acting Major) W. E. P. Phillips, Major F. H. M. Chapman (from April 14th to June 24th, 1919).

Temporary Lieut.-Colonel Sir Thomas English, K.C.M.G. (honorary Colonel in the army, Captain R.A.M.C.T.F.), relinquishes his temporary commission on reposting.

Temporary Major F. A. Hepworth (Captain R.A.M.C.T.F.) relinquishes his temporary commission on reposting.

Temporary Captains relinquish the acting rank of Major: S. Brown, M.B.E., A. W. G. Woodforde, A. C. Profeit, P. L. Watkin-Williams, D.S.O., H. E. Rawlence, C. G. Skinner, A. F. Wright, M.C., G. Marshall.

To be acting Majors: Captain A. L. Krogh (November 20th, 1918); temporary Captains A. Fletcher (March 25th, 1918), J. A. Mackenzie, A. F. Wright, M.C., R. G. Oram, N. L. M. Reader, V. C. Vesselovsky.

Major M. P. Leahy retires, receiving a gratuity.

Captain W. O. Tobias, from S.R., to be Captain, February 5th, 1918, but not to reckon for pay or allowances prior to August 1st, 1919, with precedence next below E. A. Sutton.

To be Captains, but not to reckon for pay and allowances prior to August 1st, 1919: Captain D. S. Martin, from S.R., June 16th, 1918, with precedence next below H. C. Len-Wilson; temporary Captain G. O. Fairclough Alley, M.C., January 17th, 1919, with precedence next below F. R. H. Mollan.

Captain J. J. Molynoux, from the S.R., to be Captain, July 2nd, 1918, but not to reckon for pay or allowances prior to August 1st, 1919, with precedence next below J. H. Baird.

To be acting Majors: Captain N. T. Whitehead, M.C. (whilst specially employed). Temporary Captains: H. D. Wyatt, from October 14th, 1918, to March 18th, 1919, C. Y. Ford, M.C. (whilst specially employed, November 18th, 1918).

Captain A. S. Cane, O.B.E., relinquishes the acting rank of Major on reposting.

W. Fletcher-Barrett, late temporary Captain, to be temporary Captain, July 3rd, 1919, with seniority from December 27th, 1917.

ROYAL AIR FORCE.

MEDICAL BRANCH.

Lieut.-Colonel E. O. B. Carberry (Surgeon Commander, R.N.) relinquishes his commission on ceasing to be employed.

Granted temporary commissions:—As Captains: C. P. V. MacCormack, J. G. Skeet (late Captain A.I.F.), G. M. Mellor. As Lieutenants: G. H. H. Maxwell, T. H. K. MacLaughlin.

Lieutenant C. Duggan to be acting Captain whilst employed as Captain without pay and allowances of that rank.

Transferred to unemployed list:—Captains: J. W. Brash, G. Sparrow, N. C. Graham, M.C.; Lieutenant N. C. Cooper.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonel (acting Colonel) T. F. Dewar, C.B., T.D., relinquishes the acting rank of Colonel on vacating the appointment of A.D.M.S.

Captain H. W. Spaight to be D.A.D.M.S., and to be acting Major whilst so employed.

Captain D. E. S. Davies relinquishes his commission on account of ill health contracted on active service, and retains the rank of Captain.

To be acting Majors whilst specially employed: Captains C. E. Whitehead, A. M. Jones, C. M. Nicol, B. J. Alcock.

Captain S. A. MacPhee relinquishes his commission on account of ill health contracted on active service and retains the rank of Captain.

The following officers relinquish their acting rank on ceasing to be specially employed:—Majors (acting Lieut.-Colonels) D. H. Weir, M.C. (June 6th—substituted for notification in the *London Gazette*, July 3rd), J. W. Mackenzie, O.B.E., T. P. Puddicombe, D.S.O. Captains (acting Lieut.-Colonels) W. Brown, O.B.E., J. Strathearn, (Brevet Major—acting Major) W. Brander. Captains (acting Majors): C. S. Wink, J. Turtle, A. Wilson, D. G. Kennard, H. S. Wallace, J. Anderson, W. E. Lee, J. Ramsay, O.B.E., P. J. Smyth, A. J. A. McCabe-Dallas, M.C., G. W. C. Hollist, C. H. Crawshaw, J. C. Grieve, M.C., W. W. Greer, M.C., J. H. Robinson.

TERRITORIAL FORCE RESERVE.

ROYAL ARMY MEDICAL CORPS.

Captain W. J. Hoyten relinquishes his commission on account of ill health and is granted the rank of Major.

The announcements in the *London Gazette* of the dates indicated regarding the following officers are cancelled: Major H. C. Colman and Captain D. H. Macphail (January 10th, 1919), Captain (acting Major) W. Brander (December 15th, 1918), Captains P. W. Kent and J. Gardiner (December 18th, 1918), C. J. Coleman (November 13th, 1917), A. Burgess (October 28th, 1918).

APPOINTMENTS.

BELL, G. C., M.R.C.S., L.R.C.P., Medical Officer of Health, Frinton-on-Sea Urban District Council, vice H. W. Godfrey, M.B., C.M. Aberd., resigned.

FULTON, T. F. S., M.B., B.Ch. Belf., D.P.H., Deputy Medical Officer of Health and Assistant School Medical Officer, Southend-on-Sea.

HATCHETT, Guy Fleetwood, M.R.C.S., L.R.C.P., Honorary Ophthalmic Surgeon to the Wallsall General Hospital.

MCLEISH, D. J., M.D. Glas., D.P.H., Principal Medical Officer to the Perthshire Education Authority.

RUSSELL, James, M.D., Medical Officer to the Ecclesall Union Institution.

WILLIAMS, T. P., M.B., B.S. Lond., Medical Registrar to St. Mary's Hospital, Paddington.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

MARRIAGES.

GARDNER—PONTON.—On Thursday, August 21st, at All Souls' Church, Langham Place, W., by the Right Reverend the Lord Bishop of Colchester, Humphrey D. Gardner, Captain R.A.M.C., to Phyllis Ponton.

PASCO—BURT.—On August 21st, 1919, at S. Barnabas, Bexhill-on-Sea, by the Rev. V. L. Keelan, vicar of S. Michael's, Golders Green, assisted by the Rev. E. Mortlock, vicar, Bernard Charles William Pasco, M.R.C.S., L.R.C.P., only son of Mr. and Mrs. William J. Pasco, of Mill Hill, to Elma Mary, younger daughter of Mr. and Mrs. W. H. Burt, of Bexhill-on-Sea and Eastbourne.

POWELL—RICKETTS.—On August 21st, at St. Barnabas Church, Pinlipo Road, S.W., Mr. L. K. M. Powell, 19th Bengal Lancers, son of the late Henry Watson Powell, of the Mercers Company and Australia, to Beryl, only daughter of the late T. F. Ricketts, M.B., F.R.C.S., and Mrs. Ricketts.

TASKER—ROBINSON.—August 21st, at Wouldham Parish Church, H. L. Tasker, M.D., of 58, New Cavendish Street, W.1, son of the Rev. W. Lindley Tasker, to Adela Mary, eldest daughter of Mr. and Mrs. J. Robinson, of Ring's Hill, Borsdal.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
SEPTEMBER.	
4 Thur.	Maidstone Division: West Kent Hospital, 3.15 p.m. North of England Branch: Annual Meeting, Royal Infirmary, Newcastle-upon-Tyne, 3.30 p.m.
6 Sat.	Scottish Insurance Acts Committee, 11.30 a.m.; Scottish Committee, 2.30 p.m.; North British Station Hotel, Edinburgh.
19 Fri.	London: Parliamentary Subcommittee, 2.30 p.m.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, SEPTEMBER 13TH, 1919.

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British Medical Association.

CURRENT NOTES.

Supply of Motor Cars for Medical Men.

IN consequence of the representations made to the Ford Motor Company by the Medical Secretary on behalf of many correspondents who have been pointing out the difficulty of securing delivery of their cars, the Ford Motor Company have informed the British Medical Association that they have now made arrangements whereby orders for cars required by members of the medical profession for professional purposes will be given preference in all cases. They state that the whole of their selling organization throughout the British Isles is at present undergoing revision, but they will use their best efforts to give delivery at the earliest possible moment. Representations to other motor companies have been received with great courtesy, but it is evident that the makers are experiencing almost insuperable difficulties at the present time. The Standard Motor Company state that owing to the difficulties they are encountering in connexion with labour and the supply of raw materials, deliveries of their light cars are considerably delayed, and they have as yet been unable to complete cars which were due for delivery as far back as last April. They are, however, in entire agreement with the contention that medical men should have preference, and though they cannot interfere with their agents' method of business, they have addressed a letter to each agent, strongly supporting the claim of medical practitioners for preference in delivery. The Calcott Motor Company and Morris Motors, Ltd., also report similar difficulties and consequent delays, but they both recognize the exceptional position of the medical profession and state that they will do their best to forward delivery. The Hillman Motor Company have declared their inability to assist the Association unless something can be done to stop the profiteering of which they have evidence. They state that in the first batch of cars which left their works this year there were two which were put through specially for doctors, and in each of these cases (names and addresses given) the car was sold at a premium within a very short time after delivery. Another case is quoted in which a car they sold recently to a doctor is now being offered for sale at double the price at which he bought it.

Medical Men in Public Life.

SINCE the publication of the note with this title on August 16th communications that have reached us have shown that the number of medical men who are serving on local councils and boards is larger than had been supposed. We have now received a communication which shows that in this respect, as in some others, Scotland takes a practical lead. A correspondent in the Lowlands has been at the pains to make a list of medical members of the now local education authorities in that progressive part of our island. Under the Education (Scotland) Act, 1918, which came into operation on May 16th, 1919, the school boards in Scotland to the number of 947, with over 5,000 members, were replaced by education authorities comprising 987 members. In the case of three of the education authorities

the chairman is a medical man—for Inverness-shire, Dr. William Mackay, sen. (Inverness); for Midlothian, Dr. Robert Inch (Gorebridge); for Selkirkshire, Dr. Edward M. Tyrrell (Galashiels). In three counties—Aberdeenshire (Dr. Robert M. Wilson), Argyllshire (Dr. Kenneth Campbell of Oban), and Peeblesshire (Dr. James R. Jeffrey of West Linton)—the vice-chairman is a medical man. There are altogether 4 medical members of the Midlothian county authority, 7 of Aberdeenshire, 3 of the counties of Elgin and Ross and Cromarty, 2 each of Ayrshire, Kirkcudbrightshire, Lanarkshire, and Perthshire, and 1 each of Argyllshire, Berwickshire, Caithness-shire, Haddingtonshire, Kincardineshire, Kinross-shire, Linlithgowshire, Sutherlandshire, and the Orkneys. There are 2 medical men on the Glasgow burgh authority and 2 also on the Aberdeen burgh authority.

DEPUTATION TO MINISTRY OF PENSIONS.

THE Minister of Pensions received a deputation from the British Medical Association on September 4th, at Westminster House, on certain questions relating to the duties and remuneration of doctors acting on Pensions Boards, and also relating to Pensions referees. There were present:

Representing the Ministry.

The Right Hon. Sir L. Worthington Evans, Bt., M.P.
(Minister of Pensions).
Lieut.-Colonel A. L. Webb, C.M.G.
Dr. R. Cunyngnam Brown.
Mr. J. F. Christie.

Representing the Association.

Dr. T. W. H. Garstang (Chairman of Representative Meetings).
Dr. G. E. Haslip (Treasurer).
Mr. E. B. Turner, F.R.C.S. (Chairman of Medico-Political Committee).
Dr. C. E. S. Flemming (Member of that Committee).
Dr. Adam Fulton (Member of that Committee).
Sir T. Jenner Verrall, LL.D. (Chairman of the late Central Medical War Committee).
Mr. N. Bishop Harman (Honorary Secretary of that Committee).
Dr. W. F. Dearden (Manchester) (who moved the resolution at the Annual Representative Meeting dealing with the fee for Pensions Board work).
Dr. J. F. Falconer (Middlesbrough) (who seconded the resolution at that meeting).
Dr. Alfred Cox, O.B.E. (Medical Secretary).

Sir L. WORTHINGTON EVANS welcomed the deputation, and said that as the efficiency of the work of the Ministry depended so much on the medical profession he was naturally anxious to do all he could consistent with the public interest to meet the views of the profession.

Dr. GARSTANG, as Chairman of Representative Meetings, introduced the subject, and said there were six main points which it had been decided to bring to the notice of the Minister. These were:

1. That the fee for doctors attending Boards under the Ministry of Pensions should be raised from the present standard of one guinea to two guineas.
2. That the specialist's fee be advanced *pro rata*.
3. That the number of cases to be seen in an individual session should not exceed eight.

4. That the length of the session should not exceed two and a half hours.
5. That payment to doctors attending on these Boards be made more promptly than at present.
6. What was the policy of the Ministry as regards throwing open the posts of medical referees to men who had returned from the services, and when was this policy likely to be carried out?

Dr. Garstang and several other members of the deputation explained that it was the feeling of the profession generally that the one guinea fee was inadequate, and had only been accepted as a temporary measure and owing to the anxiety of the profession to help the country during the war; but that, as the war was now over, the Ministry could not expect to have this work done at an admittedly inadequate rate if they still expected to get a choice of the best men for these Boards. It was pointed out that if the fee for the ordinary member of the Board were raised the specialist's fee would also have to be considered.

As regards the number of cases to be seen in any individual session, it was agreed that sometimes more than eight cases could be examined owing to their straightforward nature, but that generally it was most inexpedient to expect more than eight cases to be examined, and that the Ministry should, for the sake of the work, insist on this. As to the length of the session, it had been reported to the Association on many occasions that sessions extended to three or even three and a half hours. It was felt that this tendency should be sternly repressed.

The deputation said that complaints had been received, particularly from the London area, as to the payments to doctors acting on Boards being in arrears, often for a month or even more. Reference was also made to the amount of clerical work which doctors in some cases were expected to do, and it was urged that in the interests of those examined medical clerical work should be restricted severely to a minimum.

The deputation reminded the Minister of the expressed policy of the Ministry in all its work to give preference to men who had served, and stated that there were still a good many areas in which men who had returned complained that the post of referee was still being retained by a man who had done no military service, and the ex-service doctors naturally wished to know how long it would be before the posts were thrown open, and whether or not, when this was done, preference would be given to the men who had served.

Sir L. WORTHINGTON EVANS said he would most carefully consider all that had been put before him, both from the point of view of what might be acceptable to the Treasury and from the side of the medical profession, and would do his best to give an answer as soon as possible. He pointed out, however, that the proposed increase to two guineas would probably cost the country over £1,000,000 a year, and that was an increase in expenditure which could not be lightly undertaken.

As regards the number of cases examined in a session it was found that the average had for some time been 7.2 cases and latterly even less, and he thought that if that were so, it should be considered as having met the point submitted. He was entirely in agreement as to the length of the session being two and a half hours, though he pointed out that there would every now and then be occasions on which, for the sake of dealing with a case which might have come some distance, the members of the Board would be willing to extend the time of the session a little. He considered that there must be some give and take in the matter. He would look into the question of prompt payment, as in his opinion there should be no arrears such as had been mentioned, and promised to give attention to specific cases when submitted by the Medical Secretary.

As regards the post of medical referees, the District Commissioners had been instructed some time back that, as soon as they knew that practically all the doctors had returned who were likely to apply, the posts should be thrown open, preference being given in the following priority:

- (a) Service overseas,
- (b) Service in this country,
- (c) Men who had already held the posts.

Action had been somewhat delayed owing to the re-arrangement of the administrative areas of the Ministry, but in Scotland this was now complete, and the procedure mentioned would be put into operation almost at once. Wales would shortly follow suit. Similar action would be taken in other districts as soon as the District Commissioners reported that the bulk of the doctors had returned.

INSURANCE.

THE PANEL CONFERENCE.

WE have received from Dr. J. C. Lyth, honorary secretary of the York Local Medical and Panel Committee, a copy of a letter addressed by his Committee to the Medical Secretary of the British Medical Association with regard to the minutes of the recent Conference in London of Local Medical and Panel Committees. We print also the reply sent by the Medical Secretary to Dr. Lyth:

To the Medical Secretary,
British Medical Association,
429, Strand, W.C.2.

Dear Sir,—

Minutes of Conference, July 17th and 18th, 1919.

My Committee wish me to write you to remove a false impression which may be given by paragraph 124 of above minutes, where it is stated that the following amendment by York had been withdrawn:

That this Conference deprecates the action of the Insurance Acts Committee in agreeing to postpone all consideration of remuneration for present services until the new terms of services had been agreed upon.

It may be thought from the minute as it stands that the York Panel Committee had receded from its opinion as expressed in the amendment. This is not the case, and the amendment was not so much withdrawn as, owing to the railway strike, the York Representative (Dr. P. Macdonald) was unable to wait at the Conference until the item came up for consideration. Possibly in his absence it was technically withdrawn, but only technically.

As this and other cognate amendments reflecting on the actions of the Insurance Acts Committee raised quite the most important question of principle before the Conference, Dr. Macdonald endeavoured at the very beginning of the Conference to have them taken early in the agenda, and was ready to move the amendment, as he foresaw that otherwise they would be left until late in the Conference, when many delegates would perforce be absent. This the Conference decided not to agree to, largely on a lead given to it by the Chairman.

My Committee regrets particularly that circumstances prevented the amendment coming before the meeting, the more so since a similar resolution had been passed by a large majority at the Conference of Practitioners resident in the North Riding, East Riding, Hull, and York areas, held on the 3rd July, 1919, of which no notice has been published in the *BRITISH MEDICAL JOURNAL*.

Circular M.1, 1919-1920: Remuneration.

My Committee is calling a meeting of all local practitioners to discuss the question of remuneration for 1920; meanwhile I am instructed to comment on the statement in the Circular:

That collected figures for the attendances on discharged disabled service men show that an additional capitation fee of 2d. would have covered the insurance risk on all these men.

At the time of the introduction of the Regulations dealing with these men, when the most vigorous opposition was offered by my Committee, it was pointed out that the obnoxious character of these Regulations would lead to a very large number of attendances being unrecorded and uncharged for, and the probability was then brought forward by my Committee that the low figure of recorded attendances would be used as an argument against an increase in the capitation fee. It was expected that this argument would be used by the Government Department, but my Committee notes with regret that it is apparently accepted by the Insurance Acts Committee of the British Medical Association.

Yours faithfully,
(Signed) J. C. LYTH,

Hon. Secretary, York Local Medical and Panel Committee.
Sept. 1st, 1919.

REPLY BY THE MEDICAL SECRETARY.

September 2nd, 1919.

Dear Sir,—In reply to your letter of the 1st inst., it is, of course, understood that many of the withdrawals of motions from the agenda of the recent Panel Conference, as at all conferences, were technical. It is impossible in the course of formal minutes to go into the reasons for which motions were withdrawn.

I understand that the York Committee is anxious to have it known that it deprecated the action of the Insurance Acts Committee in agreeing to postpone all consideration of remuneration for present services until the new terms of service had been agreed upon. But anyone who was present at the Conference or will read the report will, I think, agree that even had Dr. Macdonald been present and moved his motion it would have got scant support, as the Conference, after all the discussion that had taken place, both understood and appreciated the reasons why it was useless to consider the question of remuneration for present services when the main point at issue was the remuneration under the new agreement.

I do not understand what is meant by your statement that the figure of 2d. which was supplied to us by the Ministry of Health was "apparently accepted" by the Insurance Acts

Committee. The Committee has given no indication whether it "accepts," by which I suppose you mean "agrees as to the accuracy of" the figure or otherwise. The figure was arrived at on the strength of figures of attendances on disabled men supplied by the Government, and the Insurance Acts Committee passed the information on to the Panel Committees. There can obviously be no proof that there has been "a very large number of attendances . . . unrecorded and uncharged for." If it be so it is a reflection on the good sense and business capacity of the profession which the Insurance Acts Committee would regret very much to make.

I am asking the Editor of the JOURNAL if he publishes your letter to publish also this reply.

Yours faithfully,
ALFRED COX,
Medical Secretary.

Dr. J. C. Lyth.

COMMITTEE ON MEDICAL REMUNERATION.

A COMMITTEE has been set up by the Minister of Health to advise as to the basis on which, and the proportions in which, the funds available (1) for the remuneration of medical practitioners for the treatment of insured persons, and (2) for mileage should be distributed amongst the Insurance Committee (county and county borough) areas in England and Wales.

A past president of the Institute of Chartered Accountants, Sir Woodburn Kirby, who has been nominated by the Insurance Acts Committee of the British Medical Association for the chairmanship of this Committee, has accepted Dr. Addison's invitation to fill this post.

The other members of the Committee will be as follows:

Doctors Nominated by the Insurance Acts Committee of the British Medical Association.

Dr. H. G. Dain, Birmingham,
Dr. B. A. Richmond, London,
Dr. A. Linnell, Northamptonshire,
Dr. Evan Lewys-Lloyd, Merioneth; and, when questions of rural doctors' remuneration (Distribution of the Mileage Pool) are under consideration—
Dr. H. B. Brackenbury, Middlesex,
Dr. J. P. Williams-Freeman, Hants.

Mr. J. Chown (of the Accounts Department, Ministry of Health),
Mr. G. W. Epps (Government Actuary's Department),
Mr. Gill Hodgson (Clerk to the Liverpool Insurance Committee),
Mr. Howell Jones (Welsh Board of Health),
Dr. G. S. McCleary (of the Ministry of Health),
Mr. James Rae (of the Treasury); and, when questions of rural doctors' remuneration (Distribution of the Mileage Pool) are under consideration—
Dr. J. Pearce (of the Ministry of Health).

Mr. H. Jerwood, of the Ministry of Health, will act as Secretary to the Committee.

LOCAL MEDICAL AND PANEL COMMITTEES.

WARRINGTON.

AT a meeting of this Committee, held on September 2nd to consider the conditions of service and remuneration, it was resolved that the basis of negotiations with the Government regarding the new conditions of service for 1920 should be a capitation fee of 15s. for the full service outlined in document M. 1.

WARWICKSHIRE.

The Warwickshire Panel Committee met at Leamington on September 3rd primarily to consider the question as to 1920 remuneration arising on circular M. 1 of the British Medical Association. Whilst there was unanimity of opinion that a capitation fee of not less than 16s. per head of the insured or other population ought to be available for the coming year (this allowing for the halved value of money, the general diminished standard of health, and for the merging of specially remunerated services), some divergence as to distribution was apparent. It was, however, agreed by a majority that definite provision should be made for remunerating certain services liable to be rendered under current conditions, which so often give rise to dissatisfaction when thus included, as being services for which special payments are made in private practice. It was accordingly proposed that the 16s. capitation fee should be applied as to 13s. 6d. for a flat payment per person entitled to benefit and 2s. 6d. for proportional distribution to practitioners rendering accounts for the following categories of service, on a credit basis per service rendered: (a) Surgical operations requiring local or general anaesthetic, or case of abortion or miscarriage in so far as not included in maternity benefit; (b) administration of general anaesthetic for the purpose of any operation included in medical benefit; (c) setting of fractures or reduction of dislocations; (d) the administration of autogenous or other serums or vaccines. The Committee further resolved that the acceptance of such capitation rate should be without prejudice to the right of the profession to receive reimbursement of all out-of-pocket working and mileage, etc., expenses and other establishment charges which should be

shown to be equitable; and that any specific requirements of the Government in connexion with treatment or consultation, etc., not contemplated under present conditions should be negotiated from the starting-point of the foregoing capitation fees.

The chairman, Dr. J. Orton, was unanimously appointed to attend the October conference as the Committee's representative, and Dr. Ridley Bailey (Bilston) was nominated for appointment to the Insurance Acts Committee.

INDIAN MEDICAL SERVICE.

THE Secretary of State for India announces that 204 medical men are urgently required to fill vacancies in the Indian Medical Service. Of these, 136 will be Europeans and the remainder Indians. The appointment of European candidates will be made by nomination on the recommendation of a selection committee in England. Applications from Europeans, and from Indian candidates resident in this country, will be received at the India Office. Applications from all Indian candidates will be considered together.

Appointment will be by nomination on the recommendation of a selection committee. Candidates must be over 21 and under 32 years of age at the date of application. Preference will be given to candidates who are or have been serving with His Majesty's Forces during the war. All service rendered as a medical or combatant officer, or in a position usually filled by an officer, during the war will count both for promotion and pension on appointment to the service.

The increased scales of pay, on the military and civil sides, were published in the JOURNAL of August 16th, 1919, p. 224. The new rates have been arrived at by adding approximately 33½ per cent. to that portion of the old rates of pay which represented military grade pay.

Application forms and further particulars can be obtained from the Secretary, Military Department, India Office. Correspondence should be marked on the top left hand side of the envelope, "Medical Recruitment."

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following announcements are made by the Admiralty:— Surgeon Captain G. A. Draper to the *Carusfort*. Surgeon Lieutenant Commanders G. T. Verry to the *Cleopatra*, R. Willan to the *Renown*, additional, Temporary Surgeon Lieutenants: A. Ritchie to the *Valiant*, A. McCallum to the *Malaya*, A. T. Hawley to the *Hussar*, C. N. Carter to the *Barham*, N. B. de M. Greenstreet to the *Fimid*, for Plymouth Hospital; H. A. L. Guthrie to the *Prince George*, T. H. R. McKiernan to the *Pekin*. Temporary Surgeon Lieutenants transferred to permanent list of surgeons, R.N.: W. P. Viery, H. Hurst, H. Morrison. Temporary Surgeon Lieutenant C. M. Williams, transferred to permanent list of surgeon lieutenants, seniority December 14th, 1915.

ROYAL NAVAL VOLUNTEER RESERVE.

Temporary Surgeon Lieutenant W. C. Murray to the *Victory*.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

Major D. F. Mackenzie, D.S.O., relinquishes the acting rank of Lieut.-Colonel on ceasing to command a medical unit.

Captain K. P. Mackenzie relinquishes the acting rank of Major on ceasing to be specially employed.

To be Captains, but not to reckon for pay and allowances prior to August 1st, 1919:—Captains: W. Potheringham, from S.R., March 19th, 1918, with precedence next below E. E. Holden; W. H. Elliott, from S.R., May 28th, 1918, with precedence next below H. P. Rudolf. Temporary Captains: H. Mitchell, April 14th, 1919, with precedence next below W. L. Partridge; R. H. Alexander, M.C., February 22nd, 1918, with precedence next below G. A. E. Argo; P. Carney, M.C., September 1st, 1918, with precedence next below R. H. Williams.

Temporary Lieutenants to be temporary Captains: J. G. Garson (seniority from October 25th, 1915), E. Duke (seniority from November 1st, 1915), J. Cameron (seniority from July 5th, 1917), W. Garton (seniority from August 13th, 1915).

Temporary Captain (acting Major) A. C. Hancock, M.C., relinquishes the pay and allowances of his acting rank.

Temporary Captain C. S. Doigson relinquishes the acting rank of Major.

To be temporary Captains: S. McNair, late temporary Captain, with seniority from June 20th, 1916; R. J. Monahan, M. F. D. Graham, temporary Lieutenant F. M. Simmonds.

The notifications regarding temporary Captains Charles G. Adams and Harold E. S. Stevon in the *London Gazette* of July 8th and 14th, 1919, respectively are cancelled.

The following officers relinquish their commissions:—Temporary Lieut.-Colonels and retain the rank of Lieut.-Colonel: E. W. Goodall, O.B.E. (on ceasing to be in charge of the Grove Military Hospital, Tooting), W. D. Buncombe (on ceasing to be employed at the City of London War Hospital), F. S. Toogood, O.B.E. (on ceasing to serve with the Lewisham Military Hospital), H. L. Eason (July 1st, 1919, substituted for notification in the *London Gazette* of July 31st, 1919), A. D. Reid, C.M.G., H. A. Kidd (on ceasing to be employed at the Graylingwell War Hospital), D. G. Thomson (on ceasing to be employed at the Norfolk War Hospital). Temporary Major and Brevet Lieut.-Colonel A. W. R. binson, and retains the rank of Brevet Lieut.-Colonel. Temporary Majors and retain the rank of Major: G. H. Ross, T. Mackenzie, F. W. Broderick, H. W. Wiltshire, F. H. Welsh,

M.C. (on ceasing to serve with the South African Native Labour Corps), T. W. Buckley (June 29th, 1919, substituted for notification in the *London Gazette*, June 29th, 1919). Temporary Honorary Major G. Hodge, on ceasing to be in charge of Springburn and Woodside Central Red Cross Hospital, June 30th, and retains the honorary rank of Major (substituted for notification in the *London Gazette*, July 10th). Temporary Major W. E. M. Corbett, Captain G. D. Robertson, Temporary Captains and Brevet Majors and retain the rank of Brevet Major: W. S. Stalker, E. C. Williams, R. McC. Hill, D.S.O. (substituted for notifications in the *London Gazette* of March 12th and 24th and May 20th, 1919, respectively). W. Fell, Temporary Captains and are granted the rank of Major: J. W. Littlejohn, M.C., F. W. Wesley, A. K. H. Pollock, A. E. Marsack, D. D. Craig, M.C., W. B. Davy, J. R. M. Whigham, M.C., A. W. Uloth, P. W. Hampton, P. A. Leighton, C. S. Gideon, J. F. McLaugh, O. J. Day, M.C., W. H. Allen (March 24th, 1918, substituted for notification in the *London Gazette*, April 11th, 1918). E. W. Willett, H. Cordner (March 28th, 1918, substituted for notification in the *London Gazette*, April 28th, 1919). F. F. Middleweek, R. W. Sutherland (on account of ill health contracted on active service), G. E. Nolegan, H. E. Rawlence, J. D. Gimlette, C. A. Weller, Temporary Captains and retain the rank of Captain: J. A. N. Scott, on account of ill health caused by wounds (April 19th, substituted for notification in the *London Gazette*, July 15th), E. E. Frazer (April 26th, 1917, substituted for notice in the *London Gazette*, June 23rd, 1917). F. J. Wheeler (May 18th, 1917, substituted for notification in the *London Gazette*, July 10th, 1917). J. A. MacLeod, on account of ill health (June 4th, substituted for notification in the *London Gazette*, July 16th). J. H. Wilks (September 1st, 1918, substituted for notification in the *London Gazette*, October 29th, 1918). C. G. G. Winter, on account of ill health (April 23rd, substituted for notification in the *London Gazette*, June 27th). D. H. Paul, R. F. Wilkinson, A. G. Gilchrist, C. W. Smith, O.B.E., G. Matthews, D. F. A. Neilson, R. W. Smith, A. B. Raffle, M.C., J. H. Wrightson, J. Scott, M.C., R. W. Valentine, H. L. Morrow, R. T. Stoney, T. F. S. Fulton, T. Brodie, C. Frash, D. McCormack, J. S. Annandale, B. L. Livingstone-Learnmouth, J. M. Whyte, J. F. M. Wigley, P. A. Creux, S. H. L. Archer, S. E. Murray, R. H. S. Marshall, P. J. Kelly, J. C. D. Allan, L. H. Leeson, B. F. Macnaughton, P. R. Hassard, M.C., D. Whyte, S. Y. Walsh, W. A. Prond, G. R. Bickerstaff, A. W. Adams, E. G. Fenton, J. M. Wishart, W. B. A. Moore, H. W. Crowe, J. M. Gibson, D. MacGregor, J. C. Hindley, J. Patrick, L. Zealand, P. F. Carr-Harris, D.S.O., M.C., J. S. Stewart (July 6th, 1919, substituted for notification in the *London Gazette*, July 31st, 1919). E. Duke, A. M. Clare, R. A. Flynn, E. Billing, A. Brown, C. W. Fowler, M.C., F. H. Diggle, O.B.E., P. N. Vellaecott, B. G. Gutteridge, J. R. Marrack, D.S.O., M.C., H. W. Parnis, J. F. Carroll, C. H. Aylen, G. O. Grain, C. E. Bashall, A. G. Naismith, M.C., O. H. Bowen, B. T. Parsons-Smith, G. M. C. Powell, L. P. Booth (on ceasing to serve with South African Native Labour Corps), W. T. Buchan, J. B. Mackay, A. G. B. Duncan, G. A. Upcott-Gill, R. P. Garrow, G. M. Vevers, G. P. Armstrong, L. T. Giles, R. C. L. Batchelor, C. C. Irvine, M.C., T. D. Cumberland, P. Lornie, D. M. Moffat, M.C., A. E. Goldie, R. W. E. Roe, C. H. Lloyd, M.C., G. G. Buchanan, A. S. Richmond (June 29th, 1919, substituted for notification in the *London Gazette*, July 31st, 1919). J. S. Kinross, E. H. Edwards, G. Stanger, J. H. C. Fegan, H. P. Dawson, H. N. Eccles, F. B. Chavasse, M.C., E. Coleman (March 6th, 1919, substituted for notification in the *London Gazette*, March 24th, 1919). J. W. Power, L. M. Markham, P. M. Shiels, T. W. Sheldon, G. H. H. Russell, A. P. MacMahon, W. T. Smith, M. T. W. Steedman, G. K. Thompson, W. Miller, G. O'N. Waddington, W. Brown, G. T. Cregan, M.C., G. W. Elder, H. M. Roberts, (acting Major) G. W. S. Paterson (on ceasing to serve with the Home Hospitals Reserve), H. H. Moffat, H. Quigley, R. Puttock, C. K. Cohen, A. W. Mitchell, R. J. M. Love, J. W. Flood, B. Haigh, J. Cruickshank, W. G. Southey, S. A. Montgomery, V. C. Pennell, H. E. Griffiths, J. J. Healy, R. L. Barwick, W. M. Stewart, L. T. Wells, J. M. Ross, J. H. Wilson, P. D. Hunter, I. W. Corkey, H. M. Cade, A. M. A. James, H. F. Hutchinson, F. M. Simmonds, L. Makin, S. Jacob, F. P. Grove, H. G. Carlisle, C. H. Newton, A. N. Drury, H. M. C. Green, J. S. Young, M. L. Neylon, S. G. Trail, A. B. R. Sworn (on account of ill health contracted on active service), V. M. Fisher, E. Marjoribanks-Marcus, J. E. Rutherford, M.C. (on account of ill health contracted on active service), L. A. Moran, C. N. Vaisey, T. H. Holroyd, G. E. Beaumont, A. R. Fraser, C. K. Lucey, W. H. D. Smith, J. M. Rishworth, T. M. Newton, D. Cowin, G. R. Wilson, V. C. Martyn, M.C., G. D. McLean, R. F. Young, W. Dawson, D.S.O., C. J. Armstrong-Dash, R. C. Monnington, B. R. G. Russell (on account of ill health). Temporary Captain L. B. Cane (Captain R.A.M.C., T.F.). Temporary honorary Captains and retain the honorary rank of Captain: J. B. Fearn, W. S. Rutherford. Temporary Lieutenants and retain the rank of Lieutenant: C. O. Miller (April 14th, substituted for notification in the *London Gazette*, March 28th), W. A. Mein, L. H. McConnell, D. R. Wheeler, W. Gilmore, S. Pardo (March 29th, 1919, substituted for notification in the *London Gazette*, March 29th, 1919). F. H. Boone, M. Baranov, S. A. Bontor, H. E. Davison (on appointment under the Ministry of Pensions (December 11th, 1917, substituted for notification in the *London Gazette* of March 7th, 1918), P. C. Mann, F. W. P. Sullivan, T. S. Macaulay, J. B. McGranahan. Temporary Lieutenant J. G. Thomson.

INDIAN MEDICAL SERVICE.

Major J. W. D. Megaw, M.B., has been confirmed in the appointment of Principal, King George's Medical College, Lucknow.

Major J. McPherson has been granted combined leave for one year with effect from July 1st.

Lieut.-Colonel J. H. Hugo, D.S.O., has been promoted to be an Agency Surgeon of the 1st Class.

Majors H. H. Thorburn, C.I.E., and M. F. White have been confirmed as Agency Surgeons, 2nd Class.

Major C. H. L. Palk, M.B., F.R.C.S.E., who was re-employed during the war, has been permitted to resign with effect from April 18th.

GENERAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

H. E. A. Boldero, late Captain R.A.M.C., to be Captain.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Captains relinquish the acting rank of Lieutenant-Colonel on re-posting: S. Miller, D.S.O. M.C., J. R. R. Trist, M.C., C. N. Gover, M.C., T. Y. Barkley, O.B.E.

Captains to be acting Majors whilst specially employed: C. Armstrong, M.B.E., R. O. C. Thomson.

Captains relinquish the acting rank of Major: H. W. H. Holmes, J. Gossip, J. P. Charnock.

Captain O. Williams to be acting Major.

Captain W. McN. Walker relinquishes his commission on account of ill health contracted on active service, and is granted the rank of Major.

Captains relinquish their commissions on account of ill health and retain the rank of Captain: R. G. Waddy, H. Chadwick.

Captain A. C. Irvine relinquishes his commission.

Lieutenants to be Captains: M. Jackson, G. P. W. Staunton, T. H. Almond, J. N. Gale, J. W. Mann, F. K. Escrib, A. C. Paterson, A. E. B. Paul.

Lieut. J. Whittingdale relinquishes his commission on account of ill health.

Lieut. R. J. Patchett relinquishes the acting rank of Major.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Captain G. E. Martin to be acting Major whilst specially employed.

The following officers relinquish their acting rank on ceasing to be specially employed: Major (Brevet Lieut.-Colonel—acting Lieut.-Colonel J. Wilson), Major (acting Lieut.-Colonel) T. Donovan, Captains (acting Majors) J. J. E. Biggs, O.B.E., L. H. Wootton, M.C., P. B. Spurgin, R. W. Aitken, W. N. P. Williams.

4th Northern General Hospital.—Captain J. J. Rainforth is restored to the establishment.

1st Southern General Hospital.—Lieut.-Colonel F. W. Ellis is seconded for duty with the 2/1st Southern General Hospital (June 1st, 1917, substituted for notification in the *London Gazette*, July 15th, 1919).

3rd Western General Hospital.—Major (Brevet Lieut.-Colonel—acting Lieut.-Colonel) E. J. Maclean relinquishes the acting rank of Lieut.-Colonel on ceasing to be specially employed.

3rd East Anglian Field Ambulance.—Lieut.-Colonel H. T. Challis to be an A.D.M.S. and to be temporary Colonel whilst so employed, January 17th, 1915.

APPOINTMENTS.

BUTTERWORTH, R. M.B., B.C.Camb., Medical Officer of the Wisbech Union Institution.

CHISHOLM, John, M.B., Ch.B., Registrar to the Jessop Hospital for Women, Sheffield.

PIKE, Douglas R., M.A., B.M., B.Ch.Oxon., Medical Officer of Health, Preesall Urban District.

TAYLOR, L. A., M.R.C.S., L.R.C.P., D.P.H., Visiting Medical Officer to the Edge View Tuberculosis Hospital, Kinner, Staffs.

DISTRICT MEDICAL OFFICERS.—J. E. Middlemiss, M.R.C.S., L.R.C.P., and E. W. Braithwaite, M.R.C.S., L.R.C.P. (Leeds Union). W. H. Canter, M.B., Ch.B.Vict. (Keighley Union). F. L. Underwood, M.R.C.S., L.R.C.P. (Stamford Union).

LEICESTER ROYAL INFIRMARY.—J. D. Slight, M.A., M.D. Edin., and Arthur Foster, M.D. Edin., Barrister-at-Law, appointed Assistant Physicians. R. S. Lawson, M.A., M.B., Ch.B. Edin., F.R.C.S. Eng., appointed Assistant Surgeon.

SALFORD ROYAL HOSPITAL.—Honorary Physician: Alexander Corsar Sturrock, M.A., M.D. Edin., M.R.C.P. Lond. Honorary Assistant Physician: George Johnson Langley, B.S., M.D. Lond.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

DICKINSON.—On September 6th, at Newcastle-upon-Tyne, the wife of W. H. Dickinson, M.B., D.P.H., of a son.

MACKINNON.—On August 29th, at 86, Union Street West, Oldham, to Dr. and Mrs. Ronald Mackinnon, a daughter.

TIVY.—On September 8th, at Showalds, Esher, Surrey, to Mr. and Mrs. Cecil B. P. Tivy, of Brixham, South Devon, a daughter.

MARRIAGES.

ADAMS—NUTTALL.—At Blackburn Parish Church, on September 3rd, by Archdeacon Sale, Vicar of Rochdale, assisted by the Rev. C. H. E. Freeman, Vicar of St. Silas's, Blackburn, Frank Shirley Adams, M.B., B.Ch., of Clitheroe, Lancashire, younger son of Mr. and Mrs. Frank Adams of Stoke-on-Trent, to Amy Kathleen, elder daughter of the late Mr. Alfred Nuttall and Mrs. Nuttall, Northwood, Blackburn.

DUNN—JACKSON.—On September 3rd, at St. James's Church, Edgbaston, by the Rev. Hugh Clatsworthy, Major Naughton Dunn, R.A.M.C., son of Mrs. Dunn, Queen's Road, Aberdeen, to Ethel Violet, daughter of Mr. and Mrs. George Jackson, of Glewstone Court, Herefordshire.

HARDY—PARKES.—On August 30th, at Howth Presbyterian Church, co. Dublin, by the Rev. J. Wilson, assisted by the Rev. J. M. McIlraith, William Hastings, only son of the late Rev. T. B. Hardy, V.C., D.S.O., M.C., to Eleanor Florence, second daughter of J. J. Parkes, Esq., Wimping.

PHILLIPS—MORGAN.—On September 9th, in London, Hugh Richard Phillips, M.D., of 2, Cavendish Court, Cavendish Square, to Phyllis Morgan.

DEATH.

YOUNG.—At Glenssken House, Kilworth, Dr. James Young, late of Bournemouth, aged 54.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
SEPTEMBER.	
16 Tues.	Naval and Military Committee, 2.30 p.m.
17 Wed.	Welsh Committee, Shrewsbury, 2.30 p.m.
19 Fri.	London: Parliamentary Subcommittee, 2.30 p.m.
OCTOBER.	
2 Thurs.	Organization Committee, 2 p.m.
3 Fri.	Central Ethical Committee, 2.30 p.m.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, SEPTEMBER 20TH, 1919.

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INSURANCE.

THE PANEL CONFERENCE.

SIR,—Dr. Cox's reply to the letter from my committee of September 1st, published in the SUPPLEMENT to the JOURNAL of September 13th, calls for remark.

In regard to the first portion dealing with the withdrawal of my committee's motion at the Conference, my committee only desired to make it plain that this did not indicate any change of attitude in this respect, and indeed, in considering the capitation fee for 1920 at a general meeting here it was found impracticable to determine upon a fee for future services until an adequate remuneration for present services had been settled.

In regard to the matter of disabled service men, this is by no means so simple as Dr. Cox's explanation would imply. When my committee expressed regret at the apparent acceptance by the Insurance Acts Committee of the argument that the low figure of recorded attendances on these men indicated a need for moderation in the demands for an increased capitation fee, there was no question as to the acceptance or non-acceptance by the Insurance Acts Committee of the accuracy of the figures supplied by the Government. Whether these figures of recorded attendances are accurate or the reverse, and whether their accuracy is accepted or not considered by the Insurance Acts Committee, my committee expressed regret that the Insurance Acts Committee, purporting to represent the interests of the medical profession in negotiation with the Government department, should have used these figures as an argument for moderation (which is clearly the case in M. 1, 1919-1920).

The majority of Dr. Cox's readers will know perfectly well that although the figures may be accurate enough as a calculation of recorded attendances, they do not in fact represent the actual attendances made. In my own area, and to my knowledge in other areas, many practitioners have sent in no claim for these attendances. Whether this be, as Dr. Cox states, a reflection on the good sense and business capacity of the profession; or whether it be rather, as these practitioners do not hesitate to affirm, a reflection on the business capacity of the representatives of the profession who agreed to the low remuneration and extra clerical work involved in such a scheme of attendances, there is none the less no excuse for the further penalizing of the profession by those who should protect it even from the results of its own (or their own) negligence. —I am, etc.,

J. C. LYTH, M.B.

Honorary Secretary, York Local Medical and Panel Committee.
September 15th.

ASSESSMENT OF THE NEW MILEAGE FUND.

In view of the appointment of the Committee to advise the Minister of Health as to distribution of the Central Insurance Pool (the reference to which with its personnel

was given on page 69 of the SUPPLEMENT of last week) the Insurance Acts Committee asked that the same Committee might be allowed to investigate the data for the assessment of the mileage fund. To this request the following reply has been received:

Ministry of Health,
Whitehall,
London, S.W.1.
6th September, 1919.

Sir,

In reply to your letter of the 21st August I am directed by the Minister of Health to state that, although the investigation of data for the assessment of any Mileage Fund which may be made available under the new conditions of service will not fall within the formal terms of reference to the Distribution of Funds Committee, the Department will be glad to accept the suggestion made in your letter.

The Minister therefore proposes to invite the Committee to examine all relevant data and memoranda bearing on the subject and to give him the benefit of their advice and assistance in the matter.

I am, Sir,
Your obedient Servant,
(Sgd.) R. W. HARRIS.

The Secretary,
Insurance Acts Committee,
429, Strand, W.C.

Association Notices.

FORMATION OF ESSEX, NORFOLK, AND SUFFOLK BRANCHES.

NOTICE is hereby given by the Council to all concerned that as a result of a proposal made by the East Anglian Branch to that effect, the Council has decided that, as from September 30th, 1919, that Branch be discontinued, and that new Branches as follows be substituted therefor:

1. ESSEX BRANCH.—Area: The county of Essex, except the south-western portion thereof, now forming the South-West Essex and Stratford Divisions of the Metropolitan Counties Branch, and bounded, on the east, by the eastern boundaries of Romford and Epping Rural Districts as far north as the northern boundary of North Wendel Bassett Civil Parish; and, on the north, by the northern boundaries of that Civil Parish, of Epping Upland Civil Parish, and of Waltham Holy Cross Urban District;
2. NORFOLK BRANCH.—Area: Norfolk;
3. SUFFOLK BRANCH.—Area: Suffolk;

the Divisions of the new Branches to be those of the present East Anglian Branch in the respective counties.

BRANCH AND DIVISION MEETINGS TO BE HELD.

NORTH WALES BRANCH.—Dr. E. Lewys-Lloyd (acting Branch Secretary) gives notice of a meeting to be held at Rhyl on Friday, September 26th. Dr. Cox, Medical Secretary, will address the meeting.

Meetings of Branches and Divisions.

PERTH BRANCH.

A MEETING of the Perth Branch was held on September 5th in the Station Hotel. Dr. EDWARDS, the president, took the chair and gave a lucid account of the Conference in London; a vote of thanks was passed to him for his report. Dr. J. HUME gave an account of the proceedings at the Conference of Secretaries in London, and stated that Branches were strongly recommended to form a clinical section and a social section, also that it was desirable to meet at a definite hour and day. Dr. Hume was thanked for his report. The Branch approved of a social section and appointed a subcommittee to arrange social business and a clinical subcommittee. After discussion it was agreed to hold a meeting on the first Friday of each second month at 3.30 p.m.

Immediately after the Branch meeting a meeting of the Perth and Perthshire Local Medical and Panel Committees was held.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

The following announcements are made by the Admiralty:—Surgeon Lieutenants: W. H. Murray to the *Agadir*, A. J. Patterson to R.M. Division, Forton, H. C. C. Veitch to the *Englet*, additional, Surgeon Lieutenants (temporary): D. J. Miach to the *Fearless*, R. M. B. McCord to the *Indus*, W. D. Nicol to 3rd R.M. Battalion.

ARMY MEDICAL SERVICE.

Major-General Sir M. T. Yarr, C.B., K.C.M.G., to be Inspector of Medical Services (temporary), vice Major-General Sir W. Babbie, V.C., K.C.M.G., C.B., K.H.S.

Colonel A. W. Bewley, C.M.G., retires on retired pay.

Temporary Colonel Sir Thomas C. English, K.C.M.G. (Captain R.A.M.C.T.F.), relinquishes his temporary commission on reposting (June 17th, 1918, substituted for notification in the *London Gazette* of July 27th, 1918).

Temporary Colonel Sir Charles A. Ballance, K.C.M.G., C.B., M.V.O. (Captain R.A.M.C.T.F.), relinquishes his temporary commission on reposting (July 19th, 1918, substituted for notification in the *London Gazette* of August 20th, 1918).

Temporary Colonel W. A. Turner, C.B. (Major R.A.M.C.T.F.), relinquishes his temporary commission on reposting.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonel L. A. Mitchell is placed temporarily on the half-pay list on account of ill health (December 31st, 1918, substituted for the notification in the *London Gazette* of December 30th, 1918).

Lieut.-Colonel K. B. Barnett retires on retired pay.

Lieut.-Colonel G. A. T. Bray, D.S.O., relinquishes the temporary rank of Colonel on ceasing to be specially employed.

Lieut.-Colonel O. W. A. Elsner, C.B.E., D.S.O., relinquishes the temporary rank of Colonel on reposting.

Major and Brevet Lieut.-Colonel A. McMunn, O.B.E., relinquishes the temporary rank of Lieut.-Colonel on reposting (May 23rd, 1919, substituted for the notification in the *London Gazette* of August 18th, 1919).

Temporary honorary Lieut.-Colonel Sir John Bland-Sutton, Kt. (Major R.A.M.C.T.F.), relinquishes his temporary honorary commission on reposting.

The notifications regarding the undermentioned which appeared in the *London Gazette* of dates specified are cancelled: Captain H. F. Joynt, May 20th, 1919. Temporary Captain L. Wilson Evans, May 9th, 1919.

The following officers relinquish their commissions: Temporary Lieut.-Colonels: E. J. Moore, C.B. And retain the rank of Lieutenant-Colonel; H. J. Shirley, G. E. Miles, C.B.E., C. T. Parsons (on ceasing to be employed at the Fulham War Hospital) (honorary Lieut.-Colonel) W. I. de C. Wheeler. Temporary honorary Lieutenant-Colonels and retains the honorary rank of Lieutenant-Colonel: J. Robertson, C.M.G., G. S. Buchanan, C.B. Temporary Majors, and retain the rank of Major: D. B. King (on ceasing to serve with the Horton (County of London) War Hospital), W. E. N. Dunn, T. M. Kendall, P. J. A. Seccombe. Temporary honorary Majors and retain the honorary rank of Major: A. G. Paterson and T. G. M. Hine. Temporary Captains: J. O. Egan, and is granted the rank of Lieutenant-Colonel. And are granted the rank of Major: D. K. Henderson, R. M. Fenn, R. V. Dolbey, H. L. Neil, B. W. Armstrong, C. A. Weller, J. A. W. Watts, C. G. McAdam, W. A. Wheelton (June 14th, 1919, substituted for notification in the *London Gazette* of July 28th, 1919). L. G. McCune, J. Crawford, M.C., R. E. Cree, M.C. And retain the rank of Captain: A. B. S. Todd, F. R. Wilson, C. M. Stubbs, E. G. von B. Bergh, J. P. Jones, M.C., L. R. H. P. Marshall, O.B.E., A. F. Potter, A. H. Davidson, H. North, D. Clark, G. C. Gaynor, M.C., H. F. Bodvel-Roberts, H. M. Gray, J. B. Wilkie, B. J. Ledlie, L. J. Lock, J. A. Gidver, M. R. Mackey, M.C., J. R. Burnett, J. Glaister, D. Y. Buchanan, W. H. Hart (on account of ill health caused by wounds), M. L. Loveless, C. P. Charles, H. E. H. Tracey, J. E. T. Jones, G. W. Anderson, A. J. Partridge, H. B. Wilkinson, H. L. Shelton, C. M. Smith, L. M. Smith, J. S. Buchanan, D. S. Jones, J. E. P. Shera, J. J. Hughes, J. C. Jones, W. D. A. King, F. H. Nixey, W. Tudhope (on account of ill health contracted on active service), A. G. Ritchie, W. W. Allison, J. G. Slade (on account of ill health), T. M. Johnstone (on ceasing to serve with the South African Native Labour Corps), W. Parsons, H. Goodale, W. G. Ridgway, R. O. Phelps, T. S. Smith, D. Benton, G. L. Thornton, M.C., A. Verling, H. Kirkland-Whittaker, R. Stipe (July 7th, 1919, substituted for notification in the *London Gazette* of July 21st, 1919), W. M. McDonald, W. B. Knobel, W. Thomas, H. O. H. May, S. E. Denyer, C.M.G., C. W. Cunningham, D. H. Derry, J. E. S. Sheppard-Jones, J. Gilchrist, A. Buchanan, M.C., J. A. M. Bigh, H. M. Jackson, J. A. Clarke, Norman V. Mitton, J. W. McDonald (on account of ill health contracted on active service), B. J. Mullins, M.C. (on account of ill health caused by wounds), W. E. M. Armstrong, H. P. Gibb, W. H. A. Elliott, F. P. Montgomery, M.C., H. D. Wyatt, J. Young, E. O. Hughes, A. M. Bell, P. Savill, J. Leach, D. L. Hutton, M.C., M. J. T. Wallis, A. R. M. Brenan, J. G. S. Mennie, G. H. Dart, J. P. Lowson, F. Heatherley, A. McEwan, L. F. West, J. Hepburn, R. A. H. Fulton, G. L.

Keynes (April 13th, 1919, substituted for notification in the *London Gazette* of May 29th, 1919). R. M. Gordon, P. F. C. Willington, W. G. Shaw, J. G. Shanklin (on account of ill health contracted on active service), (acting Major) W. F. Thompson, J. E. L. A. Turnley (on account of ill health contracted on active service), C. J. Glasson, J. M. Christie (on account of ill health contracted on active service), S. C. H. Moberly (on account of ill health), E. R. Wheeler, E. M. Brown, J. A. Wilson, F. W. Jones, C. J. Heaton, J. D. Carroll, M.C., R. A. Banbury, A. Poole, P. B. Whittington, J. C. Fergusson, M.C., J. Prichard, W. D. Lawrie, W. McFarlane, M.C., G. Hoffmann, C. Gray, H. C. Hinwood, W. C. P. Barrett, A. W. George, D. Corry, W. E. Morgan. Temporary honorary Captain and retains the honorary rank of Captain: W. A. Pride (on ceasing to serve with the Cookston War Hospital). Temporary Lieutenants: And is granted the rank of Major: G. E. Froggatt. And retains the rank of Lieutenant: R. M. D. Devereux, W. H. Newton (on account of ill health caused by wounds).

ROYAL AIR FORCE.

MEDICAL BRANCH.

Major G. D. Bateman, O.B.E., to be Lieut.-Colonel. Captain (acting Major) A. P. Bowdler to be acting Lieut.-Colonel while so employed.

Captain (acting Major) C. J. G. Taylor (Surgeon Lieutenant R.N.V.R.) relinquishes his commission on ceasing to be employed.

The notification in the *London Gazette* of August 8th concerning Captain (acting Major) C. J. G. Taylor is cancelled.

R. W. Ryan is granted a temporary commission as Captain.

Captain O. Gleeson (Captain R.A.M.C.) relinquishes his commission on account of ill health contracted on active service.

Temporary Captain A. E. Panter is granted the acting rank of Major whilst specially employed.

GENERAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

T. D. Inch, O.B.E., M.C., late Captain R.A.M.C., to be Captain (July 28th, 1919, substituted for notification in the *London Gazette* of June 11th, 1919).

APPOINTMENTS.

Cox, William J., M.B., Ch.B., D.P.H., Medical Officer of Health and School Medical Officer, Borough of Chelmsford.

DAVIDSON, James, M.D. Edin., Physician to the London Missionary Society.

SUSSEX THROAT AND EAR HOSPITAL.—A. J. Hutchison, M.A., M.B., C.M., appointed Honorary Consulting Surgeon. Morris Rigby, M.R.C.S., and Douglas A. Crow, M.B., Ch.B., appointed Assistant Honorary Surgeons.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

BRIMBLECOMBE.—On the 10th September, at Willow Bank, Martock, Somerset, the wife of S. L. Brimblecombe, M.R.C.S., L.R.C.P., of a son.

DENT.—On September 9th, at 21, Endsleigh Street, to Lieutenant R. W. Dent, H.M.T.S. *Monarch*, and Dr. Patricia Dent (née Barnes) of "Okeburn," Ambleside Avenue, Streatham, a daughter.

MARRIAGES.

BARNES—SPRAGGON.—On September 10th, 1919, at St. John's Church, Surrey Road, Bournemouth West, by Rev. Stuart Millar, George Barnes, Esq., M.R.C.S., L.R.C.P., of 194, Hammersmith Road, W., son of the late E. C. Barnes, Esq., to Ethel Mary Spraggon, daughter of T. H. Spraggon, Esq., of Jesmond, Surrey Road, Bournemouth.

STIEL—HOLLAND.—On September 15th, at Netfham Parish Church, Lincoln, by the Rev. C. K. Watkins, William Fletcher Stiel, M.R.C.S., L.R.C.P., younger son of Dr. and Mrs. Stiel of Clapham, London, S.W., to Margaret, younger daughter of Mr. George Holland and the late Mrs. Holland of "Kelvin," Lime Tree Avenue, Retford.

DEATHS.

BEVEN.—At the Anglo-American Hospital, Cairo, Iris Marie Carew, née Breakey, wife of J. O. Beven, M.R.C.S., etc.; also Wilfrid Jasper, their infant son.

BROOMHEAD.—On the 9th inst., at Ivy House, Rectory Road, Crumpsall, James Broomhead, M.B., C.M., Medical Officer of Health for Haslingden, Corps Superintendent and Surgeon St. John Ambulance Brigade.

RANKIN.—On September 14th inst., at the Orchard, Helford, Cornwall, Guthrie Rankin, M.D., F.R.C.P., and of 9, Harley Street.

WILLIAMS.—At the Cottage, Llanfabon, on August 31st, Mary Agnes Williams, aged 73 years, widow of the late Thomas Williams (coroner for North Glamorgan), of Troedyrhiw House, Merthyr Tydfil, and eldest daughter of the late John Leigh, J.P. F.R.C.S., of Llanfabon, Glam.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
SEPTEMBER.	
23 Tues.	Organization Committee: Propaganda Subcommittee, 2 p.m.
26 Fri.	North Wales Branch. Meeting at Rhyl.
OCTOBER.	
2 Thurs.	Organization Committee, 2 p.m.
3 Fri.	Central Ethical Committee, 2.30 p.m.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, SEPTEMBER 27TH, 1919.

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British Medical Association.

CURRENT NOTES.

The 1914-15 Star.

MEDICAL officers serving on hospital ships in specific theatres of war have applied to the War Office for leave to wear the decoration known as the 1914-15 Star. Such requests were always met with the reply that service in a hospital ship did not count as service in a theatre of war for the purpose of the award of this decoration, and that such claims could not be entertained. A specific case was brought to the notice of the British Medical Association in which the medical officer had actually landed on Cape Hellas, and had also been under shell fire on board his ship. The Naval and Military Committee decided to make representations on the subject to the War Office, and it is gratifying to record that its efforts have been successful, as is shown by the following letter from the War Office dated September 18th:

"I am directed to refer to your letter dated the 26th June, 1919, on the subject of the award of the '1914-15 Star' to staffs of hospital ships, and to inform you that it has been decided to award this decoration to Royal Army Medical Corps personnel who served on the staffs of hospital ships plying to and from theatres of war between the 5th August, 1914, and midnight 31st December, 1915."

Medical Men in Public Life.

In a current note with this heading in the SUPPLEMENT of September 13th a list was given of medical men who have been elected to the various education authorities in Scotland. A correspondent now draws our attention to an omission. In the County of Wigtown the poll was headed by two medical men, namely, Dr. Shaw of Wigtown, and Dr. Matthews of Glenluce.

We have received from a correspondent a list of the medical practitioners who are or have been members of the Town Council of the County Borough of Blackburn. The record may serve to encourage doctors in other parts of the county to devote a share of their time to public duties. After each name is given the length of service: J. Brooks, September, 1904, to 1906; F. J. Greeves, J.P., 1900 to present time; J. W. M. Jamieson, 1912 to present time; J. W. Keighley, 1907 to present time; A. A. P. Moffatt, 1907 to present time; Alderman J. T. T. Ramsay, J.P., July, 1896, to present time; F. W. Taylor, 1901 to 1913; F. W. M. Stephenson, J.P., October, 1913, to date of death, November 28th, 1918; J. W. Wells, 1899 to 1902; J. S. Watson, November, 1891, to 1901; G. R. Wilson, 1906 to July 30th, 1903.

Association Notices.

MEETING OF COUNCIL.

The next Meeting of Council will be held on Wednesday, October 22nd, in the Council Room, 429, Strand, London, W.C. 2.

FORMATION OF ESSEX, NORFOLK, AND SUFFOLK BRANCHES.

NOTICE is hereby given by the Council to all concerned that as a result of a proposal made by the East Anglian Branch to that effect, the Council has decided that, as from September 30th, 1919, that Branch be discontinued, and that new Branches as follows be substituted therefor:

1. ESSEX BRANCH.—Area: The county of Essex, except the south-western portion thereof, now forming the South-West Essex and Stratford Divisions of the Metropolitan Counties Branch, and bounded, on the east, by the eastern boundaries of Romford and Epping Rural Districts as far north as the northern boundary of North Weald Bassett Civil Parish; and, on the north, by the northern boundaries of that Civil Parish, of Epping Upland Civil Parish, and of Waltham Holy Cross Urban District;
2. NORFOLK BRANCH.—Area: Norfolk;
3. SUFFOLK BRANCH.—Area: Suffolk;

the Divisions of the new Branches to be those of the present East Anglian Branch in the respective counties.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

A LIST of periodical publications, official reports, and Blue Books in the Library of the British Medical Association available for issue to members on loan has been printed, and copies can be obtained free on application to the Librarian at the house of the Association, 429, Strand, W.C. The regulations governing the loan of these publications are stated in the introduction to the list. The Library is open for consultation from 10 a.m. till 5 p.m. (on Saturdays till 1 p.m.).

Meetings of Branches and Divisions.

NORTH LANCASHIRE AND SOUTH WESTMORLAND BRANCH.
The annual meeting of the Branch was held at Lowwood on September 19th.

Dr. BARLING, before vacating the chair, on behalf of the Branch thanked those who had served from the Branch area, and paid a grateful tribute to those members who fell in the war.

The following officers were elected:

President: Dr. G. Ainslie Johnston (Ambleside). President-elect: Dr. A. F. Rutherford (Barrow). Vice-President: Dr. G. Parsons (Hawthhead). Honorary Treasurer: W. D. Barrow (Lancaster). Honorary Secretary: J. Livingston (Barrow).

The new ethical rules were adopted.

Dr. AINSLIE JOHNSTON gave an address on "The future policy of the profession," and after entertaining members to tea, conveyed the party to the Ethel Hedley Hospital, Calgarth, where they were shown round by the medical director, Dr. Hough. A very interesting time was spent going over this up-to-date orthopaedic centre.

SOUTH MIDLAND BRANCH: BUCKINGHAMSHIRE DIVISION.
A MEETING of the Buckinghamshire Division was held on August 7th at the Borlase Grammar School, Great Marlow, when Dr. BRADBROOK was in the chair.

Dr. BRADBROOK gave an account of the Representative Meeting. He observed that it lasted only two days this time, and forty-nine Divisions sent no Representative. About 150 were present. Most of the Representatives were men of advanced age, and had an air of weariness. Younger men should be induced to take an interest in medical politics.

A lantern demonstration by Major L. JOYCE of Reading was then given on "Investigation of kidney and bladder diseases," and Dr. O. LEYTON of the London Hospital gave a short address on "Diabetes in children." He referred to the Allen treatment, which he said made the prognosis of these cases very different from the old treatment.

Tea was provided by the Marlow members, at the house of Dr. Wills, and there was a good attendance of members and ladies, some of whom had travelled over forty miles.

INSURANCE.

1918 INVALIDED SOLDIERS' MEDICAL BENEFIT FUND.

The following table has been supplied by the Ministry of Health:

Visits	...	...	...	232,439
Attendances	...	...	...	1,069,244
Special visits	...	...	...	3,768
Night visits	...	...	...	1,743
Operations	...	...	...	603
Administration of anaesthetics	...	...	...	87
Fractures	...	...	...	57
Dislocations	...	...	...	29
Certificates	...	...	...	167,245
Special reports	...	...	...	511
Total	...	...	...	1,475,726

THE 1920 AGREEMENT.

RECENT communications with the Ministry of Health have convinced the Insurance Acts Committee that it will not be practicable to issue the new Agreement on January 1st, 1920. It is hoped, however, that the various stages may be completed in time for the new Agreement to begin on February 1st. It was announced at the last Panel Conference that the Committee was determined not to allow the important matters connected with the new Regulations and Agreement to be rushed, nor consent to any arrangements which would prevent Local Medical and Panel Committees and individual practitioners from obtaining a clear idea of what they are agreeing to before the Agreement is signed. While consenting, therefore, to a month's postponement of the stages of the negotiations, the Insurance Acts Committee has put in a claim that the new rate of remuneration, when fixed, shall date back to January 1st, 1920. As we go to press the Conditions of Service Subcommittee are meeting representatives of the Ministry of Health to discuss the draft Regulations in the form in which they will be issued to Insurance Committees, and the Ministry will be urged to issue the draft Regulations as amended to Local Medical and Panel Committees as soon after September 25th as possible. The Insurance Acts Committee will meet not later than October 10th, and will transmit as soon as possible its observations on the Regulations, together with its opinion on the question of remuneration, to the Local Medical and Panel Committees. These Committees have therefore been advised to meet and call their constituencies together, in the week beginning October 13th, to discuss the draft Regulations and the views of the Insurance Acts Committee thereon, and to meet in the week beginning October 27th to instruct their representatives to the Panel Conference, which will be held on November 13th. Full information on the position, including any offer made by the Government, will be sent out before October 27th, and it is hoped that Committees will not formulate any motions for the Conference until they have that information. The Insurance Acts Committee is anxious to feel that at every stage it has the majority of the Local Medical and Panel Committees

behind it, and it will take all steps to keep these Committees informed. The Committees in their turn are asked to lose no opportunity of testing the feelings of their constituents, and of placing all the information before them.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following announcements are made by the Admiralty:— Surgeon Rear Admiral J. L. Smith, C.B., M.V.O., is placed on the retired list at his own request. Surgeon Captain H. W. G. Doynne to be Surgeon Rear Admiral, seniority September 15th, and is placed on the retired list. Surgeon Captain G. A. Dreaper is promoted to the rank of Surgeon Rear Admiral, seniority September 14th. Surgeon Commanders W. B. Ormsby, O.B.E., and G. M. Eastment to the *Vivid*, additional. Surgeon Lieutenant Commanders: H. N. Whelan and E. C. Holton, O.B.E., to the *Carysfort*, A. C. Rusack to R.M. Infirmary, Deal; G. P. Adshad to the *Cairo*, and D. G. Addison-Scott to the *Lowestoft*, both on commissioning; G. G. D. Fergusson to R.M. Infirmary, Portsmouth; A. R. Davidson to the *Pembroke*. Surgeon Lieutenants: A. G. Lee to the *Lowestoft*, on commissioning; H. Morrison to the *Cairo*, on commissioning; K. A. I. Mackenzie to the *Thesens*, C. H. Gimlette to the *Pembroke* for R.N. Hospital, Chatham; P. L. Gibson to the *Queen Elizabeth*, A. C. Shaw to R.N. Hospital, Malta. Surgeon Lieutenants (temporary): A. W. McMorie to the *Aquarius*, T. L. Hillier to the *Resolution*, R. T. F. D. Roberts and A. F. R. Wollaston, D.S.O., to the *Pembroke* on paying off, W. E. Heath to the *Calcutta*, T. S. Duncan, who has been invalided on account of ill health contracted in the service, to retain his rank.

ARMY MEDICAL SERVICE.

Temporary Colonels J. A. Nixon, C.M.G. (Captain R.A.M.C.T.F.), and Charters J. Symonds, C.B. (Major R.A.M.C.T.F.), relinquish their temporary commissions on reposting.

Colonels C. A. Young, C.B., C.M.G., and Bertal H. Scott, C.M.G., retire on retired pay.

Colonel G. T. Rawnsley, C.B., C.M.G., is placed on the half-pay list under the provisions of Article 351, Royal Warrant, for pay and promotion.

Colonels H. T. Knaggs, C.B., C.M.G., and A. J. Luther, C.B., retire on retired pay.

ROYAL ARMY MEDICAL CORPS.

Temporary honorary Lieut.-Colonel H. R. Kenwood, C.M.G. (Major R.A.M.C.T.F.), relinquishes his temporary commission on reposting.

Temporary Major E. W. H. Groves (Captain R.A.M.C.T.F.) relinquishes his temporary commission on reposting.

The undermentioned to be acting Lieut.-Colonels whilst commanding medical units: Major C. M. Drew, D.S.O. Captains: (Acting Major) R. G. Shaw, M.C., E. Percival, D.S.O., M.C., T. S. Eves, D.S.O. Temporary Captains (acting Majors): H. C. Watson, M.C., J. P. Davidson, M.C., G. Jackson.

Lieut.-Colonel E. McDonnell, D.S.O., relinquishes the temporary rank of Colonel on reposting.

The following relinquish the acting rank of Lieut.-Colonel:— Major and Brevet Lieut.-Colonels: Garfield Ormrod, A. W. Sampey, Major A. L. Otway (on ceasing to command a medical unit), Captain J. J. D. Roche (on ceasing to command a medical unit), temporary Captain G. W. Milne, O.B.E.

Major T. B. Moriarty, D.S.O., to be acting Lieut.-Colonel whilst specially employed from January 29th to February 22nd, 1919.

Major H. F. Shea, D.S.O., is seconded for duty under the Ministry of Pensions.

To be acting Majors: Temporary Captains A. W. Rattrie, M.C., J. M. Macfie, M.C., H. G. Hobson, M.C., Captain J. C. Sproule

Captain E. N. Platt Marland, from Special Reserve, to be Lieutenant and to be temporary Captain, October 11th, 1917, but not to reckon for pay or allowances prior to August 1st, 1919, with precedence next below A. R. Barlas.

Captain F. R. H. Mollan, M.C., relinquishes the acting rank of Major on reposting, May 15th, 1919 (substituted for the notification in the *London Gazette* of July 17th, 1919).

Captain C. Robb retires, receiving a gratuity.

Captain T. D. Inch, O.B.E., M.C., resigns his commission (July 28th, 1919, substituted for notification in the *London Gazette* of June 11th, 1919).

Temporary Captain (acting Major) R. Jamison to be acting Lieut.-Colonel whilst specially employed (July 28th, 1919, substituted for notification in the *London Gazette* of August 23rd, 1919).

Temporary Captain (acting Major) L. ap I. Davies, M.C., relinquishes the acting rank of Major, and also the pay and allowances of that rank.

To be Captains but not to reckon for pay and allowances prior to August 1st, 1919:—Temporary Captains: J. H. Graham Hunter (March 11th, 1919, next below J. H. Barry), J. McFadden (April 3rd, 1919, next below D. Pottinger), (acting Major) W. S. Martin, M.C. (April 5th, 1918, next below D. Bell, and to retain his acting rank).

Temporary Captain J. McP. MacKinnon to be Lieutenant, and to be temporary Captain, January 25th, 1919, but not to reckon for pay or allowances prior to July 1st, 1919, with precedence next below J. E. Rea (substituted for the notification in the *London Gazette* of August 9th, 1919).

The undermentioned temporary Captains, from the Home Hospitals Reserve, to be temporary Captains: A. G. Price, with seniority from August 6th, 1914; G. A. Skinner, with seniority from July 27th, 1915.

The undermentioned relinquish the acting rank of Lieut.-Colonel on reposting:—Majors: G. H. Stevenson, D.S.O., O.B.E., P. J. Marett, T. F. Ritchie, D.S.O. Captain A. J. Hickey, M.C. (May 16th, 1919, substituted for notification in the *London Gazette* of July 11th, 1919). Temporary Captains: J. Scott, D. Miller.

The undermentioned relinquish the acting rank of Major:—Captains: C. Kelly, M.C., P. A. Opie, J. Biggam, M.C., T. L. Fraser, O.B.E. Temporary Captains: A. H. Coleman, O.B.E., A. C. Mackay, D. Cowin, L. T. Giles, C. C. Chance, M.C., R. S. Barker, E. B. Smith, J. N. Wheeler, E. R. C. Cooke, M.C., R. Brown, F. W. Matheson, C. S. Dodson, C. Roche, W. J. J. Arnold, E. S. Sowerby, M.C. On ceasing to be specially employed: Captains J. E. Hepper and A. L. Foster. Temporary Captains: W. H. Clements, J. M. Morris, A. W. Tabuteau, H. M. Grey, C. Y. Ford, M.C., E. McCulloch, A. C. Hancock, M.C., J. C. D. Allan. Temporary Lieutenant: G. E. Froggatt.

The undermentioned late temporary Captains to be temporary Captains: R. A. Flynn, with seniority from July 6th, 1915; T. F. Griffin, with seniority from August 25th, 1915; J. Joule, with seniority from August 25th, 1917; C. L. Driscoll, with seniority from November 4th, 1917; L. Gibbons, August 16th, 1919, with seniority from November 3rd, 1915; E. Stokes Hall, August 12th, 1919, with seniority from August 17th, 1916; J. A. Marsden, August 17th, 1919, with seniority from August 17th, 1916; C. E. Dolling, with seniority from July 6th, 1915; P. S. MacLaren, with seniority from July 28th, 1917; J. Cunningham, with seniority from September 25th, 1915; R. Stephens, with seniority from August 15th, 1915; P. Kitchen, with seniority from September 1st, 1915; G. L. Neil, O.B.E., with seniority from November 10th, 1915; R. W. D. Hewson, with seniority from December 8th, 1917; W. B. Honey, with seniority from August 25th, 1917; G. B. Proctor (seniority June 3rd, 1918).

The following announcement should be substituted for that which appeared in our issue of September 13th, p. 69: Late temporary Captains to be temporary Captains—J. G. Garson (seniority October 25th, 1915), E. Duke (seniority November 1st, 1915), J. Cameron (seniority July 5th, 1917), W. Garton (August 13th, 1915).

To be temporary Captains: R. J. Monahan, A. E. Wood, J. A. Jardine, F. J. R. Cowie.

The following to be acting Majors:—Captains: E. Catford, J. Biggam, M.C., C. F. Burton, M.C., Temporary Captains: C. C. Harrison, M.C., C. C. Chance, M.C., A. Brown, O.B.E., R. Brown, W. H. D. Smith, F. R. C. Cooke, M.C., J. S. Lloyd, S. J. W. Donald, R. Thomson, R. H. Alexander, M.C., W. Montgomery, W. L. Hay, H. L. Mann, W. A. Todd, G. W. Rea, J. T. Gunn. Whilst specially employed: Captain and Brevet Major T. A. Weston; Captains: S. H. Smith, M.C., F. Worthington, D.S.O., O.B.E., R. E. Todd, H. F. Joynt, R. G. S. Gregg, J. J. Molyneux; temporary Captains H. C. Gillies, A. L. Robinson, S. S. Dunn, G. Cooper, J. Graham, E. K. Campbell, C. E. Waldron, H. M. Anderson.

The notifications regarding temporary Captains P. Ashe and W. E. Hallinan, M.C., in the *London Gazette* of July 23rd and June 5th, 1919, respectively, are cancelled.

The name of temporary Captain Leslie Meakin is as now described, and not as in the *London Gazette* of August 25th, 1919.

Temporary Major H. T. Jenkins, T.D. (Major 6th R. W. Fusiliers, T.F.), relinquishes his temporary commission.

Temporary Captain (acting Major) R. Hutchinson Lucas, O.B.E., M.C., to be Captain, June 2nd, 1918, but not to reckon for pay or allowances prior to July 1st, 1919, with precedence next below W. E. Adam, and to retain his acting rank whilst specially employed (substituted for notification in the *London Gazette* of July 12th, 1919).

To be temporary Major: R. H. Nicholson, Fleet Surgeon R.N.(ret.). The undermentioned Lieutenants (temporary Captains) to be Captains: C. H. C. Byrne, G. C. Robinson, C. A. Slaughter, W. L. A. Harrison, M.C., T. P. Buist, P. H. Wells, M.C.

The undermentioned temporary Lieutenants to be temporary Captains: (Acting Major) T. E. Coulson, T. M. Richardson, H. J. Cundell, L. Milburn, R. Lawrence, A. Leigh, W. K. Anderson.

G. A. Fothergill, late temporary Lieutenant, to be temporary Lieutenant, August 4th, 1919, with seniority from February 22nd, 1919.

The following officers relinquish their commissions: Temporary Lieut.-Colonels, and retain the rank of Lieutenant-Colonel: W. Harding (on ceasing to be employed at the Northern War Hospital), J. V. G. B. Tighe (on ceasing to serve with the Gateshead War Hospital, Stan-nington), M. A. Collins, temporary Major and Brevet Lieut.-Colonel A. W. Robertson, July 2nd, 1919, and retains the brevet rank of Lieut.-Colonel (substituted for notification in the *London Gazette*, August 15th, 1919). Temporary Major, and is granted the rank of Lieutenant-Colonel: G. D. Gray, O.B.E. Temporary Major (and retains the rank of Major): R. T. Smith. Temporary Captains: G. Robertson. And are granted the rank of Major: C. D. Faulkner, R. J. B. Madden, M.C., R. S. Barker, A. Dick, M.C., G. Muir, E. Tawse, A. E. Quine, J. Donald, R. S. Miller (March 25th, 1919, substituted for notification in the *London Gazette*, May 22nd, 1919). W. L. Johnson (February 22nd, 1919, substituted for notification in the *London Gazette*, May 1st, 1919). A. G. Anderson, R. W. P. Jackson, M.C., A. W. G. Woodforde, E. F. G. Ward, A. K. Cosgrave, M.C. And retains the rank of Brevet Major: Brevet Major W. E. P. Phillips. And retain the rank of Captain: L. D. Cohen and L. Gray (on account of ill health contracted on active service). A. E. Hardy (on ceasing to be employed with the Huddersfield War Hospital), G. F. May (on account of ill health), J. Allen, M. Culpin, R. H. Fleming, J. C. Padwick, A. W. T. Whitworth, A. F. Wright, M.C., R. W. Telford, A. R. Wightman, A. B. Cooke, F. J. Whitelaw, J. H. Fryer, B. B. Noble, R. T. Grant, W. O'Regan, S. Rodin, C. F. Dillon-Kelly, M.C., A. Graydon, J. T. Titterton, H. P. Shackleton, G. Riddooh, D. Young, C. B. Tudehope, J. B. Fisher, A. D. Blakely, W. Simpson, C. H. L. Rixon, E. Goffon, E. W. N. Hobhouse, P. Ashe (April 4th, 1918, substituted for the notification in the *London Gazette* of April 22nd, 1918), F. O. Stedman (April 28th, 1919, substituted for the notification in the *London Gazette* of July 12th, 1919), E. M. Gandy, F. Penny, W. P. Miles, H. O. West (on account of ill health contracted on active service), W. H. Trothowan, H. Spurway, A. Robertson, R. O. MacQueen, C. Salkeld, P. L. L. Craig, A. B. Lindsay, O. Gordon (on account of ill health), T. J. Lydon (on account of ill health contracted on active service), G. N. Kirkwood, E. R. Stone, R. L. Sinclair, A. L. McGrury, J. Duberg, D. W. Smith, B. C. Ewens, J. J. Armistead, J. E. Barnes, L. H. Skene, M.C., A. Cleland, E. G. Gibbs, J. P. P. Ingila, R. H. Maingot, J. R. Davies, R. M. Lang. Temporary honorary Captain, and retains the honorary rank of Captain: J. M. Bremner. Temporary Lieutenants, and retain the rank of Lieutenant: A. I. Girdwood, H. T. O'Neill, S. F. Broakey.

ROYAL AIR FORCE.

MEDICAL BRANCH.

Captain W. H. H. Bennett (Captain R.A.M.C.T.F.) relinquishes his commission on ceasing to be employed.

Flying officers to be Flight Lieutenants: J. Ferguson and T. M. Davies.

The following Captains relinquish their commissions on account of ill health and are permitted to retain their rank: T. E. Mulvany (August 13th, substituted for notification in the *London Gazette* of August 15th), E. H. Hogg, O. P. Strong.

Lieutenants to be Captains: H. F. Squire, J. J. O'Mullane, E. H. L. E. Clezio, N. Rumbold, V. A. T. Spang, H. B. B. Green, S. A. Nield-Faulkner.

Transferred to the unemployed list:—Major W. G. Mitchell. Captains: W. S. T. Connell, T. R. Hunter, P. O. Moffat, A. Leitch, W. H. Cam, J. Duffin, G. W. Clark. Wing Commander (acting Group Commander) T. D. C. Barry. Lieutenants: G. H. Johnson, G.

Bourne, J. G. Bird, O. P. Turner. Flight Lieutenants: J. E. Cox, P. T. J. O'Farrell, I. de B. Daly. Flying Officers: G. Hughes, P. A. Dormer, C. Lambriaudi.

ROYAL ARMY MEDICAL COLLEGE.

Colonel S. G. Moores, C.B., C.M.G., Army Medical Service, to be Commandant.

Colonel S. L. Cummins, C.B., C.M.G., to be a Professor.

The undermentioned to be Assistant Professors: Major and Brevet Lieut.-Colonel J. A. Anderson, R.A.M.C.; Major H. M. J. Perry, O.B.E., R.A.M.C.

INDIAN MEDICAL SERVICE.

Captain G. E. Malcomson will take seniority in his present rank from February 1st, 1909, his previous forfeited service having been restored for good service in the field.

The following relinquish temporary rank: Temporary Captain C. L. D. Roberts. Temporary Lieutenants: K. R. Dalal, E. K. Menon. The King has approved the relinquishment of temporary rank of Captain V. R. Nateson.

Temporary Lieutenants to be temporary Captains: R. R. H. O. Tha, V. D. Madgavakar, K. B. Awan, D. Sanyal, M. S. Bazaz, R. L. Khera, N. R. Shabane, A. K. Sen, D. N. Bhaduri, H. H. Colwell, T. P. Vaswani, V. T. Ninan, K. Thirupad, G. S. Tampi, G. G. Limaye.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Captain R. T. C. Robertson, D.S.O., relinquishes the acting rank of Lieutenant-Colonel on ceasing to command a medical unit (April 19th, 1919, substituted for notification in the *London Gazette* of May 27th, 1919).

Captain E. R. Chambers relinquishes his commission on account of ill health contracted on active service, and is granted the rank of Major (December 21st, 1918, substituted for notification in the *London Gazette* of December 20th, 1918).

Captain W. G. H. Cable to be Major.

The undermentioned Captains to be acting Majors: D. McIntyre, M.B.E., J. J. McI. Shaw (whilst specially employed), R. F. Fagan, R. P. Startie, W. McI. Chesney, M.C., W. Donald, M.C.

The undermentioned Captains relinquish the acting rank of Major: R. A. Kirkland, W. B. Cathcart, M.C., A. G. S. Wallace, M.C., D. G. Stoute, A. W. Russell, M.C., D. M. Marr, O.B.E. On ceasing to be specially employed: H. C. G. Pedler, R. O. C. Thomson.

Captain (acting Major) W. McI. Chesney, M.C., relinquishes the pay and allowances of his acting rank.

Captains M. F. Murphy, L. C. Rudd, J. H. Neill, A. H. Boon relinquish their commissions.

The undermentioned relinquish their commissions on account of ill health contracted on active service:—Captains: And is granted the rank of Major: A. W. Russell, M.C. And retain the rank of Captain: J. F. Lyons, A. B. Austin, T. G. Roche.

The undermentioned Lieutenants to be Captains: E. J. S. Bonnett, T. Patterson, S. A. Withers, A. M. Dugan, F. R. G. Heif, C. Simpson, D. C. Lamont, E. D. D. Dickson, G. R. Ross, G. M. Chapman (April 1st, 1915, since deceased), J. W. W. Newsome, B. L. Slater, V. D. Wyborn, W. Ruchan, A. C. Hill, J. A. Ross, D. C. Bowie, A. J. Macartney, D. Ferguson, J. A. Dawson, A. I. Meek, J. Morrison, G. W. C. Dunlop, R. R. MacGregor, H. J. Parish.

OVERSEAS CONTINGENTS.

Temporary Lieut.-Colonel G. J. Boyce, D.S.O., Canadian Army Medical Corps, relinquishes the appointment of Assistant Director of Medical Services.

Temporary Major S. Ellis, Canadian Army Medical Corps, relinquishes the appointment of Deputy Assistant Director of Medical Services.

CANADIAN ARMY MEDICAL CORPS.

The undermentioned temporary Lieut.-Colonels (acting Lieut.-Colonels) to be temporary Colonels: C. P. Templeton, D.S.O., E. L. Stone, P. G. Bell, D.S.O.

The undermentioned temporary Majors (acting Lieut.-Colonels) to be temporary Lieut.-Colonels: J. S. Jenkins, D.S.O., C. Hunter, W. T. Lockhart, C. F. L. Haszard, F. E. Watts.

Temporary Major (acting Lieut.-Colonel) L. R. McKim relinquishes the acting rank of Lieut.-Colonel.

The undermentioned temporary Captains (acting Majors) to be temporary Majors: H. W. Wadde, M.C., P. J. S. Bird, J. D. Jones, J. S. Fitzsimmons, J. W. Hunt, A. B. Wilkes, D. S. Lewis, S. Sprague, G. O. Scott, B. R. Almquest, J. C. Maynard.

The undermentioned temporary Captains (acting Majors) relinquish the acting rank of Major: C. W. Johnston, M.C., D. A. Morrison, M.C., C. Kerr, M.C., F. A. Brockenshire, R. A. Thomas, J. G. Shaw, M.C., J. Pullar, E. E. Risdon, A. Aitken, and A. J. Fisher.

The notifications in the *London Gazette* of June 16th and August 11th, 1919, concerning temporary Captains H. A. McKay and D. W. McKay respectively are cancelled.

Temporary Major (acting Lieut.-Colonel) E. L. Pope to be temporary Lieut.-Colonel.

Temporary Majors to be temporary Lieut.-Colonels: (Acting Colonel) O. F. Martin, (acting Lieut.-Colonel) M. H. Allen.

Temporary Majors (acting Lieut.-Colonels) relinquish the acting rank of Lieut.-Colonel: R. J. Gardiner, M.C., T. H. Bell, M.C.

Temporary Captain E. F. Risdon to be acting Major whilst employed as Officer-in-charge, Canadian Section of Plastic and Facial Surgery.

Temporary Captain J. P. S. Cathcart, M.C., to be temporary Major (May 21st, 1919, substituted for notification in the *London Gazette*, August 11th, 1919).

Temporary Captains (acting Majors) relinquish the acting rank of Major: N. W. Strong, on ceasing to be employed at No. 3 Canadian Casualty Clearing Station; W. E. Gallo, on ceasing to be employed at Granville Special Hospital, Ruxton; R. M. Ferguson, A. Collins.

The following officers retire in the British Isles: Temporary Lieut.-Colonel A. L. Johnson, temporary Majors E. A. Neff, W. G. Cooper, and J. A. Lussier. Temporary Captains: W. B. Honey, O. V. Bailor, T. V. Hunter, H. J. Thoriant, J. A. MacKenzie, J. A. Jardine, J. R. Lo Touzel, W. A. Marshall, P. A. Leacy, W. H. Hills, C. V. Mills, M. R. Roe, H. H. Perry, E. Werhsch, F. P. R. Bonfield, M.C., A. E. Wood, H. C. Clermont, H. L. Walker, F. A. O'Reilly (substituted for notification in the *London Gazette*, August 2nd), J. A. Houston, A. J. Gibson, E. E. Locke, H. W. Bell, W. A. McClelland, A. N. Aitken, A. R. Campbell, M.C. Honorary Captain J. O. McClure.

BRITISH WEST INDIES REGIMENT.

The undermentioned relinquish their commissions: Temporary Surgeon-Captain A. G. Mckenley and C. G. Deane, M.C., and retain the rank of Surgeon-Captain; temporary Surgeon-Lieut. F. A. Norton, and retains the rank of Surgeon-Lieutenant.

SOUTH AFRICAN MEDICAL CORPS.

The following officers relinquish their commissions on ceasing to be employed, and retain their rank: Temporary Major R. N. Pringle, D.S.O., M.C. (May 1st, 1919, substituted for notification in the *London Gazette*, August 25th, 1919). Captains: J. McL. Hendry. Temporary Captains: E. W. Dyer, J. I. de Villiers, E. Wolff, A. S. Wilson, G. H. Coke, E. G. Pyott. Temporary Captains E. A. Levisseur, A. H. Gifford (July 30th, 1919, substituted for notification in the *London Gazette*, August 25th, 1919), W. R. White-Cooper.

Temporary Captain R. C. Mullins relinquishes his commission (September 1st, 1918, substituted for notification in the *London Gazette*, September 18th, 1918).

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

The following relinquish acting rank:—Major (acting Colonel) T. Kay, D.S.O. (on vacating the appointment of A.D.M.S.). Captains (acting Majors) G. Stevenson, W. T. P. Meade-King, F. Ellis, M.C., F. Arvor.

The undermentioned Captains to be acting Majors whilst specially employed: H. W. Browne, M.C., R. W. Swayne, O.B.E.

Captain B. J. Alcock to be acting Major whilst specially employed, April 7th, 1918 (substituted for that which appeared in the *London Gazette* of August 19th, 1919).

Captain T. J. Faulder to be Major.

Captain S. Shephard relinquishes his commission on account of ill health contracted on active service, and retains the rank of Captain.

Major (Brevet Lieut.-Colonel, acting Colonel) D. Rorie, D.S.O., relinquishes the acting rank of Colonel on vacating the appointment as Assistant Director of Medical Services, March 31st, 1919 (substituted for that which appeared in the *London Gazette* of June 14th, 1919).

Major M. G. Foster, O.B.E., is restored to the establishment on ceasing to hold a temporary commission in the Army Medical Service.

The following relinquish acting rank on ceasing to be specially employed:—Majors (acting Lieut.-Colonels): A. R. Henchley, D.S.O., A. C. Goodwin, T. Frankish, T. D. Captains (acting Lieut.-Colonels): J. Young, D.S.O., J. H. Thomas, D.S.O., A. G. Hendley, W. D. Starrook, D.S.O., J. Barkley, D.S.O., A. C. Pearson, M.C., T. C. Clarke, M.C., F. Darlow, (acting Majors) G. T. Willan, D.S.O., G. H. H. Manfield, C. D. Law, J. L. M. Symms, L. E. Hughes, M.C., H. T. Jones, E. L. D. Dewdney, G. B. Buchanan, A. B. P. Smith, M.C., T. S. Worboys, H. Pinto-Leite, C. W. T. Baldwin, J. Taylor, O.B.E.

Captain C. Nyham relinquishes his commission on account of ill health contracted on active service, and is granted the rank of Major. Attached to Units other than Medical Units.—Major T. Frankish to be acting Lieutenant-Colonel whilst specially employed.

1st Eastern General Hospital.—Major (acting Lieutenant-Colonel) L. Humphry relinquishes the acting rank of Lieutenant-Colonel on ceasing to be specially employed.

2nd London General Hospital.—Major (Brevet Lieut.-Colonel) T. D. Acland is seconded for duty with the Military Surgical Hospital, Shepherd's Bush, November 10th, 1918. Major (Brevet Lieut.-Colonel) T. D. Acland is restored to the establishment.

4th London General Hospital.—Major W. A. Turner, C.B., is restored to the establishment on ceasing to hold a temporary commission in the Army Medical Service. Lieut.-Colonel A. H. Tubby, C.B., C.M.G., is restored to the establishment. Captain (acting Major) W. Turner relinquishes the acting rank of Major on ceasing to be specially employed.

1st London Sanitary Company.—Captain W. N. W. Kennedy, O.B.E., relinquishes his commission on account of ill health contracted on active service, and is granted the rank of Major; Lieutenant P. R. Fincher to be Captain.

2nd London Sanitary Company.—Captain (acting Major) A. G. G. Thompson relinquishes the acting rank of Major on ceasing to be specially employed. Captain B. R. Hebblethwaite is seconded for service under the Egyptian government. Lieutenants I. Walker and F. Evans, M.B.E., to be Captains.

3rd Northern General Hospital.—Captain F. A. Hepworth is restored to the establishment on ceasing to hold a temporary commission in the R.A.M.C.

Sanitary Service.—Captain (Brevet Major—acting Major) C. M. Fegen the acting rank of Major.

1st Scottish General Hospital.—Major Sir H. M. W. Gray, K.B.E., C.B., C.M.G., is restored to the establishment on ceasing to hold a temporary commission in the A.M.S.

2nd Scottish General Hospital.—Captain J. W. Simpson is restored to the establishment.

4th Scottish General Hospital.—Captain W. A. Campbell is restored to the establishment, January 11th, 1919.

2nd Southern General Hospital.—Captain (Brevet Major) E. W. H. Groves is restored to the establishment.

3rd Southern General Hospital.—Major A. T. Waterhouse and Captain J. A. Gunn are restored to the establishment. Captain (acting Major) R. E. Humphry relinquishes the acting rank of Major; Captain J. F. Robinson is restored to the establishment.

5th Southern General Hospital.—Captain (acting Lieutenant-Colonel) J. Blackwood relinquishes the acting rank of Lieutenant-Colonel on ceasing to be specially employed, and to remain seconded.

2nd South Midland Mounted Brigade Field Ambulance.—Captain A. G. Hendley to be acting Lieut.-Colonel whilst specially employed.

2nd Western General Hospital.—Captain (acting Major) G. M. Benton relinquishes the acting rank of Major on ceasing to be specially employed.

3rd Western General Hospital.—Lieut.-Colonel (honorary Surgeon-Colonel) D. Hepburn, C.M.G., V.D., relinquishes his commission on account of ill health, and retains his rank.

TERRITORIAL FORCE RESERVE.

ARMY MEDICAL SERVICE.

The announcement regarding Lieut.-Colonel (temporary Colonel) H. T. Challis which appeared in the *London Gazette* of May 8th, 1916, is cancelled.

Captain Sir C. A. Ballance, K.C.M.G., C.B., M.V.O., from 2nd London General Hospital, to be Colonel.

Captain Sir T. C. English, K.C.M.G., from 4th London General Hospital, to be Colonel.

ROYAL ARMY MEDICAL CORPS.

Major G. L. L. Lawson, from 3rd London Field Ambulance, to be Major.

Captain S. E. Whitnall, from General List, to be Captain.

The announcements regarding the following officers which appeared in the *London Gazette* on the dates specified are cancelled:—Majors: P. M. Dewar, December 18th, 1918; J. A. Kendall, December 30th, 1918; J. B. Yeoman, January 8th, 1919; G. A. C. Shipman, January 8th, 1919. Captains: C. W. Sharpley, September 3rd, 1918; D. Macnair, December 31st, 1918; C. W. Greene, January 2nd, 1919; J. R. Garrod, January 4th, 1919; F. C. Pridham, January 7th, 1919; F. R. M. Higgs, January 10th, 1919; C. H. Lilley, January 14th, 1919; J. L. M. Symms, January 14th, 1919; O. Teichman, D.S.O., M.C., January 14th, 1919; J. Carroll, January 15th, 1919.

QUEEN MARY'S ARMY AUXILIARY CORPS.

Auxiliary Section R.A.M.C. (attached): Controller of Medical Services J. H. Turnbull, C.B.E., M.D., relinquishes her appointment.

APPOINTMENTS.

NICHOLSON, C. J., M.R.C.S., L.R.C.P., Medical Officer of Institution and District, Wokingham Union.

RYLAND, Archer, F.R.C.S. Edin., Assistant Surgeon, Central London Ear, Nose, and Throat Hospital.

SHEERA, A. G., M.D., B.Ch., B.A. Cantab., M.R.C.S. and L.R.C.P. Lond., Honorary Clinical Pathologist, Princess Alice Memorial Hospital, Eastbourne.

DISTRICT MEDICAL OFFICERS.—A. G. Holman, M.R.C.S., L.R.C.P. (Newton Abbot Union), G. Macleod, M.B. (Long Ashton Union), A. R. Moore, M.B. (Southwark Union), E. P. Titterton, L.R.C.P. and S. Edin., L.R.F.P.S. Glas. (Grantham Union), C. Tylor, M.D. (Sudbury Union).

EDINBURGH ROYAL INFIRMARY.—Assistant Physician: David M. Lyon, M.B., Ch.B., F.R.C.P. Edin. Clinical Medical Officer under the Venereal Diseases Scheme: David Lees, D.S.O., M.B., F.R.C.S. Edin. Resident Physicians: R. L. Stewart, M.B., Ch.B., to Professor Gulland; Alister R. Matheson, M.B., to Professor F. D. Boyd; T. R. O'Keefe, L.R.C.S. Edin., L.R.C.P. Edin., to Dr. Fleming; Atholl Robertson, M.C., M.B., Ch.B., to Dr. Edwin Bramwell. Resident Surgeons: R. Lance Impey, M.B., Ch.B., to Mr. Miles; P. Martin Brodie, M.B., Ch.B., to Mr. Dowden; R. McNair, M.B., Ch.B., to Mr. Breviss; Leroy C. Abbott, M.D. California, to Professor Sir H. J. Stiles. Clinical Assistants: Robert Aitken, M.D., to Dr. Norman Walker; Gavin Young, M.B., to Dr. Logan Turner; W. Tyrrell Patterson, M.B., Ch.B., to Dr. Logan Turner; Disney Cran, M.D., to Dr. W. T. Ritchie; Robert L. Galloway, M.B., Ch.B., to Professor Sir H. J. Stiles.

HULL ROYAL INFIRMARY.—Honorary Surgeon for Nose, Throat, and Ear: Thomas R. Rodger, M.D. Glas., F.R.C.S. Edin. Honorary Assistant Medical Officers: Leslie Jeffcoat, M.B., Ch.B. Edin.; W. C. F. Harland, M.B., B.S. Lond. Honorary Assistant Surgeons: B. Bertram Blair, M.B., Ch.B., F.R.C.S. Edin.; Farquhar M. Stewart, L.R.C.P. and S. Edin.

SALFORD ROYAL HOSPITAL.—Resident Surgical Officer: F. W. Stone, M.B., B.S. House-Physician: C. W. Fort, M.B., Ch.B., M.R.C.S., L.R.C.P. House-Surgeon: O. J. Ellis, M.B., Ch.M. Junior House Surgeon: L. W. Sparrow, M.B., Ch.B.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

FEATHERSTONE.—On September 17th, at Coton Cottage, Erdington, Birmingham, the wife of Captain Henry W. Featherstone, M.B., B.C. Camb., R.A.M.C. (S.R.), of a son and daughter.

TORRANCE.—On the 22nd September, at 146, Mile End Road, E., to Dr. and Mrs. M. C. Torrance, a daughter.

MARRIAGES.

HARVEY—DOHERTY.—September 15th, 1919, at St. Pancras Parish Church, London, by the Vicar, Rev. E. L. Metcalfe, M.A., and the Rev. E. Harvey, M.A., brother of the bridegroom, Joseph Harvey, Captain R.A.M.C. (T.C.), youngest son of the late Mr. John Harvey and Mrs. Harvey, Rathmines, Dublin, and Winifred Eleanor, fifth daughter of Mr. and Mrs. W. Doherty, Claremont, Western Australia.

MELVIN—PORTEOUS.—At the University Chapel, King's College, Aberdeen University, on the 23rd September, by the Very Rev. Sir George Adam Smith, assisted by the Rev. James Landreth, M.A., B.D., of Logie, Perth. Montrose, James Melvin, jun., M.C., M.B., Ch.B., of Newbold Hall, Rochdale, son of Leslie F. Melvin, Esq., and Mrs. Melvin, of Aberdeen, and Margaret Porteous, M.B., Ch.B., only daughter of George Porteous, Esq., M.A., and Mrs. Porteous, of Logie, Perth, Montrose.

DEATH.

VASEY.—On the 19th inst., at Twyford Abbey, Willesden, Fleet-Surgeon C. Lyon Vasey, R.N. (ret.), aged 70.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
SEPTEMBER.	
30 Tues. London:	Public Health Committee, 3 p.m.
OCTOBER.	
1 Wed. London:	Medico-Political Committee, 2 p.m.
2 Thurs. London:	Organization Committee, 12 noon (not at 2 p.m., as previously arranged).
3 Fri. London:	Central Ethical Committee, 2 p.m.
7 Tues. London:	Hospitals Committee, 2.30 p.m.
22 Wed. London:	Council.
NOVEMBER.	
13 Thurs. London:	Conference of Local Medical and Panel Committees.

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, OCTOBER 4TH, 1919.

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British Medical Association.

CURRENT NOTES.

The Strike and Petrol for Medical Men.

COMPLAINTS have been received this week from certain districts that, owing to the small stocks held by retailers, medical men are unable to obtain their normal supply of petrol. Representations have been made by the British Medical Association to the Ministry of Transport, the Ministry of Health, and the Board of Trade, urging these departments to take immediate steps to assure a sufficient supply of motor spirit to enable medical practitioners to carry on their work.

The 1920 Agreement.

The Conditions of Service Subcommittee of the Insurance Acts Committee had an interview on September 25th with representatives of the Ministry of Health, at which the new draft Regulations were considered. It was found that delays had arisen owing mainly to the necessity of the Ministry consulting other interests—pharmacists, approved societies, and Insurance Committees. As a result it will be necessary to post-date by two weeks the various steps indicated in the paragraph with this heading in last week's SUPPLEMENT. The effect of this is that the Panel Conference will be held on November 27th instead of November 13th, and that the new Regulations cannot come into operation before February 15th, and more probably March 1st. This postponement is not due to any cause over which the Insurance Acts Committee has control.

Medical Men in Public Life.

A correspondent sends us information with regard to medical men serving on the Coventry City Council. Two medical men are aldermen, and three more are councillors; one of these was mayor for two years and chairman of the Watch Committee for more than sixteen years. At the present time a medical man is serving as chairman of the Sanitary Committee, and another is chairman of the Electric Light Committee; while one has just resigned from the chairmanship of the Housing Committee.

INSURANCE.

LONDON INSURANCE COMMITTEE.

AT the meeting of the London Insurance Committee on September 25th it was agreed to make payment for the quarter ending December 31st next to each medical practitioner on the panel at the rate of 1s. 4d. in respect of each insured person provisionally included in his list on the first day of the quarter.

The Committee agreed in the proposal that Dr. Noel Bardswell's term of engagement as medical adviser should be extended from September 6th, 1921, the date at present fixed, to the date on which it is anticipated the proposed agreement with the London County Council for a comprehensive scheme for the residential treatment of tuberculosis will expire—namely, June 30th, 1922. The proposal involves additional expenditure of approximately £1,000.

A proposal to refund to witnesses attending before the Medical Service Subcommittee their expenses (including loss of remunerative time), and to recover such expenses from the practitioner

when the subcommittee so recommended, was opposed by Dr. Ethel Bentham and other medical members of the Committee, who pointed out that such expenses could not fairly be put upon the practitioner, even if he were found entirely guilty. The proposal, however, was agreed to.

It was reported that the number of applicants for sanatorium benefit undergoing residential treatment in sanatoriums or hospitals on September 1st was 1,143, of whom 584 were discharged soldiers entitled under the special arrangements as to priority; the remainder belonged to the ordinary insured population. The number on the waiting list was 125, of whom 26 were discharged soldiers.

LOCAL MEDICAL AND PANEL COMMITTEES.

COUNTY OF LONDON.

Future Terms of Service.—At the meeting of the London Panel Committee, on September 23rd, Dr. H. J. Cardale in the chair, a discussion took place as to the means to be adopted for consulting panel practitioners generally in the area with regard to the forthcoming draft regulations, previous to the Conference of Local Medical and Panel Committees called by the British Medical Association for November 27th. It was agreed that, following upon a meeting of the Committee in the early part of October, local meetings of panel practitioners should be held in the various districts, and that another meeting of the Committee be held on October 28th to give instructions to its representatives at the Conference in harmony with the views expressed at the local consultations. The question of holding a mass meeting of London practitioners was left to the discretion of the chairman; it was understood that this course would be taken if the local meetings revealed acute divergences of opinion. Representatives were appointed to the Conference in question, and the Committee also nominated Drs. H. G. Cowie, H. B. Brackenbury, and C. H. Panting to represent Group K, which includes London, on the Insurance Acts Committee. A communication from the Medico-Political Union was read, stating that that body proposed to call a conference of committees during October to consider remuneration and range of service, and asking the Committee to appoint representatives. It was agreed, without dissent, to take no action in the matter.

Remuneration of Practitioners.—The Committee concurred in a proposal by the Insurance Committee that payment for the quarter ending December 31st next should be calculated at the rate of 1s. 4d. for each insured person provisionally included in a practitioner's list, this amount to be paid in two equal instalments. A motion was adopted requesting the Insurance Acts Committee to consider a scheme of deferred payments to practitioners on the panel as part of the negotiations with the Government in regard to the capitation fee for 1920. It was explained that the scheme, which was being worked out by a specially appointed section of the Committee, proposed to make some deduction from the capitation fees paid to practitioners, with a view to setting up a pension fund.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

The following appointments are announced by the Admiralty:—Surgeon Commanders: R. St. G. S. Bond to the *President*, additional, for service at the Medical Department, Admiralty; H. Spicer to the *Vivid*; N. H. Harris to the *Pembroke*; C. J. E. Cook, L. S. Whitman, W. Bastian, A. McCloy, R. Kennedy, J. H. L. Page, and E. F. Ellis to the *President*, additional, for R.N. College, Greenwich; C. K. Bushe to South Queensferry Hospital, additional. Surgeon Lieutenant Commanders: P. R. Egan to the *Victory*, on paying off; E. R. Townsend to the *President*, additional, for R.N. College, Greenwich; H. M. Braithwaite to the *Pembroke*; G. G. Vickery, O.B.E., to the *Friend*. Surgeon Lieutenants: R. K. Shaw to Chatham Hospital; G. H. Hayes to the *Woodlark*; J. F. Pace to the *Sandpiper*; J. S. McGrath to the *Alexander*, on commissioning; H. M. Whelan to the *Champion*; A. Simpson to the *Egmont*; J. S. Elliott to H.M. Dockyard, Devonport.

Surgeon Lieutenants (temporary): J. L. Lamond to the *Gibraltar*; J. G. Bailey to the *Pembroke*; R. D. Lockhart and F. L. H. McDowell to the *Victory*; G. E. Heath to the *Wallace*; W. D. Nicol to the *Stoke*.

ARMY MEDICAL SERVICE.

Colonel T. B. Beach, C.M.G., C.B.E., is placed on the half-pay list, having completed four years' service in his rank.

Colonel P. C. H. Gordon, C.M.G., retires on retired pay.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonel F. E. Gunter, D.S.O., retires on retired pay.

Majors to be acting Lieutenant-Colonels whilst commanding a medical unit: R. J. Franklin, A. W. Gater.

Major F. C. Cowtan is seconded whilst employed under the Air Ministry.

The undermentioned relinquish the acting rank of Major; Temporary Captain H. Goodman.

T. M. Kendall, late temporary Major, to be temporary Major, September 10th, 1919, seniority August 16th, 1915.

Captain E. Percival, D.S.O., M.C., relinquishes the acting rank of Lieutenant-Colonel on ceasing to command a medical unit.

To be temporary Major: N. G. Cooper, late Major C.A.M.C.

The name of temporary Captain Alfred Vella is as now described, and not as in the *London Gazette* of September 6th and July 23rd, 1919.

Captain A. M. McCutcheon relinquishes the acting rank of Major.

Captain J. E. Hepper to be acting Major whilst specially employed.

The notifications regarding temporary Captain A. Morrison and Lieutenant (temporary Captain) H. A. Whyte-Venables in the *London Gazette* of May 8th and 9th, 1919, respectively are cancelled.

To be Captains, but not to reckon for pay or allowances prior to September 1st, 1919: Temporary Captain R. T. Cox, October 27th, 1918, with precedence next below J. M. McKenzie; Captain G. R. Grant, M.C., from Special Reserve, February 6th, 1918, with precedence next below S. J. A. H. Walshe.

To be Lieutenants and to be temporary Captains, but not to reckon for pay or allowances prior to September 1st: Captain E. Parker, from Special Reserve, February 5th, 1917, with precedence next below G. E. L. Simons. Temporary Captain C. P. Chambers, February 26th, 1918, with precedence next below W. S. Gross. Captain W. S. Gross (S.R.), April 8th, 1918, with precedence next below G. E. MacAlevey.

To be temporary Captains: H. J. Theriault, late Captain C.A.M.C., R. Svenson, D.S.O., M.C., late temporary Captain (seniority as from February 13th, 1916). Temporary Lieutenants: T. G. Dickson, Alfred Leitch, late temporary Captain (seniority from December 4th, 1917), R. C. De Lacey, J. Lascelles.

To be temporary Lieutenant: W. E. Shipsey.

To be temporary honorary Lieutenant: Ando Huan Chu.

The following officers relinquish their commissions:—Temporary honorary Lieut.-Colonel R. G. Rows, C.B.E., on ceasing duty at the Moss Side Military Hospital, and retains the honor rank of Lieutenant-Colonel. Temporary Major and Brevet Lieut.-Colonel L. E. Lanyon-Owen, and retains the Brevet rank of Lieutenant-Colonel. Temporary Major E. F. Elliot, and is granted the rank of Lieutenant-Colonel. Temporary Major, and retains the rank of Major, J. G. Rowell (on ceasing to be employed at the Huddersfield War Hospital). Temporary Major T. W. Mead. Temporary Captains, and are granted the rank of Major: C. H. Fennell, H. T. L. Roberts. Temporary Captains and retain the rank of Captain: J. G. Cronyn, J. M. Elliot, T. D. Webster, N. M. Grace, G. S. Goodwin, J. N. Humphrey, M.C., W. Shanks, J. M. Scott, B. M. Smith, C. E. Dukes, J. W. Tonks, P. V. Early, C. T. I. Clarke, D. D. Ritchie, J. M. Anderson, L. W. Davies, O.B.E., E. J. Dermott, J. C. O'Farrell, R. P. Weldon, H. Harvey, W. A. Cardwell, O.B.E., C. J. D. Bergin, C. E. Wilson, M.C., A. N. Haworth, H. A. Forrester, H. P. Rogers, G. H. L. Fitzwilliams, G. B. Bisset, D. L. G. Radford (on account of ill health), C. W. Morrison, W. M. Shepherd (on account of ill health contracted on active service), D. F. Borrie, B. Barnett, N. B. Benjafield, J. V. Buchanan, E. S. Marshall, M.C., W. H. Croly, R. A. Hunter, L. Adamson, S. Wilton, G. Johnston, J. McNamara, W. Cramer, F. H. Ellis, M.C., C. H. Comerford, J. E. Lucas, A. E. Knapp (on account of ill health contracted on active service), H. H. Fisk, A. Benjamin, P. Daly, G. J. Hanley, J. P. S. Dunn, J. R. Bryce, S. Barron, L. E. Napier, F. B. Martin. Temporary honorary Captain W. S. Rutherford, July 9th, 1919, and retains the honorary rank of Captain (substituted for notification in the *London Gazette*, August 25th, 1919). Temporary Lieutenant R. A. MacArthur, and retains the rank of Lieutenant. Temporary honorary Lieutenant P. A. E. Sheppard and retains the honorary rank of Lieutenant.

ROYAL AIR FORCE.

MEDICAL BRANCH.

Transferred to unemployed list: Captain W. H. Payne, Squadron Leader (acting Wing Commander) F. F. Muecke, C.B.E.

INDIAN MEDICAL SERVICE.

Lieut.-Colonel R. F. Standage, an Agency Surgeon of the 2nd Class, was granted privilege leave for one month, with effect from April 17th, 1919.

Major E. C. C. Maunsell officiated as Residency Surgeon, Mysore, in addition to his own duties, from April 17th to May 16th, 1919.

Major M. R. C. MacWatters, M.B., F.R.C.S., to be Professor of Surgery, King George's Medical College, Lucknow, substantively *pro tem*.

Major C. H. Barber, M.B., to be Professor of Medicine, King George's Medical College, Lucknow, substantively *pro tem*.

Major J. R. J. Tyrrell temporarily to hold visiting charge of the office of Agency Surgeon, Baghelkhand, in addition to his own duties, July 22nd, 1919.

Colonel P. C. H. Strickland has been retained in the service, with effect from May 15th, 1919, and will be borne as supernumerary in his rank and grade.

The undermentioned officers have been absorbed in the authorized establishment of Colonels, with effect from the dates indicated: Colonel H. F. Cleveland, C.I.E. (January 10th, 1919); Colonel T. Stodart, M.B. (May 15th, 1919); Colonel P. J. Lumsden, M.B. (April 2nd, 1919); Colonel J. Jackson, C.I.E., M.B. (January 11th, 1919).

Major R. H. Bott, F.R.C.S., to be Civil Surgeon, Simla West, temporarily, July 9th.

Major J. McPherson granted privilege leave for six months, combined with furlough for six months, with effect from July 1st, 1919.

Major A. Chalmers, Staff Surgeon, 4th (Quetta) Division, appointed to hold charge of the current duties of the office of the Civil Surgeon, Quetta, in addition to his own duties, May 6th.

Lieut.-Colonel A. T. Gage, Director Botanical Survey of India, has been granted combined leave for one year, with effect from October 11th.

The following promotions have been made, with effect from the dates specified: Captains to be Majors: H. W. Acton, (Brevet-Major) R. E. Wright, M.B., F. A. Barker, O.B.E., M.B., D. Coutts, M.B., A. N. Thomas, D.S.O., M.B. (July 27th, 1919). W. J. Simpson, M.B., F. Stevenson, M.B., S. H. Middleton-West, M.C., M.B. (August 1st, 1919).

Lieut.-Colonel G. E. Fooks, re-employed during the war, has been permitted to resign (May 15th).

Colonel C. MacTaggart, C.S.I., C.I.E., M.B., Inspector-General of Civil Hospitals, United Provinces, granted combined leave for six months and fourteen days, with effect from September 15th, 1919.

Lieut.-Colonel W. H. E. Woodwright, F.R.C.S.I., appointed to officiate as Inspector-General of Civil Hospitals, United Provinces.

Lieut.-Colonel Bhola Nauth, C.I.E., promoted to the rank of Colonel, with effect from January 11th, 1919.

Majors to be Lieutenant-Colonels (July 27th, 1919): H. D. Pelle, D. H. F. Cowin, W. H. Tucker, M. N. Chaudhuri, A. C. MacGilchrist, J. W. D. Megaw, E. O. Thurston, G. Browne, D.S.O. (Brevet Lieutenant-Colonel and temporary Colonel), C. M. Goodbody, C.I.E., D.S.O. (Brevet Colonel), R. Steen, F. F. Elwes, C.I.E., E. A. C. Mathews, D.S.O., L. P. Stephen, L. E. Gilbert, T. N. G. Stokes, H. M. Mackenzie, M. H. Thornely, P. V. O. Beit, W. O'S. Murphy, M. Corry, C. C. Murison, H. A. Williams, D.S.O.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Captain J. P. Huban relinquishes his commission.

Captain B. M. Tuke, M.C., relinquishes his commission on account of ill health contracted on active service, and retains the rank of Captain.

Lieutenants to be Captains: F. K. MacMillan, W. H. Duff, A. K. I. Jones, N. B. Peacock, W. Napier, A. S. Goudie, J. W. Mackay, J. B. Potter, W. Scotland, D. Finlayson, A. M. Davidson.

OVERSEAS CONTINGENTS.

CANADIAN ARMY MEDICAL CORPS.

Temporary Lieut.-Colonel F. C. Bell, C.M.G., to be temporary Colonel.

Temporary Major F. V. Woodbury to be temporary Lieutenant-Colonel.

Temporary Captain (acting Major) A. J. Lomas to be temporary Major.

The notifications regarding temporary Major (acting Colonel) C. Hunter and temporary Captain (acting Major) H. Wadge, M.C., in the *London Gazette* of September 11th, 1919, are cancelled.

The undermentioned officers retire in the British Isles: Temporary Captain C. R. Worthington, temporary Major H. J. Williamson.

SOUTH AFRICAN MEDICAL CORPS.

Captain F. P. G. de Smidt relinquishes his commission on account of ill health, February 8th, 1918, and retains the rank of Captain (substituted for notification in the *London Gazette*, February 7th, 1918).

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Captain T. W. Squair to be acting Major whilst specially employed. Captains (acting Majors) N. J. Wigram, T. W. Hancock, O.B.E., relinquish their acting rank on ceasing to be specially employed.

1st *London General Hospital*.—Captain (Brevet Major—acting Major) R. C. Elmslie, O.B.E., relinquishes the acting rank of Major on ceasing to be specially employed.

2nd *London General Hospital*.—Major C. J. Symonds, K.B.E., C.B., is restored to the establishment on ceasing to hold a temporary commission in the A.M.S.

2nd *London Sanitary Company*.—Captain (Brevet Major) G. W. Ellis, O.B.E., is restored to the establishment.

1st *Northern General Hospital*.—Major (Brevet Lieut.-Colonel—acting Lieut.-Colonel) R. A. Bolam, O.B.E., relinquishes the acting rank of Lieutenant-Colonel on ceasing to be specially employed.

4th *Northern General Hospital*.—Captain (acting Major) G. J. R. Lowe relinquishes the acting rank of Major on ceasing to be specially employed.

APPOINTMENTS.

HORT, Violet G., Government Bacteriologist in the Isle of Man.

RICHARDS, Owen, C.M.G., D.S.O., F.R.C.S., M.Ch., Director of the Egyptian Government School of Medicine and Kasr el Ainy Hospital, Cairo, vice H. P. Keatinge, C.M.G., F.R.C.S., resigned.

ROBERTS, J. E. H., M.B., F.R.C.S., Assistant Surgeon, St. Bartholomew's Hospital.

SARGENT, Percy, C.M.G., D.S.O., F.R.C.S., Consulting Surgeon to the Royal Hospital and Home for Incurables, Putney.

STRATFORD, Howard M., F.R.C.S. (Edin.), Honorary Surgeon to the Westminster General Dispensary.

WALKER, Kenneth, M.B., F.R.C.S., Medical Officer in charge of the Venereal Department, St. Bartholomew's Hospital.

DIARY FOR THE WEEK.

ROYAL SOCIETY OF MEDICINE.—Section of Surgery: Subsection of Orthopaedics: Tuesday, 5 p.m., Cases. Section of Obstetrics and Gynaecology: Thursday, 7.45 p.m., Dr. Gordon Ley: Traumatic Rupture of the Uterus. Dr. F. J. McCann: The Pre-cancerous Uterus. Specimens. Section of Neurology: Thursday, 8.45 p.m., Presidential address—Dr. W. Aldren Turner: The Influence of Psychogenic Factors in Nervous Disorders.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
OCTOBER.	
8 Wed.	London: Journal Committee, 2.30 p.m.
11 Sat.	Scottish Committee, North British Station Hotel, Edinburgh 11.30 a.m.
15 Wed.	London: Finance Committee, 2.30 p.m.
22 Wed.	London: Council.
NOVEMBER.	
27 Thurs.	London: Conference of Local Medical and Panel Committees.

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British Medical Association.

CURRENT NOTES.

British Medical Association Lecturers.

In its Annual Report (SUPPLEMENT, May 3rd, 1919) the Council announced that it proposed to make an experiment in the use of the money which is annually devoted to scientific purposes, by putting aside a portion of those funds (not exceeding £200 per annum) to subsidize lecturers, who should be known as "British Medical Association Lecturers." The Divisions and Branches were asked to name a subject in which they were specially interested and the lecturer they would prefer. The Council then undertook to communicate with the lecturer nominated or, if no choice was indicated, to provide a suitable lecturer. The first lecture of the kind will be given under the auspices of the Sheffield Division at the University, Sheffield, on October 24th, at 8.45 p.m., by Dr. Thomas Lewis, F.R.S., whose subject will be "Remarks on the management of heart cases in general." The experiment will be watched with interest, as it gives an opportunity to Branches and Divisions to give their members the chance of hearing subjects of special or perennial interest dealt with by the highest authorities.

Motor Cars for Doctors.

As a result of representations by the British Medical Association, the Mechanical Transport Department of the Surplus Government Property Disposal Board has now made arrangements whereby the department is prepared to grant opportunity to doctors or their properly accredited agents to inspect, at the offices of the department, Earl's Court, North End Road, West Kensington, London, W.14, any motor cars available for disposal by the department. The department will value such cars as are selected and offer them to medical practitioners by private treaty at such valuation. Members of the medical profession desiring to avail themselves of the facilities should inform the Controller of the Department, in writing, of their requirements, before visiting (or getting their agents to visit) the offices, so that they can be advised by the department as to whether any car suitable for disposal to them is available. It will also facilitate matters to mention the British Medical Association when writing to the department, and to quote the reference number "DD 13/25303." At the moment only a very limited number of two-seater cars is available for disposal.

Association Notices.

ELECTION OF MEMBERS OF COUNCIL,
1920-21, BY BRANCHES OUTSIDE THE
UNITED KINGDOM.

NOTICE is hereby given that, in accordance with By-law 49, nominations of Candidates for election as Members of Council by the grouped Branches outside the United Kingdom (please see below) for a period not exceeding three years, as proscribed by By-law 52 (2), must be forwarded in writing so as to reach the Medical Secretary on or before February 14th, 1920.

Nominations must be signed by not less than three Members of any Branch in the group, and must be in the form prescribed below or in one to the like effect.

The elections, where contests occur, will be by voting papers, containing the names of all duly nominated Candidates, issued from the Head Office, 429, Strand, London, W.C.2, to each Member of each Branch in the group.

NOMINATION FORM.

By not less than Three Members of the Grouped Branches.

We, the undersigned, hereby nominate [Full name and address to be given] of [Please state the names of the Branches in the group] Branches as a Member of the Council of the Association.

Signatures and addresses of Nominators [Branch(es)]

Date 19 ..

The Nominations should be forwarded so as to reach the Medical Secretary, 429, Strand, London, W.C.2, not later than February 14th, 1920. In or about the second week in June, 1920, a notice of the result of the elections will be published in the JOURNAL.

GROUPING (ABOVE REFERRED TO) OF BRANCHES NOT IN THE
UNITED KINGDOM FOR REPRESENTATION ON THE
COUNCIL OF THE ASSOCIATION, 1920-21.

	Members of Council.
South Australian, Tasmanian, Victorian, Western Australian	1
New South Wales, Queensland	1
New Zealand	1
Barbados, Bermuda, British Guiana, Grenada, Halifax (Nova Scotia), Jamaica, Leeward Islands, Montreal, St. John (New Brunswick), Saskatchewan, Toronto, Trinidad and Tobago	1
Assam, Baluchistan, Bombay, Burma, Ceylon, Hyderabad and Central Provinces, Punjab, South Indian and Madras	1
Hong Kong and China, Malaya	1
Border (South Africa), Cape of Good Hope (Eastern), Cape of Good Hope (Western), East Africa and Uganda, Egyptian, Gibraltar, Griqualand West, Malta and Mediterranean, Natal Coastal, Natal Inland, Orange Free State, Pretoria, Rhodesian, Witwatersrand	1

MEETING OF COUNCIL.

The next Meeting of Council will be held on Wednesday, November 5th, in the Council Room, 429, Strand, London, W.C.2.

Meetings of Branches and Divisions.

DORSET AND WEST HANTS BRANCH.

THE autumn meeting of the Branch was held at Weymouth on September 24th, when Dr. H. KAYE LE FLEMING, President, was in the chair. Dr. P. S. B. Wetherall (Weymouth) was elected President for 1920, and two vice-presidents and two honorary secretaries were also elected. It was agreed to hold the annual meeting at Dorchester on the third Wednesday in May, 1920. Dr. J. ELLIOTT ROBINSON, M.O.H. for Dorset, read a paper on "Certain difficulties of the tuberculosis problem." Members were entertained to luncheon and tea at the Royal Hotel by the Weymouth members.

METROPOLITAN COUNTIES BRANCH: CITY DIVISION.

A MEETING of the Division was held on September 10th. The report of the subcommittee on the capitation fee under the

National Insurance Act was adopted, to which the attention of the Insurance Acts Committee was drawn:

That we are of opinion that the capitation fee for 1920 for the present range of service, *plus* the inclusion of disabled soldiers and sailors (discharged and demobilized) and insured persons with incomes up to £250 should be 10s. *at pre-war value*, and that each year the fee should correspond to the fluctuating value of money,

It was also decided to call the attention of the Insurance Acts Committee to the fact that demobilized soldiers who are in a bad state of health, but who do not happen to have been discharged as physically unfit, do not come under the payment per attendance arrangement.

SUSSEX BRANCH: EASTBOURNE DIVISION.

A MEETING of the Division was held at Eastbourne on September 12th, when resolutions were passed (a) adopting the new ethical rules, and (b) recommending that a minimum of 50 per cent. be added to the pre-war scale of fees charged to private patients for medical and surgical attendances. It was agreed to postpone decision on a recommendation that fees for life assurance, etc., examinations should be increased 50 per cent.

INSURANCE.

REVISION OF TERMS AND CONDITIONS OF MEDICAL SERVICE FOR INSURED PERSONS.

The following circular letter, dated October 8th, 1919, with regard to the terms and conditions of medical service for 1920, has been addressed by the Ministry of Health to Insurance Committees, Panel Committees, and Pharmaceutical Committees:

Sir,—As your Committee are aware, the Medical Benefit Regulations embodying the conditions of service for doctors and chemists are in course of revision. In the ordinary course any changes embodied in these Regulations would have come into force on January 1st, 1920, and notices of the changes would, therefore, under the existing Regulations, require to be given early in November.

In order that there may be the fullest opportunity of detailed consideration of the various questions with which the draft of the new Regulations will deal, it has been decided, after consultation with the representatives of insurance practitioners and of chemists respectively, that some short postponement of the date on which the Regulations will come into operation is inevitable.

It is proposed, therefore, to issue a short provisional regulation at an early date under which the right of individual practitioners and chemists to give notice to determine service at the end of the prescribed period will be properly safeguarded; and the new Regulations will not, in fact, come into operation until the customary notice of the conditions of service embodied in those Regulations has been given to every individual practitioner and chemist concerned, and the usual period, beyond the date of that notice, has expired.—I am, Sir, your obedient servant,

Ministry of Health, Whitehall, S.W.1.

R. W. HARRIS.

REMUNERATION OF PRACTITIONERS.

THE Ministry of Health has recently set up a Distribution Committee, with the following terms of reference:

To advise as to the basis on which and the proportions in which the funds available (i) for the remuneration of medical practitioners for the treatment of insured persons, and (ii) for mileage should be distributed amongst the Insurance Committee (county and county borough) areas in England and Wales.

The names of the members of this Committee were given in the SUPPLEMENT of September 13th, p. 69.

Mileage Fund.

The Ministry of Health has also accepted a suggestion made by the Insurance Acts Committee of the British Medical Association that the Distribution Committee should examine relevant data with a view to making suggestions as to the basis on which a mileage fund should be assessed.

The Distribution Committee has now addressed a letter to the County Insurance Committees in England and Wales asking for certain particulars with regard to mileage in rural insurance practices. The Distribution Committee feels that the amount of material at present available is not sufficient to enable satisfactory recommendations to be made on the subject of mileage, and that the further co-operation of the insurance practitioners themselves is essential. The County Insurance Committees are, therefore, invited to fill up for rural insurance practices in their areas a tabular form, which follows in the main the lines set out in paragraphs 11 and 13 of document M. 19, issued

by the Insurance Acts Committee. The practices selected should, as far as possible, be typical of the rural insurance practices of each county as a whole.

The table includes separate columns for the number of insured persons residing (a) within two miles from the doctor, (b) between two and three miles, (c) between three and four miles, (d) between four and five miles, (e) between five and six miles, and (f) more than six miles; also columns for the total number of miles travelled annually in attending all patients—insured and private—and for the average yearly expenditure incurred in travelling to all patients. Figures are also desired showing the number of miles travelled and the expenses incurred in travelling during a given period.

The Insurance Acts Committee would urge all practitioners who are asked to furnish information to do so at once, as its importance cannot be overestimated from the point of view of establishing an adequate and equitable mileage fund.

APPOINTMENTS.

DAVENPORT, E. C., M.B.Lond., Medical Officer, District and Cottage Homes, St. Albans Union.
FLINT, H. L., M.D., District Medical Officer and Medical Officer, Cottage Homes, Mansfield Union.
GAUDINER-HILL, Clive, M.B., B.Ch.Camb., Honorary Medical Officer, Horton Infirmary, Banbury, Oxon.
GROGONO, J., M.R.C.S., L.R.C.P., Medical Officer of the Institution of the Risbridge Union.
HUGHES, Reginald, F.R.C.S.E., M.R.C.S.Eng., L.R.C.P.Lond., Hon. Surgeon to the Taunton and Somerset Hospital.
PAULLEY, J., M.B., B.S., Medical Officer and Public Vaccinator to the 4th District of the Dewpad Union.
ROSENBERG, Sophie S., M.R.C.S., L.R.C.P., Assistant Medical Officer, St. Pancras Parish Infirmary.
DISTRICT MEDICAL OFFICERS: T. C. Brentnall, M.R.C.S., L.R.C.P. (Lexden and Winstree Union); G. H. Dominy, M.R.C.S., L.R.C.P. (Pewsey Union); C. F. Drutt, M.R.C.S., L.R.C.P. (Derby Union); A. L. Heiser, M.R.C.S., L.R.C.P. (Eton Union); F. J. O. King, M.B., B.Ch. (Glanford Brigg Union); A. P. Nicolle, M.R.C.S., L.R.C.P. (Newmarket Union); A. G. Osborn, M.B. (Windsor Union); F. Sugden, M.B., Ch.B. (Stamford Union).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

MARRIAGES.

PHILIP—GAULER.—On August 26th, 1919, at the Church of St. John-in-the-Wilderness, Naini Tal, India, by the Rev. Dr. Chapman, Archdeacon of Lucknow, James Leslie Ruthlin Philip, M.B., Ch.B.Glasg., Captain Indian Medical Service, only son of Thomas Philip, M.B., C.M. Edin., Greenock, to Nellie Hilda, eldest daughter of J. W. Gauler, Sutton Mandeville, Wilts.
SOUPER—MILNE.—At St. James's Episcopal Church, Aberdeen, on September 30th, by the Rev. George Bartlett, M.A., Hugh Ross Souper, Captain R.A.M.C., to Alice Eleanor, daughter of the late John Milne and Mrs. Milne, 73, Forest Road, Aberdeen.

DEATHS.

DURNO.—At Bideford, North Devon, on September 29th, Leslie Durno, M.D., aged 54 years.
MACKENZIE.—Died at Hillcrest Hospital, Rockhampton, on July 22nd, 1919, Dr. A. C. Mackenzie, of Mount Morgan, Queensland.
WALLS.—On September 30th, at Scarborough, Dr. Wm. Kay Walls (of St. John Street, Manchester), the beloved husband of Edith M. Walls.

DIARY FOR THE WEEK.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, W.—Monday, 8 p.m., Annual General Meeting; 8.30 p.m., Presidential Address by Mr. V. Warren Low, C.B. Paper on Angina Pectoris, with Low Blood Pressure, by Dr. F. de Havilland Hall.
ROYAL SOCIETY OF MEDICINE.—Section of History of Medicine: Wednesday, 5 p.m., Mr. M. W. Hilton-Simpson: Some Arab and Shawia Remedies. Section of Dermatology: Thursday, 4.30 p.m., Cases. Section of Electro-Therapeutics: Friday, 8.30 p.m., Presidential Address by Dr. A. E. Barclay.
SOCIETY FOR THE STUDY OF INEBRIETY.—Tuesday, 10.30 a.m.: Autumn Conference, 11, Chandos Street, W. 5.30 p.m.: Norman Kerr Memorial Lecture (I, Wimpole Street, W.) by Mrs. M. Scharlieb, M.D., M.S.: The Relation of Alcohol and Alcoholism to Maternity and Child Welfare.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
OCTOBER.	
11 Sat.	Scottish Committee, North British Station Hotel, Edinburgh 11.30 a.m.
14 Tues.	London: Public Health Committee, 3 p.m.
15 Wed.	London: Medico-Political Committee, 2 p.m.
16 Thur.	London: Organization Committee, 11.30 a.m.
17 Fri.	London: Arrangements Committee, 2.45 p.m.
23 Thur.	London: Naval and Military Committee, Territorial Force Subcommittee, 2.30 p.m.
29 Wed.	London: Finance Committee, 2.30 p.m.
NOVEMBER.	
5 Wed.	London: Council.
27 Thur.	London: Conference of Local Medical and Panel Committees.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, OCTOBER 18TH, 1919.

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THE COMING ELECTION TO THE GENERAL MEDICAL COUNCIL.

ENGLAND AND WALES.

THE British Medical Association decided at the Annual Representative Meeting in July last to support the candidature, in the forthcoming election of four direct representatives for England and Wales on the General Medical Council, of Dr. R. A. Bolam, O.B.E. (Newcastle), Dr. J. A. Macdonald, LL.D. (Taunton), Mr. E. B. Turner, F.R.C.S. (London), and Sir T. Jenner Verrall, LL.D. (Bath). These gentlemen were selected from a list of candidates nominated by the Divisions of the Association after due notice, and it now falls to the members of the Association to do what they can to secure the return of the Association's candidates.

We print below the election address issued jointly by Dr. Bolam, Dr. Macdonald, Mr. Turner, and Sir Jenner Verrall, together with the covering letter addressed by them to members of the medical profession in England and Wales.

GENERAL MEDICAL COUNCIL.

ELECTION OF DIRECT REPRESENTATIVES FOR ENGLAND AND WALES, NOVEMBER, 1919.

To the Registered Medical Practitioners of England and Wales.

LADIES AND GENTLEMEN,

Postponed from time to time on account of the war the election of four Direct Representatives for England and Wales to the General Medical Council will take place early in November, and we venture to ask for your support and votes.

When the election was last held, in 1911, the foremost place in medical politics was taken by the proposals for National Insurance which were on the point of being adopted. So now, and in still greater measure, the Ministry of Health will provide many and serious subjects for professional consideration.

Arising from this there will be, doubtless, aims, desires, and difficulties for the profession, of which the General Medical Council should be kept fully acquainted, and it is thought that knowledge acquired by experience in practice and by service on the Council and Committees of the British Medical Association should secure this most efficiently. Such training has been received by all of us who are making our joint candidature, and we therefore offer ourselves for election.

Of the dangers of unqualified practice the Council has always been fully cognisant and loses no opportunity of bringing them to the notice of the Government. We should gladly lend this our earnest attention and support.

Though the Council is primarily concerned with the regulation of medical education, it will be recognized that the duty is bound up with the subsequent professional life of students and with all those matters which bear on the efficiency and interests of the medical practitioner. The establishment of a Ministry of Health makes this consideration still more urgent and important.

Should you do us the honour of electing us as your representatives it will be our great desire to do all in our power for the credit and welfare of the profession, and to justify your selection.

R. A. BOLAM,

Physician to Skin Department, Royal Victoria Infirmary, Newcastle-on-Tyne; Member Consultative Council of Ministry of Health on Medical and Allied Services; Member of Council, British Medical Association.

J. A. MACDONALD,

Representative Member General Medical Council; Member Consultative Council of the Ministry of Health on Medical and Allied Services; Chairman of Council, British Medical Association; formerly Chairman of Representative Meetings, British Medical Association.

E. B. TURNER,

Vice-Chairman, Central Medical War Committee; late Member of Advisory Board, Ministry of National Service; Member of Council, British Medical Association, late Chairman Representative Meetings.

T. JENNER VERRALL,

Representative Member General Medical Council; late Chairman, Central Medical War Committee for England and Wales; late Member Advisory Board, Ministry of National Service; Member of Council, and formerly Chairman of Representative Meetings, British Medical Association.

GENERAL MEDICAL COUNCIL ELECTION.

DEAR SIR (OR MADAM),

We are forwarding to you a copy of the "Election Address" issued by us jointly, and request the honour of your support.

To two of us (Dr. Macdonald and Sir Jenner Verrall) the work of the General Medical Council is well known through several years of service as Direct Representatives, and we have all a full knowledge of professional duties and responsibilities gained in the course of general practice, and in public medical work. Dr. Bolam and Mr. Turner, who now seek your suffrages for the first time, have special claims arising from their experience in matters affecting the public health. They have also held and still hold important official positions in the British Medical Association.

At the last election, eight years ago, the Association thought well to put forward candidates who should receive its organized support, and these all secured the approval of the electors.

It was believed that through the frequent discussions of medical politics by the Association the Direct Representatives might be given reliable information on the trend of medical opinion in the great problems of public health, and that the selection of those who were in constant touch with this source of information would be beneficial both to the public and the profession. It being determined that a similar selection of candidates should be made on the present occasion, we have been chosen by the Representative Meeting of the Association, an honour we greatly value.

It is our hope and desire that we may be entrusted with the duty of keeping the Council informed as to the mind of the profession generally in all the matters coming under the consideration of the Council; and this more particularly in those modifications of medical life and practice which are likely to follow the creation of a Ministry of Health.

On these grounds we ask not only for your vote, but for your assistance in securing the votes of your colleagues.

We are, yours faithfully,

R. A. BOLAM.
J. A. MACDONALD.
E. B. TURNER.
T. J. VERRALL.

First List of Supporters.

The following is a first list of those officers of the British Medical Association who have signified their intention of supporting the Association candidates:

- ACKLAND, JOHN McKNO, Exeter, President South-Western Branch.
ADAMI, JOHN GEORGE, Liverpool, Member Science and Arrangements Committees.
ALCOCK, REGINALD, Hanley, Honorary Secretary North Staffordshire Division.
ALLAN, JAMES, Leeds, Honorary Secretary Leeds Division.
ALLBUTT, Sir T. CLIFFORD, Cambridge, President, Member of Council.
BAILDON, FRANCIS JOSEPH, Southport, Representative Southport Division.
BAILEY, THOMAS RIDLEY, Bilston, Member Medico-Political, Insurance Acts, and Ministry of Health Committees; Chairman Staffordshire Local Medical and Panel Committee.
BALDOCK, EDWARD HENRY, Hereford, Honorary Secretary Hereford Division.
BARNES, ALFRED EDWARD, Sheffield, Chairman Sheffield Division.
BARNES, JOHN ARTHUR PERCIVAL, Member of Council, Member Organization Committee, Joint Honorary Secretary Metropolitan Counties Branch, Joint Honorary Secretary and Representative North Middlesex Division.
BARR, Sir JAMES, Liverpool, Member of Council.
BASSETT, FRANK PICKERING, St. Helens, Representative St. Helens and Warrington Divisions.
BATEMAN, WILLIAM HIRST, Rochdale, Chairman Rochdale Division.
BATT, BERNARD EDWARD AUGUSTINE, Bury St. Edmunds, Honorary Secretary West Suffolk Division, Honorary Secretary West Suffolk Local Medical and Panel Committee.
BEADELES, HAROLD SHATFORD, Canning Town, E., Member of Council, Honorary Secretary and Representative Stratford Division, Honorary Secretary West Ham Local Medical and Panel Committee.
BEATON, FRANK, Ashington, Honorary Secretary Morpeth Division.
BENNETT, FRANCIS DILLON, London, Honorary Secretary, Westminster Division.
BHABHA, SHAPURJI DADABHAI, London, Representative Greenwich and Deptford Division.
BIGGS, MOSES GEORGE, London, Member of Central Ethical and Ministry of Health Committees.
BLACK, ARTHUR CAMPBELL, Paddock Wood, Honorary Secretary Maidstone Division.
BLADGEN, JOHN JAMES, Chester, Honorary Secretary Chester Division.
BLAIR, DAVID, Lancaster, Honorary Secretary Lancaster Division.
BLAKE, ANTHONY FEWSTER, Grays, Chairman South Essex Division.
BOISSIER, ARTHUR JENNY, Banbury, Chairman Oxford Division.
BOLLANS, ROBERT WILFRED, Hadfield, Manchester, Honorary Secretary Glossop Division.
BELTON, CHARLES, London, Member Science Committee.
BOND, FRANK FOURACRE, Trowbridge, Honorary Secretary Wiltshire Branch and Trowbridge Division.
BONE, JOHN WARDLE, Luton, Representative Bedford Division, Member Medico-Political Committee.
BOYD, SIDNEY ARTHUR, London, Honorary Secretary Hampstead Division.
BRACKENBURY, HENRY BRITTEN, London, Member of Council, Medico-Political, Insurance Acts, Parliamentary Elections, and Ministry of Health Committees.
BRADSHROCK, WILLIAM, Chairman and Representative Buckinghamshire Division.
BRIDLEY, EDWARD EDELSTEN, Cardiff, Joint Honorary Secretary South Wales and Monmouthshire Branch, Representative Cardiff Division.
BRISTOWE, HUBERT CARPENTER, Wrington, Somerset, Member of Council, Chairman and Representative Bristol Division.
BROWN, HENRY, Sheffield, Honorary Secretary Sheffield Division.
BROWN, HERBERT HENRY, President late East Anglian Branch.
BULL, WILLIAM HENRY, Chairman Northamptonshire Division.
CAMPBELL, ARTHUR JAMES, Uley, Glos., Chairman Gloucestershire Local Medical and Panel Committee, Member Insurance Acts Committee.
CAMPBELL, HENRY JOHNSTONE, Salcombe, Member Science, Hospitals, and Ministry of Health Committees.
CASTLE, RICHARD FIELD, Darfield, Chairman and Representative Barnsley Division.
CAUTLEY, EDMUND, London, Chairman Westminster Division.
CHALLANS, FRANK, London, Chairman Stratford Division.
CHESTERS, WALTER HORSFALL, Bromley, Honorary Secretary and Representative Bromley Division.
CHOWN, FRANCIS, Honorary Secretary and Representative West Cornwall Division.
CLARIDGE, GEORGE PERCIVAL CHARLES, Honorary Secretary Norwich Division.
CLARK, FRANCIS WILLIAM, Member Dominions Committee.
CLEGG, JOHN WILLIAM, Chairman Burnley Division.
CLENDINNEN, WILLIAM MCENTIRE, Representative Mid-Staffs Division.
COHEN, GEORGE ALEXANDER, London, Chairman North Middlesex Division.
COLVIN-SMITH, ROBERT CURZON MOLISON, Cromer, Chairman East Norfolk Division, Chairman Norfolk Panel Committee.
COOMBE, RUSSELL, Sidmouth, Member of Council and Organization Committee, Representative Exeter Division, Chairman Devon Local Medical and Panel Committee.
COOPER, HAROLD MERRIMAN, Hampton, Chairman South Middlesex Division.
COOPER, HARRY GORDON, Altrincham, Chairman Mid-Cheshire Division.
COPE, ALBERT ERNEST, London, Representative Westminster Division.
CARVER, NORMAN CLIFTON, Surbiton, Chairman Kingston Division.
COURT, ARTHUR, Chesterfield, Chairman and Representative Chesterfield Division.
COX, JOHN HENRY, Nottingham, Chairman Midland Branch.
CRAIG, JOHN GIBSON, York, Honorary Secretary York Division.
CRAIG, THOMAS CONNELL, Wolverhampton, Chairman South Staffordshire Division, Chairman Wolverhampton Panel Committee.
CRAWSHAW, SAMUEL, Ashton-under-Lyne, Chairman and Representative Ashton-under-Lyne Division.
CREW, HENRY CHARLES, Wednesbury, Chairman West Bromwich Division.
CROWE, HENRY NEVILLE, Worcester, Honorary Secretary Worcester Division, Honorary Secretary Worcester Local Medical and Panel Committee.
DAIN, HARRY GUY, Birmingham, Representative Birmingham Central Division, Member Insurance Acts Committee, Chairman Birmingham Local Medical and Panel Committee.
DALDY, ARTHUR MANTELL, Hove, Honorary Secretary Sussex Branch.
DAVIES, DAVID, Tunbridge Wells, Honorary Secretary Tunbridge Wells Division.
DAWSON, Sir BERTRAND EDWARD, London, Member of Council, Journal, and Ministry of Health Committees.
DEARDEN, WILLIAM FRANCIS, Manchester, President Lancashire and Cheshire Branch, Representative Manchester Division, Member Public Health Committee.
DENHAM, WILLIAM JOSEPH, London, Representative City Division.
DEINHOLM, GEORGE, Brandon, Durham, Honorary Secretary Durham Division.
D'EWART, JOHN THOMAS, Manchester, Representative Manchester Division.
DICKSON, ROBERT HARPER, Newcastle, Staffordshire, Chairman North Staffordshire Division.
DILL, JOHN FREDERICK GORDON, Hove, Member Ministry of Health Committee.
DISMORE, HENRY BERTRAM, Wroughton, Wilts, Honorary Secretary Swindon Division.
DON, JAMES, Newcastle-on-Tyne, Honorary Secretary North of England Branch, Representative Newcastle-on-Tyne Division.
DOUGLAS, WILLIAM, Representative Maidstone Division.
DRINKWATER, HARRY, Wrexham, President North Wales Branch, Member Welsh Committee.
DRYLAND, LESLIE WINTER, Kettering, Representative Northamptonshire Division, Member Organization Committee.
EAGER, RICHARD, Exeter, Honorary Secretary Exeter Division.
EALLES, GEORGE YOUNG, Torquay, Representative Torquay Division.
EARDLEY, WILLIAM, Goole, Honorary Secretary, Wakefield, Po. to. tract, and Castleford Division.
ECCLES, W. MCADAM, London, Member of Council, President Metropolitan Counties Branch, Member Finance, Hospitals, Parliamentary Elections and Ministry of Health Committees.
EDGEcombe, WILFRED, Harrogate, Chairman Harrogate Division.
EDMOND, WILLIAM SQUARE, Shrewsbury, Honorary Secretary Shropshire and Mid-Wales Branch.
EDWARDS, PERCY, Liverpool, Honorary Secretary Liverpool Division.
EVANS, DANIEL CYRIL, Cardiff, Honorary Secretary Cardiff Division.
EYERS, CHARLES JOHN, Faversham, Chairman Canterbury and Faversham Division.
EVILL, FREDERICK CLAUDE, Barnet, Chairman West Herts Division, Chairman Hertfordshire Local Medical and Panel Committee.
EWART, JOHN HENRY, Eastbourne, Representative Eastbourne Division, Member Central Ethical Committee.
EZARD, EDWARD HENRY, Cambridge, Chairman Cambridge and Huntingdon Division.
FALCONER, JAMES FORSYTH, North Ormesby, Chairman Cleveland Division, Honorary Secretary Middlesbrough Local Medical Committee.
FASNACHT, REYMOND EDWARD, Bedford, Honorary Secretary Bedford Division.
FINLAY, DOUGLAS EDWARD, Gloucester, President and Representative Gloucestershire Branch.
FLEMING, CHARLES EDWARD STEWART, Bradford-on-Avon, Representative Salisbury, Swindon, and Trowbridge Divisions, Member Medico-Political and Ministry of Health Committees.
FORBES, ALEXANDER, Sheffield, Representative Sheffield Division, Chairman Sheffield Panel Committee, Member Insurance Acts Committee.
FORREST, JAMES LIDDELL, Wisbech, Honorary Secretary West Norfolk Division.
FOTHERGILL, ERNEST ROWLAND, Hove, Member of Council and Organization, Insurance Acts, Parliamentary, and Ministry of Health Committees, Representative Brighton Division, Chairman Brighton Local Medical and Panel Committee.
FOX, CAMPBELL TILBURY, Ashford, Chairman Ashford Division.
FRANCE, CHARLES FREDERIC, Wigan, Honorary Secretary Wigan Division.
FRASER, LACHLAN GEORGE, North Shields, Chairman Tyneside Division.
FRY, PERCY VICTOR, Sowerby Bridge, Member Insurance Acts and Ministry of Health Committees.
FULTON, ADAM, Nottingham, Member of Council and Finance, Medico-Political and Parliamentary Elections Committees.
GARDINER, ARTHUR, King's Lynn, Representative West Norfolk Division.

GENGE, GEORGE GILBERT, Croydon, Member Insurance Acts Committee.

GERARD, CHARLES BUTCHART, Oldham, Honorary Secretary Oldham Division.

GIBSON, CHARLES, Harrogate, Honorary Secretary Harrogate Division.

GIDLEY, GUSTAVUS GEORGE, Cullompton, Chairman Exeter Division.

GIUSEPPI, PAUL LEON, Felixstowe, Representative North Suffolk and South Suffolk Divisions.

GORDON, JAMES EDWARD, Salisbury, Chairman Salisbury Division, Chairman Wiltshire Local Medical and Panel Committee.

GOMEZ, FRANCIS JOSEPH, South Petherton, President West Somerset Branch.

GOODWYN, HENRY, Bovey Tracey, Chairman Torquay Division.

GRAHAM, CHARLES HUNTER, Southampton, Honorary Secretary Southampton Division.

GREENLEES, THOMAS DUNCAN, Fordingbridge, Member of Council and Dominions Committee.

GREY-EDWARDS, CHARLES, Parkstone, Chairman Bournemouth Division.

GRIFFIN, GEORGE ARTHUR, Grimsby, Chairman North Lincoln Division.

GROVE, WILLIAM REGINALD, St. Ives, Hunts, President Cambridge and Huntingdon Branch.

HAIG, ARTHUR NORMAN, Yeovil, Honorary Secretary West Dorset Division.

HALL, CHARLES HERBERT, Watford, Representative West Herts Division, Member Journal Committee.

HALL, HERBERT STRANGE, Leigh, Representative Leigh and Wigan Divisions.

HARMAN, NATHANIEL BISHOP, London, Joint Honorary Secretary Metropolitan Counties Branch, Joint Honorary Secretary and Representative Marylebone Division, Member of Council and Medico-Political, Hospitals, Parliamentary Elections and Ministry of Health Committees.

HARPER, JOHN MAURICE, Bath, Chairman Bath Division.

HARRIS-JONES, EVAN HARRIES, Northampton, Honorary Secretary South Midland Branch.

HASLIP, GEORGE ERNEST, London, Treasurer, Member of Council, Representative Westminster Division.

HATTRICK, CHARLES DAINTY, New Barnet, Honorary Secretary West Herts Division.

HAWTHORNE, CHARLES OLIVER, London, Chairman and Representative Marylebone Division, Member Journal Committee.

HAYNES, GEORGE SECRETAN, Cambridge, Honorary Secretary Cambs and Hunts Branch.

HEDLEY, ARTHUR SAMUEL, Rothbury, Chairman North Northumberland Division.

HENRY, ROBERT WALLACE WESLEY, Leicester, Honorary Secretary and Representative Leicester and Rutland Division, Member Medico-Political Committee.

HERN, JOHN, Darlington, Honorary Secretary Darlington Division.

HILL, REGINALD AUGUSTUS LOWDER, Chairman Wimbledon Division.

HILLIS, ROBERT WRIGHT, West Hartlepool, Honorary Secretary Hartlepool Division.

HILLMAN, GEORGE BROWN, Castleford, Chairman Wakefield, Pontefract and Castleford Division.

HOAR, CHARLES EDWARD, Maidstone, Chairman Maidstone Division.

HODDER, ANDREW EDWARD, Stafford, Chairman Mid-Staffs Division.

HODGSON, WILLIAM HAMMOND, Blackpool, Chairman Blackpool Division.

HOLBECH, ARTHUR OLIVER, Great Malvern, Representative Worcester Division.

HOLMES, WILLIAM MOFFATT, Leicester, Chairman Leicester and Rutland Division.

HOBSON, JAMES, Newcastle-on-Tyne, Honorary Secretary Newcastle-on-Tyne Division.

HUGHES, JOHN BRIERLEY, Macclesfield, Honorary Secretary, Stockport, Macclesfield, and East Cheshire Division.

ILES, ALFRED JOHN HOPKINSON, Taunton, Honorary Secretary West Somerset Branch.

JACQUES, ROBERT, Plymouth, Chairman Plymouth Division, Chairman Plymouth Local Medical Committee.

JOHNSON, ISAAC WELLSWOOD, Bury, Representative Bury Division, Member of Council and Hospitals Committee.

JOHNSTON, ARTHUR HAMMURLEY, Hull, Chairman East York Division.

JOHNSTON, GEORGE AINSLIE, Ambleside, Representative Furness and Kendal Divisions, Chairman Westmorland Local Medical and Panel Committee.

JONES, ARTHUR THOMAS, Mountain Ash, Honorary Secretary North Glamorgan and Brecknock Division.

JONES, HERBERT, Hereford, Member Public Health Committee.

JONES, JOHN, Dolgelly, Chairman South Carnarvon and Merioneth.

JORDAN, JOHN FURNEAUX, Birmingham, Member Central Ethical Committee.

JORDAN, WALTER ROSS, Birmingham, President Birmingham Branch.

KEMPE, CHARLES GILBERT BERRINGTON, Salisbury, President Wiltshire Branch.

KENDAL, CUTHBERT ROBERT, Hexham, Chairman Hexham Division.

KENDRICK, HORACE HERBERT, Coventry, Chairman Coventry Division.

KERR, JOHN, Hyde, Honorary Secretary Hyde Division.

KIRK, THOMAS JOSEPH, Norton-on-Tees, Honorary Secretary Stockton Division.

KIRKPATRICK, WILLIAM, Stourbridge, Chairman Dudley Division.

KNOWLES, FREDERICK JOSEPH, St. Helens, Honorary Secretary St. Helens Division, Chairman St. Helens Local Medical and Panel Committee.

LACE, WILLIAM FRANCIS, Sutton-at-Hone, Honorary Secretary Dartford Division.

LANGDON-DOWN, REGINALD LANGDON, Hampton Wick, Representative South Middlesex Division, Member of Council and Central Ethical Committee.

LANGFORD, FREDERICK CHARLES, London, Representative Camberwell Division.

LANKESTER, CECIL PRYOR, Guildford, Honorary Secretary Surrey Branch, Chairman and Representative Guildford Division, Chairman Surrey Local Medical and Panel Committee, Member Organization Committee.

LARKING, ARTHUR ERNEST, Buckingham, Honorary Secretary Buckinghamshire Division, Honorary Secretary Buckinghamshire Local Medical and Panel Committee.

LAURENCE, GEORGE, Chairman Trowbridge Division.

LAWSON, GARNET GLOAG, Hebden Bridge, Chairman Halifax Division.

LE FLEMING, ERNEST KAYE, Wimborne, President Dorset and West Hants Branch, Representative Bournemouth Division.

LEITCHWORTH, THOMAS WILFRED, London, Honorary Secretary Kingston Division.

LEWIS-LOYD, EVAN, Towyn, Honorary Secretary North Wales Branch, Honorary Secretary and Representative South Carmarthen and Merioneth, Honorary Secretary Merionethshire Local Medical and Panel Committee, Member of Public Health and Welsh Committees.

LINNELL, ALFRED, Towcester, Member of Insurance Acts Committee, Honorary Secretary Northants Local Medical and Panel Committee.

LIVINGSTON, JOHN, Barrow-in-Furness, Honorary Secretary North Lancs and South Westmorland Branch, Chairman Barrow-in-Furness Local Medical and Panel Committee.

LIVINGSTON, JOHN LOCKHART, Hurley, President Southern Branch, Chairman Winchester Division.

LOCKETT, THOMAS WOOD, Melksham, Member Insurance Acts Committee, Secretary Wiltshire Local Medical and Panel Committee.

LORD, SAMUEL THOMAS, Castleton, Representative Rochdale Division, Chairman Rochdale Local Medical and Panel Committee.

LOWE, GEORGE HAROLD, Middlesbrough, Honorary Secretary and Representative Cleveland Division.

LOWE, GODFREY JOHN RALPH, Lincoln, Honorary Secretary Lincoln Division, Honorary Secretary Lincoln Local Medical and Panel Committee.

LUCAS, ALBERT, Birmingham, Member of Council and Journal Committee.

LYNDON, ARNOLD, Hindhead, Member of Public Health Committee.

MC CREA, JOHN, Wargrave, Representative Reading Division.

MCCULLY, ANDREW LOWRY, Huddersfield, Honorary Secretary Huddersfield Division.

MACDONALD, JOHN ALEXANDER, Grantham, Chairman Kesteven Division, Chairman Lincoln (Kesteven) Local Medical and Panel Committee.

MACDONALD, PETER WILLIAM, Weymouth, Chairman West Dorset Division, Chairman Dorset Local Medical and Panel Committee.

MCFARLAND, BEATTIE, Lincoln, Chairman and Representative Lincoln Division.

MACKENZIE, STEPHEN MORTON, Chairman Reigate Division, Member of Council and Organization Committee.

MACRE, GEORGE, Wellington, Shropshire, Representative Shropshire and Mid-Wales Branch.

MACLAREN, NORMAN, Carlisle, Honorary Secretary Border Counties Branch, Chairman English Division.

MACNIDDER, JAMES, Hull, Honorary Secretary East York and North Lincoln Branch, Honorary Secretary East York Division.

MACTIER, HENRY CARTER, Wolverhampton, Member of Council and Medico-Political and Welsh Committees, Honorary Secretary and Representative South Staffordshire Division.

(To be continued.)

IRISH PUBLIC HEALTH COUNCIL.

*Opening Address delivered at the first meeting on
October 2nd, 1911.*

By E. COEY BIGGER, M.D., M.Ch.,
CHAIRMAN.

LADIES AND GENTLEMEN.—I have been asked by the Chief Secretary to express to you his sincere regret at not being able to be present here to-day. As you know, he is detained in London under circumstances over which he has no control. He hopes, however, at an early meeting of the Council, to thank the members personally, and to answer any points on which they may desire information from him. He has directed me to express to you his thanks for your kindness in consenting to act on the Public Health Council, and to convey to you the deep sense of gratitude he feels in finding that the representatives of the great health departments and organizations and public bodies in the country have shown themselves so willing and ready to help in the important and necessary work of carrying out health reforms in Ireland.

Before proceeding further I would like personally to express my appreciation of the great honour which the Minister of Health has conferred on me in inviting me to act as Chairman of the Council. I have accepted the invitation with some hesitation, realizing as I do the great responsibility of the position. I also desire on my own behalf to thank every member of the Council for their kindness in allowing themselves to be nominated as members. I am sure that we will all work with one object in view, which is to concentrate our thoughts on the vast problems whereby the health services of this country can be placed on the best possible basis.

The Council's Function.

I will now briefly indicate the Minister's wishes and intentions. His idea is that the Public Health Council, as now constituted, is merely a temporary body formed to advise him as Minister of Health as to the steps to be taken for the improvement of the public health.

For this purpose he has been careful to select as its members the representatives of the different existing authorities charged with public health functions throughout the country, and it is now his aim to formulate, with the advice and assistance of those members, a comprehensive scheme of public health to be incorporated in a bill to be submitted to Parliament. He desires it to be under-

stood that, generally speaking, the functions of the Council will be to prepare a legislative programme, and the Minister hopes that the work of preparing material for the bill will be undertaken with all possible expedition.

It goes without saying that health is of the highest importance, and its protection and preservation is essential for social and material progress. Health is something more than the absence of disease—it requires comfortable conditions of life, suitable food and clothing, proper housing, satisfactory conditions for work, rest and recreation.

The Prime Minister did a great service in drawing attention, in his speech at Manchester on September 12th, 1918, to the fact that if the health of the people had been looked after we should have been able to put into the fighting ranks at least a million more men, and the war would by that date have ended triumphantly.

A population which deserved the term "healthy" ought to yield the following per 1,000 men: 700 Grade I, 200 Grade II, 75 Grade III (for sedentary work), and only 25 physically incapable. Yet many towns in England and Scotland produced only 200 Grade I, 250 Grade II, 450 Grade III, and 100 Grade IV. As conscription did not apply to Ireland, I am not able to give any figures for Irish towns, but I doubt if they are much better than some of the English and Scottish towns.

Those statistics prove that Mr. Lloyd George's statement was well within the mark. The Premier also said that the cause of the deterioration was in the home.

As you are all doubtless aware, public health legislation in England differs greatly from that enacted for Ireland, and any of you who have followed the recent debates in Parliament will understand why it was necessary to establish this Public Health Council. The heads of the three great public departments which are connected with public health are members of this Council, and the Minister hopes that they will co-operate in assisting him to frame the legislative measures necessary to secure the desired reforms in the health services and conditions of Ireland.

Problems before the Council.

Turning now to the powers and duties which have been entrusted to the Minister of Health for Ireland, it will be observed from Section 10 of the Act of this year that these powers and duties are identical with those vested in the Minister of Health for England; I need not take up your time in referring to them at length, but will endeavour to indicate to you shortly the more important and pressing problems which this Council will have to take into consideration and deal with.

We have been entrusted with the requisite authority for making inquiry into the present system of health administration, with a view to advising the Minister of Health for Ireland as to the steps to be taken to secure the preparation, effective carrying out and co-ordination of measures conducive to health, including measures for the prevention and cure of diseases, the treatment and care of the blind, the initiation and direction of research, the collection, preparation, publication, and dissemination of information and statistics relating thereto, and the training of persons for health services. It will therefore be seen that Parliament has given us power to make the widest investigations into practically all the important branches of public health with which most of the social economic questions are intimately connected.

The Public Health Act of 1878 and the subsequent Acts are chiefly concerned with the correction of sanitary defects, the isolation and treatment of infectious disease, provision of water supplies and sewage systems, rather than the correction of individual physical defects which lead to impaired health.

During the last few years attempts have been made to rectify these defects, and at least seven Acts of Parliament have been passed with the primary object of preventing rather than treating sickness. Of the most important of these Acts are:

Notification of Births (Extension) Act, 1915.

Provision of Meals Acts, 1914-1917.

Midwives (Ireland) Act, 1918.

Housing (Ireland) Act, 1919.

Medical Inspection and Treatment of School Children Act, 1919.

These Acts have all been initiated by the Local Government Board for Ireland. In addition, the Insurance Commission has never lost an opportunity of endeavouring

to secure amendments in its original Act with a view to securing more efficient working of the insurance system.

Despite the fact that no country can boast of more highly skilled physicians and surgeons, better equipped hospitals, or a more comprehensive system for the medical treatment of sickness of the poor, it must be confessed that everything possible has not been done to prevent and treat disease in this country. It will be one of the chief functions of the Public Health Council to suggest the remedy for this state of affairs, and to present as their right to all sick persons not only some medical treatment, but the best possible treatment.

Our cities are provided with well equipped and well staffed hospitals which give to the poor operative and specialist treatment in no respect inferior to that available to the wealthy. An extension of the system of pay patients would help immensely that very large class of persons who are better off than the working class and therefore do not care to seek free treatment as a charity and yet cannot afford specialists and private hospitals.

The same excellent conditions do not, unfortunately, hold in the smaller towns and in the country; often the only hospital accommodation is in the union infirmary with its so-called pauper taint, or in the county infirmary, too often handicapped by lack of funds and subject to conditions and limitations imposed by an Act of Parliament passed in 1765.

Neither in the rural districts nor smaller towns are those who are in most need of the highest medical or surgical skill or prolonged institutional treatment, radium, x ray, etc., cared for as their condition demands. To improve matters, the former should be completely divorced from the workhouse and the latter given sufficient public money to modernize its equipment. Both are, however, useless without efficient staffs, and it is hopeless to expect to obtain and to keep these unless the conditions of service are improved.

The fact that county councils, although entrusted with health and medical administration, are not sanitary authorities within the meaning of the Public Health Acts, has proved to be inconvenient. For instance, although a county council may undertake the management of sanatoriums and dispensaries for the treatment of tuberculosis, and appoint a medical staff for certain specific purposes, such as tuberculosis, medical treatment of school children, or a scheme under the Public Health Act, 1917, there is no power to appoint a county medical officer of health for the general superintendence of health matters in the country. This defect can only be remedied by an Act of Parliament. The same so-called pauper taint is frequently applied to the dispensaries, which also require to be better equipped and modernized.

The obvious remedies by which these services may be improved would be by rewarding the skill and efficiency of the medical officers by a system of promotion to better positions, a more equitable scale of salaries, increased facilities for better treatment and compulsory study leave every few years, which would enable every medical officer to keep abreast of the times by learning the most modern methods of diagnosis and treatment.

There must be a great extension in the providing of trained nurses to the sick. At present the only nurses available are those of such voluntary societies as the Queen Victoria Jubilee Nurses Association and the Lady Dudley Nursing Association, and the excellent work accomplished by these organizations demonstrates clearly the urgent need for the extension of this work till every district would have at least one nurse. Efficient nursing is often more than half the battle in the fight which the doctor wages against death.

Properly qualified dental surgeons are urgently required particularly in country districts, the inhabitants of which are often compelled to seek the assistance of unqualified persons. Possibly a system of itinerant dentists might partially meet the need, which is very real, for decayed teeth are a fruitful source of chronic ill health.

The antituberculosis measures already adopted require consideration and enlargement. We cannot hope to lessen the ravages of this disease to any great extent until every county has its medical officer, its dispensaries, its observation wards for suspicious cases, and arrangements for the isolation and treatment of open cases, whether these are early or advanced.

In Ireland the facilities for laboratory diagnosis of disease are totally inadequate. Only a few counties have appointed a pathologist. A doctor who has no ready means of obtaining a report on pathological material is very greatly handicapped in making a diagnosis, which may make all the difference between the life and death of his patient. Every doctor should be able to obtain the help of an expert pathologist when required. He should also be able to obtain when necessary such modern aids to treatment as vaccines and therapeutic serums.

The field of preventive medicine in Ireland is as yet almost unexplored. It is one of the most important branches and has been too long neglected.

The Notification of Births (Extension) Act, 1915, marks a new era in preventive medicine, as this Act was designed for the purpose of ensuring that the health and physical welfare of the mother, both before and after the birth of her child, are looked after as well as that of the child from the time of its birth onward till it reaches the age of 5 years.

In order to encourage health authorities to undertake the care of mothers and children the State has come to their assistance and defrays half the cost of maternity and child welfare schemes. From the age of 5 years, which may be regarded as the school age, the child will come within the scope of the Medical Treatment of School Children Act, 1919.

Under this Act county and county borough councils are compelled to provide for the medical inspection of school children and to make arrangements for attending to their health and physical condition. In the exercise of those duties the councils will act under regulations to be made by the Local Government Board, with the approval of the Treasury, and the Commissioners of National Education for Ireland. Parliament will provide one-half the cost of this service, and the remaining half will be borne by the rates. You will see at once that this duty, if properly carried out, will involve a considerable charge, not only on the rates but also on the State, and it is of the utmost importance that the manner in which the Act is to be administered should be carefully thought out.

The examination for the detection of tuberculosis, adenoids, defects of vision, hearing, and dentition, requires extreme care if tendencies towards future serious defects are to be disclosed. There are many physical defects which interfere with the progress of the child's education which escape the notice of parents until they pass a stage at which they can be easily remedied. It is therefore of the greatest importance that the regulations to be drawn up will ensure that this branch of health administration will be thoroughly and scientifically carried out, as a mere perfunctory examination would be worse than useless.

The Local Government Board have not yet formulated their regulations, and have asked this Council to assist them in this respect, and the Commissioners of National Education have also signified their willingness that the Public Health Council should co-operate and assist in the matter. It would appear, therefore, that one of the first duties of this Council will be to endeavour to secure that the intentions of Parliament in regard to the medical treatment of school children are efficiently and economically carried into effect.

You will observe, therefore, that the health of the child can be continuously looked after by the health authorities from its birth until it leaves school, the State contributing one-half the expenditure and the rates being responsible for the remaining half. At the end of the school period the child will automatically come under the provisions of the National Health Insurance (Ireland) Act, and accordingly, with a proper and efficient service and administration, there will be no reason why any child should suffer from any defect which is capable of being remedied or prevented. Of the other preventive measures which come within the scope of the Council, one of the most important is in relation to the milk supply, which is at present far from satisfactory. Another is the question of the improvement of the housing conditions of the people.

A special committee in connexion with the Local Government Board has already been appointed to deal with this problem, and the Government have arranged to give most liberal assistance to local authorities to enable them to provide commodious and healthy dwellings.

I will not weary you by referring at length to the other

problems that will come before you for consideration, and it may be sufficient for the present if I point out that this Council will have to deal with the initiation and direction of research on all subjects affecting or relating to health.

The war has shown how much can be done by organized research in the investigation and treatment of disease, and it should be possible to obtain even better results in these times of peace.

I am sure that you will realize from what I have stated above that this Council will have an important and onerous duty to perform in assisting the Minister to secure the much needed reform of the health services and conditions in Ireland, and I feel confident that the Minister can rely on the whole-hearted support of every member of this Council in attaining that end.

British Medical Association.

CURRENT NOTES.

Pensions Medical Boards.

DURING the debate on July 31st on the vote for the Ministry of Pensions, the Minister undertook to give careful consideration to various suggestions made. Dr. Donald Murray, M.P., had expressed the opinion that too much clerical work was put upon the shoulders of members of medical boards; one member, he said, might be doing the work while the other two might be writing up the records. He thought that if a clerk were provided a great deal more work could be done, and more attention given by the three members to individual cases. Dr. Murray has recently received from the Ministry a letter containing the following statement:

"The Minister has inquired into this, and is advised that the frequent use of medical and scientific terms constitutes a difficulty to the employment of clerks who are probably unacquainted with medical phraseology, the more so since a very slight inaccuracy in a report might have far-reaching results. Where the employment of clerks has been tried unofficially, the results have not been entirely satisfactory. This reply does not refer to the case of a chairman of a board or a D.C.M.S., a considerable amount of ordinary clerical work being carried on under their direction. Steps have been taken to secure that work which should devolve upon a clerk shall not be undertaken by a chairman or D.C.M.S."

Medical Men in Public Life.

Dr. James Ferguson of Burnley, a former president of the Lancashire and Cheshire Branch of the British Medical Association, writes:

To show that we are doing our bit in this town, I send the medical record of men who either have served or are at present serving on the town council: Dr. Wm. M. Coultate 1861 to 1882 (the year of his death), Alderman and Justice of the Peace; Dr. Thos. Willis 1878 to 1883 (the year of his death); Dr. Thos. Dean 1866 to 1872, afterwards M.O.H. to the Borough; Dr. J. M. Ferguson 1889 to 1906, Alderman and Justice of the Peace; Dr. J. L. Smirthwaite-Black 1889 to 1898; Dr. John Parsons 1891 to 1893; Dr. H. M. Sinclair 1896 to 1902 and 1908 to the present date, Alderman and Justice of the Peace, served as Mayor three years; Dr. H. Slane 1911 to the present date; Dr. A. C. Glashan 1913 to the present date; Dr. J. W. Clegg 1909 to the present date. In addition Dr. G. S. Pullon, J.P., served on the School Board for many years.

Association Notices.

MEETING OF COUNCIL.

The next Meeting of Council will be held on Wednesday, November 5th, in the Council Room, 429, Strand, London, W.C. 2.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

A LIST of periodical publications, official reports, and Blue Books in the Library of the British Medical Association available for issue to members on loan has been printed, and copies can be obtained free on application to the Librarian at the house of the Association, 429, Strand, W.C. The regulations governing the loan of these publications are stated in the introduction to the list. The Library is open for consultation from 10 a.m. till 5 p.m. (on Saturdays till 1 p.m.).

Meetings of Branches and Divisions.

SOUTH AUSTRALIAN BRANCH.

At the annual meeting of the Branch held on June 26th the following officers were elected:

President: Sir Joseph Verco. *Vice-Presidents*: Drs. H. S. Newland and B. Smeaton. *Honorary Treasurer*: Dr. W. A. Verco. *Honorary Secretary*: Dr. H. A. Powell, C.M.G., D.S.O. *Federal Committee*: Drs. W. T. Hayward, C.M.G., and F. S. Hone. *Local Editor*: Dr. T. G. Wilson. *Library Committee*: President, Honorary Secretary, Drs. Swift, London, and Hone. *Branch Council*: Drs. A. A. London, J. E. Good, Malcolm Scott, E. V. R. Fooks, H. H. E. Russell, F. S. Scott.

WILTSHIRE BRANCH.

A MEETING of the Branch was held at Trowbridge on September 28th, when the President, Dr. KEMPE, was in the chair.

The former ethical rules were rescinded, and the revised rules adopted.

The following resolution, proposed by Dr. FLEMMING, was carried:

That notice be given to the friendly societies that in six months' time medical men in Wiltshire will only accept members for attendance at the same rates and terms as may then be agreed to for insured persons. For children under 16 years of age and persons in necessitous circumstances special rates shall be arranged.

It was resolved to send a copy of this resolution to every medical man practising in the county, asking him to send to the secretary the names of the clubs he attends, with the names of the secretaries. Notice was given by Dr. FERGUSON of a resolution to be proposed at the next meeting: "That from January 1st, 1920, the fee for life assurance examinations be not less than one guinea." The SECRETARY reported that, at a meeting of the Trowbridge Division on May 24th, 1919, the following resolution was passed:

That this meeting considers that a fee of one guinea shall be paid to referees (under the National Insurance Act) for each examination and report, with mileage, 1s. per mile each way over two miles.

He also stated that Dr. Wright (Trowbridge) had reported to him that, in accordance with the above resolution, he had notified the Royal Victoria Liverpool Society that he would in future require a fee of one guinea, and that the society had replied that they were removing his name from their list of referees. The Secretary of the Trowbridge Division had written to all members in the Division asking them to support Dr. Wright by immediately sending a similar notice to any society for which they might act as referee. The Branch decided to support the Trowbridge Division in this matter, and the Secretary was instructed to write to every medical man in the county informing him of the action taken by the Division.

MEDICAL APPOINTMENTS UNDER THE MINISTRY OF PENSIONS.

In the SUPPLEMENT of September 13th, p. 67, the report was given of a deputation from the British Medical Association to the Minister of Pensions on certain questions relating to the duties and remuneration of doctors acting on pensions boards and also relating to pensions referees. The following letter has now been received from the Ministry of Pensions:

Ministry of Pensions,
Secretary's Office,
October 8th, 1919.

Sir,—With reference to your letter of the 9th forwarding a report of the deputation from the British Medical Association received by the Minister of Pensions on the 4th ultimo I am directed to say that he has given further consideration to the question of the remuneration of members of the boards. Sir Laming Worthington Evans fully appreciates the services rendered by the medical profession both during and since the war in carrying out the important national duty, which, as he is well aware, involved frequent absence from the work of their private practice. He agrees that the present fee of one guinea per session for ordinary members of boards is inadequate in present circumstances, now that the emergency arising from the war has disappeared, and, having represented the matter to the Treasury, he has obtained authority to raise the fee to £1 11s. 6d. per session. The additional fee payable to a doctor acting as chairman of a board has also been raised to 5s. 3d. per session or 10s. 6d. per day.

These increases take effect as from the 6th instant, and the necessary instructions have been issued to give effect to this decision.

After careful consideration the Minister has not felt able to seek authority for an increase in the fees payable to specialists.

As intimated to the deputation, it is his intention that, save in exceptional circumstances, the duration of a

session should be limited to two and a half hours, and that, as a general rule, not more than eight cases should be dealt with in a session. He does not consider it desirable, however, to lay down hard and fast limits of time and number, as it may on occasion be found necessary to prolong a session in order to complete a case or even to consider a case in addition to the normal number if, for instance, an applicant has come from a distance and is likely to suffer inconvenience or even hardship from delay.

The policy of the Ministry in regard to the appointment of medical referees is, as explained by Sir Laming Worthington Evans to the deputation, to reappoint all the medical referees in each district as soon as all the practitioners in the district who are likely to apply have returned, and to give preference, first, to men who have served overseas; secondly, to those who have served in this country; and thirdly, to those who have already held the posts.

The deputation directed the Minister's attention to complaints of delay in settling accounts of fees due for service on medical boards. Every effort is made to secure prompt payment, and the Minister believes that in general these claims are expeditiously settled. He will, however, be glad to make special inquiry into any individual case brought to his notice in which delay is alleged and to take steps to secure its immediate settlement.

I am, Sir, your obedient servant,

(Signed) GEORGE CHRYSAL.

The Medical Secretary,
British Medical Association.

INSURANCE.

THE NATIONAL ASSOCIATION OF INSURANCE COMMITTEES.

THE annual meeting of the National Association of Insurance Committees was opened in London on October 16th.

The report of the executive council summarized at some length the chief points in the report of the departmental committee on institutional treatment of tuberculous persons. It stated that the total number of beds available for the adult male population was between 10,000 and 11,000; of these some 4,000 were now occupied by tuberculous ex-service men who had a prior claim to residential treatment. The tentative standard of the Astor Committee of 1912 of one sanatorium bed and one hospital bed for 5,000 inhabitants was now found to be insufficient; from two to six times this accommodation was required in some industrial areas. It was stated that in view of the urgency of the problem, army hutments could be used at least temporarily, and should be obtained from the Government without charge. The departmental committee suggested that tuberculous persons should be dealt with in three stages continuous with one another: first, the sanatorium where treatment was mostly emphasized; second, the colony where treatment was continued, but training and graduated labour were the main objects; and thirdly, the permanent village settlement where permanent employment was afforded, but always under medical supervision. It was pointed out that the previous Exchequer grant of £90 a bed for sanatoriums and hospitals needs to be at least doubled, that for training colonies the initial Exchequer grant should be at least three-fifths of the approved cost, and bearing in mind the deficiency of training colony accommodation that the fund available should be supplemented by at least £250,000, and Parliament should also be asked to vote £1,000,000 for providing village settlements, primarily for ex-service men. For advanced cases suggestions are made for the provision of small homes in the larger centres, and for further accommodation for advanced cases in sanatoriums.

In January last the council passed a resolution which was sent to the Commissioners, declaring its opinion that attendance by panel practitioners at confinements should be made a part of medical benefit, that the services of midwives should be available to insured persons, and that provision should be made for a domiciliary service by practitioners for expectant and nursing mothers and children under school age, to be administered by Insurance Committees under similar arrangement with general practitioners as now exist. The report stated that the medical profession would not object to attendance at confinement being made part of medical benefit provided that there were an efficient service of midwives, that payment for such attendance were not included in the capitation fee, and that practitioners were free to refuse such cases.

Recognizing that the frequent reluctance of insured persons to accept sanatorium treatment often arose from pecuniary considerations, the committee had urged on the Ministry of Health that Insurance Committees should be allowed to grant subsistence allowance for dependants of insured persons undergoing treatment in a sanatorium, and it was pointed out that the Ministry of Pensions had recommended War Pensions Committees to supply discharged tuberculous soldiers in receipt of home treatment with food ancillary to such treatment. The council intended to represent to the Ministry of Health that the funds now available for sanatorium benefit were insufficient to allow of the provision of grants for food ancillary to domiciliary treatment of tuberculosis. The annual meeting was further invited to discuss the question of allowing tuberculous patients, while in receipt of sickness benefit, to do a certain amount of light work recommended by their medical attendant.

The report quoted at length from the summary and recommendations of document M 25 of the British Medical Association which was discussed by the recent conference. The council supported certain resolutions of the Manchester Insurance Committee, which included recommendations that provision should be made to secure that a sufficient number of insurance doctors should be resident in the area in which they practised, and that the insurance service should at once be extended to the wives and dependants of the insured. Other matters mentioned for discussion at the annual meeting were a superannuation scheme and a minimum scale of salaries for the staffs of insurance committees, and a request would certainly be made for an increase in the Benefits Administration funds of committees. The report concluded by recommending the resumption of health lectures and publications on health which had been practically suspended during the war.

FORMS FOR RECORDING PANEL WORK.

WE have received preliminary proofs of the "Keystone" A.B.C. Panel Record. It was originally devised just before the war to be used in connexion with the record cards, so as to reduce the handling of them to once a year only. It is suggested that the system can be employed to make a permanent full record of panel work. It consists of two kinds of loose sheets. The first contains spaces for the names of about fifty patients on a page, with their ages, occupations, and a quarterly summary of their sicknesses and attendances, the part containing the names being detachable so as to preserve secrecy. The other sheets are ruled so that the names of patients can be easily put alphabetically, a fresh sheet being required each month on which attendances are recorded as given, while other spaces are ruled so that a summary of previous months can be inserted. The labour involved in keeping the two forms of sheets would be considerably greater than the old record cards required; but for practitioners who desire for their own information to keep a permanent full record of their panel work from which they can at any time make various summaries the system appears to offer unusual facilities. We are informed that sample sheets are being sent to each panel committee in England.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

The following appointments are announced by the Admiralty:—Surgeon Commanders: A. K. Smith-Shand to the *Cardiff*, T. A. Smyth, to the *Grafton*, J. Whelan to the *Hecla*, M. H. Knapp to the *President*, additional, for R.N. Recruiting Head Quarters, J. E. H. Phillips to the *Gibraltar*, Surgeon Lieutenant Commanders: H. E. Perkins to Portland Hospital, H. Burns, O.B.E., to the *Pembroke*, G. L. Buckridge to the *Powerful*, C. J. Aveling to the *Titanic*, Surgeon Lieutenants promoted to the rank of Surgeon Lieutenant Commanders: A. R. Sharred, J. S. Elliot, A. E. Punter, G. S. Harvey, W. H. Murray, G. H. Hayes, H. C. A. T. Cannon. Surgeon Lieutenants: A. C. Ross and J. A. Maxwell to Haslar Hospital, H. Hurst to the *Sviatogor* on commissioning, Surgeon Lieutenants (temporary): R. Lyon and A. F. Grimbley transferred to the permanent list, seniority July 16th, 1915, and January 24th, 1917, respectively; W. V. Gabe to the *Ituriet*, J. H. Sheldon to the *Mars*, H. A. Guthrie to the *Pembroke*, W. F. Beattie to the *Defiance*, T. N. D'Arcy to the *Mars*, J. A. Watson to the *Apollo*, J. T. Johnston to the *Greenwich*, A. Craig to the *Barham*, D. A. Imrie to the *Warspite*, H. P. Williams to the *Caledon*.

ARMY MEDICAL SERVICE.

Temporary Colonel Sir Ronald Ross, K.C.B., K.C.M.G., F.R.S. (Lieutenant-Colonel R.A.M.C.T.F.—Major retired I.M.S.) relinquishes his temporary commission on reposting.
Colonel J. S. Davidson retires on retired pay.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel C. Garner, C.B.E. (ret.), is granted the rank of Colonel on ceasing to be re-employed.

The undermentioned relinquish the acting rank of Lieutenant-Colonel: Captain C. H. Stringer, D.S.O. (on ceasing to command a medical unit); temporary Captain F. G. W. Deane (and to revert to the acting rank of Major); Major P. Dwyer, temporary Major E. F.

Elliot (on ceasing to be specially employed); Majors: G. F. Rudkin, D.S.O., W. K. Beaman, D.S.O., and T. H. Scott, D.S.O., M.C. (on ceasing to command medical units).

To be acting Lieut.-Colonels whilst specially employed: Temporary Captain G. Clarke, temporary Captain (acting Major) W. N. Parker, D.S.O., Major and brevet Lieut.-Colonel A. McMunn, O.B.E. (from June 6th to September 8th, 1919).

To be acting Majors whilst specially employed:—Temporary Major H. D. Gillies (March 25th, 1918, substituted for notification in the *London Gazette*, September 6th, 1919). Temporary Captains: G. Marshall, B. G. Brooke, E. F. Bashford, O.B.E. Captains: A. I. Foster, C. D. K. Seaver.

The undermentioned relinquish the acting rank of Major:—Temporary Captain and Brevet Major H. F. Marriss. Temporary Captains: A. L. Lockwood, D.S.O., M.C., W. V. Robinson, A. W. Rattrie, M.C. (on ceasing to be specially employed); Captain and Brevet Major J. D. Kidd, O.B.E., M.C. Temporary Captain D. J. Glen. On reposting: Temporary Captain A. L. Krogh, Captain P. Carney, M.C.

Major W. M. Power, from the half-pay list, retires on retired pay.
Captains: A. W. Raymond, M.C., and J. Sainsbury resign their commissions.

Captains from Special Reserve to be Captains, but not to reckon for pay or allowances prior to September 1st, 1919: K. A. Maclean (February 16th, 1918, with precedence next below E. G. Foley), C. L. Balkwill (March 30th, 1918, with precedence next below W. H. Cornelius), H. Alcock (April 30th, 1918, with precedence next below Q. V. B. Wallace), C. W. Sparks, M.C. (February 20th, 1918, with precedence next below S. Smith), R. R. G. Atkins, M.C. (March 23rd, 1918, with precedence next below F. S. Gillespie), J. Stephenson, M.C. (May 9th, 1918, with precedence next below D. McKelvey).

Captain L. B. Clarke, from T.F. to be Captain, but not to reckon for pay or allowances prior to October 1st, 1919, with precedence next below L. A. J. Graham.

The notifications regarding temporary Captain F. H. Ellis, M.C., and temporary Lieutenant C. M. Bradley in the *London Gazette* of August 30th, 1919, and February 27th, 1919, respectively, are cancelled.

Late temporary Captains to be temporary Captains: E. H. Jones (seniority January 5th, 1915), A. H. Priestley (seniority September 15th, 1915), H. W. Fox (seniority September 28th, 1915), J. J. Clarke (seniority September 16th, 1916).

To be temporary Captains: Temporary Lieutenants: R. L. Wilcox, F. A. Stokes, E. L. Morgan, R. H. Wace, S. G. Platts, J. N. Turnbull, A. J. Beattie, R. F. Higgin, B. G. Reynolds, G. H. Winch, G. W. M. Smith (late Captain C.A.M.C.).

To be Lieutenants: W. A. Slack, W. M. Bristow and W. F. Gardener. Temporary honorary Lieutenant B. D. Brooker to be temporary honorary Captain.

The following officers relinquish their commissions: Temporary Lieutenant-Colonels and retain the rank of Lieutenant-Colonel: J. G. Blandford, S. C. Elgee (on ceasing to be employed at the Manor—County of London—War Hospital), W. Scatterley (on ceasing to be employed at the Keighley War Hospital). Temporary Lieut.-Colonel J. Collis (Lieutenant-Colonel T.F. Reserve). Temporary Major and Brevet Lieut.-Colonel T. R. St. Johnston, and retains the Brevet rank of Lieutenant-Colonel. Temporary Major (acting Lieut.-Colonel) J. Russell, on ceasing to be employed with the Staincliffe War Hospital and is granted the rank of Lieutenant-Colonel. Temporary Majors, and retain the rank of Major: R. H. Rigby, A. O'Neill (on ceasing to be employed with the County of Middlesex War Hospital, Napsbury). Temporary Captains (acting Majors) and are granted the rank of Major: E. Tawse and J. Donald (August 20th, 1919, substituted for notification in the *London Gazette*, September 17th and 20th, 1919, respectively), W. G. Waugh. Temporary Captain (acting Major) R. C. MacQueen, and retains the rank of Captain (August 27th, 1919, substituted for notification in the *London Gazette*, September 19th, 1919). Temporary Captains and are granted the rank of Major: W. H. D. Smith (July 25th, 1919, substituted for notification in the *London Gazette*, August 28th, 1919), H. Goodman, R. T. Grant, J. L. A. Groat, M.C., T. E. Coulson. Temporary Captains and retain the rank of Captain: T. C. D. Watt, M.C., W. J. Woodman, J. E. J. R. Kelly, M. W. Cantor, C. J. A. Woodside, R. G. Sterling, E. G. B. Calvert, S. H. Wilkinson, L. H. D. Thornton, S. Honeyman, H. D. Robb, A. A. W. Petrie, E. S. Chapman, E. J. Dyke, W. R. Watt, A. L. Weakley, C. G. Adams, H. T. Lippitt, M.C., K. M. Walker, G. James, R. H. Stavens, A. L. McCreery (August 2nd, 1919, substituted for notification in the *London Gazette*, September 20th, 1919), H. G. M. Henry, J. W. Grice, G. I. Moriarty, G. S. Terry, R. W. Skinner, F. L. Thomas, W. N. Soden, W. MacKenzie, D.S.O., S. G. Askey, H. M. Mathias, T. Kelly, R. W. H. Gibson, L. Crombie, A. T. McWhirter, C. J. Young, C. S. Dodson, F. W. Diamond, J. F. Hammond, R. S. Dobbin, J. J. Middleton, J. M. Young, W. Fraser, E. G. Howell, R. H. Adams, F. E. S. Willis (on account of ill health caused by wounds), J. Dick (on account of ill health), G. B. Archer. On account of ill health contracted on active service: D. Cogan, M. Graves, M. P. Thomas, R. L. Kitching. Temporary Captain M. M. Crickshank on appointment to the I.M.S. Temporary honorary Captains and retain the honorary rank of Captain: D. R. W. Crile, W. H. Irish. Temporary Lieutenants and retain the rank of Lieutenant: C. M. Bradley, W. H. Brooks, J. C. Carr, R. C. Redman, N. S. MacNaughton. Temporary Lieutenant H. W. Hackett.

ROYAL AIR FORCE.

MEDICAL BRANCH.

Lieut.-Colonel N. H. Harris (Surgeon Commander R.N.) relinquishes his commission on ceasing to be employed.

INDIAN MEDICAL SERVICE.

Major H. Halliday appointed to be Civil Surgeon, Simla West (August 20th, 1919).

Lieut.-Colonel W. D. H. Stevenson, C.I.E., Assistant Director-General, I.M.S. (Sanitary), has been granted privilege leave for three months from September 3rd, 1919.

Major J. A. Cruickshank, M.C., of the Bacteriological Department, has been appointed to officiate as Assistant Director-General, I.M.S. (Sanitary).

Promoted to the rank of Colonel: Lieut.-Colonel F. R. Ozzard (January 10th, 1919); Brevet Colonel A. J. Macnab, C.I.E., C.M.G., F.R.C.S. (April 2nd, 1919); Lieut.-Colonel C. N. C. Wimberley, M.C.O., M.B. (May 15th, 1919).

Captain C. C. Mecredy has been permitted to retire from the service on account of ill health (June 21st, 1919).

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Captain F. H. Goss, M.C., relinquishes the acting rank of Major on reposting.

Captains to be acting Majors whilst specially employed: G. E. Kidman, D. G. Stoute.

Lieutenants to be Captains: W. A. Coutts, M. J. Cahalane, H. A. Cochran, A. B. S. Drysdale, R. P. Jack, D. MacColl, E. J. Peters, F. L. Heap, F. A. Prosser, G. Gordon, T. B. Moyes, E. M. E. Cumming, W. R. D. Hamilton, J. Irving, W. R. McLindoe, W. A. Jaques.

OVERSEAS CONTINGENTS.

CANADIAN ARMY MEDICAL CORPS.

Temporary Captain (acting Major) A. B. James relinquishes the acting rank of Major.

The undermentioned officers retire in the British Isles: Temporary Majors: J. R. McKee, D. A. Murray.

SOUTH AFRICAN MEDICAL CORPS.

Major J. C. A. Rigby, O.B.E., relinquishes his commission on ceasing to be employed, and retains the rank of Major.

Temporary Captain G. J. Joubert relinquishes his commission on ceasing to be employed and retains the rank of Captain.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

The following officers relinquish the acting rank of Lieutenant-Colonel on ceasing to be specially employed: Majors (acting Lieut.-Colonels) A. E. Hodder, D.S.O., J. Bruce, O.B.E., G. Mackie, Captain (acting Lieut.-Colonel) D. C. L. Fitzwilliams.

Captain (acting Major) H. B. Cunningham relinquishes the acting rank of Major on vacating the appointment of D.A.D.M.S.

Captain N. W. Kidston to be acting Major whilst specially employed.

Captains (acting Majors) relinquish the acting rank of Major on ceasing to be specially employed: R. G. Walker, M.C., E. L. Forward, O. K. Wright (February 24th, 1919, substituted for notification in the *London Gazette*, March 20th, 1919); J. A. Morris, J. W. Scott, M.C., A. M. Young, A. P. Watson, O.B.E., C. E. Whitehead.

1st Eastern General Hospital.—Major H. B. Roderick, O.B.E., T.D., is restored to the establishment.

2nd London Sanitary Company.—Captain (acting Major) A. G. G. Thompson relinquishes the acting rank of Major on ceasing to be specially employed (July 21st, 1919, substituted for notification in the *London Gazette*, September 9th, 1919). Lieutenants A. R. Ward and P. G. MacGregor to be Captains.

2nd Northern General Hospital.—Major J. K. Jamieson is restored to the establishment. Captain (acting Major) C. W. Vining relinquishes the acting rank of Major on ceasing to be specially employed.

2nd Scottish General Hospital.—Lieut.-Colonel C. W. Cathcart, C.B.E., and Captain J. G. Cattinach are restored to the establishment.

1st Southern General Hospital.—Lieut.-Colonel (Brevet Colonel) F. Marsh, C.B.E., is restored to the establishment.

2nd Southern General Hospital.—Captain J. A. Nixon, C.M.G., is restored to the establishment on ceasing to hold a temporary commission in the A.M.S.

2nd South-Western Mounted Brigade Field Ambulance.—Captain (temporary Major—temporary Lieutenant-Colonel) R. Waterhouse reverts to the temporary rank of Major with precedence as from August 8th, 1915, on ceasing to command a field ambulance, July 19th, 1916.

3rd Western General Hospital.—Captain (acting Major) W. J. Greer relinquishes the acting rank of Major on ceasing to be specially employed.

TERRITORIAL FORCE RESERVE.

ROYAL ARMY MEDICAL CORPS.

The announcements regarding Major J. McD. Nicoll and Captains D. Shannon and C. R. Crowther which appeared in the *London Gazette* of January 17th, 7th, and 15th, 1919, respectively, are cancelled.

The announcements regarding Major W. M. Mackay and Major (acting Lieutenant-Colonel) A. E. Hodder, D.S.O., in the *London Gazette* of January 14th, 1919, are cancelled.

VOLUNTEER FORCE.

Banffshire R.A.M.C.(V).—Temporary Lieutenant G. C. Grant to be temporary Captain.

QUEEN MARY'S ARMY AUXILIARY CORPS.

Auxiliary Section R.A.M.C. attached.—Medical Controller I. C. D. Eaton and Medical Officer M. McMullen relinquish their appointments.

APPOINTMENTS.

BENSON, J. M., M.B., Ch.B., Medical Officer of Institution and District, Great Ouseburn Union.

FELDMAN, William, M.B., B.S.Lond., Senior House-Physician at the Prince of Wales's General Hospital, Tottenham.

GARREY, Gilbert, M.D.Glasg., Medical Officer of Duke Street Prison, Glasgow.

GEDDIE, D. Watson, M.B., C.M., Senior Physician to the Royal Aberdeen Hospital for Sick Children.

GREENWOOD, E. Climson, M.R.C.S., L.R.C.P., Medical Superintendent to St. John and St. Elizabeth Hospital, St. John's Wood.

GUTHRIE, Douglas, M.D., F.R.C.S., Surgeon to the Ear and Throat Department, Royal Hospital for Sick Children, Edinburgh.

LANCASTER, E. Le Cronier, B.A., M.B., B.Ch.Oxon., M.R.C.S.Eng., Consulting Physician to the Swansea General and Eye Hospital.

LEITCHWORTH, T. W., M.B., F.R.C.S., Assistant Surgeon Royal Eye Hospital.

MCWALTER, W. H., M.B., C.M.Glasg., Medical Officer of Barlinnie Prison, Glasgow.

RAWLENCE, H. E., F.R.C.S., Senior Surgeon Orthopaedic Hospital, Netley.

RICHARDSON, G. Y., M.D.Édin., D.P.H., Medical Officer of Health for Haddingtonshire.

THOMSON, Charles S., M.D., D.P.H., B.Hy., Medical Officer of Health and School Medical Officer, Hyde, near Manchester.

DAVID LEWIS NORTHERN HOSPITAL, Liverpool.—Honorary Physicians: J. Murray Bligh, M.D.Liverp., A. Douglas Bigland, M.D.Liverp., Assistant Physician: H. S. Pemberton, M.B., Ch.B.Liverp.

STANLEY HOSPITAL, Liverpool.—Surgeon: F. J. S. Heaney, M.D.Dubl., F.R.C.S.I., vice F. C. Larkin, F.R.C.S., retired. Laryngologist: Courtenay Yorke, M.D.Liverp., F.R.C.S., vice J. E. M'Dougall, Ch.B., resigned.

DISTRICT MEDICAL OFFICERS: D. R. Acheson, M.B., B.Ch. (Thornbury Union); K. C. Crosbie, M.B., Ch.B.Édin. (Skipton Union); H. Davis, M.D. (Liskeard Union); W. Eardley, M.B. (Goole Union); L. W. Hughes, L.R.C.P. and S.Édin. (Pwllheli Union); T. B. Marshall, M.R.C.S., L.R.C.P. (Buckingham Union); J. Paulley, M.B., B.S. (Depwade Union).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

FOXELL.—On October 13th, 1919, at 22, Wheeley's Road, Edgbaston, Birmingham, the wife of Humphrey Foxell, M.B., B.S.Lond.—a daughter.

JOHNSON.—On October 7th, at 5, Palmerston Street, Romsey, to Madeleine, the wife of G. H. Johnson, M.R.C.S., L.R.C.P.—a son.

MARRIAGES.

HODGSON—GILLAM.—October 8th, at St. Philip's Cathedral Church, Birmingham, by the Rev. G. B. Code, B.A., Albert Ernest Hodgson, M.D., D.P.H., City Hospital, Fazakerley, Liverpool, son of John Hodgson and the late Mrs. Hodgson, of Glanagile, Coatham, Redcar, to Nora Creina Gillam, daughter of the late John Gillam of Penrhyn, Stourbridge, and of Mrs. Gillam, Stourbridge.

ROLLAND—COOPER.—At St. George's Road Congregational Church, Bolton, on the 8th inst., by the Rev. R. W. Thompson, M.A., B.D., William Rolland, M.D.Glasg., second son of Mr. and Mrs. Wm. Rolland, Rhu-na-Craig, Paisley, to Phyllis Houghton, eldest daughter of Mr. and Mrs. J. Tyas Cooper, Chisworth, Victoria Road, Bolton.

DEATHS.

DRAPES.—October 5th, 1919, at his residence, Milleen, Dalkey, after a short illness, Thomas Drapes, M.B., T.C.D., third son of the late Thomas Drapes, M.D., of Lakeview, co. Cavan, late Resident Medical Superintendent of the District Asylum, Enniscorthy, co. Wexford.

MACKENZIE.—Died at Glenoran, Inverness, on the 11th October, Dr. Finlay Matheson Mackenzie, aged 77 years.

MESSER.—At Kinelune, Carlisle Road, Eastbourne, on the 11th inst., Adam Brunton Messer, Inspector-General of Hospitals and Fleets, R.N.(ret.), M.D., K.H.F., aged 81.

DIARY FOR THE WEEK.

HARVEIAN SOCIETY OF LONDON, 11, Chandos Street, W.—Thursday, 8.45 p.m., Sir Berkeley Moynihan: Diagnosis and Treatment of Gastric Ulcer.

LONDON DERMATOLOGICAL SOCIETY, St. John's Hospital, Leicester Square, W.C.2.—Tuesday, 4.15 p.m., Specimens and Cases. 5 p.m., Dr. F. Howard Humphris: The Melted Paraffin Wax Bath with especial reference to Chilblains.

ROYAL SOCIETY OF MEDICINE.—General Meeting of Fellows, Tuesday, 5 p.m. Occasional Lecture, Thursday, 5.30 p.m.—Mr. Frederick L. Hoffman, LL.D. (Newark, New Jersey): The Methods and Results of National Health Insurance. Section of Study of Disease in Children: Friday, 4.30 p.m., Dr. F. G. Crookshank: Epidiascope Demonstration: Hand Prints of Children, including Mongolian Imbeciles. Cases. Section of Epidemiology and State Medicine: Friday, 8.30 p.m., Major W. Byam, R.A.M.C.: Epidemiology of Typhoid Fever.

POST-GRADUATE COURSES AND LECTURES.

FELLOWSHIP OF MEDICINE, 1, Wimpole Street, W.—Monday, noon, Dr. P. J. Cammidge: Treatment of Diabetes (II). Tuesday, noon, Dr. N. Mutch: Gastro-duodenal Disorders. Wednesday, noon, Sir George H. Savage: Syphilis and Insanity. 5 p.m., Mr. J. Swift Joly: Urinary Calculi. Friday, noon, Mr. J. A. Cairns Forsyth: Diseases of the Pancreas.

HOSPITAL FOR CONSUMPTION, Brompton, S.W.—Wednesday, 4.30 p.m., Prognosis in Pulmonary Tuberculosis.

MANCHESTER ROYAL INFIRMARY.—Tuesday, Diagnosis of Affections of the Spinal Cord.

ROYAL EYE HOSPITAL, Southwark, S.E.—Wednesday, 5 p.m., Surgical Anatomy of the Eye. Friday, 5 p.m., External Diseases.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
OCTOBER.	
22 Wed.	London: Journal Committee, 2.30 p.m.
23 Thur.	London: Naval and Military Committee, Territorial Force Subcommittee, 2.30 p.m.
29 Wed.	London: Finance Committee, 2.30 p.m.
NOVEMBER.	
5 Wed.	London: Council.
27 Thur.	London: Conference of Local Medical and Panel Committees.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, OCTOBER 25TH, 1919.

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THE COMING ELECTION TO THE GENERAL MEDICAL COUNCIL. ENGLAND AND WALES.

THE British Medical Association decided at the Annual Representative Meeting in July last to support the candidature, in the forthcoming election of four direct representatives for England and Wales on the General Medical Council, of Dr. R. A. Bolam, O.B.E. (Newcastle), Dr. J. A. Macdonald, LL.D. (Taunton), Mr. E. B. Turner, F.R.C.S. (London), and Sir T. Jenner Verrall, LL.D. (Bath). These gentlemen were selected from a list of candidates nominated by the Divisions of the Association after due notice, and it now falls to the members of the Association to do what they can to secure the return of the Association's candidates.

We printed last week the election address issued jointly by Dr. Bolam, Dr. Macdonald, Mr. Turner, and Sir Jenner Verrall, together with the covering letter addressed by them to members of the medical profession in England and Wales.

The following officers of the Association have signed nomination papers for the four candidates supported by the Association:

- Sir CLIFFORD ALBUTT, K.C.B., F.R.S., Cambridge, President.
- Dr. T. W. H. GARSTANG, Altrincham, Chairman of Representative Meetings.
- Dr. G. E. HASLIP, London, Treasurer, Chairman Finance Committee.
- Dr. M. G. BIGGS, London, Member of Central Ethical and Ministry of Health Committees.
- Dr. H. B. BRACKENBURY, London, Member of Council, Chairman Insurance Acts Committee, Member of Medico-Political, Parliamentary Elections, and Ministry of Health Committees.
- Sir BERTRAND DAWSON, G.C.V.O., K.C.M.G., London, Member of Council and Member of Journal and Ministry of Health Committees.
- Lieut.-Colonel R. H. ELLIOT, London, Member of Council and Member of Science, Naval and Military, and Dominions Committees.
- Mr. W. MCADAM ECCLES, London, Member of Council, President Metropolitan Counties Branch, Member Finance, Hospitals, Parliamentary Elections, and Ministry of Health Committees.
- Mr. N. BISHOP HARMAN, London, Member of Council, Joint Honorary Secretary Metropolitan Counties Branch, Joint Honorary Secretary and Representative Marylebone Division, Member Medico-Political, Hospitals, Parliamentary Elections, and Ministry of Health Committees.
- Dr. R. WALLACE HENRY, Leicester, Deputy Chairman Representative Meetings, Honorary Secretary and Representative Leicester and Rutland Division, Member Medico-Political Committee.

Nomination papers have also been signed by many other leading members of the Association throughout the country.

SECOND LIST OF SUPPORTERS.

The following is a further instalment of the list of officers of the British Medical Association who have undertaken to support the candidature of Professor R. A. Bolam, Dr. J. A. Macdonald, Mr. E. B. Turner, and Sir Jenner Verrall at the forthcoming election of four direct representatives of the medical profession in England and Wales upon the General Medical Council.

The name of the Chairman of Representative Meetings, Dr. T. W. H. Garstang, was omitted by an oversight from last week's list.

Dr. H. Langley Browne, one of the retiring Direct Representatives and a former Chairman of Council of the British Medical Association, has signified his support of the Association's candidates.

- MAHOMED, ARTHUR GEORGE SULIEMAN, Bournemouth, Member of Parliamentary Elections Committee.
- MANKNELL, ARTHUR, Bradford, Member of Council and Public Health Committee, Chairman Bradford Local Medical and Panel Committee.
- MARKS, LEONARD FREEMAN, Swansea, Honorary Secretary South Wales and Monmouthshire Branch, Member of Welsh Committee.
- MARTIN, CHARLES JAMES, London, Member of Science and Arrangements Committees.
- MATHIAS, CHARLES DAVID, Tenby, Chairman South-West Wales Division.
- MICHAEL, CYRIL EDEN, London, Chairman Bromley Division.
- MICHAEL, GUSTAVE, London, Chairman Tower Hamlets Division.
- MILLER, ARTHUR WILLIAM, London, Representative City Division.
- MOLYNEUX, ECHLIN STOKRY, Leamington, Representative Warwick and Leamington Division.
- MOORS, ELISHA HODKINSON, Wigan, Chairman Leigh and Wigan Divisions.
- MOULSON, ALBERT EDWARD, Sunderland, Honorary Secretary Sunderland Division.
- MORISON, JAMES RUTHERFORD, Newcastle-upon-Tyne, Member of Hospitals Committee.
- MORRIS, CHARLES EDWARD, Holywell, Representative Denbigh and Flint Division, Secretary Flint Local Medical and Panel Committee.
- MORRIS, SIR MALCOLM ALEXANDER, London, Member Parliamentary Elections and Ministry of Health Committees.
- MURRELL, GEORGE BERTRAM, Whitehaven, Representative English Division.
- MURRAY, THOMAS ALEXANDER, Warrington, Honorary Secretary Warrington Division.
- MURRELL, CHRISTINE MARY, London, Member of Parliamentary Elections Committee.
- MUSPRATT, PERCY KYWLES, West Drayton, Chairman and Representative Harrow Division.
- NASH, WALTER GIFFORD, Bedford, Chairman Bedford Division.
- NASON, EDWARD NOEL, Nuneaton, Member of Council.
- NICHOL, FRANK EDWARD, Margate, Chairman Isle of Thanet Division.
- NOBBS, ATHELSTANE, London, Chairman Wandsworth Division.
- NORMAN, VINCENT PHILIP, West Bromwich, Honorary Secretary West Bromwich Division, Representative Walsall and West Bromwich Divisions.
- O'CALLAGHAN, TIMOTHY, South Shields, Honorary Secretary South Shields Division and Honorary Secretary South Shields Local Medical Committee.
- ODGERS, PAUL NORMAN, BLAKE, Northampton, Honorary Secretary Northampton Division.
- OLDHAM, HUGH FALCONER, Morecambe, Chairman and Representative Lancaster Division, Chairman Lancashire Local Medical and Panel Committee, Member of Insurance Acts Committee.
- O'NEILL, THOMAS, Bolton, Honorary Secretary Bolton Division, Honorary Secretary Bolton Local Medical and Panel Committee.
- ORTON, JOHN, Coventry, Representative Nuneaton and Tamworth Division, Chairman Warwickshire and Coventry Local Medical and Panel Committees, Member Central Ethical Committee.
- OXLEY, WILLIAM HENRY FRANCIS, London, Honorary Secretary Tower Hamlets Division.
- PALMER, CHARLES JAMES, Nottingham, Member Insurance Acts Committee, Chairman and Representative Nottingham Division.

PANTING, CHARLES HENRY, London, Representative South-West Essex Division, Member Insurance Acts Committee.

PAIKER, GEORGE, Bristol, Representative Bristol Division, Member Hospitals Committee.

PAKILL, SAMUEL JAMES, Burton-on-Trent, Chairman Derby Division.

PATERSON, WILLIAM, London, Honorary Secretary Willesden Division.

PATTON, JAMES, Gateshead, Representative Consett and Gateshead Divisions.

PENNEFATHER, CLAUDE MAXWELL, Harrow, Honorary Secretary, Harrow Division.

PETTER, WALTER, Darlington, Chairman Darlington Division.

POOLER, HARRY WILLIAM, Alfreton, Honorary Secretary Chesterfield Division.

FREBBLE, PHILIP, Blackburn, Representative Blackburn Division.

PRICE, DAVID REES, Ammanford, Member Welsh Committee.

RAINFLETT, FRANK, Oldham, Member Insurance Acts Committee, Chairman Oldham Local Medical and Panel Committee.

RAMSAY, MABEL LIDA, Plymouth, Member Insurance Acts Committee.

RAVEN, HUGH MILVILLE, Broadstairs, Honorary Secretary Isle of Thanet Division.

RENTON, MAURICE WATGH, Dartford, Representative Dartford, Rochester, Chatham, and Gillingham Divisions.

RICHARDSON, ALFRED ERNEST, Tamworth, Chairman Nuneaton and Tamworth Division.

RIDDELL, DAVID, Kendal, Honorary Secretary Kendal Division, Honorary Secretary Westmorland Local Medical and Panel Committee.

ROBBS, CHARLES HALDANE DENNY, Grantham, Honorary Secretary Kesteven Division.

ROBINSON, EDWARD STANLEY, Slough, President Worcestershire and Herefordshire Branch.

ROOKE, WILLIAM STANLEY, London, Honorary Secretary Finchley and Hendon Division.

ROPER, FRANK ARTHUR, Exeter, Honorary Secretary South-Western Branch.

ROSS, PERCY ALEXANDER, Bournemouth, Joint Honorary Secretary Dorset and West Hants Branch.

ROWDEN, LEONARD ALFRED, Leeds, Representative Dewsbury and Leeds Divisions.

ROWELL, HERBERT ELLIS, East Rudham, Chairman West Norfolk Division.

ROXBURGH, DAVID, London, Representative Marylebone Division.

RUSBY, EDWARD LIONEL MACPHERSON, London, Honorary Secretary Lambeth Division.

RUSSELL, JOHN, Stoke-on-Trent, Representative North Staffordshire Division.

RUTTER, HUBERT LLEWELLYN, Newcastle-upon-Tyne, Member Insurance Acts Committee, Honorary Secretary Newcastle-upon-Tyne Local Medical and Panel Committee.

SANDERSON, ROBERT, Hove, President Sussex Branch.

SANKEY, JULIUS IVOR, Great Yarmouth, Chairman Great Yarmouth Division.

SHAW, GEORGE HEDLEY, Leigh, Honorary Secretary Leigh Division.

SHAW, WILLIAM FLETCHER, Manchester, Member of Council and Hospitals Committee, Honorary Secretary Lancashire and Cheshire Branch.

SHEAHAN, DENIS A., Portsmouth, Member of Council.

SHELLEY, ARNOLD, Chatham, Chairman Rochester, Chatham, and Gillingham Division.

SMILEY, GEORGE KENNEDY, Derby, Honorary Secretary Derby Division, Member of Council, Honorary Secretary Derby Local Medical and Panel Committee.

SMYTH, WILLIAM JOHNSON, Bournemouth, Member of Council and Finance Committee.

SOUTH, FRANK MONTAGUE WILSON, London, Honorary Secretary Camberwell Division.

SPAULL, PERCY WILLIAM, London, Honorary Secretary Chelsea Division.

SQUIRE, ETHELBERT WILLIAM, Reading, Honorary Secretary Oxford and Reading Branch.

STANCOMB, ERNEST HENRY MURLY Southampton, Representative Isle of Wight and Southampton Divisions, Chairman Southampton Panel Committee.

STARLING, EDWIN ALFRED, Tunbridge Wells, Honorary Secretary Kent Branch, Representative Sevenoaks and Tunbridge Wells Divisions.

STEEN, ROBERT HUNTER, Dartford, Chairman Dartford Division.

STEPHENS, LOCKHART EDWARD WALKER, Emsworth, Hants, Honorary Secretary Southern Branch.

STEVENSON, CLAUDE MABERLY, Cambridge, Honorary Secretary Cambridge and Huntingdon Division.

STEWART, GEORGE IRVINE THOMPSON, Ipswich, Honorary Secretary South Suffolk Division.

STRETTON, JOHN LIONEL, Kidderminster, Chairman Worcester Division, Chairman Worcestershire Local Medical and Panel Committee.

STURGE, WILLIAM HOWARD, Hoddesdon, Representative East Herts Division.

SUSMAN, WALTER JAMES, Henley-on-Thames, Chairman Reading Division.

SWINHOE, GEORGE RODWAY, Swindon, Chairman Swindon Division.

TANNER, HERBERT, London, Chairman Kensington Division.

TAYLOR, LOT ALBERT, Stourbridge, Honorary Secretary Dudley Division.

THOMAS, WILLIAM EVANS, Ystrad Rhondda, Member Welsh Committee, Chairman Glamorgan Local Medical and Panel Committee.

THOMPSON, GEOFFREY WAID, Scarborough, Chairman Scarborough Division.

THOMSON, DAVID GEORGE, Norwich, Honorary Secretary East Norfolk Division, Representative East Norfolk and Great Yarmouth Divisions, Honorary Secretary Norfolk Local Medical and Panel Committee.

TREASURE, WILLIAM BEESON CRAWFORD, Cardiff, Member of Council and Insurance Acts and Welsh Committees, Representative Cardiff Division, Honorary Secretary Cardiff Local Medical and Panel Committee.

TUNSTALL, ALBERT EDWARD, Bradford, Representative Bradford Division.

TURNBULL, JAMES CAMERON, Bury, Chairman Bury Division.

TURNER, EDGAR OLIVE, Great Missenden, Member of Council and Central Ethical Committee.

TUXFORD, REGINALD, Boston, Lincolnshire, Chairman Holland Division.

UTHOFF, JOHN CALDWELL, Hove, Chairman Brighton Division.

VALLANCE, HERBERT, Lewes, Honorary Secretary Lewes and East

Grinstead Division, Chairman and Honorary Secretary East Sussex Local Medical and Panel Committee.

VERITY, ROBERT JAMES STANLEY, Pontypool, Honorary Secretary Monmouthshire Division.

VERNON, MARK HENRY HERBERT, Horsham, Honorary Secretary and Chairman Horsham Division.

WALKER, CYRIL HUTCHINSON, Bristol, President Bath and Bristol Branch.

WALKER, EDWARD, Huddersfield, Representative Huddersfield Division.

WALLIS, CHARLES EDWARD, London, Joint Honorary Secretary and Representative Marylebone Division.

WATERS, ALFRED CHARLES STANLEY, March, Honorary Secretary Isle of Ely Division, Honorary Secretary Isle of Ely Local Medical and Panel Committee.

WATSON, WILLIAM NORMAN WEST, Bradford, Honorary Secretary Bradford Division.

WEBBER, ALEXANDER MOXON, Nottingham, Honorary Secretary Midland Branch, Honorary Secretary and Representative Nottingham Division.

WESTCOTT, WILLIAM WYNN, London, Chairman City Division, Member of Public Health Committee.

WHITBY, CHARLES JOSEPH, Bath, Representative Bath Division.

WILKIN, ROBERT HUGH, Newmarket, Chairman West Suffolk Division.

WILLIAMS, ROBERT MORRIS, Menai Bridge, Chairman North Carnarvon and Anglesey Division.

WILLIAMSON, JAMES BURRELL, South Shields, Representative South Shields and Tyneside Divisions.

WILLOCK, EDWARD HULSE, Croydon, Honorary Secretary and Representative Croydon Division, Member Organization and Journal Committees.

WILLSON, JOHN WHERRY, Bradford, Chairman Bradford Division.

WYSE, RICHARD, Birkenhead, Chairman Birkenhead Division.

YELF, ROBERT EDWARD BURNET, Moreton-in-Marsh, Representative Oxford Division.

YONGE, AMBROSE PODE, Twickenham, Honorary Secretary South Middlesex Division.

YOUNG, WILLIAM JOHN, Cambridge, Representative Cambs and Hunts and Isle of Ely Divisions.

THE ORGANIZATION OF THE PROFESSION.

*An Address given at the Summer Meeting of the
Dorset and West Hants Branch.*

BY

E. KAYE LE FLEMING, M.B., B.Ch.CANTAB.,

PRESIDENT.

THE subject expressed by the title of this address is very wide, and I would confine attention to that aspect of the whole which is concerned with the expression of views of the profession concerning legislation, prospective and retrospective, and the defence of our interests as a body from parliamentary exploitation.

No organization can hope to represent the whole profession except in an academic sense. The interests of the various sections are so varied and divergent that the attempt to legislate for them all must lead to dissensions and disquietude as to the relative claims of each. The largest sections will claim too much, the lesser will complain of neglect.

Surely this has been the chief difficulty of the British Medical Association. In its desire to do much for the large general practitioner section it has failed to go far enough to please them, and has lost the support of smaller and important branches of our brethren. Those who value the highest traditions of medicine and surgery complain that we have become parochial in our outlook and devoted too much to the commercial side of our profession, while neglecting the issues that rank above all question of reward; the other side complain that we should long ago have become a vast trade union.

Twenty years ago the British Medical Association was a highly efficient organization for its purpose, for it is only in the past twenty years that legislation has been invading the private territory of the profession.

The State has rather suddenly discovered that the public health is a national asset of great importance, and *pari passu* with the realization that it is not so impossible after all to make a man sober by Act of Parliament, has determined on the attempt at least to make him healthy by the same means. The problems that such a situation present may, for simplicity's sake, be divided into two heads:

1. How can the profession best use its organization to place its views as a whole before Parliament?

2. How can the profession so organize itself that it may be able to resist legislation detrimental to its best interests?

In order to clear the ground for my main thesis, I will dispose of (2) first, which brings us to the trade union question.

This question has been recently put before us in Bournemouth very forcibly at meetings where the views of both

the British Medical Association and Medico-Political Union have been ably put forward. You will, I hope, forgive me if I briefly refer to the conclusions that were arrived at as the result of those discussions. The British Medical Association opposes the trade union movement on the grounds that such a union will offer no greater advantages than the British Medical Association already possesses, and will split the unity of the profession. It refers to the Coventry case thus:

We lost the case on the ground of "malice" only. In future cases we shall be warned and not repeat the mistake. The best legal advice we can get informs us that had we been a trade union we should have lost the case just the same, and if our funds had been immune our individual members would have been cast in damages.

The Medico-Political Union claim exactly the opposite—also on the best legal advice, namely:

That any form of boycott or peaceful picketing would be legal. That the funds of the union could not be attached. That the individuals would also be immune. Both sides, however, agree that the only way of finding out what the law really means is to take a case into court.

It is a truism that if the medical profession unite solidly on any question they must obtain their object. They cannot be replaced and they cannot be trained under a long period of years. Unfortunately the profession is composed of members who by virtue of their training and occupation are strongly individualistic and as such are opposed to the subjection of personal views to the wishes of a majority, by which alone successful organization is obtained.

This difficulty is overcome in trade unions by compulsion. Under the innocent title of "peaceful picketing" a recalcitrant labourer is faced with the choice of falling into line or having his head broken. This is obviously inapplicable to our profession. Apart from the legal questions of damages either against a union or association or individuals, it is inconceivable that educated men could adopt such a course. The most that we could do would be to give the "cold shoulder" and ignore or boycott a blackleg.

I am strongly of opinion that a successful strike is only possible though extremely unlikely in local disputes, but on a large question (such as, let us say, the extension of Insurance Act benefits) is absolutely out of the question. As this is to my mind one of the most likely problems of the future, let me develop the point a little more. What chance of success would a labour strike have if you not only abolished peaceful picketing, but offered the blacklegs a share in the wages of those who went on strike, and not only during the strike but permanently, and at the same time suspended all strike pay? Yet this is not an unfair representation of the position in the medical world if a strike were attempted on a large issue.

If peaceful picketing were legal I think that a small number only of the profession would be willing to adopt it. Government-supported "blacklegs" would not only be encouraged financially at the time at our expense, but would take care to secure that the advantages were not temporary only. What chance would there be of raising a sufficient sum of money to pay those who went on strike the salaries they were earning through the Insurance Act, if only for six months?

You may get 90 per cent. of the profession to vote for a certain line of action, and that percentage will be 100 per cent. of those who attend meetings on the question, but a minority of 10 per cent. will be sufficient, and more than sufficient, to wreck your organization.

Always remember that the most important members in your calculations are those who stop away from your meetings. If you are wise you will not count on their written pledge or guarantee. The man who wishes to be relieved of his pledge or guarantee will always persuade himself he has justifiable ground for doing so. And, apart from all these considerations, the vested interests already created by the Insurance Act are so great as to prevent any action that would seriously jeopardize them.

The organization of the profession as a means to develop an effective strike must always remain in the hands of the profession themselves, apart from any association or trade union.

In a large general strike—for example, on an Insurance Act question—a relatively small number of successful local strikes would force the hand of the Government.

How, then, can a local body of medical men combine to be unanimous? Does it affect the question whether they are members of the British Medical Association or the Medico-Political Union? I maintain not. Such bodies would have to combine in any case, whatever their relative numbers. The danger would lie with those who were not members of any organization, and who could not be drawn into the combine. That is to say, organization can promote the unity of the profession, but nothing can command it but the unanimity of the individuals.

Look at the case from another point of view. Suppose in a town one or two members of the profession, by taking undesirable contracts or in other ways, were considered to be acting to the detriment of the honour of the profession, and the remaining members were unanimous in deciding to ostracize them. It would matter little what organization they belonged to if they were really unanimous in their action. Without resort to peaceful picketing or "malice" the position of the undesirable members could be made untenable. But experience shows that this unanimity is almost impossible to obtain. Individuals differ as to the precise degree to which ostracism should be carried. A little success on the part of the blackleg—and they will always obtain temporary success—a little threatening of the direct interests of this or that individual, leads to abandonment of the firm attitude which is sufficient to wreck the success of the combine.

I fear that no organization, be it trade union or otherwise, will be able to enforce the will of a big majority upon a minority. Therefore I say again emphatically, in my opinion any organization with a view to a general strike can only be of use as a threat—as an ultimate resort it will fail, as it failed in 1912.

Remember on that occasion the conditions were more favourable for a successful strike than they can ever be again. No vested interests were threatened; no single member of the profession ran any risk of loss; everyone stood to gain by standing firm and insisting on better conditions. The public was with us. Yet the threat of a small minority to profit by running counter to the majority was sufficient to wreck the unity and resolution of the main body of the profession. To any clear-thinking man it was obvious that if that small minority were disregarded and ignored, the position of the Government must be proved untenable in a short time. Yet we were defeated by the minority and by the lack of unity in the majority to stand aside and trust each other not to go over to the enemy. Such an occasion will not occur again. We cannot expect to get such an outstanding majority in the future on any general question. We held all the cards in our deal with the Government. We won the first deal largely by the aid of the British Medical Association, but we lost the last trick and the game by sheer lack of unity, for which we have no one but ourselves to blame.

If my conclusions are correct, as I believe them to be, an organization like the Medico-Political Union, which is founded on the principle of effecting a successful strike as a last resort, can only have a limited value. That value to my mind lies in consolidating the members of our profession who will continue to believe in trade union methods until it has proved its limitations, and in attracting into a solid body many who will not at present join the British Medical Association. I believe the ultimate result will be to stimulate the British Medical Association to increased activity in the right direction, and after an interim period of apparent loss, the parent body will emerge infinitely stronger than before.

The necessity for a general strike is likely to arise in the very near future. Are we better organized to meet it than in 1912? There can only be one answer to that question. Not only are we still unprepared, but as I said before, we cannot expect to have the same unanimity now that vested interests are created. Moreover, the powers that be are quite aware of our position. Therefore we must concentrate on the first of the two problems previously mentioned.

How can the profession best combine to place its views as a whole before Parliament in the hope of influencing impending legislation?

It is obvious that if the whole profession were members of one organization and that organization democratically governed, it would be comparatively simple to place the views of the whole body of the profession before

Parliament. This, by the way, is the policy of the British Medical Association with its 23,000 members, but, as is generally the case in this world, the practical is not likely to reach the ideal.

Let us try to look at this question from the opposite point of view. A Minister of Parliament is involved in legislation affecting medical interests. How is he to obtain the views of the profession as a whole? One thing is certain—he will not get them in Parliament. We shall never have men in Parliament that represent the profession. The man who gets there is either of sufficient means to be independent of his profession, or is more than likely to be compelled to subordinate professional interests to political ones, to remain there.

The Minister in question can easily obtain the views of the 23,000 members of the British Medical Association, but this is where his difficulty begins. No sooner has he approached that body than other organizations such as the Medico-Political Union, the Association of Medical Officers of Health, the teaching bodies, and many others claim to be heard on their own behalf. The natural result is that conflicting views are brought forward, and the Minister—who is more concerned with the success of his bill with the public than with any question of equity to the profession—is able to play off one section of the profession against the other, to our disadvantage. It seems perfectly obvious that the machinery wanted to meet this difficulty must have the power to get all these sections of the profession into one room, where the different opinions can be put forward and threshed out, and a resulting general policy adopted that can be put before the Government with a single voice.

Since these lines were written such an effort has been made. Every organization in the profession has been invited to send representatives to a joint meeting, with a view to the formation of a parliamentary committee which shall represent the whole profession. Personally, I look with more hope to such a body for practical results in influencing intended legislation than in all the other organizations together in producing effective resistance to the law as it stands.

In view of the swift approach of another Insurance Act crisis, and one in which we shall be in a far worse position to offer effective resistance to detrimental conditions, it is most necessary to institute some form of campaign to induce the apathetic and indifferent to enter the ranks of some organized body. To be practical, this campaign should begin at home, if only as an example to others, and I suggest that a statement be drawn up and circularized to all members of the profession in our area, pointing out in brief and explicit language:

1. That an insurance crisis is imminent.
2. That all sections of the profession will be involved directly or indirectly in this and in the National Health legislation which is impending.
3. The urgent need of joining some organization.

I am quite sure that we as members of the Association, which is, and which in my hope and belief always will remain, the great and premier organization of our profession, are much more desirous of joining our ranks to those of other bodies such as the Medico-Political Union, and marching side by side to face the great issues before us, than of standing aside and wasting our time and energy in bickering as to which of us shall be the greater, while the enemy takes us in the rear and compasses our defeat.

In conclusion, I would express the hope that for the present all members of the profession in our area will be invited to attend the meetings of this Branch, in the hope that the evidence of the advantages to be obtained from combination and good fellowship amongst ourselves may stimulate them to join this or some other organization, and at the same time we may all be able to keep in touch with the general views of the profession as the new crisis approaches.

Association Notices.

MEETING OF COUNCIL.

The next Meeting of Council will be held on Wednesday, November 5th, in the Council Room, 429, Strand, London, W.C. 2.

APPOINTMENTS.

BLACKETT, J. F., M.D.Lond., D.P.H., Medical Officer of Health for Bath.
GALBRAITH, C. J., M.B., B.S.Lond., M.R.C.S., L.R.C.P., D.P.H., Tuberculosis Officer to the Barnstaple area of Devon under the Devon County Council.
HICKS, Charles E., M.R.C.S., L.R.C.P., Medical Officer of Health for Huntingdon Urban District Council.
KEITH, William Brooks, M.C., M.D., Senior Assistant Medical Officer to the Surrey County Asylum, Brookwood.
VICTORIA HOSPITAL FOR CHILDREN, Chelsea, S.W.—Physicians to Out-patients: Stanley Wyard, M.D., M.R.C.P.Lond., Helen Ingley, M.B., B.S., M.R.C.P.Lond.
YORK COUNTY HOSPITAL.—Assistant honorary Surgeons in Eye, Ear, Nose, and Throat Department: J. Acomb, M.B., B.S.Lond., T. H. Barton, M.B., B.S.Lond., Assistant honorary Anaesthetists: Nora Kemp, M.B., C.M.Glas., J. H. Sutcliffe, M.B.
DISTRICT MEDICAL OFFICERS.—K. C. Crossie, M.B., Ch.B. Edin. (Settle Union); D. F. Curran, L.R.C.P. and S.I. (Wantage Union); W. B. Gordon, B.C.Camb. (Selby Union); A. Tarleton, M.B., B.Ch., B.A.O.Dub. (Middlesbrough Union).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

ADAMSON.—October 17th, in Leeds, Rhoda Hicks Butler, M.D., B.S., the wife of Wallace Wright Adamson, M.B., Ch.B., D.P.H., of a son.
CALDWELL-SMITH.—On the 8th October, at 27, Cliveden Place, Eaton Square, S.W., the wife of E. L. Caldwell-Smith, M.B.Cantab., of a daughter.
CAMPBELL.—At The Copse, Larbert, Stirlingshire, on the 17th inst., the wife of R. B. Campbell, M.D., F.R.C.P.E., of a daughter.
FALLE.—On the 16th October, at 18, York House, W. 1, to Hilda C. Falle, O.B.E., and Frances Mabel Falle (Dr. Frances Huxley, 4, Harley Street, W. 1)—a daughter.
MASLEN JONES.—On October 11th, in London, to Dr. and Mrs. S. W. Maslen Jones, of 131, Bedford Hill, S.W. 12—a son.

MARRIAGE.

AMBROSE—IRELAND.—October 14th, at Westminster Cathedral, by the Rev. M. Ambrose, S.J., M.A. (brother), assisted by the Rev. Joseph Hull, C.S.S.R., Alfred Ambrose, F.R.C.S., L.R.C.P., son of the late Daniel Ambrose, M.P., M.D., and Mrs. Ambrose, Clapham, to Kathleen Agnes, daughter of Mr. and Mrs. Thomas Ireland, St. Peters, Thanet.

DEATHS.

McLEAN.—October 19th, at Horbury, Wakefield (suddenly), Charles J. R. McLean, M.D., D.P.H.
ORD.—On October 14th, at Eastlands, Basingstoke, George William Ord, M.R.C.S., L.R.C.P., eldest son of the late George Rice Ord, M.R.C.S., L.R.C.P., and late of Richmond, Surrey, and Bexhill-on-Sea, in his 57th year.

DIARY FOR THE WEEK.

HUNTERIAN SOCIETY, School of Oriental Languages, Finsbury Circus, E.C.—Wednesday, 9 p.m., Dr. S. Russell Wells: Functional Numbness.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, W. 1.—Monday, 8.30 p.m., Discussion on the Reclassification and Treatment of Pensioners, to be introduced by Colonel A. L. A. Webb, C.B., C.M.G., A.M.S., to be followed by Lieut.-Colonel Sir Alfred Pearce Gould, K.C.V.O., R.A.M.C.(T.), F.R.C.S., Lieut.-Colonel E. L. Gowland, R.A.M.C., Captain R. McNair Wilson, R.A.M.C., and others.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Friday, 5 p.m., Demonstration by Professor Arthur Keith, F.R.S.: Achondroplasia.

ROYAL SOCIETY OF MEDICINE.—Occasional Lecture, Friday, 5.30 p.m., Lieut.-Colonel Hamilton Fairley, A.M.C.: Egyptian Bitharziasis: its Recent Pathology, Symptomatology, and Treatment. Section of Odontology: Monday, 8 p.m., Presidential Address, Mr. J. F. Colyer: The Debt of the Dental Profession to John Hunter. Mr. G. C. Chubb: Operative Treatment of Ankylosis of Mandible. Mr. W. Kelsey Fry: Movements of the Soft Palate. Section of Medicine: Tuesday, 5.30 p.m., Dr. Gordon Ward: Anaemias of the Haemolytic Jaundice Group. Section of Bacteriology and Climatology, Thursday, 5.30 p.m., Dr. F. Parkes Weber: Health Resorts and the State. Members will dine at Pagani's R. restaurant at 7 p.m., price per head 6s. 6d. Those desiring to attend should send their names to Dr. Charles F. Sonntag, 80A, Belsize Park Gardens, N.W. 3.

POST-GRADUATE COURSES AND LECTURES.

BROMPTON HOSPITAL FOR CONSUMPTION.—Wednesday, 4.30 p.m., Pulmonary Tuberculosis.

FELLOWSHIP OF MEDICINE, 1, Wimpole Street, W.—Monday, noon, Dr. P. J. Cammidge: Treatment of Diabetes (111). Wednesday, noon, Sir George H. Savage: Morbid Mental Growths: 5 p.m., Mr. J. Swift Joly: Urinary Calculi.

MANCHESTER ROYAL INFIRMARY.—Tuesday, Inflammation of Appendix in the Pelvis or less usual positions.

ROYAL EYE HOSPITAL, Southwark.—Wednesday, 5 p.m., Refraction (I). Friday, 5 p.m., External Diseases (11).

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
OCTOBER.	
29 Wed. London: Finance Committee, 2.30 p.m.	
NOVEMBER.	
5 Wed. London: Council.	
27 Thur. London: Conference of Local Medical and Panel Committees.	

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THE COMING ELECTION TO THE
GENERAL MEDICAL COUNCIL.

ENGLAND AND WALES.

THIRD LIST OF SUPPORTERS.

THE following is a further instalment of the list of officers of the British Medical Association who have undertaken to support the candidature of Professor R. A. Bolam, Dr. J. A. Macdonald, Mr. E. B. Turner, and Sir Jenner Verrall at the forthcoming election of four direct representatives of the medical profession in England and Wales upon the General Medical Council.

AINSLIE, WILLIAM, M.C., Hereford, Representative Hereford Division.
 AIDERMAN, HARRY COLE, Halifax, Honorary Secretary Halifax Division.
 ALEXANDER, GEORGE, Barrow-in-Furness, Joint Honorary Secretary Furness Division.
 ANSTEE-CHAVE, THOMAS, Redhill, Honorary Secretary Reigate Division.
 BABBIE, Sir WILLIAM, K.C.M.G., V.C., London, Member of Council and Naval and Military Committee.
 BAKER, MARTYN WILFRED, Redhill, Representative Reigate Division.
 BARRITT, ROBERT HASBY, Wisbech, Chairman Isle of Ely Division.
 BENSON, PERCY HUGH, St. Aubins Jersey, Member of Dominions Committee.
 BIGGS, GEORGE NIXON, London, Member of Council and Naval and Military Committee.
 BOND, ELEANOR CECILIA, Bournemouth, Honorary Secretary Bournemouth Division.
 BRADBURY, HARVEY, Nuneaton, Honorary Secretary Nuneaton and Tamworth Division.
 BRADSHAW, THOMAS ROBERT, Liverpool, Representative Liverpool Division.
 BRAITHWAITE, JOHN, Boston, Honorary Secretary Holland Division.
 BULLOCK, ROGER, Warwick, Chairman Warwick and Leamington Division.
 BUTLER, WILLIAM BARBER, Hereford, Honorary Secretary Worcestershire and Herefordshire Branch.
 CASSIDI, FRANCIS LAIRD, Derby, Representative Derby Division.
 CHALMERS, JAMES, Sunderland, Chairman Sunderland Division.
 CHARLES, JOHN STANLEY, Durham, Honorary Secretary Consett Division.
 CLITHEROW, HERBERT GEORGE, London, Chairman Camberwell Division.
 DIVINE, JOHN HULL, Representative East York Division, Honorary Secretary Kingston-upon-Hull Local Medical and Panel Committee, Member Insurance Acts Committee.
 DOMVILLE, EDWARD JAMES, Bridport, Member Medico-Political, Public Health, Hospitals, and Ministry of Health Committees.
 ELLIOT, ROBERT HENRY, London, Member of Council and Science, Naval and Military, and Dominions Committees.
 FARQUHARSON, ALEXANDER CHARLES, M.P., London, Member of Council and Medico-Political and Parliamentary Elections Committees, Representative Bishop Auckland and Durham Divisions.
 FERGUSON, DONALD, Warrington, Chairman Warrington Division.
 FITZGEROFT, Sir THOMAS EVANS, Bolton, Member Finance and Parliamentary Elections Committees, Chairman and Representative Bolton Division, Chairman Bolton Local Medical and Panel Committee.
 FOWLER, CHARLES OWEN, Thornton Heath, President Surrey Branch.
 FOX, GEORGE MARTIN, Walsall, Chairman Walsall Division.
 FRIER, CHARLES, Grantham, Representative Holland and Kesteven Divisions, Honorary Secretary Lincoln (Kesteven) Local Medical and Panel Committee.
 GALLOWAY, Sir JAMES, K.B.E., London, Member Finance and Hospitals Committees.
 GARDNER, JAMES, Burnley, Honorary Secretary Burnley Division.
 GOLD, DAVID DRYBURGH, Hereford, Chairman Hereford Division.
 GOMEZ, FRANCIS JOSEPH, South Petherton, President West Somerset Branch.
 GREEN, ALFRED WITHERS, London, Member Insurance Acts and Public Health Committees.

GUTCH, JOHN, Ipswich, President Suffolk Branch.
 HAMILTON, ALEXANDER GEORGE, O.B.E., Chester, Honorary Secretary Chester Division.
 HAWKINS, CHARLES LOUIS, Barnet Green, near Birmingham, Honorary Secretary Bromsgrove Division.
 HEGGS, THOMAS BARRITT, Sittingbourne, Honorary Secretary Canterbury and Faversham Division, Representative Canterbury and Faversham and Isle of Thanet Divisions, Member of Public Health Committee.
 HENCHLEY, ALBERT RICHARD, D.S.O., Salisbury Plain, Member of Naval and Military Committee.
 HILL, ALFRED BOSTOCK, Birmingham, Member Insurance Acts and Ministry of Health Committees.
 HISLOP, JAMES ANDREW, Tyne-mouth, Honorary Secretary Tyneside Division.
 HODGSON, STANLEY, Salford, Chairman Salford Division.
 HOWELL, ROBERT EDWARD, Middlesbrough, President North of England Branch.
 JONES, EVAN, London, Honorary Secretary City Division.
 KANE, THOMAS ADAM BERESFORD, J.P., Bishop Auckland, Chairman Bishop Auckland Division.
 KEENAN, THOMAS FRANCIS, London, Member Public Health Committee.
 KEIGHLEY, JOHN WILLIAM, Blackburn, Chairman Blackburn Division, Honorary Secretary Blackburn Local Medical and Panel Committee.
 KNIGHT, HENRY ERNEST, Rotherham, Chairman Rotherham Division.
 LACE, FREDERICK, Bath, Honorary Secretary Bath Division.
 LAYTON, FRANK GEORGE, Walsall, Honorary Secretary Walsall Division.
 LEWIS, BENJAMIN MORGAN, Pontypridd, Chairman North Glamorgan and Brecknock Division.
 LEWIS, ERNEST WILLIAM, Southport, Honorary Secretary Southport Division.
 LEWIS, FRANK BENJAMIN, St. Leonards-on-Sea, Honorary Secretary and Representative Hastings Division, Chairman Hastings Panel Committee.
 LODGE, GEORGE HENRY, Rotherham, Honorary Secretary and Representative Rotherham Division, Member Central Ethical Committee.
 LOVELL-KEAYS, LIONEL FRANCIS, Guildford, Honorary Secretary Guildford Division.
 MAIRWOOD, ALBERT ERNEST, Southsea, Chairman Portsmouth Division.
 MILBANK SMITH, HARRY JAMES MILBANK, Worthing, Honorary Secretary Chichester and Worthing Division, Representative Chichester and Worthing and Horsham Divisions, Chairman West Sussex Local Medical and Panel Committee.
 MOORE, BENJAMIN, London, Member Science Committee.
 MOORE, MILNER MONTGOMERY, Eastbourne, Representative Lewes and East Grinstead Division, Member Finance and Central Ethical Committees.
 MURRAY, JOHN, Llandrindod Wells, President Shropshire and Mid-Wales Branch, Member Welsh Committee.
 NEILD, NEWMAN, Bristol, Honorary Secretary Bath and Bristol Branch, Honorary Secretary Bristol Division.
 NICHOLLS, FRANCIS JOHN, Eastbourne, Chairman Eastbourne Division.
 NICHOLSON, BENJAMIN HUGH, Colchester, Honorary Secretary late East Anglian Branch.
 NORMINGTON, ARTHUR EDWARD, Nelson, Representative Burnley Division.
 OSER, Sir WILLIAM, Oxford, President Oxford and Reading Branch.
 PARSONS, GEORGE, Hawkhead, near Ambleside, Chairman Furness Division.
 PEARSON, ELLIS, Bideford, Honorary Secretary and Representative Barnstaple Division.
 POCHIN, FREDERICK LINNEY, Withycombe, nr. Exmouth (late Oldham), Chairman and Representative Oldham Division.
 PRATT, EDWARD FREDERICK, Newcastle-on-Tyne, Chairman Newcastle-on-Tyne Division.
 PRYTHORCH, JOHN ROWLANDS, Anglesey, Honorary Secretary and Representative North Carnarvon and Anglesey Division, Honorary Secretary Anglesey Local Medical and Panel Committee.
 RATCLIFFE-GAYLARD, JAMES, Birkenhead, Representative Birkenhead Division.
 RATCLIFFE, JAMES RILEY, Birmingham, President Birmingham Branch, Chairman Birmingham Central Division.
 RYNNOLDS, LEWIS WILLIAM, High Wycombe, President South Midland Branch.
 RICHARDSON, RICHARD ISAAC, Liverpool, Representative Liverpool Division.

RIDGOT, CHARLES A. SCOTT, Southsea, Honorary Secretary Portsmouth Division.
 RILEY, FRANCIS, Tunbridge Wells, Chairman Tunbridge Wells Division.
 ROLLISTON, SIR HUMPHRY DAVY, London, Member Arrangements Committee.
 ROOME, ALFRED MARTIN, Grimsby, Honorary Secretary North Lincoln Division.
 ROTHERHAM, FRANK HERBERT, Grimsby, Representative North Lincoln Division.
 ROUND, JOHN, London, Honorary Secretary Greenwich and Deptford Division.
 SELLERS, WILLIAM HENRY IRVIN, Preston, Representative Preston Division, Chairman Preston Local Medical and Panel Committee.
 SHERWOOD, EDITH GRACE, Stafford, Acting Honorary Secretary Mid-Staffs Division.
 SMITH, ALEXANDER HENRY, Yarm-on-Tees, Chairman Stockton Division.
 SNELL, ERNEST HUGH, Coventry, Member Public Health Committee.
 SYKES, WALTER, Preston, Honorary Secretary Preston Division, Honorary Secretary Preston Local Medical and Panel Committee.
 TAUNTON, JOHN GODFREY CRESSWELL, Chatham, President Kent Branch.
 TAYLOR, JOHN CLEASHY, Berwick-on-Tweed, Honorary Secretary North Northumberland Division.
 TERRY, HAROLD CAIRNS, Gloucester, Honorary Secretary Gloucestershire Branch and of Gloucester Local Medical and Panel Committee.
 THOMPSON, ARTHUR EDWARD, Barrow-in-Furness, Joint Honorary Secretary Barrow-in-Furness Division.
 TINSLEY, SIDNEY VERLING, Spennymoor, Honorary Secretary Bishop Auckland Division.
 TRUMPER, OSCAR B., Birmingham, Honorary Secretary and Representative Birmingham Central Division.
 TODD, DAVID FEE, Sunderland, Representative Sunderland Division, Member Naval and Military Committee.
 TYSON, WILSON, Lowestoft, Honorary Secretary North Suffolk Division.
 VEALE, RANDON A., Leeds, Honorary Secretary Yorkshire Branch.
 WEBSTER, WILLIAM, Newcastle, Staffs, Honorary Secretary Staffordshire Branch.
 WALKER, JOHN FREDERICK, Southend-on-Sea, Honorary Secretary and Representative South Essex Division, Member Organization Committee.
 WALLACE, SIR CUTHBERT SIDNEY, London, Member Hospitals and Arrangements Committees.
 WATTS, ALEXANDER M., Ashford, Honorary Secretary, Ashford Division.
 WAY, JOHN HENRY FREDERICK, Southsea, Vice-President Southern Branch, Honorary Secretary Portsmouth Local Medical and Panel Committee.
 WILLIAMS, OWEN, Bury Port, President South Wales and Monmouthshire Branch.
 WINDSOR, CHARLES WILLIAM, Royston, Chairman East Herts Division.

British Medical Association.

CURRENT NOTES.

Motor Cars for Doctors.

THE large majority of manufacturers of motor cars who have been written to by the British Medical Association in connexion with the question of early delivery of cars ordered from them by medical practitioners have intimated their desire to arrange that so far as possible cars ordered by doctors for the purposes of their professional work shall have priority in delivery. In most cases they cannot interfere with the actions of their agents, but are willing to try to induce them to do what they can to help. The Ford Motor Co., however, being in a more favourable position, as they have just reorganized all their agencies, have assured the Association that in the case of cars required by doctors for their professional work they will endeavour to give delivery of the car within three weeks.

The Gloucester Maternity and Child Welfare Scheme.

Those members who take an interest in the question of maternity and child welfare will be glad to hear of the success that has attended the efforts of the British Medical Association to preserve intact a very satisfactory scheme, which has been in operation in Gloucester for the last seven years, against an attempt to replace the general practitioners already employed by a whole-time officer. The scheme was evolved after consultation with the members of the local Division, and it had worked satisfactorily and with a minimum of friction since its inception. The Gloucester Health Committee contributed £200 a year, but in March last the Health Committee decided to withdraw this grant and in lieu of it to give the services of a whole-time assistant medical officer, who was, in addition to other duties, to take over the work previously done by the general practitioners. This step was very far from meeting with the approval of the Welfare Committee and also of the general practitioners concerned. The assistant officer had been advertised for when the assistance of the Association was sought with a view to maintaining the *status quo*. Representations were made to Sir George Newman, who sent

down an inspector to inquire into the working of the scheme. The inspector's report was so favourable that the Ministry of Health strongly recommended that the existing scheme should be allowed to continue on its old lines, with the result that the proposal to put in a whole-time officer was dropped. This result is due to cordial co-operation between the doctors concerned and an active Division of the Association, with help from head quarters. The sympathetic and prompt action of Sir G. Newman must also be gratefully acknowledged.

Association Notices.

MEETING OF COUNCIL.

THE next Meeting of Council will be held on Wednesday, November 5th, at 11 a.m., in the Council Room, 429, Strand, London, W.C. 2.

BRANCH AND DIVISION MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH: WILLESDEN DIVISION. — A meeting of this Division will be held on Tuesday, November 4th, 1919, at 8.30 p.m., at St. Andrew's Schools, 133, High Road, Willesden Green.

Meetings of Branches and Divisions.

SOUTH-WESTERN BRANCH: EXETER DIVISION.

A MEETING of the Exeter Division was held on October 23rd at the Royal Devon and Exeter Hospital. In the unavoidable absence of the chairman and deputy chairman, Mr. RUSSELL COOMBE was unanimously voted to take the chair.

Arising out of the minutes of the last meeting, which were read and signed, the HONORARY SECRETARY read the replies received to a letter sent to local authorities asking them to consider the question of raising the salaries of all medical officers employed by them by 33½ per cent. He was further instructed to communicate with medical officers practising in areas from which no reply had been received with a view to ascertaining what had been done with regard to this suggested increase.

It was decided to request the Representative to furnish a report at the next meeting of the Division with regard to the matters on which he was instructed to vote at the Annual Representative Meeting.

The revised rules governing procedure in ethical matters as approved by the Annual Representative Meeting, 1919, were unanimously adopted.

The HONORARY SECRETARY called the attention of members to the forthcoming election of Direct Representatives on the General Medical Council, and the CHAIRMAN urged those present to support the four Association candidates.

SUFFOLK BRANCH.

THE inaugural meeting of the Suffolk Branch was held at Ipswich on October 10th, when Dr. WHITWELL was voted to the chair.

Rules for the Branch were considered and adopted, as were also the Ethical Rules.

The following officers were elected for the year 1919-20:

President: Dr. Gutch. President-elect: Dr. O. R. M. Wood. Vice-Presidents: Dr. H. H. Brown, Dr. B. E. A. Batt. Secretary and Treasurer: Mr. P. L. Giuseppe.

SUSSEX BRANCH: HORSHAM DIVISION.

A MEETING of the Division, to which all practitioners in the area were invited, was held at Horsham on October 9th, with Dr. MARK VERNON in the chair.

The question of professional charges and the fees paid for insurance examinations was fully discussed, and letters on the subject from members and others unable to attend were read. It was unanimously resolved to recommend all practitioners in the area to raise their pre-war charges by at least 50 per cent.; and to express the opinion that the subject of fees for insurance examinations should be brought before the next Representative Meeting. It was held that a fee of two guineas should be advocated for all ordinary cases, whatever the value of the policy, and not less than 5s. in the case of industrial policies.

The revised rules governing procedure in ethical matters were approved.

INSURANCE.

1920 REGULATIONS AND REMUNERATION.

THE Ministry of Health has undertaken to forward this week a copy of the draft Regulations to every member of Local Medical and Panel Committees. Insurance practitioners who are not members of a Local Medical or Panel Committee will be able to secure copies of the draft Regulations on application to the Secretary, Ministry of Health, Whitehall, S.W.1. During the course of next

week copies of an explanatory memorandum (M.23), drawn up by the Insurance Acts Committee, will be issued to every insurance practitioner. This memorandum examines the draft Regulations in the light of the discussion of Document M.25 at the Panel Conference held last July. A further memorandum (M.22) has been drawn up by the Insurance Acts Committee dealing with the remuneration of insurance practitioners under the 1920 terms of service. The Ministry of Health has intimated that it will furnish a reply to the latter memorandum, and it is hoped to publish both M.22 and the Minister's reply at an early date. Although the draft Regulations do not in all respects fulfil the desires of the Insurance Acts Committee, the Committee approves them generally, and intends to recommend the forthcoming Panel Conference to accept the Regulations provided remuneration is on a satisfactory basis. The Conference will be held at the Memorial Hall, Farringdon Street, London, on Thursday, November 27th.

NATIONAL ASSOCIATION OF INSURANCE COMMITTEES.

THE annual meeting of the National Association of Insurance Committees was held in London on October 16th and 17th, under the presidency of Mr. WALTER DAVIES. The proceedings of the main session were to have been inaugurated by an address by Dr. Addison, but the Minister of Health was unable to attend owing to indisposition, and his place was taken at short notice by Sir Robert Morant, who asked that he might not be reported.

The PRESIDENT, in his address, said that the National Insurance Act was only a very small step in the great stairway of a complete medical service. The ideal intention of the Act had been whittled down until the treatment given was of a most elementary kind, and was largely looked upon with opprobrium. There must be a comprehensive curative service for all, alike for toothache or typhoid, and there must be a preventive service to deal with housing and sanitation. This curative service must not be an adjunct to the local authority. It must be controlled by a local representative body, absolutely independent of the urban, borough, or county councils, and must be uniform throughout the country, so that the man in the village could obtain the same necessary institutional or specialist treatment as the man in the large city.

The conference discussed the institutional treatment of tuberculosis, and Mr. GILL HODGSON of the Executive Council moved:

That this meeting of representatives of Insurance Committees expresses its strong dissatisfaction with the inadequacy of the arrangements made for the efficient administration of sanatorium benefit in respect to insured persons and their dependants, and desires to represent to the Ministry of Health the immediate and very urgent need for more extended provision for the prevention and treatment of all forms of tuberculosis, and, in particular, the necessity for additional institutional accommodation, namely, sanatoriums, convalescent homes, training colonies, village settlements, etc.; further, that the Executive Council be instructed to take all steps necessary to secure the provision referred to at the earliest possible date.

The mover said that the provision of accommodation, both for ex-service men and civilians, was seriously deficient, and he urged the association to do what it could to induce the Government to take immediate action.

The motion was seconded by Mr. ALBERT BAUCHER (Wigan), who pointed out that although, in the departmental report, and in the circular letter of October last, offers of substantial subsidies for the provision of sanatoriums were made to local authorities, there was nothing to compel the acceptance of these offers or to make the local authorities themselves proceed with the erection of sanatoriums. It ought to be incumbent upon all local authorities to satisfy some department that they had made such provision.

Other speakers suggested that the local authorities had been to a great extent standing in the way of the necessary provision. There was a large sum available from the Treasury which could be used if local authorities liked to exercise their powers. One speaker, however, stood up for the local authorities in the matter of the provision for ex-soldiers, declaring that it was not their business but the army's to look after the 35,000 tuberculous ex-service men.

The resolution was agreed to by an overwhelming majority, with the addition that representations should be made on the subject, not only to the Ministry of Health, but to county councils and councils of county boroughs throughout the country.

In the course of discussion on the range of medical benefit some strong comments were made upon what was alleged to be inadequate and unsatisfactory surgery accommodation for insurance patients in many instances; it was stated from the chair that this matter, in the opinion of the executive, was being satisfactorily dealt with in the new draft Regulations about to be issued. The limitation of panel lists was another matter which, again in the opinion of the executive, was dealt with by the new Regulations in a better manner than had obtained in the past.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following notifications are announced by the Admiralty:—
Surgeon Captains: G. T. Collingswood, C.B., M.V.O., to R.N. Hospital, Malta; C. M. Beadnell, to R.N. Hospital, Chatham. Surgeon Commander W. K. Hopkins has been placed on the retired list at his own request. Surgeon Commanders: J. F. Hall, C.M.G., and E. A. Penfold, D.S.O., promoted to the rank of Surgeon Captain. Surgeon Commanders: N. H. Harris to the *Inconstant*, on commissioning; J. J. H. Rooney to Portland Hospital and Depot; E. A. G. Wilkinson, O.B.E., to the *Egmont*; F. J. Gowan to the *Tamar*, additional, and to the *Tamar*, for Sick Quarters, Yokohama; E. S. Wilkinson to the *Comus*, on commissioning. Surgeon Lieutenant Commander (emergency) R. B. Fasson has been promoted to the rank of Surgeon Commander (emergency), seniority November 11th, 1918, in recognition of services rendered during the war. Surgeon Lieutenant Commanders: H. Burns, O.B.E., to the *Vernon*; J. S. Austin, to the *Victory*, for R.N. Barracks; L. F. Cope to the *Egmont*, additional; G. L. Buckridge to the *Powerful*; E. L. Atkinson, D.S.O., to R.N. Hospital, Chatham. Surgeon Lieutenants: W. Everett to the *Pembroke*, for Milton Mount Sick Quarters; M. B. MacLeod to the *Bentley*; L. F. Strugnell to H.M. Dockyard, Rosyth; J. F. M. Campbell to the *Clio*; R. W. Nesbit, to the *Comus*, on commissioning. Surgeon Lieutenants (temporary): H. A. L. Guthrie to the *Hecla*; H. D. Morse to the *Pembroke*, on ship paying off; G. E. Heath to Port Edgar Naval Base; A. H. Hart and H. J. R. Surridge to the *Wallace*; E. R. Peirce to the *Argus*.

ARMY MEDICAL SERVICE.

Temporary Colonel Howard H. Tooth, C.B., C.M.G. (Lieutenant-Colonel R.A.M.C., T.F.), relinquishes his temporary commission on reposting, October 18th, 1918 (substituted for notification in the *London Gazette*, October 19th, 1918).
Colonels W. T. Mould, C.M.G., and Harold V. Prynn, C.B.E., D.S.O., retire on retired pay.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonels W. P. Gwynn, C.M.G., and J. H. R. Bond, D.S.O., relinquish the temporary rank of Colonel.
Lieut.-Colonel H. Simson, O.B.E., relinquishes the acting rank of Colonel.

The undermentioned relinquish the acting rank of Lieutenant-Colonel:—Major and Brevet Lieut.-Colonel A. W. Sanney (May 20th, 1919, substituted for notification in the *London Gazette*, September 18th, 1919). Majors: W. MacD. MacDowall, H. G. Sherren, A. S. Williams, D.S.O. Temporary Major G. D. Gray, O.B.E. Captains: J. H. Ward, D.S.O., M.C., G. O. Chambers, M.C., A. H. T. Davis (on ceasing to command a medical unit). Temporary Captain H. E. S. Stiven.

To be acting Lieutenant-Colonels: Majors T. H. Scott, D.S.O., M.C., A. W. A. Irwin, Captains A. Watson, D.S.O. (whilst commanding a medical unit from October 24th, 1915, to June 25th, 1916), P. Carney, M.C., A. J. Hickey, M.C., J. R. Hill, (acting Major) W. W. Treves, O.B.E. (from November 22nd, 1918, to June 26th, 1919). Temporary Captains F. D. Johnson, (acting Major) A. J. Blake, M.C.

The undermentioned relinquish the acting rank of Major: Captains (Brevet Major) J. D. Bowie, D.S.O., F. S. Tamplin, P. G. M. Elvery, D.S.O., M.C., David S. Martin. Temporary Captains C. E. Dukes, O.B.E., J. B. Alexander, W. A. Hoskins, J. J. Gibb, C. M. Goddie, C. Averill, F. G. Milne, A. G. Troup, J. S. Williamson, H. G. Joyce, A. Dick, M.C., A. Mathieson, W. S. Perrin, H. H. Hepburn, M.C., W. H. D. Smith, J. Morrison, R. G. Riches, C. C. de B. Daly (on ceasing to be specially employed).

Majors G. W. Heron, D.S.O., O.B.E., and C. Cassidy, M.C., are restored to the establishment.

Temporary Major D. Embleton (Captain R.A.M.C., T.F.) relinquishes his temporary commission on reposting.

Major R. G. Archibald, D.S.O., from half-pay list, retires, receiving a gratuity.

To be temporary Majors: R. A. Beaver (late temporary Major), temporary Captain R. L. Davies (whilst specially employed).

To be acting Majors:—Captains: F. R. H. Molham, M.C., A. L. Aymer (March 15th, 1919), G. D. Harding. Temporary Captains: W. B. Swate-Evans, A. W. Comber, W. S. Perrin, F. D. Sauer, A. C. Lambert, M.C., F. D. Johnson, A. G. Howson, A. A. Wilson, J. W. Simon, C. A. O'Driscoll (from June 21st to August 17th, 1919), A. A. W. Petrie (from June 21st to August 22nd, 1919), R. H. Wallace, D.S.O., M.C., S. H. Pitcairn, H. W. Hay (from January 6th to April 11th, 1919), O. de B. Burgh, O.B.E., H. S. Laird (whilst specially employed).

The notifications regarding Captains Henry C. D. Rankin and C. O. Shackleton and temporary Lieutenant H. S. Lister in the *London Gazette* of June 27th, May 16th, and January 28th, 1919, respectively, are cancelled.

To be Captains, but not to reckon for pay or allowances prior to October 1st, 1919: Captains from T. F.—H. T. Findlay, February 10th, 1919 (precedence next below J. A. Binning), F. R. Fletcher, March 28th, 1918 (precedence next below A. N. Minns), C. H. Kerr Smith, M.C. (precedence next below T. F. Kennedy), Captain K. L. O'Sullivan, from S.R. (April 7th, 1918, precedence next below J. J. Magner), temporary Captain G. D. Yale, (May 16th, 1918, precedence next below R. A. Anderson).

Late temporary Captains to be temporary Captains with seniority from the dates indicated: J. Maguire (June 14th, 1917), C. M. Forster (January 21st, 1915), C. W. C. Robinson (July 5th, 1916), S. Wigglesworth (September 16th, 1917), W. Reynolds (May 8th, 1916), E. C. Arnold (July 8th, 1916), J. Cross (August 27th, 1916), R. F. Gill (February 11th, 1918), P. M. Kirwan (October 29th, 1915).

Captain T. P. Buist is seconded for service under the civil administration of Mesopotamia.

Lieutenant (temporary Captain) A. A. B. Scott to be Captain.
To be temporary Captains: R. P. Hynes, J. P. Mitchell, O.B.E. (Captain S.R.), Lieutenants C. V. Macnamara, J. C. Coutts, C. A. Whitfield, J. E. Rea. Temporary Lieutenants B. D. Merrin, J. W. Clynne, M. D'Alton.

To be temporary Lieutenants: M. J. Woodberg, A. M. Moll, A. W. D. Midge.

The following officers relinquish their commissions:—Temporary Lieut.-Colonels and retain the rank of Lieut.-Colonel: W. Wrangham, O.B.E. (on ceasing to serve with the Bradford War Hospital), E. P. Cathcart. Temporary honorary Lieut.-Colonel H. Chaffer (on ceasing to be in charge of the Red Cross Hospital, Bollaheuston, Glasgow, and retains the honorary rank of Lieut.-Colonel). Temporary Majors T. C. Snuance (on ceasing to be employed at the Sunderland War Hospital and retains the rank of Major), G. H. Colt, E. W. Witham (and retains the rank of Major). Temporary and acting Major H. D. Gillies and retains the rank of Major. Temporary Captain and brevet

Major H. F. Marris and retains the brevet rank of Major. Temporary Captains and are granted the rank of Major: R. Charles, O.B.E., R. G. Riches, A. G. Hamilton, A. Mathieson, J. E. H. Roberts, E. Biddle, M.C., A. R. Esler, J. W. Dew, M.C., (acting Major), A. C. Pickett, E. S. Marshall, M.C. (August 28th, 1919, substituted for notification in the *London Gazette*, September 27th, 1919). Temporary Captains and retain the rank of Captain: P. A. Sargeant (August 30th, 1919, substituted for notification in the *London Gazette*, July 26th, 1919), J. Finnegan, L. G. Brown, M.C., B. D. Merrin, J. T. H. Madill, C. C. C. White, W. Lock, P. Donald, A. W. McGregor, A. E. Finney, H. I. Pinches, J. B. Tombleson, F. W. McMillan, R. G. Meyer, A. J. Brock, W. Parker, F. Morris, J. McCausland, D. L. Seaman, P. W. M. Curry, P. R. Lowe, H. Archer, S. F. McDonald, W. D. Sammon, J. B. McDougall, F. C. Mason, O. S. Kellett, J. E. Rees, W. Lesacy, P. Bryan, R. C. Cantsworth, G. M. Grant, A. Crawford, W. R. Logan, G. M. Jackson, A. F. Millar, G. A. Kitching (on ceasing to serve with the South African Native Labour Corps), P. J. Watkin-Williams, D.S.O., J. W. Bennett, F. W. Bird, M.C., G. P. B. Huddy, E. W. H. Cruickshank, E. C. Tamplin, M.C., W. D. Allan, J. M. Campbell, G. W. Christie, M.C., N. P. Hallows, P. Wallace, F. A. Mills, A. G. Macleod, R. C. Crawford, G. E. Elkington, D. G. Halsted, J. A. MacLean, C. W. Wilson, T. H. Fowler (on account of ill health contracted on active service), W. H. Ross (on account of ill health caused by wounds), F. A. Grange, M.C., H. B. Emerson, R. Y. Stones, M.C., H. V. Fitzerald, G. C. Ramsay, N. Booth, D. C. Evans, G. Jonghin, H. W. Hodgeson, S. W. Coffin, J. B. Whitfield, G. A. Bird, M.C. On account of ill health contracted on active service: A. J. Bennet, H. G. Sparrow. Temporary honorary Captains, and retain the honorary rank of Captain: F. J. Caldwell, E. S. Bridges, D. C. Parmenter, Lieutenant (temporary Captain) D. J. Valentine. Temporary Lieutenants and retain the rank of Lieutenant: E. W. Sharp, W. G. Cook, D. Ferguson.

ROYAL AIR FORCE.

MEDICAL BRANCH.

Lieut.-Colonel G. N. Biggs (Major R.A.M.C.T.F.) from unemployed list, to be restored to establishment without pay and allowances. Captain H. Harvey to be acting Major whilst Major. Flying officer R. G. J. McCullagh to be Flight Lieutenant. Transferred to unemployed list: Acting Lieut.-Colonels J. L. Birley, O.B.E., H. C. T. Langdon, O.B.E. Captains W. P. Whippell, R. B. Lilly, A. H. Wade. Lieutenants E. F. Wilson, E. E. Rollins, L. Patchett, W. J. Lytle.

INDIAN MEDICAL SERVICE.

Lieut.-Colonel B. R. Chatterton, M.D., has been appointed to be an Honorary Surgeon to His Excellency the Viceroy, vice Lieut.-Colonel T. A. Granger, C.M.G., M.B., whose tenure has expired. The services of Major A. W. Overbeck-Wright, M.D., have been placed permanently at the disposal of the Government of the United Provinces.

Lieut.-Colonel J. C. H. Leicester, M.D., F.R.C.S., has been appointed to officiate as Professor of Midwifery, Medical College, and Obstetric Physician and Surgeon of the Medical College Hospitals, Calcutta (September 5th, 1919).

Lieut.-Colonel Sir J. R. Roberts, Kt., C.I.E., M.B., F.R.C.S., has been permitted to retire from the service (July 9th, 1919).

Captains J. H. Smith, M.B., and E. S. Goss, M.C., to be Deputy Medical Store Keepers, as a temporary measure (August 9th and 14th, 1919, respectively).

Lieut.-Colonel C. H. L. Meyer, M.D. (retired), who was re-employed during the war, has been permitted to resign, with effect from March 21st, 1919.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Major S. G. McAllum, D.S.O., relinquishes the acting rank of Lieutenant-Colonel.

Captains relinquish the acting rank of Major: A. R. F. Clarke, M.C., S. W. M. Jones, E. Watson-Williams, M.C., A. Wilson, O.B.E., M.C., A. J. Brown, D.S.O. (on ceasing to be specially employed).

Captain T. C. Storey, M.C., to be acting Major.

Captains O. C. S. Tandy and T. M. Davie, M.C., relinquish their commissions on account of ill health caused by wounds and retain the rank of Captain.

Lieutenants to be Captains: D. A. Dyer, E. S. Gawne, F. L. Whineup, J. H. E. Moore, B. Sergeant, F. Holmes, G. P. N. Richardson, W. G. Burns.

OVERSEAS CONTINGENTS.

CANADIAN ARMY MEDICAL CORPS.

Temporary Lieut.-Colonels (acting Colonels) P. Burnett, D.S.O., and T. J. F. Murphy, D.S.O., to be temporary Colonels.

Temporary Major (acting Lieut.-Colonel) W. J. McAlister, M.C., to retain the acting rank of Lieut.-Colonel.

The following officers retire in the British Isles: Temporary Lieut.-Colonel M. H. Allen, temporary Major N. J. Barton, honorary Major H. J. Testar, honorary Captain H. G. Bayes.

Temporary Captains (acting Majors) to be temporary Majors: J. R. McRae, A. C. C. Johnston, C. M. Strong.

SOUTH AFRICAN MEDICAL CORPS.

Captain E. H. Cluver relinquishes his temporary commission on completion of service, and retains his rank.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

The following officers relinquish the acting rank of Lieutenant-Colonel on ceasing to be specially employed: Majors (acting Lieut.-Colonels) F. Gracie, O.B.E., T. D. J. F. Crombie, D.S.O., T. D. H. W. Williams, Captains (acting Lieut.-Colonels) H. Paterson, A. G. Hobbethwaite, D.S.O., R. A. Broderick, M.C., R. E. Bickerton, D.S.O., Captain (Brevet Major) R. L. Guthrie, O.B.E.

Captains (acting Majors) relinquish their acting rank on ceasing to be specially employed: J. Everidge, O.B.E., K. D. Wilkinson, O.B.E., H. R. Dive, M.C., C. B. Johnstone, F. S. Bedale, M.C., J. F. Edmiston, E. W. Matthews, (Brevet Major) W. R. Bristol, A. M. Jones, H. N. Goode, M.C., H. A. Sandford, M.C., B. J. Alcock, R. P. Pollard, M.C., T. S. Elliot, M.C., R. D. Langdale-Kelham, A. W. Paterson, K. F. R. Davison.

Captain F. W. K. Tough to be acting Major whilst specially employed.

QUEEN-MARY'S ARMY AUXILIARY CORPS.

Auxiliary Section R.A.M.C. attached.—Recruiting Medical Controller H. M. Henderson, M.B., relinquishes her appointment.

APPOINTMENTS.

RICHARDSON, Edmund D., M.R.C.S., L.R.C.P., D.P.H.Lond., Tuberculosis Officer in charge of the Central Dispensary under the Lambeth Borough Council.

STEEN, Robert Hunter, M.D., M.R.C.P.Lond., Out-patient Physician for Psychological Medicine, King's College Hospital, Denmark Hill, London.

EDINBURGH ROYAL INFIRMARY.—Resident Surgeon: J. Leslie Wilson, M.B., Ch.B. Non-resident House-Physician: W. J. Nisbet, M.B., Ch.B. Non-resident House-Surgeon: Robert Stevenson, M.B., Ch.B. Clinical Assistant: Daniel McKiever, M.B., Ch.B.

EDINBURGH ROYAL MATERNITY AND SIMPSON MEMORIAL HOSPITAL.—Physicians: William Fordyce, M.D., F.R.C.P.Edin., J. Lamond Lackie, M.D., F.R.C.P.Edin.

ROSS COTTAGE HOSPITAL.—Surgeons: A. Adam Dighton, L.R.C.P., L.R.C.S., H. L. D'Oliver Duckworth, M.B., B.Ch.

ROYAL FREE HOSPITAL, Gray's Inn Road.—Honorary Anaesthetist: C. W. Morris, O.B.E., M.B., B.S. Surgical Registrar: Major J. McLean Pinkerton, M.B., Ch.B.Glas. Casualty Officer: Miss U. P. Blackwell, M.R.C.S., L.R.C.P. Clinical Assistants Throat, Nose, and Ear Department: Miss A. M. Matland, M.R.C.S., L.R.C.P. Miss Gowers, M.R.C.S., L.R.C.P. Clinical Assistant Medical Out-patients: Miss Gowers, Junior Obstetric Assistant: Miss Lloyd Williams, M.R.C.S., L.R.C.P.

ROYAL HATFAX INFIRMARY.—Honorary Physician: N. V. Mitton, M.B., Ch.B.Leeds. Honorary Assistant Surgeons: P. L. Pollard, M.B., Ch.B.Vict., McWilliams Henry, jun., F.R.C.S.Edin.

ST. MARY'S HOSPITAL, Paddington.—Assistant Surgeon for Diseases of the Ear, Nose, and Throat: Kenneth A. Lees, M.B., B.Ch.Cantab., F.R.C.S.Eng. Honorary Anaesthetists: A. W. Matthew, M.R.C.S., L.R.C.P., J. H. Newmarch, M.B., B.Ch., M.R.C.P.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

GRAY.—At the Sanatorium, Grassington, Yorks, on October 15th, to Dr. and Mrs. J. W. Gray, a son.

THOMASON.—On October 24th, at a nursing home, the wife of H. P. Thomason, M.B., Ch.B., Fillingley, near Coventry, a son.

DEATHS.

FOWLER.—On October 26th, at Ardvoan, Poole Road, Bournemouth, Frank Fowler, M.D., aged 54.

RENTON.—At 80, Thirstlane Road, Edinburgh, on October 20th, James Crawford Renton, M.D., late of 1, Woodside Terrace, Glasgow.

DIARY FOR THE WEEK.

ASSURANCE MEDICAL SOCIETY, 11, Chandos Street, W.—Wednesday, 5.30 p.m., Dr. Otto May: The Tuberculosis Problem in Life Assurance.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Friday, 5 p.m., Demonstration by Professor Arthur Keith, F.R.S.: Multiple Exostoses.

RONTGEN SOCIETY, 11, Chandos Street, W.—Tuesday, 8.15 p.m.

ROYAL SOCIETY OF MEDICINE.—Section of Surgery: Subsection of Orthopaedics: Tuesday, 5 p.m., Cases. Section of Pathology: Tuesday, 8.30 p.m., Dr. Dennis Embleton: Sphenoidal Empyema and Epidemic Meningitis. Professor Arthur Powell: A Bodo-like Flagellate in the Urine. Section of Surgery: Wednesday, 5.30 p.m., Discussion and Exhibition of Specimens of Secondary Deposits in Bone mistaken for Primary Tumours, to be opened by the President, Sir John Bland-Sutton. Section of Ophthalmology: Wednesday, 8 p.m., Cases; 8.30 p.m., Dr. Rayner D. Batten: The Need of Ophthalmic Physicians for the Advancement of Ophthalmology. Section of Obstetrics and Gynaecology: Thursday, 8 p.m., Cinematograph Demonstration, Dr. Drummond Robinson: The Cinematograph in the Teaching of Obstetrics. Dr. Herbert Spencer: Nine Cases of Inversion of the Uterus. Section of Laryngology: Friday, 4 p.m., Cases and Specimens. Section of Anaesthetics: Friday, 8.30 p.m., Dr. F. E. Shipway: Intratracheal Insufflation of Ether in Operations Involving Bleeding into the Air Passages; Demonstration of Apparatus for administering Nitrous Oxide and Oxygen, by Professor Desmarest (Paris), Dr. Geoffrey Marshall, and Dr. F. E. Shipway.

POST-GRADUATE COURSES AND LECTURES.

BROMPTON HOSPITAL FOR CONSUMPTION.—Wednesday, 4.30 p.m., Demonstrations in the Wards.

FELLOWSHIP OF MEDICINE, 1, Wimpole Street W.—Monday, noon, Dr. P. J. Cammidge: Diabetics, Complications. Wednesday, noon, Dr. H. Bayon: Microscopic Diagnosis of Malignancy. Thursday, 5 p.m., Mr. Lockhart Mummery: Painless Operations.

MANCHESTER ROYAL INFIRMARY.—Tuesday, 4 p.m., Clinical Types of Gal I Stone Disease.

ROYAL EYE HOSPITAL, Southwark.—Monday, 5 p.m., Cataract. Wednesday, 5 p.m., Refraction (II). Friday, 5 p.m., Diseases of the Iris and Ciliary Body.

DIARY OF THE ASSOCIATION.

Date. Meetings to be Held.

NOVEMBER.

- 4 Tues. Willesden Division, St. Andrew's Schools, 133, High Road, Willesden Green, 8.30 p.m.
- 5 Wed. London: Council, 11 a.m.
- 13 Thur. London: Medical Research and Laboratory Workers' Subcommittee, 2.30 p.m.
- 27 Thur. London: Conference of Local Medical and Panel Committees, Memorial Hall, Farringdon Street, London.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, NOVEMBER 8TH, 1919.

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INSURANCE REMUNERATION FOR 1920.

MEMORANDUM BY THE INSURANCE ACTS COMMITTEE (M. 22).

THE Insurance Acts Committee of the British Medical Association has issued the following Memorandum on the remuneration of insurance practitioners under the 1920 terms of service:

1. The Central Pool (forming the Central Practitioners' Fund) is a sum ascertained by multiplying the actuarially calculated number of insured persons for any year by an agreed capitation fee. The Local Pool of an Insurance Area (County or County Borough) is that proportion of the Central Pool which is allocated to the area by the Distribution Committee. The remuneration of each practitioner is such proportion of the local pool as is appropriate to the work he has done or the liabilities he has undertaken. This remuneration therefore is not necessarily the number of names on a practitioner's list multiplied by the agreed capitation fee; but it is nevertheless necessary to ascertain a capitation fee for constituting the Central Pool in such a way as to afford sufficient remuneration to practitioners whether they are paid individually on an "attendance" or on a "liability" basis. Allowance must also be made for the fact that a first call on the Central Pool is for the administrative expenses of Panel Committees, whether such call is made by the exercise of statutory powers or by a voluntary arrangement.

2. There are two main methods by which the ascertainment of the appropriate capitation fee may be approached:

(i) The pre-war fee (7s. 6d. as a maximum or 7s. 3d. as an average) may be taken as a basis, and inquiry made as to the proportion in which certain altered circumstances and conditions should vary this.

(ii) An appropriate total remuneration for a skilled general practitioner doing a full year's work as such may be ascertained, and from this may be calculated a capitation fee which may be expected to produce an income in accordance with that proportion of the total work done in connexion with the insurance service.

3. Whichever method is adopted it is evident that (a) some material factors will be of an uncertain character or insusceptible of mathematical proof, (b) it is necessary to take the average of many cases so that the inappropriateness of some statements or calculations in individual cases may not vitiate the result, (c) there are other relevant conditions which may modify to some extent the results arrived at in strict accordance with paragraph 2.

4. Taking the former method, the basic fee of 7s. 6d. cannot be assumed to be an agreed one, since even if circumstances had not changed it was understood that it would be subject to reconsideration as the result of three years' experience. However, from the professional side, the fact that this fee has been tolerated for seven years (with an obviously necessary "bonus" addition during the last two of them) may be taken to indicate that it was not wholly inappropriate in pre-war conditions. It must be emphasized, however, that almost from the beginning the bulk of insurance practitioners have regarded it as too low, and that this toleration of the fee has largely been due to patriotic motives—the desire to continue at work and to create no unnecessary disturbance in a national emergency.

5. The main factors necessitating the revision of this fee may be grouped thus:

(1) The altered value of money.
(2) Increased work and responsibility owing to the impaired health or disabilities of discharged or demobilized men, and of similar war effects among other insured persons.

(3) Certain modifications of service under the proposed new arrangements.

(4) Newly or increasingly recognized responsibilities of general practitioners in connexion with public health and medical research.

6. As to the first point—the altered value of money—there are two factors to be taken into consideration, cost of living and expenses of practice.

Cost of Living.

7. The question of the increase which ought to be made to cover the increased cost of living is a matter of considerable difficulty, not only because it is almost impossible to secure reliable and adequate data, but because even if we had these there is no generally accepted standard by which the appropriate degree of compensation for high prices can be measured. We have the Board of Trade figures which show that at a recent date the rise in the price of articles consumed by the working classes was 120 per cent.—and apparently the rise is still going on. In the case of incomes practically the whole of which must be spent on necessities this would be a reliable standard. In this regard, the fact that persons with large incomes may be able to purchase certain necessary commodities to greater advantage than those with quite small incomes is balanced by the fact that many of the more essential articles of food can often be purchased by the latter advantageously at street and other markets which are not available for the former. The difficulty of discovering an agreed standard arises with regard to that portion of the larger incomes which is spent on "comfort" and "luxuries" and

which may be available for actual saving and investment. It is common ground that, in the case of incomes of a moderate amount such as the professional classes may be regarded as receiving, an appropriate allowance should be made for at least the former of these forms of expenditure. In fact, in these classes, many things which are sometimes called "comforts" and "luxuries" are actually necessities unless their standard of living is to be degraded in a way which would not be advantageous either to them or to the community. The difficulty is to combine these various factors so as to arrive at an appropriate assessment for a professional man.

8. The award made to the Civil Service cannot now be regarded as adequate, whether as applied to that body or to the medical profession. In order to test its adequacy we may take the case of a man with an income of £1,000 a year, with no income other than his professional earnings, and with a wife and three children to support, two of the children being at school. In this fairly typical case we must discover what is the actual increase of income which the bonus gives him, and what is the actual necessary additional expenditure in respect of which the bonus is given. The bonus received under the award is £260, but from this has to be deducted (a) the income tax on this bonus at the rate paid before the bonus was granted; (b) the extra 9d. in the £ on £1,260 by reason of the total income having been brought into the high rated category; (c) the loss of the allowance on one child from the same cause. These deductions leave the increase of actual income due to the bonus at about £168, in comparison with what it would have been if the bonus had not been given. The absolutely necessary additional expenditure is (a) food, fuel, light, and cleaning materials, at 15s. a head per week, £195; (b) clothing at, say, £20 a head for self and wife, and £10 for each child, £70; total £265. So that the net additional income produced by the bonus in such a case covers barely three-fifths of the additional expenditure on necessities and allows nothing for luxuries or even comforts. Further, there is no provision for the education of children to an extent which will enable them to earn an income which will maintain them in the same social or industrial scale as their parents. If the average practitioner is to be forced to economize on this item, not only will injustice be done to individuals, but in the long run the highest interests of the community as a whole must suffer.

9. Moreover, it must be remembered that the bonus given to civil servants covers only cost of living, and includes nothing equivalent to the item of practice expenses; that it varies from 50 per cent. to the civil servant earning £200 a year to 25 per cent. to the man earning £1,200 a year; and that while the civil servant may economize by changing his residence or altering his standard of living, these economies are not open to the medical practitioner, who would stand to lose materially in income by adopting them.

Expenses of Practice.

10. Particulars as to the expenses incurred in twelve each of rural and semi-urban practices were supplied in October, 1918, to the National Health Insurance Commissioners in connexion with the application for a grant towards increased practice expenses. These showed:

	Year 1915 or 1914	Year 1917.
Expenditure—	£	£
1. Drugs, instruments, professional books, etc., and general surgery expenses	3,549	4,571
2. Travelling expenses	4,826	8,420
3. One-third of rent, rates, lighting, and firing	894	1,048
4. Salary, etc., of locum, assistant and dispenser	849	1,551
5. Telephone	178	242
Total expenses	10,295	16,198
Gross receipts	42,784	47,135
Net earnings	32,488	30,937

On these figures it is necessary to make the following comments:

(i) As dispensing practitioners must hold some stocks of drugs, the 1917 expenditure does not represent the full rise in price, even at that time.

(ii) In war time many cars were used which in normal times would have been replaced by new ones. If replacements had occurred with normal frequency, the increase shown in the above figures would have been greater.

(iii) Figures for rents, etc., are too low in both years. When practitioners sending in returns owned their houses they frequently omitted to charge any rent for them. Rents must rise, and sooner or later higher charges will have to be incurred.

Examination of the figures also suggests that insufficient charges were made for wages and board of domestic servants.

(iv) There can be no doubt that if figures could be obtained from urban areas, those practices would show a higher rate of costs, for not only would rent, rates, and general practice expenses be higher than in the rural areas, but the cost of locomotion would be relatively higher owing to the more frequent stoppages leading to less economical consumption of petrol and more wear and tear.

(v) The above returns apply to 1917 (mid-year), since which time every item has increased in cost with the possible exception of drugs.

11. These figures show (a) an increase of expenses from 25 per cent. of the gross receipts in 1913 to nearly 35 per cent. in 1917, (b) an increase of 60 per cent. in the expenses themselves in 1917. These figures are almost certainly too low as will be seen from the considerations set out in the preceding paragraph, and the last figure of 60 per cent. for mid 1917 becomes probably 85 per cent. for end-1919, if increased in accordance with the proportionate rise of prices between those periods. A consideration of all these facts leads to the conclusion that in order to produce a rise of not more than 50 per cent. in the money-income over 1913 approximately 60 per cent. would have to be added to the gross income. To take this latter figure as the percentage of increase which is necessary in respect of the altered value of money is certainly not unreasonable, and probably leaves the actual income somewhat less than in 1913, for the same amount of work and responsibility.

12. With regard to the increased work and responsibility involved in the attendance on discharged disabled men, such statistics as we have had access to seem to show the need of an increase of 2½ per cent. on the pre-war general capitation fee. But this is certainly too small a proportion, mainly owing to two reasons:

(1) The accounts rendered for these cases do not represent the whole of the attendances, for (a) a considerable proportion of discharged disabled men have not been placed on the special attendance system at all, but have been retained on the ordinary list; (b) a considerable number of practitioners have never rendered any accounts for the attendances given; and (c) in many instances the accounts rendered have been only for relatively serious attendances, while accounts for shorter attendances have not been sent in; and

(2) Many discharged disabled men (especially in towns) have been referred for treatment to institutions direct instead of being sent to insurance practitioners as should have been the case, and it must be assumed that in future, with the gradual closing down of military hospitals, a more correct course will be followed.

Even these imperfect statistics indicate, and general experience appears to show, that the attendance required by a discharged disabled man is approximately twice that of an ordinary insured person.

13. Besides those men who come under the special arrangements for discharged disabled soldiers and sailors there are large numbers of others who have been demobilized in a state of impaired health (for example, liable to attacks of malaria, dysentery, and trench fever). The experience of practitioners has led them to form the opinion that the effect of this class upon their work and responsibility is even greater than that of the discharged disabled men, apart from the consideration of their vastly larger number.

14. It is sometimes said that there are classes of insured persons on whose health war conditions have had a beneficial effect. The evidence of the existence of such classes does not seem at all clear. The deleterious effects of war conditions on many classes of insured persons are, however, undoubted, and though the incidence of these may vary with locality to some extent, there is a widespread prevalence of certain war-produced conditions (for example, delayed nerve disturbances) which in the aggregate have materially increased the work of insurance practitioners.

15. The new conditions of service impose at least two definite new liabilities—namely:

- The provision of attendance in emergencies,
- The making of additional reports in certain cases.

These are entirely fresh responsibilities or liabilities, which do not exist at all under the present contract; and, in addition, the proposed future conditions of service are in several respects more stringent than in practice the old have been. Instances are the provisions with regard to (a) surgery and waiting-room accommodation, (b) the employment of assistants and deputies, (c) the giving of services outside the contract, (d) the number of insured persons who may be accepted, and (e) attendance for conditions arising out of labour after the tenth day. These are not mentioned here as being new liabilities at all comparable in this respect to those named above, nor is it suggested that their increased stringency is other than proper, but it is a fact to be noted in this connexion as one which should be given its due weight when considering any variations of capitation fee appropriate to modifications in the conditions of service.

16. It is recognized that under the existing conditions it is the practitioner's duty to give his best attention and exercise his highest skill towards the cure of those insured persons for whom he is responsible, and that to this end he should avail himself of such new or improved methods of diagnosis and treatment as are within his reach. This duty is not a new one imposed by the new conditions, but it is claimed that the recent advances in medical and surgical technique, and the increased and increasing availability of improved methods, do constitute a factor which is germane to the determination of the appropriate capitation fee governing the practitioner's remuneration—that is, that the fee ought to be fixed in view of the fact that he is expected to increase his knowledge and to use it appropriately in accordance with his best judgement.

17. In addition to this high standard of work in the cure of the individual a further important consideration now arises. It would be possible for a practitioner to perform his duty with great conscientiousness and efficiency in this regard, without doing anything material in the sphere of preventive medicine in the interests of the community as such, and without contributing anything to the furtherance of medical research, on which all future progress depends. The importance of the general practitioner in both these respects is largely a new realization, and is, at any rate, becoming much more definitely recognized to-day than it was eight years ago. The insurance service should be an important factor in these directions, and the insurance practitioner should be expected, in proportion to his ability and opportunity, to do what he can in these respects. Examples are increased attention to pre natal conditions, increased co-operation with the medical officer of health in sanitary matters, and, above all, the investigation of the beginnings of disease by the study of symptoms in a way which no one but the general practitioner has opportunity for doing. It is not maintained that the particular talents of every practitioner will be equally suitable for this research work, or that every one will be equally fortunate in his opportunities, but it is urged that the remuneration of the service should be such as to attract to it and maintain in it the type of practitioner indicated.

18. There is one other point which may properly be considered. Conditions since the year 1912—mainly, but not exclusively, war effects—have resulted in a very marked decrease in the supply of medical practitioners and a very greatly increased demand upon the services of the profession by the community. The economic value of these services is necessarily enhanced.

19. If, then, we regard the alteration in the value of money as requiring at least 60 per cent. increase on the basic fee, it is still necessary for our purpose to assign some appropriate percentage to the other factors named. This is perhaps less susceptible to mathematical test, but it can scarcely be placed at less than 20 per cent.—say 10 per cent. in respect of the definitely increased work and responsibility in regard to the impaired health of those classes referred to in paragraphs 11, 12, 13, and 14, and 10 per cent. in respect of new liabilities and newly recognized responsibilities for the future. This gives us:

	s.	d.	s.	d.
Basic fee	7	3		
60 per cent.	4	4		
			11	7
10 per cent.			1	1
10 per cent.			1	1
			13	9

20. Inasmuch as the basic fee cannot be said to be definitely agreed at the figure of the existing capitation fee,

however, as well as for other reasons, the Committee would prefer and attaches greater importance to the second of the two main methods mentioned in paragraph 2.

21. This second method for ascertaining the appropriate capitation fee may be stated in two forms:

(i) The total gross annual income appropriate to a reasonably full year's work of a general practitioner, as such, may be agreed; the proportion of this work which would, under the conditions contemplated, be required by a given number of insured persons may be investigated; and the capitation fee may be determined from these data.

(ii) The fees determined mainly by individual and traditional experience, but modified by recent and present economic conditions) appropriate to different items of general practitioner service may be agreed; an average fee per item of service may be gauged from these; the number of items of service required on the average by each insured person may be found from past records as modified by any relevant facts; and the capitation fee may be determined from these data.

These are merely two aspects of the same method, for doubtless all medical fees for particular services are ultimately regulated by the total annual income they may be expected to produce. There may, however, be some advantage in checking one form of calculation by the other.

22. Taking the first mode, it is suggested that the income factor may reasonably be placed at £1,800 for a recognized 2,400 hours' work, and that the proportion of such time appropriate to a list of 1,000 insured persons would be approximately three-eighths.

23. It is necessary to examine carefully the exact meaning and propriety of these figures. First, take the hours. It will probably be unnecessary to prove that an 8-hour day for 300 days in the year is rather above than below what is coming to be regarded as ordinary full work for those classes whose work can appropriately be measured by time. No such measure (least of all a daily measure) can properly be applied to professional work, and, least of all, to that of a general medical practitioner. But the equivalent number of hours spread over the year may be taken as a reasonable datum for calculation.

24. Secondly, take the income. The sum mentioned is a gross amount at present-day values. For the purpose of comparison with other professional emoluments—for example, the salaries of whole-time officers—the proportion of practice expenses must be deducted. These, of course, vary within considerable limits, but if the average be taken at 33 per cent. if drugs and dispensing costs be included, or at something less, say 25 per cent. in non-dispensing practices, it will not be an over-estimate under present conditions. Further, the resulting figure is not taken as the commencing net income of a practitioner entering on practice or of one whose success is of an average character. It is, on the contrary, taken as the income of a man of average ability, whose personality, or opportunity, or luck, has resulted in his practice occupying his full ordinary time, and it may therefore be compared with the maximum salary of a whole-time officer.

25. On the other hand, the gross income named is not necessarily the largest amount that any general practitioner can expect to obtain as a year's professional income, for (1) there are considerable numbers of general practitioners who are in some degree specialists, and who therefore, in respect of part of their work, receive fees which it is customary to reckon on a somewhat higher scale; (2) many practitioners possess professional skill or psychological characteristics which enable them to do more than the average in a given time; (3) many practitioners may choose, or may be compelled by circumstances, to work "overtime," and can do this effectively over a greater or less number of years. These facts do not affect the propriety for the present purpose of reckoning a reasonable income for work of what may be regarded as full ordinary duration.

26. Thirdly, consider the proportion of such work properly assignable to the professional attention necessitated by a list of, say, 1,000 insured persons. Statistics of the work of insurance practitioners seem to show that this would involve somewhat less than fourteen items of attendance per day, but the contemplated future conditions—for example, the inclusion of discharged disabled men and others of impaired health—will certainly necessitate a distinctly larger number of attendances. We may safely assume not less than, say, four visits and ten or eleven surgery attendances per day. The time actually occupied in paying these visits and giving these attendances is not

the only item to be taken into account. Within the total ordinary professional working time must be included (a) that occupied by professional correspondence, notes, and records, and (b) that given to purely professional reading and study for the benefit of the individual cases attended. A proper proportion of the time so occupied must therefore be assigned to attendance on insured persons, and if all these factors be considered, three hours out of every eight may not unreasonably be taken as occupied by efficient attention to 1,000 such persons.

27. The estimate made in the preceding paragraph is, of course, a difficult one. We believe it to be approximately correct; but even if the proportion of three-eighths be a slight over-estimate, there is another important consideration which should materially affect the calculation. The whole of a practitioner's time is (or should be) at the disposal of his patients, and even if, in the case of a practitioner with 1,000 insured persons on his list, it may be expected that not more than three-eighths of his ordinary working time will, in fact, be occupied by such persons, the conditions of the insurance contract really constitute a prior claim for such persons on the whole of his time. Such provisions as those relating to emergency attendances or the provision of a deputy do not become of no effect by reason of the fact that the practitioner was properly engaged in attending his private patients at the time the insured person required his services. The calculations on the above figures will be found to give a capitation fee of 13s. 6d.

28. Passing to the alternative method of calculation mentioned in paragraph 17, items of service under the contract may be of several kinds—surgery attendances, certificates, visits, special or night visits, attendances on miscarriages, dislocations, fractures, minor operations, the provision of an anaesthetist when required. Fees for these services in ordinary practice correspondingly vary. They are different, also, in different classes of practice, but professional experience has stabilized them within certain limits, and this experience, modified by a suitable allowance made for the present economic conditions, enables us to gauge a reasonable average fee for a practice conducted on such lines as everyone would wish to apply to the insurance service. We believe that such an average fee should now be not less than 3s. 4d.* This is a gross fee, the net remuneration per item of service being 25 per cent. to 33½ per cent. less.

29. Insurance statistics show an average of approximately 3.8 items of attendance per insured person per year. These statistics are not regarded by practitioners as very reliable, but statisticians may possibly be in a position to satisfy their doubts. In any case, the average number of items shown by these statistics must be increased in future, as indicated in a previous paragraph, by the inclusion of discharged and invalided men and others. To reckon four attendances per insured person would not be an over-estimate. These figures result in a capitation fee of 13s. 4d.

30. Any uniform rate of payment will almost certainly result in some individual practitioners being overpaid while others are underpaid. These inequalities, however, whether due to differences of individual ability and character or to varying incidence of sickness in different localities or practices, are accepted as being probably counterbalanced by the conveniences of the method, or to some degree inevitable under any practical method. It is claimed that the capitation fee should be such as to result in such remuneration of the insurance service as will attract to the service, or retain in it, practitioners of the highest skill and character.

31. The Committee believes that, for the reasons set out in this memorandum, a fee of 13s. 6d. is the lowest that is consistent with fairness to the profession, and that any lower rate of remuneration than this must result in a service which is to some extent dissatisfied and unsatisfactory. It recognizes that this means an additional national provision for the service of some four million pounds, but it does not believe that if the profession's contentions are just, the nation, in the new economic conditions, will grudge this to secure an improved and

adequate medical service for some 15,000,000 of its population.

REPLY BY THE MINISTRY OF HEALTH.

The following official reply to the above memorandum has been addressed by the Ministry of Health to the Secretary of the Insurance Acts Committee:

Sir,

1. I am directed by the Minister of Health to state that the Memorandum (M. 22) on the Remuneration of Insurance Practitioners under the 1920 terms of service, forwarded with your letter of October 25th, has been submitted to him, and that he has under his close consideration the subject to which it relates.

2. It is noted that the Memorandum is being sent to the officers and members of Local Medical and Panel Committees, and will also be sent to every insurance practitioner, together with such reply, if any, as the Minister may think well to make at the present stage. It is further understood that, after consideration of the subject by Panel Committees and insurance practitioners, it will be considered at a Conference of Local Medical and Panel Committees to be held on November 27th.

3. From perusal of the Memorandum Dr. Addison observes that the arguments therein set forth tend to suggest that the general capitation rate (apart from mileage allowance for rural practitioners) on which calculations of the remuneration of insurance practitioners are based, should be increased to 13s. 6d. per head per annum.

4. Such an increase would, as your Committee recognize, entail a large additional expenditure of public funds. In the present serious position of national finances any proposal for increased expenditure must receive the closest scrutiny; and it is essential that the case in support of such a claim as is now foreshadowed should be conclusively established.

5. At the same time, Dr. Addison fully recognizes the importance of providing proper remuneration for the doctors engaged in giving medical services under the Insurance Acts.

6. In order that the matter may receive the careful consideration which is necessary, alike from the public and professional standpoint, he recognizes that ample time must be given to those members of the medical profession who are especially concerned for examining the subject with due regard to all relevant considerations; and further, that it may be of assistance to them, in such an examination of the matter, both prior to and in the Conference of November 27th, to have before them, in addition to the Memorandum of the Insurance Acts Committee, a statement of points which occur to him from the public standpoint at the present stage of his consideration of the subject, and on the information now before him.

7. The object of the Minister, as of those representing the profession, must be to arrive at agreement as to a capitation rate which will represent a fair remuneration, in present circumstances, for the professional work involved in giving adequate attendance and treatment to insured persons, under the proposed new conditions of service.

8. In attempting to find a satisfactory basis for the determination of the proper capitation rate, either one of the methods indicated in the Memorandum of the Insurance Acts Committee may at first sight appear suitable, and the Minister would not preclude from consideration any other method of examination of the question which may be thought more appropriate.

9. Of the two methods mentioned, that based upon the capitation rate fixed in 1912 would naturally suggest itself as the most direct method of approaching the subject. But, as a means of arriving at agreement, this method suffers from the defect that it is not accepted as agreed that the rate fixed in 1912 was the proper remuneration, in the circumstances of that day, for the services then required. It appears that many doctors consider that it was insufficient. On the other hand, the Government cannot ignore the opinion of many who have been conversant with the working of the Insurance Medical Service that the 1912 rate afforded an excessive remuneration for the services rendered; and it would be unprofitable to enter now upon an exhaustive investigation of the appropriateness or otherwise of that particular rate.

* The statistics for the medical attendance and treatment of discharged soldiers and sailors show an average per item of 2s. 1d., which increased by 60 per cent. on account of the altered value of money is exactly 3s. 4d., and this in spite of the fact that the proportion of the higher priced items in the urban areas is obviously too low.

10. But, although for these reasons a calculation based on the 1912 rate must be inconclusive, it may be helpful in considering the general subject to refer to some of the points put forward on behalf of the profession in this connexion, which must apply equally to any other method of examining the subject.

11. The first is as to the weight to be attached to the alteration in the value of money as affecting both the cost of living and cost of practice expenses. It is observed that in the opinion of the Insurance Acts Committee whatever rate was appropriate in 1912 ought on these grounds now to be increased by 60 per cent. In arriving at this figure, however, some assumptions are made in the Memorandum which will be seen on examination to be invalid. Such are the inclusion of income tax as a set-off in the calculation of the benefit derived from the war bonus, and the use of the figures derived from rural and semi-rural experience for the purpose of estimating the allowance to be made for increase of practice expenses under urban conditions.

12. The position of medical practitioners as regards income tax does not differ from that of other citizens. The object of any allowance such as is here under consideration is to secure that remuneration shall be such as, in terms of present currency, will afford an income appropriate to the services for which the remuneration is paid. The total income thus ascertained must then contribute its proper share to public burdens, in accordance with the principles applied to any other persons enjoying the same income. To take income tax into account in any way in assessing the allowance would be, in effect, to relieve the recipient of the allowance of part of his share of income tax.

13. As regards practice expenses, it is observed that drugs and travelling expenses form a very large proportion of the items of expenditure on which the calculation in the Memorandum is based. But the cost of drugs does not enter into working expenses of insurance practice under urban conditions, and the cost of travelling is, of course, a much smaller item per person attended, or per person entitled to attendance, in an urban than in a rural district.

14. When the necessary correction is made in respect of these items, the case at present put forward appears to Dr. Addison to fall far short of establishing 60 per cent. as the allowance properly to be made in respect of increased cost of living and practice expenses in an urban area.

15. Apart from change in the value of money, the changed circumstances now to be taken into account are:

(i) Any change in the health of the insured population as a result of the war, particularly in the case of ex-service men, which may be likely to increase the work of insurance practitioners;

(ii) Any increase in the amount of work that may result from changed conditions of service.

16. As regards increased attendance expected to be required as a result of war conditions, the case put forward appears to Dr. Addison to be, in the main, of a conjectural character. The one ascertained fact is that the attendance of ex-service men discharged disabled, paid for on an "attendance" basis, has entailed an additional expenditure (over and above the ordinary capitation rate) working out at about 2½d. per insured person per annum. Additional provision, it is said, ought to be made in respect of

(i) Attendance said to be given to ex-service men, although not hitherto charged for; (ii) extra attendance that may be required by men demobilized in an impaired condition of health, and (iii) the assumed deterioration of health of the insured population generally through war conditions.

No attempt is made, however, to estimate the actual amount of extra attendance for which provision should be made under any of these heads, and no weight seems to be allowed for the cases of either former soldiers or other members of the community whose health may have benefited, directly or indirectly, from military training or from special war conditions (for example, increased earnings) affecting certain sections of civilian workers. That some such persons have, in fact, benefited in health seems to Dr. Addison as indisputable as that a person who has acquired malaria in military service may hereafter require some additional attendance in consequence. The whole question is of the numbers of such persons of either kind in the whole insured population, and of the weight to be attached to them, separately and on balance, in making the present estimate. It is suggested in the Memorandum that the allowance to be made for increased attendance required in this connexion is 1s. 1d., or, in other words,

10½d. per head of the insured population, more than the additional 2½d. ascertained to have been spent on discharged disabled soldiers in 1918. It appears to Dr. Addison that this must be a very large over-estimate of any increased attendance which will, in fact, be required under this head.

17. As regards changed conditions of service, it is recognized that the new provision of the Regulations as to attendance in emergency will, and the provisions as to records and reports may, require more time to be devoted to the work in respect of any particular number of insured persons than under former conditions of service; and that other changes of Regulations referred to by the Committee, though not requiring an actually greater amount of attendance upon insured persons than was always within the obligation, may in some ways slightly increase the necessary clerical work and render the conditions in some respects less acceptable to practitioners. It is difficult to believe, however, that the additional work required in all these respects can constitute more than a very small proportion of the doctor's daily work.

18. It is suggested, however, in the Memorandum that, besides any actual new obligations imposed by the conditions of service stated in the proposed new Regulations, there may in the future be changes in concomitant circumstances tending to increase the professional work required, these including possible provision of new services (for example, specialists, laboratory facilities, nurses), linked up with the insurance service, enlargement of the general practitioner's professional obligation to his patients through advances in medical knowledge and practice, and development of the preventive aspects of his work. Such developments, however, must be a matter of time: no indication is given of the actual increase of work which it is thought will consequently take place within the period during which any new financial arrangement is likely to remain in force; and no allowance is made for various ways in which such developments may tend to diminish the practitioner's work.

19. On the whole question, therefore, of additional work expected to be required in future in connexion with the insurance service, Dr. Addison must again state that in his view the case for the increase of remuneration claimed on this account is very far from being made out.

20. The questions last considered—as to the increased professional work that may, in fact, be required for the treatment of insured persons in the new circumstances and conditions of service—have an important bearing on the alternative method of measuring the adequacy of a capitation rate, since they affect the estimation of the proportion of a doctor's total working day that will ordinarily be occupied in giving the requisite service to the insured persons for whose care he is responsible. The Insurance Acts Committee anticipate that under the new conditions three-eighths of a doctor's working time will be required for looking after 1,000 insured persons. If, however, this is in fact an over-estimate on their part of the time that will be required, a smaller fraction must obviously be assumed, which might be as low as two-sevenths or even one-fourth. This part of the case will need close investigation, since the conclusion arrived at with regard to it must have a considerable influence on the determination of the appropriate capitation rate.

If, for example, it were found in practice that adequate attention could be given, to those among 1,000 insured persons who require treatment, in a quarter of the doctor's working time—that is, two-eighths instead of three-eighths as assumed in the Memorandum—the proposed capitation rate of 15s. 6d. would correspond to a whole-time gross income of £2,700 per annum, as compared with the £1,800 per annum assumed by the Insurance Acts Committee.

21. In estimating the time necessary for giving adequate attendance and treatment to any particular number, say 1,000 insured persons, it is impossible to disregard the following considerations: The Committee's assumption that the proper medical care of 1,000 insured persons would require three-eighths of a doctor's time is equivalent to the assumption that a list of 2,700 would require his whole time, leaving no margin for private practice. This estimate is difficult to reconcile with the strong opposition that has been manifested in the profession to the fixing of a limit of 3,000 as the maximum number of insured persons for whom a doctor could be allowed to be responsible, whilst continuing to have unlimited freedom as to the number of private patients he also attends.

Regard must also be had to the fact that the Conference of Local Medical and Panel Committees was of opinion, in July last, that a limit ought not to be imposed in any area except on the special recommendation of the Panel Committee based on evidence of actual inefficiency of work. Thus, it would appear that, in the opinion of the Conference, the acceptance (as has happened) by a practitioner of responsibility for the care of, say, 4,000 or 5,000 insured persons could not be presumed, in the absence of a definite representation, to be inconsistent with adequate attendance. When every allowance is made for any real increase in the amount of attendance that may be required, under the prospective as compared with the past conditions, these facts make it difficult to accept as the finally-considered view of the profession that adequate attendance and treatment for 1,000 insured persons cannot be given under the new conditions in less than three-eighths of a doctor's working time.

22. On the other principal item in the calculation of a capitation rate on this method—namely, the gross, or the net income which is to be regarded as the proper equivalent of an average general practitioner's whole working time under existing conditions (including the present value of money), which the Committee regard as suitably fixed at £1,800 (gross)—Dr. Addison does not propose at present to express an opinion. It will be appreciated, however, that this is an aspect of the matter to which public opinion will be necessarily directed, and upon which the public generally will consider that they are competent to form an opinion.

23. From the point of view of many doctors, as well as that of the public, it may be of assistance, in considering what would be a proper capitation fee, to have before them the appended statement, showing what rate of whole-time gross or net incomes would correspond to the capitation rate now being paid (inclusive of war bonus), on different assumptions as to the proportion of a doctor's whole time which would be required for giving adequate attendance to 1,000 insured persons. The present rate, inclusive of average extra cost of attending disabled soldiers, of an equivalent to the floating 6d., and of war bonus at the average rate, may be taken as 8s. 9d.

24. On a rate of 8s. 9d.—

	Gross.	Net.*
If three-eighths of the doctor's total time were to be taken to represent the time required for 1,000 insured persons, the equivalent whole-time income is about	£ 1,160	£ 870
If two-sevenths, the equivalent is about	1,530	1,150
If one-fourth, the equivalent is about	1,750	1,320

On the other hand, the rate of 13s. 6d. would represent—

If three-eighths of a day is assumed	1,800	1,350
If two-sevenths of a day is assumed	2,360	1,770
If one-quarter of a day is assumed	2,700	2,030

* Assuming a deduction of 25 per cent. for practice expenses.

25. The decision as to the proper capitation rate, under the new conditions of service, resolves itself into, first, a decision as to the amount of time, and, thence, the proportion of the practitioner's whole working time, which may reasonably be expected to be necessary for rendering to any specified number of insured persons general-practitioner-services of the character and standard required; and, secondly, a decision as to the rate, in terms of whole-time net income, at which services of general practitioners of ordinary attainments and working capacity ought, in the prospective circumstances, to be remunerated. With regard to the second of these elements of calculation, Dr. Addison must, as already stated, reserve any expression of opinion, and must not be understood as accepting the rate of income suggested by the Insurance Acts Committee. As to the first element he desires that it should be made clear that his eventual estimate will be based on the assumption that insurance practitioners will render to insured persons the highest standard of work of which they are capable; and that there will, in fact, be nothing in the doctor's methods of work or his attitude towards his insured patients to justify the supposition, at present unfortunately somewhat widely prevalent, that they will obtain better treatment by paying fees as private patients than by availing themselves of their right to medical benefit.—I am, Sir, your obedient servant.

R. W. HARRIS,

Assistant Secretary.

Ministry of Health, Whitehall, S.W.1,
October 30th, 1919.

British Medical Association.

THE INDIAN MEDICAL SERVICE.

DEPUTATION TO THE SECRETARY OF STATE FOR INDIA.

A DEPUTATION from the British Medical Association waited upon the Secretary of State for India (the Right Hon. E. S. Montagu, M.P.) at the India Office on October 30th to discuss further the conditions of the Indian Medical Service.¹ The deputation consisted of Professor Harvey Littlejohn, of Edinburgh, Lieut.-Colonel R. H. Elliot, I.M.S.(ret.), Chairman of the Naval and Military Committee of the British Medical Association, Sir Peter Freyer, K.C.B., Lieut.-Colonel I.M.S.(ret.), Surgeon-General P. H. Benson, I.M.S.(ret.), Dr. Dawson Williams (Editor BRITISH MEDICAL JOURNAL), Dr. Alfred Cox, O.B.E. (Medical Secretary), and Dr. Courtenay Lord (Assistant Medical Secretary). Accompanying the Secretary of State were Sir Thomas Holderness, G.C.B., K.C.S.I. (Permanent Under Secretary), Mr. S. F. Stewart, and Mr. S. K. Brown.

The members of the deputation were introduced by Professor HARVEY LITTLEJOHN, who said that the President of the Association, Sir Clifford Allbutt, and Sir Berkeley Moyulian regretted that they were unable to attend. A memorandum had been prepared, which Colonel Elliot would read.

Statement by Colonel Elliot.

Colonel ELLIOT: Sir, with your permission I will, as before, read the memorandum. I need not remind you of what passed previous to our last interview with you, but I desire to recall certain points in that interview. You were good enough to promise us: (1) An increase in grade pay amounting to one-third more on the grade pay of officers, which was suggested not by the British Medical Association, but, we understood from you, by Sir Pardey Lukis; (2) arrangements for a considerable increase of cadre, which would permit of ordinary leave and study leave being granted as it fell due; (3) the safeguarding of facilities for private practice; and (4) the hope that the position of the Director-General and the Surgeons-General would be set right, in accordance with the views we were privileged to lay before. We were profoundly impressed with the manner in which you met us, and with the very considerable nature of the promises you so kindly made us, and on the strength of those promises we promised you our support in return.

Will you allow me to say here that both then and since, and not less to day than then, we appreciated very fully all you have done for this great Service? We recognize the extraordinary difficulties under which you have laboured, and we would beg that in return you would add to your many kindnesses by endeavouring to appreciate how very great are the difficulties which confront us to-day.

May I first remind you, Sir, that, as the representative of the naval and military interests of the British Medical Association, I have striven to the utmost of my power to carry these negotiations to a conclusion that would be satisfactory both to you and to the officers of our Service? You are aware, Sir, of the warning and of the request for patience and moderation that I addressed to my brother officers on the occasion of the Indian Medical Service dinner, when we had the honour of having you as our guest. You may not be aware that I followed that up with a letter, expanding and reinforcing my points, in the BRITISH MEDICAL JOURNAL.

You will, I trust, forgive me when I say that, had it been possible to put the promises you so kindly made us into immediate execution, we think it might have been possible for us, in return, to have caught the tide on the flow and to have carried our point. Once again, Sir, I appreciate your difficulties. I know that you did everything that was in your power to do, and that the delay which followed was one for which you were in no sense responsible. That delay has been one of the factors which have landed us in so many difficulties. Officers of the Indian Medical

¹ The two previous deputations on the subject were received on June 27th, 1918, and February 10th, 1919, and the proceedings were reported in the SUPPLEMENTS of July 6th, 1918, and February 15th, 1919, respectively.

Service still find leave closed to them. They have become increasingly exasperated, and consequently increasingly difficult of persuasion.

Even with regard to the question of pay great difficulties have arisen. I ask your forgiveness for speaking very plainly on this point, but the contention of many of our correspondents is that, by one means or another, the Financial Department of the Government of India have contrived so to deal with the figures that the concession you made has not in fact fulfilled the hopes and expectations with which it was received. We are aware that the subject bristles with difficulties, but that the discontent on this head is very real and very widespread we earnestly beg you to believe.

I have said that, had it been possible for your promises to have been carried out on the spot, we believe that the present crisis would not have arisen, but by reason of the delays three fresh elements have come into the case: (1) The demand for medical men has gone up rapidly and speedily, both at home and abroad—that demand is still rising, as others will tell you to-day; (2) the cost of living has gone up in India, as in other parts of the world; and (3) time has been given for officers to discuss the question at length and to formulate their demands in a way that they had not done before. The full weight of these factors began to be evident at the last Representative Meeting of the British Medical Association in July, where it was made clear that an agitation had been set on foot from many quarters, which made it quite impossible for us, who represent the interests of the navy and the army and the Indian Service, to carry out the programme we had hoped. If we had attempted to do so, we should inevitably have been met with a wave of opposition that would have swamped these negotiations.

Three points have been raised by our critics: (1) The question of free passages to and from India; (2) that the pensions of Indian Medical Service officers have not been raised and are very unsatisfactory; and (3) that the increase of pay recently granted is insufficient.

It would be quite useless, Sir, for us to support you if we felt that that support would prove absolutely valueless, in view of the rapid alteration in economic and professional conditions and of the representations made to the Association by many Indian Medical Service officers. We have asked ourselves the question which you may reasonably ask us, Where is this to end? and to the answer we have given long, earnest, and careful thought. Our determination is to tell you frankly the terms which we believe will get the men you need. If you in return can meet us in these matters, we are determined to end the matter once for all, to nail our flag to the mast, and to say to the young men entering our profession: "This is a Service worth entering; we consider these terms such as should prove attractive to able medical men, and we advise you to take them, and to enter the Indian Medical Service, whatever the grumblers may say."

The terms for which we beg your consideration, in addition to those general improvements in the conditions of the Service which have already been discussed at previous interviews and on which we have had your assurance, are: (1) An increase in the pensions of retired officers to meet the increased cost of living; (2) steamer passages backwards and forwards to India for all officers of the Indian Medical Service going out, retiring, or travelling on leave; and (3) an increase of pay which shall be equivalent to a rise of 50 per cent. on the total pay that an officer under similar circumstances would have drawn under the same conditions before the war. We would ask that (1) and (3) be made retrospective.

To meet the case of the many overtired officers of the Indian Medical Service whose leave is long overdue, we suggest as a purely temporary measure that you should offer such conditions and pay as will attract a number of young men to go out for short terms to afford the necessary relief.

One point more in closing. The report of Sir Verney Lovett's Commission has, we understand, been for some time in your hands. In the recommendations of that Commission we are deeply interested, and we gratefully remember that you were kind enough to promise a member of this deputation that you would allow the British Medical Association to be heard on the subject before you passed your final orders on those recommendations. May we

remind you, Sir, of that very kind promise and express the hope that it will not be long before you will be able to give us an opportunity of expressing our views on a subject which interests us so nearly?

In conclusion I desire, both on my own behalf and on that of the Association which I have the honour to represent, to thank you for the sympathy you have shown us, and to express the earnest hope that our joint efforts may be crowned with the success which your kindness, your unfailing courtesy, and your wide views of the medical needs of India justify us in expecting.

MR. MONTAGU: I have only one question to ask about the memorandum. Would you repeat what you said about sea passages in the definite demands that you put forward? You want increased pensions for retired officers, a 50 per cent. increase in pay, and what was the point about sea passages?

COLONEL ELLIOT: "Steamer passages backwards and forwards to India for all officers of the Indian Medical Service going out, retiring, or travelling on leave." May I explain that so many men complain that under the present conditions in India they are utterly unable to save the necessary amount of money to come home, and they say that, even though they have earned leave, many of them have not got the means to pay for their passages?

SIR PETER FREYER: If I understand Colonel Elliot aright, he wishes to bring the Indian Medical Service, in regard to passages to and from India, into conformity with the Royal Army Medical Corps. They have, I understand, full passages both ways.

Remarks by Professor Littlejohn.

PROFESSOR HARVEY LITTLEJOHN: Sir, may I say one word from another point of view? I am interested in medical education, and belong to the biggest medical school in the country, that of Edinburgh University, and I was dean of the Faculty for many years. I should like to put before you this point: that whereas years ago the service which the very best students we had—and we had perhaps 300 students graduating in a year—tried to get into was the Indian Medical Service. To get in was a great distinction. Now I am sorry to say that we cannot get even second or third rate graduates to look at the Indian Medical Service. I think that is a great pity, because it is a Service which has great traditions, and which, speaking on behalf of the university, I should like to see come into its own again. I think that the causes of this are the unsatisfactory nature of the pay, which has been dealt with by Colonel Elliot, and the unsatisfactory conditions of leave. You are well aware, Sir, that we could not get men to go into the Royal Army Medical Corps until Sir Alfred Keogh got it put on a better basis, with leave and study leave. The present medical man is not content with simply going into the Service and vegetating there; and, unless he can get leave to come home and keep himself abreast of the times and of the newer knowledge that may have been developed, the Service does not mean anything to a good man. Pay and leave and study leave are three of the chief things the unsatisfactoriness of which has acted detrimentally to our getting men for the Indian Medical Service. I am quite certain that the medical schools of the country would welcome the institution again of the examination for the Indian Medical Service at the standard which it had some years ago. India offers a great future, and it ought to get only the best, and the only way of doing that is to raise the standard of entrance.

The Secretary of State's Reply.

MR. MONTAGU: Gentlemen, I am very much obliged to you for the emphasis, clearness, and directness with which you have put your suggestions, but I must tell you very frankly, and it would be no use worrying you to come here if I did not speak frankly, that in the whole course of my experience in this office and in any other office—experience which always means to every man who holds any office a series of profound disappointments—I have never been so profoundly disappointed as I have been over this subject. We had a meeting here, as Colonel Elliot has reminded us, and I made definite suggestions which you accepted. Since then what has happened? I am quoting now from the preface to a Blue Book which I propose to issue in the course of a few days on the medical arrangements for the

troops on the North-West Frontier. Some of these happened before your deputation and some have happened since.

"(1) The rates of staff pay in the field," I am informed, "were improved. A scheme of accelerated and acting promotion was introduced on the lines of that in force for the R.A.M.C., and promotions were made in the case of officers who had to be retained beyond the normal limit. Two temporary surgeons-general were appointed to meet the special needs of the war, and eight additional military administrative appointments were created for the period of the war carrying the rank of colonel."

"(2) The adoption of the system of station hospitals for Indian troops is of considerable advantage from the professional point of view to officers of the Indian Medical Service, as it involves a more satisfactory employment of specialist officers and enables an individual officer, by his attachment to a hospital where patients from several, and in some cases many, units are concentrated, to do his work under more satisfactory conditions, and provides him with facilities for studying subjects in which he is specially interested."

"(3) An increased scale of pay has been approved for the whole service, both on its military and civil sides. The principle of the increase is 33 per cent. on the old rates of military pay of grade"—which is what was promised to the deputation. "The rates of pay for home leave have also been improved."

In addition to that, owing to the fact that there has been discontent because of the restriction on leave to the United Kingdom for health or for study or for ordinary purposes, we have taken two steps: "Temporary officers already in the Service are being retained and more temporary officers are being appointed." We have recently completed an estimate of our requirements for the I.M.S., and in the new terms of contract we have allowed the option of retiring with a gratuity of £1,200 after eight years' service—a one-sided option. The recruit can retire, but an option to terminate his contract is not to be given to the Government.

You also made a point of the status of the heads of your Service and their right of access to the Viceroy and the heads of Provincial Governments. This point has been conceded. A committee has sat, to which Colonel Elliot referred—Sir Verney Lovett's Committee—and it has made very far-reaching proposals, and it has, I believe, gone into some of the questions which I venture to think are even more important than pay in the present discontent of your Service. This report has not been received by me officially; it has not yet been received with the observations upon it of the Government of India; I have got an advance copy. The delay is entirely due to the outbreak of the Afghan war, which prevented the consideration of this report, and I give you a renewed assurance that I will keep the promise that I made on this matter as soon as the report comes to me officially.

A committee to deal with the reorganization of the army in India has been appointed under the chairmanship of Lord Esher; it is shortly leaving for India, and it will have, as one of its terms of reference, the investigation of that very vexed question—the relations between the Royal Army Medical Corps and the I.M.S.

Finally, in order to confer on the whole question with the Government of India and to try to get a speedy settlement of all outstanding questions, particularly the question of opportunities for study leave to which you have referred, my medical adviser, Sir Havelock Charles, has just started for India, and that is the reason why he is not here to-day.

Now, reading that record and remembering what took place, I cannot help thinking that the promises and hopes that I held out to you have been fulfilled more adequately than I could have dared to hope at the time. And, be it remembered, when you made your promise to me in this room, afterwards to be confirmed, as I understand, by the body that you represented, you believed that your promise was one which you could keep and was one which would be final. But you found that you were dealing, if I may apply an expression from my own profession to yours, with your constituents, and you found that when you went back, as Colonel Elliot has perfectly frankly stated, the discontent and the opposition were so great that it was impossible to keep your promise.

Colonel Elliot has put forward three demands. I do not complain of them in the least, but, so far as my memory serves me, not one single one of the three points that Colonel Elliot makes now was asked for at the last deputation. He assures me on your behalf that if those three demands are granted we shall have the assistance of the British Medical Association, and the thing will be final. It is in no spirit of complaint that, in assuring you

that I will commend your suggestions to the Government of India and report the emphasis with which you made them, I must ask. What reason have you to believe that, if these are granted to you, you will find that they have cured the discontent in your Service? Let me say at once that on the subjects that Colonel Elliot raised—that he has received complaints that in carrying out the increase of pay the Finance Department of the Government of India have nullified or minimized the advantages promised—I will immediately have investigated any single case or series of cases that is brought to my notice; and I can assure you here that if there is any consideration that the gentleman in question who makes the complaint will be affected in the least way by having made it, I will take steps either to preserve his anonymity or to see that there is no danger of anything of that kind occurring.

Before I come to the new demands that are made this evening, I should like to mention to you the reason I asked the question whether this is going to cure our troubles. It is that I am advised—I put this forward for your opinion—that much of our difficulty is caused, not by financial considerations at all, but by difficulties that neither you nor I can cure. There is, is there not, a general scarcity of qualified medical men? The medical schools have been empty or comparatively empty for the last four years; and, coupled with the scarcity of doctors, there are greatly improved prospects both in civil employment in the United Kingdom and elsewhere and also in the Royal Army Medical Corps; although, be it said, if a man takes up an appointment as a lieutenant in the Royal Army Medical Corps under the new pay he only gets £495 a year, whereas when he joins the Indian Medical Service under the new pay he gets £660 a year, rising as a lieutenant-colonel in the Royal Army Medical Corps to £1,142 and in the Indian Medical Service to £1,860. So that we are still ahead, and substantially ahead, of the R.A.M.C., but there is undoubtedly a great improvement in the prospects of that service.

The second point is that I am given to understand there is great discontent in the Indian Medical Service owing to overwork, to lack of leave, and so forth. None of those things can be cured except by increased recruitment and the employment of temporary officers, which therefore is affected by the first cause.

Then I am not surprised to find that after people have had a long term of war service—military service—they do not like the idea of entering a profession which requires at least two years—in actual practice, four or five years—to be spent in military duty. Once in the army so many people think they have had enough of it. Then I am informed that there are many men, demobilized officers, who, before thinking about any new profession, want to study in order to obtain further qualifications before starting on their career. Now if there is any force in any of those reasons for difficulties in recruitment—and particularly in the first one—I am very much afraid that the three suggestions made by Colonel Elliot will not go far to cure them. However, gentlemen, when I have said that, and when I have invited your comments upon those remarks, I gladly recognize that you want to help us, and I gladly recognize that I want your help. The situation is very serious. We want the doctors and we are not getting them; we must do everything together that we possibly can in order to supply them, but we must be quite sure that we are doing the right thing.

With regard to pensions, I agree that they have got to be reconsidered. I am at the moment waiting for recommendations from the Government of India about the pensions in the army, which have not yet been dealt with, and whatever principle is adopted in increasing the pensions of army officers will also be adopted in considering the pensions of the Indian Medical Service. I hope that will not be long; I will do my best to expedite it.

Sea passages form one of the most difficult questions that we have to deal with. I think myself that there is no argument against it in theory, but it is a question which has been raised, I think, in regard to every service in India. We are always confronted with difficulties of this kind: How often are the passages to be given? What is the kind of passage that a man is entitled to? Is he entitled to a mail passage from Bombay or must he on occasion put up with a passage from Colombo or Calcutta on an

inferior boat? Is he to have a first-class passage or a second-class passage? Is he to be allowed a passage for his wife and his family or only for himself? Of course, there is another way of doing it, which comes very much to the same thing, and which does not raise all these questions—namely, an increase in leave pay. I have a committee sitting at the present moment here on two other services in connexion with which this demand for sea passages has also come up, and again I promise you obviously that, whatever is the settlement of the general question of sea passages for the services of India, the Indian Medical Service will share in it, and I hope a decision will be reached on that at any rate by the end of this year.

Now I come to the question of general pay. I must say that 50 per cent. on the total pay, grade pay *plus* allowances, is a very large order. It does rather stagger me to think that that should have been put forward as what, in your opinion, is essential for the contented recruitment of doctors for India.

SIR PETER FREYER interjected that he understood that, in giving the increase of one-third on the grade pay, all allowances were swept away.

MR. MONTAGU: Oh, no. Owing to the amalgamation of certain posts during the war, a particular doctor found himself in receipt of several more allowances than one, and in certain cases those allowances have had to be reduced owing to the separation of the posts again. Those exceptional allowances cannot be taken to be a permanent prerogative of the particular incumbent of the position.

SIR PETER FREYER: In fact, Sir, I was led to believe that the increase of one-third on the grade pay and the sweeping away of all the other allowances would leave the Indian Government, so far as its purse is concerned, absolutely in the same position as it was before.

MR. MONTAGU: Oh, no. The increase on the grade pay of 33½ per cent. is equal to an increase of 24 per cent. on the total pay taken all over. I have not worked out the figures—I have only just received them—but an increase of 50 per cent. on the pre-war pay would give an officer in the Indian Medical Service who had just joined something like £765 a year, compared with the British army lieutenant's £495—something like £270 more. We are dealing with the Indian taxpayer's money, and I do not know what would be said of us if we were prepared to pay something like 40 per cent. more to a doctor than we were willing to pay to the same man when we were using the British taxpayer's money. Of course I agree, let me hasten to add, that service in India must be more highly paid than service in England. We have just sanctioned a scale of pay for the army which gives a lieutenant £100 a year more, roughly speaking, in the Indian army than in the British army, but that is something much smaller than the difference that you suggest, and I cannot hold out, I fear, any hope that this proposal will be accepted by my Council or by the Government of India. But I will do this: I will tell them that the British Medical Association Committee came to see me and told me that they were unable to fulfil their promise to help me to get recruits for the Indian Medical Service at the rates of pay which we have already published and agreed upon, and I will go further and tell them that your considered opinion was that nothing short of a 50 per cent. increase of their total pre-war rate of pay would be of any use. I am startled by the size of the figure and the way it works out. A boy going to India as a lieutenant in the Indian Medical Service would be 25 years of age and would immediately be earning £760. Is not that something that the older members of the Service would feel was a little extravagant? Will you not be prepared to go away from this meeting and reconsider that figure? If you want to stick to it, and if it really is your considered opinion, I do not want to influence you, but it seems to me a very high one indeed. That is all I have to say.

Consolidated Rates.

DR. DAWSON WILLIAMS: I think it would be a great advantage to us, Sir, if we could get the matter of the consolidated pay quite cleared up with you this evening. I have in my hand the document that was issued by the India Office early in August or the end of July. It sets out certain rates of pay on the military side in two columns. In one column there is the old rate, which

means, I suppose, the old grade rate of pay *plus* the regimental allowance. In the other column there are the new rates of pay, and there is a note to the table, saying: "*The new rates are consolidated and include charge pay for the command of station hospitals.*" The Station Hospital Order (No. 1343) was issued at the end of November, 1918, and was to take effect on December 1st. That Order specified certain grade rates of pay which were, on the whole, the same or nearly the same as the old grade pay. They were in one or two instances rather less.

MR. MONTAGU: I think they were less.

DR. DAWSON WILLIAMS: They were less in certain instances at least. But there was an appendix to that Order, setting out certain payments in respect of the charge allowance for the command of hospitals, or the second in command. The net result of that, as far as I can calculate, is that the abolition of the charge allowance for hospitals makes the consolidated pay very little better, if at all better, in some instances—certainly not in the proportion of 33½ per cent. What I think officers anticipated was that there would be an increase of their grade pay and that this charge allowance for station hospitals would continue to be paid as under Order 1343, which came into effect on December 1st. The arrangement with regard to the 33½ per cent. was antedated to the same date. We are quite ready to assume that the station hospital system cannot be in order yet, but we should very much like that point cleared up, and I think it would remove a good deal of uncertainty on our part and perhaps some dissatisfaction.

MR. MONTAGU: The station hospital system was not, as I understand it, intended to increase the pay.

DR. DAWSON WILLIAMS: No, I do not think so. The station hospital system, as I understand it, was intended to ensure greater efficiency.

MR. MONTAGU: Your contention is that its introduction has so lessened pay in individual instances that they get practically the same as they got before, despite the increase in grade pay?

DR. DAWSON WILLIAMS: The loss of the charge allowance would tend to have that effect.

MR. STEWART: I should like to say that if the station hospital system, as I understand it, did not alter the pay given in general to the service, then if we kept our promise and gave one-third of the old grade pay in addition to what the men got before, they have no right to the charge allowance for the station hospital. Put it this way: The station hospital system, so far as pay is concerned, was simply a redistribution of a man's pay into two other different components. We said: "We will add a certain proportion—one-third—of the old grade pay to the total that the man had under the old system." I cannot see that in addition to that, if his old pay was increased by a certain amount, he has a right to the charge allowance under the hospital system, because that would give it to him twice over.

SIR PETER FREYER: The other allowances are abolished, such as horse allowance and officiating allowance, which one got in the Service in my time, in addition to what was called in those days "unemployed pay," which I assume is the same as what is called "grade pay" now. Apparently those are all abolished.

MR. MONTAGU (to Mr. Stewart): I do not think you have answered what Dr. Dawson Williams said. Let us admit that there are arguments to justify anything that may have occurred. Dr. Dawson Williams says that, when you increased the military grade pay by 33½ per cent., it was understood by doctors that their pay would be increased; but, owing to the alteration in the system of allowances, there are doctors now in India—some doctors, at any rate—who find that, despite the promise of an increase of pay, they are getting no more than they got before.

MR. STEWART: From the calculations of the cases we took, officers in general are getting from 22 to 26 per cent. more than they got under the old system. Their pay was made up of grade pay *plus* charge allowance for a regiment. We took those together in effect; we added 33½ per cent. in the first of the two factors. The net result was to give on the average 24 per cent. of the man's total pay under the old system. Now his total pay under the old system—I want to make it clear—is generally exactly his total pay under the abortive station hospital system of pay.

DR. DAWSON WILLIAMS: "Abortive"?

MR. STEWART: I mean so far as the pay system is

concerned. The station hospital system was adopted from the point of view of organization, but the system of paying was superseded by our scheme of a consolidated rate.

Professor LITTLEJOHN: You have put before us exactly one of the great difficulties—that, whereas a man got 900 rupees a month before, now he gets 950. He says: "I am only getting 50 rupees more." I cannot give you the instances now, but I could get the instances—even where it is said that in a division the Government is saving 3,000 rupees a month owing to the new scale of pay.

Mr. MONTAGU: Perhaps I ought not to be so ignorant, but I begin to see daylight now, because if you have representatives of a service who come and say that their pay is not sufficient and the Secretary of State says: "Very well, I will give you 33½ per cent. on your grade pay," that obviously does not necessarily mean that your total pay will be increased by 33½ per cent. But at the same time, if that is announced, and then there are in the service people who have got, as a consequence of the new arrangement, no increase of pay at all, they naturally begin to write to the representatives of their service and say: "You have been 'had'; we have got nothing." What is the use of an average to them? It is quite true somebody has got 26 per cent., but the individual is where he was, and he was hard up before the increase of pay. I quite see that point; and I promise you I will give it my most earnest consideration. It seems to me a very pregnant circumstance that when we increase the rate of pay in the army or when we increase the rate of pay in the Indian Medical Service, every civil servant and every soldier gets an increased rate of pay, and if it be true that there are doctors now who have got little or nothing out of this, then I think we must give it our most serious consideration.

Sir PETER FREYER: May I ask, when you promised an increase of one-third—33½ per cent. on the grade pay—did you mean or not that that was not to interfere with the allowances? That is the question.

Mr. MONTAGU: As far as I can recollect the circumstances, what happened was that, just before this increase of pay was made there had been this alteration in the system of hospital charges, and when the new increase was made it absorbed the changes which had just been made previously. If that previous change had never been made this thing would have worked all right.

Colonel ELLIOT, in thanking Mr. Montagu for the manner in which he had received the deputation, referred again to the question of leave. There were, he said, a large number of senior officers who had been out nine, ten, eleven, twelve, and he believed even thirteen years, who were in bad health, and could not get home because they would not go sick. The time and thought given to the question of what terms would be satisfactory had been very great. After full consideration the request for an addition of 50 per cent. had been put forward, but the deputation was willing to be reasoned with on the point. Replying to Mr. Montagu's question what assurance there would be if this were done that more would not be asked for in the future, Colonel Elliot said that after full consideration the Naval and Military Committee had resolved to put forward certain conditions that it thought would attract men. If they were granted it would be possible to say to young medical men, "These are the conditions we think fair." He concluded by pressing for an early decision.

NOTES ON THE FUTURE POLICY OF THE PROFESSION.

*Communicated to the Annual Meeting of the North
Lancashire and South Westmorland Branch.*

BY

G. AINSLIE JOHNSTON, M.D., F.R.C.S.I.,
PRESIDENT.

Nothing in Nature stays still; everything either develops or decays. This is true of sociological and professional matters just as much as in natural history; but medical men appear sometimes to forget it and wish things to stay just as they are, which is impossible.

We have now got established a Ministry of Health, for which the British Medical Association has been asking for some forty years, and now that we have got it, how are we and the nation going to benefit by it? Perhaps

through somewhat unexpected means. I believe that the much abused Insurance Act may be made a powerful lever with which to work an immense amount of good, in a manner which I will endeavour in a few words to explain. This Act—in some form—has come to stay, but, owing largely to the manner of its introduction, it at first met with a great deal of opposition from practically the whole of the profession. That opposition still exists in many quarters owing to the cause mentioned and to inadequate remuneration; so much so that a not inconsiderable number of medical men who have accepted service, which they feel they have been more or less forced to undertake, follow the policy of taking as much as they can get and giving in return as restricted a service as possible. This policy not unnaturally leads to resentment on both sides, and cannot be a wise or a good one, since it does not produce a satisfactory service; it will never get insured people nor the public on our side.

What, then, is the wiser and better policy? It is the policy that is being strongly taken up by our Association—that of making use of the Ministry of Health and turning the tables, so to speak, upon the insurance authorities by insisting upon the fullest, best, and most adequate medical service being provided for all insured people. We want for our insured patients the best the nation can give; we want to teach the public that in health matters wise expenditure is the truest economy in the long run. We want for insured patients an adequate supply of trained nurses, greatly increased laboratory facilities, consulting services, the provision in every district of hospital beds where insurance practitioners can follow their patients and treat them whenever they can be better treated there than at home, and we want better equipment for diagnosis as well as for treatment.

Now what follows when we have all this provided for our insured patients, representing some fourteen or fifteen million people? At present in the general community it is only the very poor—for whom it is provided to some extent—and the rich who can command the best in the way of treatment and the necessary equipment for diagnosis, because this is getting more expensive every year, and is already beyond the pocket of the average general practitioner or the average member of the community. But if we insist on the provision of all these things for our insured patients, and get the public to realize that in matters of health a wise expenditure is the truest economy, does it not follow that the Government, through the Ministry of Health, will be forced to provide, not only for the insured people but also for everyone else in the country of similar economic status, the same facilities for the best that can be given in the way of equipment for diagnosis and for different forms of medical treatment? I think that this necessarily does follow, and that it will result in a great improvement in the health of the nation and a more efficient and greatly improved standard of service throughout the medical profession.

The interests of the public and those of the medical profession are identical. When we insist on the public having and upon our giving, and having the means to give, the most adequate service possible to each and all of our patients, then we will have public opinion on our side when we demand in return an adequate fee, whether it be for insured patients or any other.

This policy has many other advantages. The medical profession will become more attractive, the doctor's life even more interesting. The provision in every district of equipment for treatment and all means of diagnosis will raise the standard of medical work. General practitioners, especially perhaps the younger men, will take more interest in the scientific side of their profession in their daily work, and a great many men—most of those who have ability and ambition—will, while remaining general practitioners, with the broad and comprehensive outlook which that gives when intelligently followed, take up some branch of work for which they have special aptitude or liking, and become to a large extent experts or specialists in that branch, willing and competent to give specialist advice. In this way, I believe, in the future much of the specialist advice will be given by the best men among general practitioners, working perhaps in every district somewhat on the lines of the team work or team partnerships first put in practice on the other side of the Atlantic, which has been attended with such brilliant results during the last four or five years in the R.A.M.C.

The provision of adequate local laboratories in every district has many great advantages, and it will bring the practitioner and specialist into close personal co-operation, with great benefit to the patient; and the criticisms and suggestions of colleagues often meeting and working together will, as it has been well said, teach more than many books.

I am not one of those who wholly condemn the despised and rejected record cards; I believe that in a somewhat simplified form they would be of great use, for we should encourage the habit of taking notes of our cases. It has been well said that the genius of British medicine is the accurate observation of cases; that accurate observation for which the general practitioner has an unrivalled field should be recorded in a concise and accurate manner, but we should not practise nor encourage the taking of notes in an ambiguous fashion, such as is recorded of the Atlantic passenger who put down in his notebook that on the fifth evening he took a seidlitz powder and next morning passed an iceberg.

Association Notices.

COUNCIL BY-ELECTION.

NOTICE is hereby given that a vacancy has arisen among the Members of the Council elected by the Grouped Branches in the United Kingdom owing to the resignation of Dr. James R. Drever of Glasgow, who was elected by the Members of the Glasgow Central, Glasgow Eastern, Glasgow North-Western, and Glasgow Southern Divisions.

Nominations of candidates for election as Member of Council to fill the vacancy for the remainder of the year 1919-20:

(i) May be by any of the Divisions named, or by any three members thereof.

(ii) Must be on the prescribed form, copies of which will be furnished on application, and

(iii) Must reach the Medical Secretary, 429, Strand, London, W.C.2, not later than November 22nd, 1919.

Those applying for forms are asked to state which form is required. In the case of a contest, voting papers containing the names of all duly nominated candidates will be issued to every member of the above four Divisions from the Central Office on Monday, November 24th, and be returnable not later than Monday, December 1st.

BRANCH AND DIVISION MEETINGS TO BE HELD.

METROPOLITAN COUNTIES BRANCH.—Messrs. N. Bishop Harman and J. A. Percival Barnes, honorary secretaries, give notice that a special general meeting of the members of the Metropolitan Counties Branch will be held at 429, Strand, W.C., on Tuesday, November 11th, at 4.30 p.m., to consider the adoption of revised ethical rules for the Branch.

SOUTHERN BRANCH.—Dr. Lockhart Stephens, honorary secretary (The White House, Emsworth, Hants), gives notice that the autumn general meeting of the Branch will be held at the South-Western Hotel, Southampton, on Thursday, November 13th, at 3 p.m. Under the new scheme for the provision of British Medical Association lecturers, Sir Thomas Horder, M.D. (St. Bartholomew's Hospital), will give a lecture on "Preventive treatment in influenza." The Branch Council cordially invites non members to be present, and trusts that all members of the Branch will make a special effort to attend. Tea will be served after the meeting.

Meetings of Branches and Divisions.

ABERDEEN BRANCH.

SPECIAL meetings of the Aberdeen Branch and the Aberdeen Division were held on October 23rd, when the following officers were elected:

Aberdeen Branch.—President: Dr. L. B. Boddie. Vice-President: Sir Alexander Ogston, K.C.V.O. President-elect: Professor J. Macneil, C.V.O. Treasurer: Dr. J. R. Lovack. Secretaries: Dr. Thomas Fraser, Dr. Frederick K. Smith.

Aberdeen Division.—Chairman: Dr. George Williamson. Deputy Chairman: Dr. D. Rorio. Joint Secretaries and Treasurers: Dr. Frederick K. Smith, Dr. H. Edgar Smith.

BIRMINGHAM BRANCH.

THE annual meeting of the Birmingham Branch for the session 1919-20 was held at the Medical Institute on October 23rd. It was decided to resume at once the scientific meetings of both the clinical and pathological sections. The president for the

ensuing session, Dr. THOMAS WILSON, then read an address on Hospital Politics, and reviewed the present position of the voluntary hospitals as regards finance and management, and made suggestions regarding their future. The address provoked so much interest that it was suggested that a full debate should take place on the Future of the Voluntary Hospitals at one of the monthly meetings.

KENT BRANCH: ISLE OF THANET DIVISION.

A MEETING of the Isle of Thanet Division was held at Ramsgate on October 14th, when Dr. NICHOI presided. All practitioners in the area had been invited to attend.

Dr. ALFRED COX addressed the meeting on the probable alterations in the National Insurance Medical Service in 1920. He pointed out that in 1920 the service would not be very radically altered; that the inclusion of wives and children was not likely to be effected at present; that the method of remuneration through a central pool was to be put on a sounder basis; that the payments would be more regular; the country grants would be more proportionate; mileage fees more adequate; the rural practitioners' position improved. He also dealt with a new scheme for allocation of patients, waiting-room accommodation for patients, anaesthetics; record attendance cards which would probably be retained but simplified; extra services; the question of locumtenents and assistants; monthly certificates in chronic cases; temporary residents, which were apparently to be dealt with on the basis of increased proportionate grants to practitioners in health centres, including the seaside; and finally, with the larger question of finance and increased capitation fee. The economic side of the whole question, and the strength of the medical practitioners' position with regard to an increased demand, were thoroughly discussed.

A prolonged discussion followed, after which Dr. Cox replied, and the meeting closed with a cordial vote of thanks to Dr. Cox for his address and to the Chairman for presiding.

PERTH BRANCH.

A MEETING of the Perth Branch was held in the Station Hotel on Friday, October 31st. Dr. FERGUSON WATSON presided, and there was a large attendance of practitioners. Dr. NORMAN WALKER, candidate for the General Medical Council, gave an eloquent address, which was listened to with rapt attention. Dr. Walker dwelt on the necessity of a fairly stiff preliminary examination, and emphasized the need for a more practical knowledge of the newer diagnostic methods in the later years of college life, so that when a medical man started practice he would be fortified by experience previously gained and not be so dependent on an official report from one or other laboratories. Dr. Walker spoke for over half an hour and resumed his seat amid applause. The CHAIRMAN invited questions, to which Dr. WALKER replied, elucidating many doubtful points. A vote of thanks to Dr. Walker was carried unanimously.

THE GENERAL MEDICAL COUNCIL ELECTION.

ENGLAND AND WALES.

It is announced that there will be ten candidates at the forthcoming election of four direct representatives for England and Wales upon the General Medical Council. The voting papers are being issued to registered medical practitioners to-day, Friday, November 7th. The election address of the four candidates nominated by the British Medical Association was published in the SUPPLEMENT of October 18th, and the candidature of Professor R. A. Bolam, Dr. J. A. Macdonald, Mr. E. B. Turner, and Sir Jenner Verrall has been very widely supported throughout the country. These gentlemen were selected from a list of practitioners nominated by the Divisions of the Association after due notice, and it behoves members of the Association to do what they can to secure the return of the Association's candidates. Meetings in support of their candidature will be held at Manchester (Holdsworth Hall) on November 8th and at Birmingham (Queen's Hotel) on November 13th, in each case at 4 p.m.

Lists of supporters of the Association's candidates have been given in the past three issues of the SUPPLEMENT. Among those who have since signified their support is Dr. Henry Barnes, O.B.E., Carlisle, Senior ex-President of the British Medical Association.

Dr. Alexander Blackhall-Morison has been nominated as a candidate by the National Medical Union, and his election address, of which we have received a copy, is as follows:

Dear Sir (or Madam),

Nominated as a candidate for the direct representation of the profession on the General Medical Council in England and Wales by the National Medical Union, with the approval of the

Scottish Medical Guild and others in sympathy with their activities, I have the honour to ask your support for my candidature.

The interests of the profession, educational and economic, have not been protected in the recent past to the satisfaction of many by the great corporations and the Association numerically the most powerful, namely, the British Medical Association. The latter has nominated four candidates for all the available vacancies, in the hope of acquiring the whole influence conferred by direct representation in the Council. Their address issued to the profession is characteristically non-committal. It is probably also, in their view, as much the embodiment of wisdom as it certainly is of prudence. Whether the profession, remembering the not very edifying capitulation of the Association on the eve of the National Insurance legislation, the Medical Benefit Section of which cannot now be regarded with much satisfaction even by its creators, will feel such confidence in the nominees of the Association as to commit to their care its interests, at the present juncture so fateful for its future, remains to be seen. That a very considerable body will not support them is certain.

For myself, it will be my endeavour, if elected, to oppose any curtailment of the work or responsibilities of the general practitioner, believing that this can only lead to his inefficiency, his impoverishment, and the depreciation of his professional status. On him the whole superstructure of the profession rests, and must rest, and on his efficiency and prosperity the public good.

If the Government measures in contemplation under the Ministry of Health conserve these, they will have my support. If they threaten them, my opposition. There is, unfortunately, every indication that, by the institution of various public specialisms, the ridiculously imputed recondite nature of which is emphasized, and by a multitude of candlestick civic health activities among others than the necessitous poor, the legitimate work and responsibilities of the general practitioner will be seriously affected, whatever his ability to discharge his duties as a physician.

Having had ample opportunity of learning from personal experience the conditions and needs of medical practice, educationally, and otherwise, originally as a general practitioner and later as a consultant, I claim to be in a position to serve the interests of the profession both as regards its educational needs and its material welfare.

In conclusion, I have also too high a regard for the mission and status of our calling, and too reverent a memory of the men of culture and research of the past, from whose individual labours the whole profession has derived its beneficent power and the social esteem in which it is held, to advocate the adoption of the trade union methods of the proletariat to advance our economic interests. These, as is known, are recommended by some, influenced by counsels of economic despair and captivated by the lucrative results of industrial strikes. That such methods will receive any considerable support from the profession is scarcely probable.

My opportunities and principles of service having been and being such, I respectfully solicit the support of all sections of the profession for my candidature.

ALEXANDER BLACKHALL-MORISON, M.D.,
F.R.C.P. Lond. and Edin..

Co-President of the National Medical Union; Senior Physician
to the Great Northern Central Hospital, London, etc.

Dr. John Brown of Blackpool is standing as an independent candidate, and has requested us to print his election address to the medical practitioners of England and Wales, as follows:

Dear Sir (or Madam),

To my regret I find that on a point of honour I have to enter the arena of the election for a Direct Representative for England and Wales on the General Medical Council. In the BRITISH MEDICAL JOURNAL, June 10th, 1916, I published a letter a part of which is as follows: "I do protest against the policy adopted in 1906 and in 1911 by which no one, unless a member of the British Medical Association, has 'the ghost of a chance' of being elected as Direct Representative of the profession on the General Medical Council." Before 1906 the contests were free and open to all. The elections were keenly contested. My brother, the late Mr. George Brown, and Mr. George Jackson addressed great public meetings in various parts of England, and were successful in the two elections previous to 1906. Then the British Medical Association succeeded in its policy of securing all the Direct Representatives, and also in 1911. Over three years ago I stated if their policy were again adopted, as a protest I might be a candidate. My candidature is now before you, and I shall be glad of the support of all those who love a "fair field and no favour." I am convinced that the Medical Act of 1886 intended elections to be open to all and not to be the monopoly of any association or caucus. The Medical Act of 1886 needs amending. In 1916 I advocated the formation of four areas for England and Wales, of about 7,000 electors for each. The advantages are obvious: the cost would be about one-fourth; candidates would be able to visit the large towns and get into personal touch with the electors. Parliament only can do this. There are many reasons for its early adoption. I know no valid objection. In my opinion the General Medical Council, the British Medical Association, the Medico-Political Union, and allied societies ought to take up the matter and press it forward. I have no

committee, nor funds to effectively canvass and circularize an electorate of over 26,000, extending from Land's End to Berwick-on-Tweed, and from the North Sea to the Irish Sea.

Hornby Road, Blackpool, Oct. 30th.

JOHN BROWN, M.D.,
late M.O.H. Bacup.

We understand that the Medico-Political Union has nominated to contest the four seats its president, Mr. W. F. H. Coke; its vice-president, Dr. E. H. M. Stancomb; its organizing secretary, Dr. G. A. Main; and its general secretary, Dr. A. Welply. A communication from Dr. Stancomb regarding his candidature is printed in the correspondence columns of the JOURNAL this week.

MEETINGS OF THE PROFESSION.

AYRSHIRE.

A MEETING of the medical practitioners of Ayrshire was held at Kilmarnock on October 22nd at the invitation of the Ayrshire Division, to hear an address by Dr. ALFRED COX on the work and policy of the British Medical Association.

In the course of his warmly appreciated speech, Dr. Cox instanced many facts to demonstrate the very active part the Association had played in the past, and was continuing to exercise, in the interest of every practitioner throughout the country, whether in the services or in civil practice.

Dr. MCRAE, in moving a vote of thanks to Dr. Cox, said that such meetings could only serve to enhance the reputation and usefulness of the Association by stimulating a more intelligent interest in its affairs, and permitting of a flow of ideas through more intimate channels between practitioners, the Divisions, and the executive. There could be no question that the executive had been subjected to much unfair criticism, both by members and non-members of the Association—too often the result of hasty and warped judgement on insufficient data—as was clearly shown in Dr. Cox's address and replies to questions.

The time had come when each individual must take a more active part in the affairs of the Association if the wishes and aims of the profession as a whole were to find effective expression. It was impossible for the Council to voice the opinion of the medical profession if the vast majority of the members of the Association refrained from the regular attendance at its meetings, to ventilate their views and guide their representatives concerning their professional welfare.

EXETER.

A meeting of the members of the medical profession practising in the Exeter City area was held at the Royal Devon and Exeter Hospital on October 23rd, with Dr. R. PICKARD, C.M.G., in the chair.

Modifications of Scheme C, regarding the constitution of Local Medical Medical and Panel Committees, as drafted by the Insurance Commissioners, were read and approved by the meeting, and Dr. Eager was instructed to submit them to the Ministry of Health as a permanent constitution of the Local Medical Committee.

INSURANCE.

THE NEW TERMS OF SERVICE.

MEETING OF SOUTH LONDON PRACTITIONERS.

THE first of two meetings of insurance practitioners, convened by the Panel Committee for the County of London, was held at Camberwell Town Hall on November 4th to discuss the new terms of service and to elicit expressions of opinion which might form a basis for the instructions to be given by the Panel Committee to its representatives at the forthcoming Conference of Local Medical and Panel Committees on November 27th. The meeting was for practitioners resident south of the Thames, and 150 were present.

Dr. H. J. CARDALE, Chairman of the London Panel Committee, who presided, said that the discretion had been given to him of calling a mass meeting of all London practitioners previous to the Conference, and he intended that such a meeting should be called. It would be held at Wigmore Hall, probably on Sunday, November 16th.

Dr. B. A. RICHMOND then discussed certain features of the new draft Regulations. The meeting was under some disadvantage in that it had been impossible to circulate an explanatory memorandum until that day. Dr. Richmond's

request to the Ministry of Health for 1,500 copies of the document containing the draft had been refused, chiefly because the Ministry did not wish by such a wide circulation to suggest that the present was in any sense a final draft. He had therefore issued a small memorandum setting out the main points. The Government had conceded the demand made at the July Conference that there should be no signed agreement; in its place there would be a kind of formal application for admission to the list. That would bring the service more into line with other Government services where no actual contract was signed. In the literal sense the agreement might be said to have been abolished. The obligations undertaken by the practitioner were to be dealt with under an allocation scheme, which would be in the hands of a special subcommittee consisting of representatives of the Insurance Committee and the Panel Committee in equal numbers. One of the duties of this Allocation Subcommittee would be to ensure a proper pharmaceutical service. Another point was that the business of the medical card was cleared up at last. The practitioner was entitled now to demand a medical card. The Insurance Committee was not to wait until it received notice from the approved society, but would issue cards more promptly. With regard to the limitation of lists, the Government had determined upon the establishment of a maximum of 3,000 for a doctor in single-handed practice, and the allocation subcommittee might even vary the maximum downwards. Under the model distribution scheme each practitioner would have a form of notice setting forth the basis on which his remuneration was calculated. Payment for temporary residents and for anaesthetics was matter for negotiation between the committees. Under the new scheme of distribution, in which there would be no extra capitation fees (the fund for the year being estimated in advance and paid in full during the year), individuals and institutions limiting their lists would be dealt with by some adjustment of payment, probably the deduction of a small percentage. On the matter of remuneration not much at present could be said: in his opinion, there was no need for panic or excitement. If they calmly considered their approval of the proposed changes, and were determined to give the best quality of work on the basis of adequate remuneration, and kept together and adopted an attitude of dignity, they need not fear the result.

Schedule I was then considered in detail. The first point on which any discussion arose was with regard to the disposal of practices on retirement or death, and on this matter, in reply to questions,

Dr. H. B. BRACKENBURY said that, rightly or wrongly, the Government had determined to stop what it called, very crudely, the buying and selling of the insured. When the contract was entered upon in 1912-13 the majority of the profession thought that the introduction of insurance service would damage the goodwill of practices. That had proved to be erroneous; the goodwill of the insurance part of a practice had become considerably greater than the goodwill of the private part. Under the present arrangements, on the transfer of an insurance practice, 97½ per cent. of the insured persons automatically came upon the list of the successor. The Government had made up its mind that this was not to continue. The arrangement whereby, if the insured person did not make a fresh choice within a fortnight, he was automatically transferred to the successor, would no longer obtain; but it had been secured that the name and address of the successor should be sent by the Insurance Committee to the insured persons along with the intimation of death or retirement; and if the persons in question did not make a fresh choice within a certain time, the Allocation Subcommittee might assign them to a new practitioner. For those newly entering insurance practice the alteration would come into force immediately, but it was put to the Government that those who had bought or built up practices under the old scheme had a vested interest properly established, and the Government had agreed that for those at present in the service the old arrangements should hold good for three years—to the end of 1922—after which the new Regulations would apply to them also. He would not pretend that the new arrangements were as valuable as the old. The question was whether the three years' notice was sufficient and constituted a safeguard of goodwill.

Dr. J. A. ANGUS thought that in this matter insurance practitioners must be divided into two categories, those who came in with the inception of the Act and those who came in later. Most of the former had appointments which could have been transferred easily to a successor.

Thus there was a vested interest. They were told that they were not to suffer any disability by undertaking service under the Act, which meant that they would be given an equivalent for the easily transferable nature of those appointments. To take away this equivalent now was sheer robbery. On the other hand, doctors who had entered more recently into service had evidently held no such appointments, and here the principle did not apply. An effort should be made to exclude from the new provision men who came in at the beginning.

Two or three speakers urged that no rigid division could justly be made between those who came in at the time of the passing of the Act and those who came in later. Dr. ANGUS then moved that the new regulation with regard to the disposal of practices on the death of a practitioner (his retirement raised different considerations) should not apply to any practitioner on the panel on December 31st, 1919, and this was carried, with two dissentients.

On the question of the range of practitioners' duties, Dr. R. S. PEARSON urged that there should be a special fee for operative cases in incomplete abortion. The CHAIRMAN pointed out that fees for special services could be arranged in consultation between the committees in the area. One questioner asked whether the new regulations relating to surgery and waiting-room accommodation meant that they would be subject to the visits of inspectors. The CHAIRMAN replied that they did not; complaints would be made and dealt with in the ordinary way.

After some further discussion of small points, Dr. ALFRED SALTER said that the afternoon's proceedings were perfectly futile. The Insurance Acts Committee had made up its mind already, irrespective of any decisions that might be made in a meeting of practitioners.

The CHAIRMAN pointed out that the meeting was not called to instruct the Insurance Acts Committee directly. The London Panel Committee must ascertain the views of practitioners in its area in order to be able to instruct its representatives at the Conference, by whose findings the Insurance Acts Committee was bound.

A motion that no records be kept except those that had been found necessary during the last three years of the war was lost. On the requirement that a doctor absent from his practice for more than seven days should report his absence to the Insurance Committee, Dr. R. BALDERTON proposed that the period be fourteen days, and this was carried by a small majority, only a few voting either way.

Dr. V. S. PARTRIDGE then raised various points relating to the arrangements other than those which the conveners of the meeting had emphasized in the memorandum, in particular with regard to minor variations which practitioners might desire. Dr. BRACKENBURY said that what was proposed in the Regulations was only the existing arrangement, which was framed for the convenience and protection of practitioners. If the doctors in an area wished to vary a minor requirement it was open to them to propose this to the Insurance Committee. The regulation might suggest that the Committee could do as it liked, but committees, in fact, had no that power.

Dr. PARTRIDGE criticized also the arrangements for the supply by practitioners of drugs and appliances. The intention of the paragraph, he suggested, was to ensure that in the event of a strike of chemists, doctors would be used as strike-breakers. The CHAIRMAN said that if that was the intention the Ministry had reckoned without the medical profession.

At the close of the discussion on the Regulations Dr. J. A. ANGUS proposed and Dr. W. C. JARVIS seconded, and it was agreed without dissent—

That the new Regulations cannot be finally accepted until a just and adequate scale of remuneration has been agreed upon.

Dr. BRACKENBURY then made a statement on the present position with regard to remuneration. The Insurance Acts Committee had endeavoured after conversations with important officials at the Ministry of Health—though not with Dr. Addison—to approach the question in a scientific manner. It must be remembered that the capitation fee to be determined was not what some insurance doctors had had in their minds for the last few years—the figure which, multiplied by the number of names on their lists, represented their remuneration. They had to arrive at such a figure for the capitation fee as, multiplied by an actuarially ascertained number of insured persons in the country, would constitute the central pool, the whole of which was to be distributed among insurance practitioners. Data for such a calculation were not always available, and many factors were not capable of mathe-

mathematical proof. One of the chief difficulties, he remarked, had been that of getting insurance doctors to furnish figures. The most satisfactory way would have been to take complete returns from a large number of practitioners. They had been thrown back on the figures for a few rural and semi-rural practices, and these had been accepted by the Ministry. The Committee had approached the question in three ways, as set out in document M. 22. As to the first method, the difficulty was that the Ministry did not accept 7s. 3d. as the agreed basic figure. But, taking that figure, the Committee had been able to calculate a certain definite increase. The three methods led approximately to the same figure, and therefore the Committee had put forward a case which it believed to be very strong—understated rather than overstated—that at present the remuneration of the insurance practitioner for the calculation of the central pool ought not to be less than a capitation fee of 13s. 6d. (Hear, hear.) An answer had already been received from the Ministry of Health, and to this a considered reply would be forthcoming, and would be placed before the approaching Conference. He believed the practitioners had an unanswerable case, and he made an appeal in closing for a careful study, in due course, alike of the Committee's case and the Ministry's reply, and for unity in the decisions which would be made.

Dr. PARTRIDGE asked whether 8s. 9d. was not mentioned in the letter from the Ministry. Dr. BRACKENBURY said there had, so far, been no offer from the Ministry; the only mention of 8s. 9d. was in the statement that this was the sum doctors were now receiving, including war bonus.

Dr. PEARSON said that the meeting would be lacking in its duty if it did not convey to Dr. Brackenbury the unbounded thanks of London practitioners for the exceptional ability, industry, and keenness which he had brought to this matter. Dr. G. B. BATTEN warmly associated himself with these sentiments, which were received by the meeting with hearty applause.

Dr. BRACKENBURY, in acknowledgement, said he would like Dr. H. G. Cowie and all his colleagues on the Insurance Acts Committee to be associated with him in the compliment.

CORRESPONDENCE.

The New Insurance Regulations.

SIR,—I cannot believe that the Insurance Acts Committee can have realized what would be the effect upon the profession if the suggested new regulation as to death or resignation from the panel should become law. Certainly the direct representatives of panel practitioners cannot have realized it, or they would know very well that their constituents would not for a moment accept such a grave attack upon their rights.

It practically means that insurance practitioners are deprived of the right to dispose of their insurance practices. This would mean in very many cases the whole of their practices, for the tendency is increasing every day for men in insurance practice to give their whole time to it.

I can scarcely credit that the suggestion is seriously made that doctors, alone amongst the community, should have the results of a lifetime of industry confiscated upon their dying or finding it necessary through age or ill health to retire. And the Insurance Acts Committee announce, without any comment on this amazing paragraph, that they are going to advise the profession to accept the new Regulations as they stand!

Well, I can confidently assure them that the profession will not take their advice, as far as this particular paragraph is concerned. It will be useless for the Committee to throw dust in the eyes of practitioners by suggesting that the effect of Clause 4 is largely nullified by the two following clauses. Whether use could be made of the latter two clauses to nullify Clause 4 or not does not matter; medical men will not submit to the necessity of resorting to dubitable expedients in order to be permitted to exercise their right to dispose of their practices in the open market as they have always done. Expedients may be all right for politicians, but medical men have no use for them, and will not accept them in exchange for a principle.

I hope every Panel Committee in the country will instruct its representative at the Conference on November 27th to insist upon the total revocation of Paragraph 4 (1) of Part I of the first schedule to the new Regulations. I

have not gone into details in this letter, because the ruinous effects of the suggested clause are too obvious to make it necessary; besides I have to consider your valuable space.—I am, etc.,

Gloucester, Nov. 3rd.

J. A. BELL.

The Forgotten Factors.

SIR.—Through the courtesy of the Medical Secretary I have recently been perusing M. 22 of the British Medical Association, a document which might well, I venture to suggest, have been printed in full in the *BRITISH MEDICAL JOURNAL*, even if room had to be made by the omission of lists of names of persons subscribing to portraits or supporting candidates to the General Medical Council. For the benefit of such of your readers as may not have seen this document, may I be permitted to state that it is a "Memorandum on the remuneration of insurance practitioners under the 1920 terms of service"—terms which at present are unknown to the majority of the profession.

The document is devoted to discovering a fair capitation fee for 1920, and to this end discusses the various factors which must be taken into consideration. These are employed in two ways. In the first the old fee is taken as a basis, and percentages are added for new services, etc. In the second it is assumed that an average practitioner's income after some years in practice is £1,800 and his insured patients number 1,000. From the further somewhat arbitrary consideration that these will require three-eighths of his time a capitation fee of 13s. 6d. is arrived at. The suppositions employed in this latter method of calculation seem to me so little capable of support that I do not propose to discuss it further.

For the purposes of the first calculation the base fee is taken at 7s. 3d., not at 7s. 6d. as one might have expected. With regard to the 7s. 6d. fee it is recognized that it was to have been revised in three years from the commencement of the Act, that it has always been regarded as too low, and has only been tolerated from motives of patriotism. It might have been added that this fee has kept many of the best practitioners off the panels, and has only allowed of a service which no one deems satisfactory. Nevertheless, 7s. 3d. is taken as the basic fee in this calculation, with prejudice to the percentages subsequently.

The first modifying factor recognized is the altered value of money. After considering various headings under which expenses have risen, the memorandum concludes:

A consideration of all these facts leads to the conclusion that in order to produce a rise of not more than 50 per cent. in the money income over 1913, approximately 60 per cent. would have to be added to the gross income. To take this latter figure as the percentage of increase which is necessary in respect of the altered value of money is certainly not unreasonable, and probably leaves the actual income somewhat less than in 1913, for the same amount of work and responsibility.

It is not very apparent why a "rise of not more than 50 per cent." should be the highest ambit on of the practitioner, especially since the Government allows from 100 per cent. upwards as the increased cost of living to other classes. However, the memorandum takes 7s. 3d. plus 60 per cent. of 7s. 3d. and adds them to make 11s. 7d. This is now adopted as a basic fee which would be fair supposing that the conditions of our work remained as in 1913. To this is added 10 per cent. in respect of increased incidence of disease due to war conditions and 10 per cent. in respect of new liabilities to be undertaken. The total fee arrived at is 13s. 9d., and this is arbitrarily reduced further to 13s. 6d. as a minimum fee.

The insurance practitioner will naturally ask what these new services, estimated as worth 10 per cent. increase, may be and why other factors have been left out of the calculation. The memorandum refers to "two definite new liabilities," namely, the provision of attendance (on other doctor's cases) in emergencies and the making of additional reports in certain cases. It also states that the future conditions of service will be "in several respects more stringent" than formerly. Amongst "respects more stringent" we find the giving of services outside the contract and attendance for conditions arising out of labour after the tenth day. These are not further defined but also look very like new liabilities.

The British Medical Association is supposedly democratic, that is, its members have a full and adequate share

in its government. Yet we here find one of the governing committees laying down a minimum fee (which like all minimum fees will probably come to be regarded as a maximum) without any complete knowledge of the services to be required, or, if it has it, without publishing this knowledge to its members. Surely opinions might have been asked before this document was published, especially since it omits several factors of importance.

Of these, the first is the increased responsibility of the practitioner, involving "increased attention to pre-natal conditions, increased co-operation with the medical officer of health in sanitary matters, and, above all, the investigations of the beginnings of disease." I quote from the memorandum, which recognizes all these when it deals with the altered value of money, but makes no percentage addition to the fee in respect of them. If such things are to become obligatory they ought to be paid for. Co-operation with the M.O.H. would certainly entail much clerical work, and, says the memorandum, "the insurance practitioner should be expected . . . to do what he can in these respects."

A second forgotten factor, to which my attention has been particularly called by Dr. Dukes of Croydon, is the increasing number of non-contributing old people on our lists. These were left out in 1913 because to include them would have raised the fair capitation fee too much. They are now automatically included, since "once insured always insured," and, with their high sickness rate, form a greatly increased responsibility. Dr. Dukes estimates that the capitation fee should have advanced by three-halfpence a year in respect of the old people, and this is certainly not excessive.

A third forgotten factor is the inclusion of a new class with incomes up to £250. Possibly the class is small at present, but even so it detracts from our non-panel income, and may quite easily be increased by the Government at any time.

From the omission of these factors and from the general tone of British Medical Association publications and pamphlets on remuneration, one feels bound to deduce that the insurance practitioner is still insufficiently consulted, insufficiently informed, and inefficiently represented in the British Medical Association. His interests seem to be as straw before the wind when the British Medical Association goes to meet the Government:—I am, etc.,

Sevenoaks, Nov. 3rd.

GORDON WARD.

INSURANCE COMMITTEES.

COUNTY OF LONDON.

Settlement of Medical Benefit, 1918.—It was reported to the London Insurance Committee on October 23rd that the balance remaining in the practitioners' fund for 1918, after deducting the advances made during the year, was £72,589, which is to be distributed amongst the practitioners. The amount in 1917 was £104,165. The average cost of medicines for insured persons in 1918 was 1s. 11.08d., as compared with 1s. 6d. in 1917, and the amount to be transferred from the drug fund to the practitioners' fund is £4,399. In 1917 the practitioners received the whole amount derived from the "floating sixpence," but for 1918 the amount available from that source is smaller, presumably on account of the influenza epidemic.

Chemists' Closing Hours.—The special section which was appointed by the Committee to investigate difficulties alleged to be experienced by insured persons in obtaining medicines after 3 p.m. reported that in several districts from which complaints had been received no special action appeared to be necessary, but in one district—Battersea—on the suggestion of the section, a rota of chemists to deal with urgent prescriptions up to 9 o'clock had been formed.

Breach of Agreement.—In a case in which an insured person complained that his insurance practitioner had failed to give any treatment when called in, but had simply advised the man's removal to the infirmary, the subcommittee, after investigation, found that the doctor had committed a breach of his agreement, and recommended that the sum of 18s. 6d.—the fees of a second doctor who was called in—should be deducted from his remuneration. Several members of the full Committee, however, pressed for a more exemplary penalty, and it was agreed that the facts should be placed before the Ministry of Health with a view to further inquiry.

The Sanatorium Menu.—As the result of a motion by Mr. L. N. Rowden, the Sanatorium Benefit Subcommittee was instructed to report upon the food arrangements in sanatoriums. It was alleged that in many cases the sameness of the daily menu was the reason why a very large proportion of the patients sent to sanatoriums voluntarily took their discharge before their treatment was finished. It was stated that at one hospital resort mutton was given to the patients for thirteen weeks on end.

LOCAL MEDICAL AND PANEL COMMITTEES.

MIDDLESEX.

At the monthly meeting of the Middlesex Panel Committee, held on October 9th, with Dr. H. B. BRACKENBURY in the chair, the question was raised of the right of a Panel Committee to be represented at inquiries held by the Ministry of Health in cases in which the complainant is not a Panel Committee. It was decided to ask the Ministry of Health to state what in their opinion is the position of Panel Committees in such cases, especially with reference to any request which might be made by a practitioner to a Panel Committee to undertake his defence.

At a special meeting of the Middlesex Panel Committee, on October 30th, to consider the draft Medical Benefit Regulations and the question of future remuneration, Dr. BRACKENBURY, who presided, explained in detail the most important of the new regulations. The Committee considered with special care Article 15, and in the sub-section (g) which deals with emergency cases it decided to recommend that the word "serious" should be inserted before the word "accident," in order that it might be made quite clear that the obligation contained in the sub-section would be operative only in cases of genuine gravity. It was decided to convene a meeting of the practitioners of the county for the purpose of considering the regulations and future remuneration.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

The following announcements are notified by the Admiralty:—Surgeon Rear Admiral Sir W. W. Fryn, K.B.E., C.B., has been placed on the retired list. Surgeon Rear Admiral V. G. Thorpe, C.B.E., has been placed on the retired list at his own request. Surgeon Rear Admiral D. J. P. McNabb, K.B.E., C.B., to R. N. Hospital, Plymouth. Surgeon Captain J. F. H. J. C. M. G., to Medical Department, Admiralty, as Deputy Director-General. Surgeon Commanders F. W. Parker, O.B.E., and (acting Surgeon Captain) W. H. S. Stalkart, have been promoted to the rank of Surgeon Captain. Surgeon Commanders E. Sutton, C.M.G., to Medical Department, Admiralty, as Assistant to Medical Director-General; H. W. Gordon-Green, O.B.E., to Haulbowline Hospital and Dockyard. Surgeon Lieutenant Commanders W. Bradbury, D.S.O., to the *Blake*; T. C. Patterson to the *Victory*, additional, for long course at P. and R. T. School, Portsmouth; E. D. Rutherford to the *Gibraltar*, additional. Surgeon Lieutenants: W. H. A. Sinclair-Loutit to the *Europa*; J. D. Murphy to H.M. Dockyard, Devonport; F. C. Hunot to the *Barham*; G. F. B. Page to the *Irish* for R.N. Barracks. Surgeon Lieutenants (temporary): S. H. Waddy to the *Heythrop*; R. T. D. Roberts to the *Agadir*; W. A. Jolliffe to the *Boadicea*; L. M. Arnold and P. E. F. Frossard to the *Caledon*; C. M. Williams to the *Gnat*.

ROYAL NAVAL VOLUNTEER RESERVE.

Surgeon Lieutenants (temporary) C. R. Martin to the *Greenwich* for duty with Baltic Fleet. R. S. Ward to the *Impregnable*.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

To be acting Lieutenant-Colonels:—Whilst commanding medical units: Majors H. W. Farebrother, G. H. Stevenson, D.S.O., T. E. Harty, D.S.O. Captain and Brevet-Major R. E. Barnsley, M.C. Whilst specially employed: Majors J. L. Wood, O.B.E., A. S. Littlejohns, D.S.O., M. H. Allen, late Lieutenant-Colonel C.A.M.C., to be temporary Major.

The following officers relinquish the acting rank of Major: Captains T. O. Thompson, T. B. Nicholls, A. L. Aymer, Temporary Captains J. S. Lloyd, V. H. Mason, M.C., O. de B. Marsh, O.B.E., W. A. Clayton, Major E. R. Lathbury, O.B.E., relinquishes the acting rank of Lieutenant-Colonel.

C. L. Williams, late Major I.M.S., to be temporary Major.

Temporary Captain M. Fitzmaurice-Kelly to be acting Major whilst specially employed.

The notification in the *London Gazette* of September 17th, 1919, regarding temporary Captain Ronald T. Grant, is cancelled.

The name of temporary Captain F. E. S. Willis, M.C., is as now describe 1, and not as in the *London Gazette* of October 10th, 1919.

To be Captains but not to reckon for pay or allowances prior to October 1st: Temporary Captains (acting Major) S. Fenwick, M.C. (April 10th, 1918, and to retain his acting rank, precedence next below C. K. G. Dick), W. Russell, M.C. (November 3rd, 1918, precedence next below J. H. Bayley), G. Jackson, M.C. (August 1st, 1919, precedence next below T. C. Bowle), K. N. Purkis, M.C. (February 14th, 1919, precedence next below J. F. Bourkel), Captain (acting Major) W. McMeekin Chesney, M.C., from S.R. (February 9th, 1918, with precedence next below J. Walker, and to retain his acting rank), Captain F. G. Flood, M.C., from S.R. (March 23rd, 1918, with precedence next below A. L. Aymer).

To be temporary Captains: J. L. Rubidge (late temporary Captain, seniority May 7th, 1917), C. R. Worthington (late Captain C.A.M.C.), J. J. McConnell, Temporary Lieutenants A. H. Ward, A. R. Moore, M. Rust, C. A. D. Bryan, W. C. Morton, B. Dunlop, A. E. Ain cow, T. M. Walker, H. P. Fairlie.

Temporary Captain H. G. P. Armitage to be Lieutenant, and to be temporary Captain, September 6th 1917, but not to reckon for pay or allowances prior to October 1st, 1919, with precedence next below J. C. Burns.

To be temporary Lieutenants: T. B. Bokenham, E. P. O'Dowd.

The following officers relinquish their commissions:—Temporary Lieut.-Colonel H. French, C.B.E., and retains the rank of Lieut.-Colonel. Temporary Major H. M. Chasseaud and is granted the rank of Lieut.-Colonel. Temporary Major W. B. B. Taylor on ceasing to be employed at Edmonton War Hospital and retains the rank of Major. Temporary Captain (acting Lieut.-Colonel) W. Kennedy-Taylor and is granted the rank of Lieut.-Colonel. Temporary Captains and are granted the rank of Major: J. L. Wilson, C. Kingston, Temporary Captains and retain the rank of Captain: W. A. Ryan, S. H. Browning (on account of ill health contracted on active service), E. G. Rawlinson, H. H. Molloy, W. E. Glover, A. O. P. Reynolds, M.C., W. Reynolds, D. W. Reid, E. Atkinson, W. McKee (on account of ill

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, NOVEMBER 15TH, 1919.

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British Medical Association.

CURRENT NOTES.

MEETING OF THE COUNCIL.

AN ordinary meeting of the Council of the British Medical Association was held at the house of the Association, 429, Strand, on November 5th, when Dr. J. A. Macdonald, Chairman of Council, presided.

Dates of Meetings of Council.

At the meeting of the Council on July 26th, 1919, it was resolved that more frequent meetings should be held during the coming year, and the following dates were provisionally settled: October 22nd and December 17th, 1919; February 18th, April 21st, and June 23rd, 1920. The Council was moved to make this arrangement because it was found that the business coming before an ordinary quarterly meeting was sometimes more than "could be satisfactorily dealt with in a single day. Owing to the derangement of business caused by the railway strike it was found necessary to postpone the meeting which was to have been held on October 22nd until November 5th. At this meeting a new standing order was proposed by the Chairman of Council and adopted in the following form:

The proceedings of the Council shall commence at 10 a.m., or at an hour to be fixed by the Chairman after consideration of the business to be transacted. All meetings shall terminate at 5 p.m., and any business on the agenda not dealt with at that hour shall stand adjourned until the next meeting of Council.

On this occasion the Council found it possible to get through nearly the whole of the business before 5 p.m., and in order to conclude it suspended the standing order and sat until 5.30 to finish the matters before it.

East Anglian Branch.

THE Chairman of the Organization Committee, Mr. Russell Coombe, reported that new Essex, Norfolk, and Suffolk Branches had been formed to take the place of the East Anglian Branch, and that inaugural meetings of the Norfolk and Suffolk Branches had been held. The East Anglian Branch was, we believe, the oldest Branch of the Association. The claim has been disputed, but seems to be well founded, although only by a few months. At the fourth anniversary meeting of the Association, held at Manchester in July, 1836, the Eastern Provincial Medical and Surgical Association sent a deputation pro-

posing that it should join with the Provincial Medical and Surgical Association—the forerunner of the British Medical Association—and shortly afterwards this plan was carried out. Subsequently in the course of the same year branches were formed at Wells, Bath, and Southampton. The Organization Committee in its minutes noted that the East Anglian Branch has from first to last done great work for the Association and the profession, thus leaving the new branches a most illustrious example. The annual meeting of the Association was held in Norwich in 1846, and subsequently annual meetings were held within the area of the Branch at Norwich for the second time in 1874 and at Ipswich in 1900.

Naval Medical Service.

NAVAL members will be interested to hear that a subcommittee of the Naval and Military Committee has been appointed to consider the Jerram-Halsey Report. The subcommittee is giving its first consideration to matters which have appeared to it to be urgent. An interim report dealing with any matters requiring immediate action will be presented to the parent committee at an early date. As it is understood that the new scheme governing retirement and pensions will be put into operation on January 1st, 1920, this question is being dealt with first. The subcommittee will be glad to receive any suggestions which may be helpful to its work. These should be sent immediately, addressed to the Medical Secretary, British Medical Association, 429, Strand, W.C.2, and will be regarded as confidential.

Certificates for Out-of-Work Donations.

FROM communications received it appears that medical men are frequently asked to sign forms of identification which have been issued by the Ministry of Labour to persons applying for out-of-work donations. These applications are often made by persons practically unknown to the doctor though possibly on his panel list. The medical man is thus placed in the invidious position of having either to refuse and thereby seem discourteous, or to give a signature which is to all intents and purposes valueless. Moreover, the form requires the doctor to certify that, in his opinion, the statements made by the applicant as to his previous employment are correct; in many cases he cannot have any means of knowing whether such statements are correct or not. Representations have been made to the Ministry by the British Medical Association, and it has been suggested that it would be as well so to alter the form as to ensure that it should be taken to someone who knows the applicant well. A reply has

been received to the effect that the Association's objection to the present procedure has been noted, that the suggested alterations will be carefully considered when the forms are reprinted, and that the question of devising some alternative method of obtaining the necessary verification of the statements of applicants is occupying the attention of the Employment Department of the Ministry of Labour.

Association Notices.

MEETING OF COUNCIL.

THE next Meeting of Council will be held on Wednesday, December 17th, in the Council Room, 429, Strand, London, W.C. 2.

LIBRARY OF THE BRITISH MEDICAL ASSOCIATION.

A LIST of periodical publications, official reports, and Blue Books in the Library of the British Medical Association available for issue to members on loan has been printed, and copies can be obtained free on application to the Librarian at the house of the Association, 429, Strand, W.C. The regulations governing the loan of these publications are stated in the introduction to the list. The Library is open for consultation from 10 a.m. till 5 p.m. (on Saturdays till 1 p.m.).

Meetings of Branches and Divisions.

DUNDEE BRANCH.

ON Wednesday, November 5th, Sir JAMES MACKENZIE gave the first address of a series now being organized by the Dundee Branch. His subject was "The soldier's heart and war neuroses: a study in symptomatology." The address was an interesting talk, in which were explained the classification of symptoms as structural, functional, and reflex, and the law of associated phenomena which are stated in *The Future of Medicine*, and showed the need of research such as is to be pursued in the institute which Sir James has just opened in St. Andrews. The meeting was in University College, Dundee, and Dr. COLMAN presided over a very large audience. After the address Dr. MACKIE WHYTE and Emeritus Professor MACEWAN proposed a vote of thanks, which was heartily accorded. The address is to be published later in a developed form.

THE GENERAL MEDICAL COUNCIL ELECTION.

ENGLAND AND WALES.

THE Council of the Metropolitan Counties Branch of the British Medical Association convened a meeting on November 6th at St. James's Vestry Hall, Piccadilly, to hear Dr. R. A. Bolam, Dr. J. A. Macdonald, Mr. E. B. Turner, and Sir Jenner Verrall, candidates in the forthcoming election to the General Medical Council. The chair was taken by Mr. W. MCADAM ECCLES, President of the Branch, who, in opening the proceedings, described briefly the qualifications of each of the candidates, particularly the eight years' work of Dr. Macdonald and Sir Jenner Verrall upon the General Medical Council, and the distinguished part which all four had taken in the executive work of the Association.

Dr. MACDONALD outlined the constitution and powers of the General Medical Council, and urged that, while in no way depreciating the representatives of the schools, the direct representatives of the profession were likely to bring to the consideration of the disciplinary cases a moderating and humanizing influence. The Government conferred with the Council on projected legislation, and there again men who were in contact with the general body of practitioners in the country were in the best position to understand the effect of proposed changes. His own chairmanship of Council of the British Medical Association and his previous tenure of other offices had given him considerable insight into the difficulties and opinions of the ordinary practitioner.

Sir JENNER VERRALL emphasized the fact that the primary purpose of the General Medical Council was to protect the public; its secondary purpose was to protect the interests of the profession. On its educational side, any modifications which the Council introduced from time to time were never in the direction of a lowered standard.

Of late the Council had been eager to provide training facilities in preventive medicine. It was hoped that the curriculum, already overloaded, might be relieved by a larger recognition of the excellent work done in the secondary schools. He looked forward to the establishment of a one-portal system for those entering the profession. He referred, in conclusion, to his own long connexion with medical politics, and his membership for a quarter of a century of the Council of the British Medical Association.

Dr. BOLAM said that during the last ten years he had taken a very active part in professional life in the North of England, and had been brought into touch with all phases of medical practice. He thought there was an acknowledged need for change, and to some extent reform, in the training of medical students. The standard of preliminary examination must be maintained at an adequate level, and must also be standardized, for it was irksome to teachers and confusing to parents to find such extraordinary variety in the preliminary examinations. One necessity was the co-operation of teachers throughout the whole of the student's career. At present there was too much "compartmentalism." The curriculum also needed to be pruned of many redundant features; materia medica required considerable revision, and might be taken earlier, while public health and forensic medicine might be pushed back or reserved for post-graduate study. There was room for a carefully supervised contact with the patient, in the out-patient department at any rate, and to some extent in the wards, at an early stage in the student's career. While supporting the one-portal system, he hoped that nothing would be done to prevent the various educational institutions stamping the peculiar impress of their genius upon their own men.

Mr. E. B. TURNER asked the meeting to regard the candidates collectively. Their careers had been mainly spent, his own in London, and Dr. Macdonald's, Sir Jenner Verrall's, and Professor Bolam's respectively in the west, south, and north of England; and they were all men who knew a great deal about the needs of the profession. His own views on education were that the preliminary teaching should be sufficient to train the student's mind to the best advantage for his future career. He was absolutely in favour of the one-portal system. The standard of knowledge and practice a man must reach in order to obtain a degree should be the same throughout the United Kingdom. As to disciplinary cases, while he had had no experience of the General Medical Council, he had been a member and vice-chairman of the Central Ethical Committee of the British Medical Association, and the cases there dealt with—happily few—had given him insight and sympathy in dealing with such matters. He had also been Chairman of Representative Meetings, and had done much work on committees. He appealed to the profession to take an interest in this matter of the election of direct representatives; he would rather be rejected on a poll of 30,000 than elected on one of fifteen hundred.

The CHAIRMAN then invited heckling, and himself asked two questions—first, the relationship of the General Medical Council to the Ministry of Health, and secondly, to what body the General Medical Council was responsible.

Dr. MACDONALD said that the General Medical Council was an absolutely untrammelled body; there was no appeal against its decisions. He could not see, in the absence of any further legislation, how the Ministry of Health could control it in any way. The Council had been called a committee of the Privy Council, but that was a very doubtful title.

Dr. CHARLES SANDERS said that he had heard that the General Medical Council was the most expensive deliberative body in the world, and he had heard it said that its deliberations cost 60 guineas a minute!

Dr. MACDONALD said that it was certainly expensive. The members who attended were paid—(Dr. SANDERS: And rightly!)—five guineas a day, with one guinea subsistence allowance, and travelling expenses.

Sir JENNER VERRALL said that whatever the expenses might be the work of the Council in this respect was one of the things which cost no more than it did before the war (laughter). He added that there were thirty-seven members, all of them, as it happened, medical men, though laymen might be appointed.

The CHAIRMAN pointed out that the four candidates, if elected, would not be representatives of the British Medical Association. They would be direct representatives of general practitioners. But, seeing that the British Medical Association was the body which voiced the claims and ideas of general practitioners, it was right that the Association should actively support the candidates it favoured.

Surgeon-General CORKER asked who elected the remainder of the 37.

Dr. MACDONALD said that some years ago the Council was composed entirely—as it was now in great part—of nominees of the Crown and of the teaching corporations, but steps were taken, chiefly by the British Medical Association, to secure a certain amount of direct representation.

The CHAIRMAN said that he found considerable lack of knowledge as to the functions of the General Medical Council. To secure for general practitioners all that they wanted was not one of its functions; but it had powers greater than those possessed by any other body; it could deprive a man of his livelihood, and its decisions governed in many cases the withdrawal of diplomas by the medical corporations. The re-granting of the diplomas was a necessary precedent to restoration to the *Register* by the Council, so that the representatives of the corporations on that body were extremely important from the judicial as well as from the educational point of view.

Mr. SWINFORD EDWARDS proposed a vote of thanks to the four candidates, and said that he had been greatly enlightened that afternoon. The addresses must have commended themselves to those present, as did also the appearance of the candidates.

Dr. H. W. HENSHAW (Bromley), in seconding the vote of thanks, said that he had come into the room with an open mind, but the addresses had convinced him that the proper thing to do was to give such candidates his support. The members of so great a judicial body ought to be experienced, not only in medical matters but in affairs of the world, impartial, and men whose opinions carried weight with the general public. The candidates answered these tests.

The vote of thanks was carried with acclamation.

Dr. JOHN MACKETH said that he also had come to the meeting with an open mind, but he had not been convinced of the suitability of the four candidates, and he thought it better to give new men a trial on this occasion.

A vote of thanks was accorded to the Chairman on the motion of Dr. MACKETH, seconded by Dr. SANDERS, and Mr. MCADAM ECCLES briefly replied that he regarded his membership of the Council of the British Medical Association as a great privilege, because it enabled him to do his best to maintain that unity of the profession which had no parallel in any other country.

INSURANCE.

THE NEW TERMS OF INSURANCE SERVICE.

MEETING OF NORTH LONDON PRACTITIONERS.

THE second meeting of insurance practitioners arranged by the London Panel Committee to discuss the new terms of insurance service was held at the house of the Royal Society of Medicine on November 6th. Dr. H. J. CARDALE presided, and the same procedure was followed as in the case of the meeting of South London practitioners held two days previously.¹ The main discussion centred around the new Regulation as to the disposal of practices on death or retirement.

Dr. J. A. ANGUS again moved his resolution, which had been almost unanimously accepted at the previous meeting, that the new Regulation should not apply in the case of the death of any practitioner whose name was included in the medical list on December 31st next. This compromise, however, had a much less general body of support than at the previous meeting. Several speakers strongly denounced the Government proposal.

Dr. COODE ADAMS said that trade customs were given distinct recognition in the law courts; in this case also professional custom was involved, the custom, namely, of transferring practices on death or retirement. Practitioners must not submit to the loss of this right. Dr. T. F. KEENAN described the Regulation as downright piracy. When Mr. Gladstone abolished purchase in the army every man who had a commission was compensated, yet the Government did not propose to compensate practitioners for what it took away. Dr. H. G. COWIE, having referred to certain abuses which the Government was determined should not recur, was asked to be more specific, and in reply he said that while it was difficult to give details, he could mention one case of which he knew. At the death of a certain practitioner his list was acquired, and three weeks afterwards was sold at an enhanced figure. Other cases of the same kind had occurred.

Dr. H. B. BRACKENBURY appealed to those present to deal with the question in a businesslike spirit. While

they would all prefer the old Regulation to the new, it had to be realized that, rightly or wrongly, the Government was resolved not to tolerate what it called the buying and selling of insured persons, and the most obvious course for practitioners seemed to be to endeavour to secure such modifications as would prevent injustice. He would like to press upon the Government the need for some alteration in the case of death vacancies. Under the new Regulation, however, the name of the successor in a practice would be furnished to every insured person who had been on the list of the former practitioner; moreover, it was reasonable to suppose that in the case of those insured persons who had to be assigned under the allocation scheme on the death or retirement of a practitioner, the subcommittee (including as it did representatives of the Panel Committee of the area) would naturally assign the persons to the successor in the practice.

Dr. Angus's motion was carried by 87 votes to 40, but its scope was enlarged by a further motion, which was carried, that the Regulation should not be applicable to any practitioner on the list on December 31st who subsequently withdrew from the panel; the previous motion had related only to death vacancies. A motion by Dr. KEENAN to resist the Regulation altogether and to refuse to work under it was lost. Dr. B. A. RICHMOND denounced the suggestion that practitioners were being trapped into service and that afterwards the matter of remuneration would be dealt with. These were only regulations that were proposed, and all that was asked for was a mandate for the coming Conference.

Dr. ANGUS (who had now taken the chair) proposed the same resolution as that which had been passed at the previous meeting—namely, that practitioners were not prepared to accept service until an entirely satisfactory scale of remuneration had been agreed upon; and this was carried without dissent. Dr. BRACKENBURY then made a similar statement on remuneration to that which he had made previously, and in closing the proceedings Dr. ANGUS from the chair expressed the hope that the heated words and occasional personal references in these discussions would be forgotten, and that they would preserve unity in the cause in which they were all comrades together.

MEETING AT AYLESBURY.

A general meeting of Buckinghamshire practitioners was held on November 7th at the Crown Hotel, Aylesbury, with Dr. J. C. BAKER in the chair. The meeting discussed the draft new Regulations of the Insurance Act. Dr. BAKER, introducing the subject, referred to the indefinite nature of the income limit, and gave a resumé of important points. He asked those present to bring forward any part they thought ought to be considered. Dr. LARKING spoke on the abolition of the vested interests of insurance practitioners after 1922. He thought it would lead to great injustice in the cases of death vacancies if insured persons were to choose another doctor. It would lead to a large number choosing a man they knew rather than the purchaser of the death vacancy, and would abolish the market value of the practice. He proposed:

That this meeting strongly objects to the part of Regulation 16 referring to the arrangements at the end of 1922, it being especially a hardship on the widow and family of a deceased practitioner.

Dr. HUGGINS said that payments would cease on the death of the practitioner, and there might not be any money even to pay the locumtenens; two or three months might pass before the patients were allocated. Dr. L. W. REYNOLDS said a practice should not be sold like a flock of sheep. At present there was no chance for a young man to settle anywhere, as all patients had chosen a doctor. Dr. ROSE said that death vacancies were always a hardship. Panel patients would have the same introduction as private ones.

Dr. S. BAILEY said that no Allocation Committee would allot the patients to other than the successor of the deceased practitioner. Dr. DOBSON said patients would dilly-dally and only select a doctor when they were taken ill. Dr. KENNISH thought there should be an interval of three months after the death of a practitioner.

In reply, Dr. LARKING pointed out that there was a great difference between a panel and a private patient, in that the former had to select a doctor at once, whilst the latter waited until he was ill.

On being put to the meeting the resolution was carried by 14 votes to 4.

Dr. HUGGINS referred to Regulation 10, par. (2), and proposed that it be deleted up to the words "provided that." He said it was very unfair to doctors who did not supply drugs to other than private patients to be compelled to dispense for insured persons if they did not wish to do so.

¹ Reported in SUPPLEMENT, November 8th, p. 108.

It was taking away a medical man's freedom. The resolution was carried *unanimously*.

With regard to the payment for drugs, it was thought that the Regulations were not at all clear, and the Secretary was directed to draw attention to this. Referring to the payment of fees, the Secretary was directed to ask if anything in the Regulations would prevent the acceptance of a fee for giving an anaesthetic for a dentist to a panel patient.

The question of remuneration was then considered, and the Representative (Dr. Larking) was instructed.

LOCAL MEDICAL AND PANEL COMMITTEES.

WARWICKSHIRE AND COVENTRY.

A JOINT meeting of the members of the Warwickshire and Coventry Panel Committees was held in Coventry on November 3rd for the purpose of considering the draft conditions of service for 1920 and the remuneration question. Dr. J. ORTON acted as chairman, and there was a good attendance.

At the outset of the consideration of the draft Regulations strong exception was taken to the provisions of Article 20, whereunder the Distribution Committee, which will exercise the highly important function of advising as to the allocation of all panel moneys amongst the respective areas, is to be appointed at the arbitrary pleasure of the Minister of Health; and a resolution was adopted that the Distribution Committee should be elected, as to the majority thereupon, by the Panel Committees. The meeting also unanimously resolved that there should be determined opposition to any modification of the current right of a practitioner or his successors to transfer his panel list to another doctor under mutual arrangements, subject to the existing rights in the matter of objection allowed to the insured person. It was felt that the new six-monthly arrangements for giving notice to transfer would act as an additional safety-valve to prevent hardship; and the view was also expressed that the vested interest of the practitioner in the matter was legitimate, and one accruing in all contract practice long before the passing of the 1911 Act.

Other resolutions as to the Regulations included: Opposition to a further liability to keep prescribed records, on the ground that the work thus entailed might often seriously encroach on the time required to be spent otherwise in the patient's best interests; the acceptance of Government appointed referee-consultants, subject to its being expressed that the approved society will have no further power to refer an insured member to any private referee; and substitution of seven days for two where notice has to be given of a fee charged for a service considered outside the range of medical benefit. The inclusion in the Regulations of some measure for the provision of dental treatment was urged.

In dealing with remuneration, the meeting expressed the view that it was undesirable to attempt to analyse the time factors of attendances given as between insured and private patients, and that such an attempt must always be unreliable and misleading. The factors in M. 22 upon which the general increases in remuneration were calculated to be requisite as due to the depreciation in money, were held to be underestimated. The meeting finally resolved that the acceptance of an inclusive capitation fee of less than sixteen shillings would not be reasonable; and remitted this and the previous resolutions to the agenda of the forthcoming Panel Conference.

At the same meeting a resolution to send delegates to a conference of the Medico-Political Union on November 26th was defeated by eleven votes to six. A provisional payment of £100 was authorized on the part of the Warwickshire Panel and Local Medical Committee as a subscription to the objects of the National Insurance Defence Trust.

SUNDERLAND.

Three largely attended meetings of the Sunderland (Borough) Medical and Panel Committees, presided over by Dr. I. G. MODLIN, have had under consideration the draft Medical Benefit Regulations 1920, and have passed the following resolutions thereon:

- (a) In the case of an insured person who fails to produce evidence of his right to treatment and is charged a fee for treatment rendered or drugs supplied, the cost of the same shall be borne by the approved society or the insured person or other person who may be at fault.
- (b) In first schedule, Part I, Clause 4 (1) of the Medical Benefit Regulations 1920, the date 1922 to read 1930. Further, that in every case of the death of a practitioner the procedure for the transfer of his insured patients to the

list of his successor shall remain as at present, and that the draft Regulations and term of service be altered accordingly.

- (c) That payment to practitioners for drugs and appliances supplied under first schedule, Part I, paragraph 8 (a), shall be made out of the drug fund on the basis of the drug tariff, and not by capitation fee or percentage on the payment to practitioners.
- (d) That the time has arrived when the range of duties of a general practitioner of ordinary professional competence and skill, as contemplated by the Medical Benefit Regulations, 1920, first schedule, Part I, Clause 8 (1) should be properly defined.
- (e) The Subclauses (11) and (12) of the Medical Benefit Regulations, 1920, first schedule, Part I, Clause 8, are vague, and the practitioner should be safeguarded. The matters referred to should be more fully discussed in consultation with the profession.
- (f) That the prohibition of "Rep. Mist." should not be agreed to, as the issue of the prescriptions in triplicate is intended to provide for any trouble cast upon the chemist. In the event of the Rep. Mist. being abolished, two copies of the prescription should not be required for the chemist.
- (g) That the action of the Insurance Acts Committee be strongly supported in asking for a capitation fee of 13s. 6d.

At a meeting of the Sunderland Medical and Panel Committees, held on November 4th, it was resolved that Panel Committees should be advised not to confer with Insurance Committees on the new Medical Benefit Regulations until the policy of the profession is settled at the forthcoming Conference in London of the Local Medical and Panel Committees.

CORRESPONDENCE.

Document M. 22.

SIR,—It seems to me that the document M. 22, around which so much controversy is raging at the present moment, is a profoundly unsatisfactory statement of the just claims of the medical profession. I will confine my remarks to the subject of the proposed remuneration under the 1920 Regulations.

There are two main points to which attention should be specially directed. The first is the question of the proper pre-war basic fee. It has been admitted, I believe, that for every insured patient on a doctor's panel list three consultations and one visit are required on an average, and it is also admitted that 2s. ought to be paid for a consultation and 2s. 6d. for a visit. This brings the basic fee to 8s. 6d.—instead of the 7s. 3d. given in M. 22—as a basis for their calculations. The second main point is the 60 per cent. increase proposed on account of the diminished value of money. In M. 22 it is shown that on account of the increase of expenses, to obtain a 50 per cent. increase of net income it is necessary to have a 60 per cent. increase on gross income. No sound argument, however, is produced to show why medical practitioners ought to be content with a 50 per cent. increase of net income.

In the BRITISH MEDICAL JOURNAL of November 1st, p. 567 et seq., there is a long unsigned article which is apparently nothing but an exposition of M. 22, which it seems to think is quite satisfactory. Let us look at this article. It begins by pointing out that the value of money has diminished by more than half. Next it examines the position of working men. It points out that a working man spends practically all his wages on food and shelter, and that therefore it is absolutely necessary that his wages should be doubled. Next it considers the case of the retail trader, taking a grocer as an example. It is shown that in his case his turnover is automatically doubled and that therefore his income is also automatically doubled. So far, so good.

Now, when the case of the unfortunate medical practitioner is considered, the above arguments are suddenly abandoned. Instead of saying, the value of money being half what it was, the doctor's income ought to be doubled, which is the logical outcome of the preceding arguments, it goes off into all sorts of irrelevant side issues. It says that the doctors cannot expect to be as well paid now as they were before the war. I ask, Why? It says that every one must bear a portion of the country's burdens, and that doctors must take their share. I quite agree, but we ought to take our share of the country's burdens by paying our proper share of taxes, which we do, and more. But we ought not to be both underpaid and overtaxed at the same time.

Any income which a doctor earns beyond his necessary living expenses goes towards the education of his children and provision for old age and ill health; it seems to me to be evident that he ought not to be deprived of the ability to do both these things.

My conclusion is that, on account of the altered value of money, his net income ought to be increased 100 per cent. and his gross income 110 per cent., the extra 10 per cent. being used up in the extra expense of running his practice. Against this it may be said that the value of money may increase before the end of the time during which the new Regulations will be in force. Now it does not seem probable that the value of money will be increased much in the next few years, so that it seems clear that the gross income ought to be increased by at least 100 per cent.

If now we make the calculations as they ought to have been made in M.22, we have: original basic fee 8s. 6d. + 100 per cent. = 17s., and adding 20 per cent. for extras (a figure which is probably an under-estimate), we have 17s. + 3s. 5d. = £1 0s. 5d. as a minimum capitation fee.

Considerations of space forbid my writing at greater length, but I should like to end this letter by asking why the British Medical Association adopted M.22 in its present form, with its utter lack of sound arguments on the two points I have raised, and whether M.22 has been submitted to the medical profession generally and endorsed by them.—I am, etc.,

Sandown, I.W., Nov. 9th.

H. B. BILLUPS.

SIR,—Perusal of the memorandum (M.22) sent by the Insurance Acts Committee to the Ministry of Health has convinced me that the Committee has gone far towards delivering us gagged and bound into the hands of a wily and well-equipped foe.

The suggested capitation fee of 13s. 6d. assumes that the original capitation fee of 7s. 6d. was a correct one, whereas they must be well aware that it was forced by unstatesmanlike and unpatriotic threats upon a protesting profession, and never had any pretension to adequacy.

Three methods of computing this sum of 13s. 6d. are quoted, and the last two are carefully arranged to give the same result as the first.

The second one contains for me a *casus belli* against the Committee for suggesting that the average general practitioner earns £1,800 per annum. Such a statement is absurd and would, I think, destroy public sympathy in the event of our refusal to accept service under the new Regulations.

Assuming that a plutocrat of the profession earning £1,800 year condescends to panel work, let us see to what conclusion the figures quoted by the Committee would lead.

If 1,000 patients occupy three-eighths of his time then 2,700 would occupy the whole of it. Therefore, as he receives £375 per annum for 1,000 panel patients, he must receive £1,425 per annum for 1,700 other patients. In other words, he gets £375 per thousand for panel patients and £855 per thousand for others, or more than twice as much per patient.

The Insurance Acts Committee suggests that fourteen attendances a day would be required by 1,000 panel patients. I find that with a panel of nearly 600, approximately twelve attendances a day are required. If emergency and night calls are borne in mind, surely 5s. per visit and 2s. 6d. per surgery attendance is a modest claim; as there are about four visits to eight surgery attendances, this amounts to £2 a day and represents a capitation fee of 24s. Special services, such as anaesthetics and extension of service under new Regulations, should be paid for in addition.

I do not favour calculations based on increased cost of living, etc., as these would undoubtedly be whittled away in the future. All the same, a bonus for 1920 in addition to the capitation fee would only be fair and just.

As one would expect from an official of the Government, Dr. Addison, replying for the Ministry of Health, demurs at "additional expenditure of public funds." The figures supplied by Dr. Addison and published in the accounts of Insurance Act expenditure for 1918 are illuminating in this respect. They show that medical benefit (which would include chemists' accounts) cost £4,840,000. Profits to the extent of £9,847,000 were actually invested, and yet cash in hand showed a substantial increase at the year's end. It is obvious that our payments in capitation fees could therefore have been more than trebled out of the funds available.

In conclusion, I should like to draw attention to the sum of £73,900 for "audit" as an example of "expenditure of public funds."—I am, etc.,

Armitage, Staffs, Nov. 10th.

J. H. CLARKE.

The Ministry's Reply.

SIR,—It should not be difficult for the Conference to reduce the reply of the Ministry of Health to waste paper. It resembles the leg of mutton on which Dr. Johnson dined. It is ill cooked, ill dressed, and ill served. Dr. Addison

tells us there is a supposition, at present unfortunately somewhat widely prevalent, that insured patients will obtain better treatment by paying fees as private patients than by availing themselves of their right to medical benefit. In other words, the prevalent idea is that to get good treatment you must pay for it. But he has just made the statement that the Government cannot ignore the opinion of many who have been conversant with the working of the Insurance Medical Service that the 1912 rate afforded an excessive remuneration for the services rendered. Do these people imagine that by lowering the rate the service will improve?

In the Act of 1912 the insurance practitioner is to give such treatment as is of a kind which can, consistently with the best interests of the patient, be properly undertaken by a general practitioner of ordinary professional competence and skill. The American critic, Dr. Hoffman, held that the effect of this was to standardize mediocre practice. So Dr. Addison hopes to change this, and he throws out the hint that insurance practitioners will render to insured persons the highest standard of work of which they are capable. The work from being ordinary must in future be of the highest standard. Yet there is no case made out for an increased grant!

The Insurance Acts Committee made the mistake of anticipating that under the new conditions three-eighths of a doctor's time will be required for looking after 1,000 insured patients. Of course the Ministry of Health seized on this, and has favoured us with five paragraphs of reply to this anticipation. Personally I should be delighted to give two hours of my eight hour working day for £1,750 gross a year to look after 1,000 patients, but he must not demand more than the two hours.

I was told on unimpeachable authority that the Government had increased the rate of pay in the Post Office by 60 per cent. of the pre-war rate. On some such information, I presume, the Insurance Acts Committee demanded an increase of 60 per cent. over the 1912 rate. Paragraph 11 of the reply, by its weakness, shows that the Government is in a tight corner.

The reply has given me a piece of interesting information. It seems that the health of men who were fit to join His Majesty's forces has so much improved from military training or from special war conditions that the work of insurance practitioners has decreased. If true this is most excellent news.—I am, etc.,

Exeter, Nov. 9th.

J. PEREIRA GRAY.

SIR,—As it is evident that M. 22 has failed to convince Dr. Addison of the reasonableness of our claim to an increased capitation fee of 13s. 6d., I venture to submit a few points which perhaps may be helpful.

1. As to the so-called "basic fee" of 7s. 3d. Probably this is the correct figure, but why should it be so? Why do we not insist on payment for the aged and the chronically disabled? I never could understand why we should have taken on the treatment of these gratuitously. Now that there is a chance of revision of terms, this injustice should be put right. I take it it accounts for the basic fee being 7s. 3d. and not 7s. 6d. Dr. Addison questions whether the fee of 7s. 6d. was inadequate from the beginning. I can assure him that while no doubt it proved quite a good thing to some practitioners and in some areas, in this district it was far from being so. In my own experience, while it stabilized my income, it never paid.

2. I do not think there was any need, under the heading increased cost of living, to introduce the question of income tax, and was not surprised to note what the Ministry of Health had to say on that point.

3. Under heading "expenses of practice"—again Dr. Addison points that to include increased drug expenses in the case of urban practices is inadmissible, inasmuch that in such, the chemist supplies the drugs. This makes one wonder if in arriving at the figure 13s. 6d. as the minimum to be asked for, under the new agreement, the Insurance Acts Committee are reckoning that the rural practitioner will get more than 13s. 6d., but at the expense of the urban practitioner, who would get less, the average to remain at 13s. 6d.

4. Impaired health of returned soldiers and sailors. Now this is really, in spite of what Dr. Addison may think, a very serious matter indeed. I am painfully struck by the large number of malarial cases cropping up, and, worse still, the number of cases of venereal infections in both men and women. There is quite an epidemic of ophthalmia neonatorum, as proving my contention. These cases are not paid for under the payment by attendance system. They are on the doctor's ordinary capitation list in the large majority of instances; and even if they were under the former system, to say that 2½d. represents the increase per head per annum is absolute nonsense.

Doctors either will not, or have not time to, fill up the irksome details of the account forms.

5. To try and estimate the proportion of a practitioner's time taken up in panel and private practice respectively will not help us at all, and, as Dr. Addison's comments show, is most misleading. Whether a doctor has 100 or 3,000 on his panel, the whole twenty-four hours for 365 days are what the contract implies. If the doctor is not at liberty to attend a case he must find and pay another to act for him.

6. I am relieved to note that in the reply of the Ministry of Health (paragraph 8) "other methods" of examining the question of suitable remuneration are not precluded from consideration. I beg to offer this alternative method: Roughly 15,000,000, or one-third of the population, are insured. We are asked to give the best of treatment and to make no discrimination between insured and non-insured. What do the other two-thirds of the population pay us? The public, for the most part, do not like insurance treatment. They do not feel they are getting the same as private cases. Unfortunate, but it is so. The only way to convince them that they are entitled to get as good treatment under the one system as the other is to pay equivalent fees. Now, our fees have been raised during the last two or three years. How much? 30 to 50 per cent. To whatever it may be, add the other contributory considerations—the inadequacy of the basic fee, the increased calls on our services, etc. In connexion with this last, I should say six attendances per insured per annum is nearer the mark than four. What it amounted to during the influenza epidemics goodness only knows. The average fee for an attendance should be about 3s. I happen to have such a practice as described in M. 22—that is, rather less than 1,000 panel (before the war), representing about one-third of my clients. And what do I find? That while my visiting lists will show the same proportion of one-third of panel to two-thirds of private cases, at my surgery the panel patients actually predominate, or at least equal the private.

No, Dr. Addison; 13s. 6d. is too little!—I am, etc.,

Padiham, Lancs, Nov. 10th.

A. P. AGNEW.

SIR,—When I finished reading the reply of the Ministry of Health to M. 22 I was more than indignant at the conclusion of the last paragraph.

Surely the Insurance Acts Committee will not take it lying down, but enter a protest by refusing to continue the negotiations until a full and unreserved apology be offered and the offending sentence withdrawn.

No one suggests that all doctors are angels, but there is no necessity to introduce "suppositions at present unfortunately somewhat widely prevalent" into the negotiation, and thus lower the whole tone, as "suppositions" are not confined to one side.—I am, etc.,

Auchencairn, Castle Douglas, Nov. 8th.

J. CROMIE.

A Proposal for Arbitration.

SIR,—It seems probable, judging from Dr. Addison's reply to M. 22, that the capitation fee about to be offered will be in the neighbourhood of 8s. 9d., and that such will be deemed inadequate by the profession. This will lead to deadlock or a discontented service; hence would it not be possible to ask for an independent Arbitration Board to fix the figure? Moreover, since the Regulations, etc., contain irritating, undesirable, and possibly unfair conditions, if the Ministry does not see its way to modify them, such matters also should be presented to a similar board of arbitration for decision.

Both the Ministry and the profession are interested persons in the work, and an independent body should be able to adjust our differences.—I am, etc.,

St. Albans, Nov. 8th.

SIDNEY CLARKE, M.D.

Transfer of Practices.

SIR,—I hope every insurance practitioner will carefully read Dr. Bell's letter, in the SUPPLEMENT of November 8th, as to the effect of the new Regulations, if passed, on the transfer of practices either during life or at death. If the Government had taken over the liquor trade they would undoubtedly have had to compensate the brewers. It is now proposed to confiscate the capital invested in a practice and without any compensation. The iniquity of the proceeding is obvious. I note that at a meeting of the South London practitioners with regard to the disposal of practices at the death of the holder, a resolution was passed that the new Regulation should not apply to any practitioner on the panel on December 31st, 1919. This, of course, should apply also to the transfer of a practice during life. There are comparatively few medical men

that can complacently accept the loss of capital the result of many years' hard toil.

Dr. Addison, in his reply to the Insurance Acts Committee to Memorandum (M. 22) on Remuneration, has, in my opinion, scored heavily in clause 21. It is, of course, only a tactical success, and largely caused by the desire of men in towns to have a huge panel list. I do not believe any single man can do efficient work to a list of 3,000 panel patients *plus* private work, or even without this last. I am confident that a single-handed practitioner in the country would have to give more than half his time to a panel of 1,000 patients.

I trust that men will, through their representatives, protest against the suggested method of dealing with insured patients in the transfer of practices at death or retirement.—I am, etc.,

Gillingham, Dorset, Nov. 8th.

R. W. MORGAN, M.D.

SIR,—We are all busy reading the proposed new Regulations, or such extracts from them as have yet reached us. It is inevitable that they should contain several provisions that many of us cannot be expected to take kindly to, although upon reflection we must admit that they are justifiable. But there is one which I think all will agree is both unreasonable and intolerable—the abolition of the capital value of our practices after 1922.

A doctor's practice has, in most cases, been bought with capital collected with much difficulty, and in many cases the capital value has been increased by his own efforts. In these days it is practically impossible for a general practitioner to save; and, apart from the policy on his life, the capital value of his practice is the principal property which he has to leave his wife and children should his life be suddenly cut short by accident or illness.

For nineteen out of twenty of us the withdrawal of this new Regulation is absolutely vital. It appears that the Insurance Acts Committee did their best to prevent its insertion. I sincerely hope that the Panel Committees will, each and all, appreciate the extreme gravity of this situation, and instruct their representatives at the Conference to insist on the abolition of this dishonest proposal, and in this way strengthen the hands of the Insurance Acts Committee. This body made a great principle of not considering remuneration until we had agreed upon conditions of service. Let us adhere to that policy, and insist upon the maintenance of the capital value of our practices before we consider the question of what is adequate remuneration for service under the Act.

It is a great and vital principle that is at stake. It is worth fighting for, and a conflict upon this would bring us far more public sympathy than any dispute about our capitation fee.—I am, etc.,

Calne, Nov. 9th.

C. EDE.

SIR,—It is to be hoped that medical men engaged in insurance practice—those few who have managed to secure a print of the Draft Regulations, 1920, copies of which the Ministry of Health appears so shy of circulating too widely—realize the true meaning of Article 16 (1) (C).

At a meeting of North London insurance practitioners at the Royal Society of Medicine on Thursday, November 6th, a member of the Insurance Acts Committee, in reply to a question, said that the reason the Ministry of Health had in proposing this new Regulation was that they wished to put down certain abuses which had arisen, chiefly in connexion with death vacancies, when panel lists were transferred *en bloc* as at present.

Of course this is not the real motive the Ministry has in bringing in this new Article 16 (1) (C). The abuses indicated in the very small number of instances in which they can occur could quite easily be provided against, by introducing two or three special disciplinary rules.

The fact is that the Ministry of Health has made up its mind that vested interest in the goodwill of insurance practice is to be swept away, and the introduction of the new Regulation is a good beginning towards that end.

The immediate effect of the Regulation, upon urban practices especially, will be to depreciate the goodwill of existing panel lists by at least 60 per cent. It takes away a capital value which most of us have had to buy: a capital value, the existence of which Mr. Lloyd George admitted specifically both in the House of Commons and at the Special Representative Meeting in May-June, 1911, during the passage of the Insurance Bill. Yet we have a member of the Insurance Acts Committee seeking to justify this new Regulation on the ground that the capital value of the goodwill it destroys was created by the Insurance Act itself!

If one did not know that this gentleman represents the interests of the profession, one would almost be driven to

the conclusion that his chief concern was to justify and carry through any regulation, however outrageous, proposed by the Ministry of Health.—I am, etc.,

W. J. DEIGHAN,
Member London Panel Committee,
Representative City Division.

London, N.E., Nov. 11th.

SIR,—The novel procedure of automatically transferring patients by the thousand from one doctor to another without consulting them was unknown before the Insurance Act came in, and can hardly be defended in these democratic times. Such process is, moreover, a gross violation of that "free choice of doctor" on which we insisted so vehemently, and still put forward as an excuse for not limiting panels, and for opposing State service.

Even without this unprecedented action, a panel practice must remain far more readily transferable than any private one is or ever has been. First, because a panel list contains numbers of persons who have never required a doctor, would not appear on any private list, and have formed no strong personal predilection; secondly, because each single person can be at once appealed to individually by the purchaser who has the list, and this with a minimum of labour and expense, by merely supplying printed slips to be sent with the notice by the Insurance Committee; and thirdly, because the Allocation Committee will naturally give precedence to his claims in allotting those who make no choice.

No private or even club practice before the Act gave such security of transfer. I can conceive no attitude more fatal if we would oppose State medical service than that of Dr. J. A. Bell, which lays us open to the charge that we only value "free choice of doctor" when it suits our pockets so to do.—I am, etc.,

Chichester, Nov. 10th.

G. C. GARRATT.

The Regulations and the Warning Notice, G.M.C.

SIR,—During the past week I have received two interesting documents. One contains a list of certain acts which the General Medical Council considers "discreditable to the profession of medicine." The other is a copy of the draft Medical Benefit Regulations for 1920. The General Medical Council carefully points out that the list of offences is by no means exhaustive, and that there are many other acts which it might deem "discreditable."

It is somewhat difficult to reconcile these two official documents, since the acceptance of the new Regulations would be distinctly "discreditable to the profession of medicine." They swathe us in yards of red tape. They display gross and unjustifiable interference with our liberty and rights. They demand our services—services which are absolutely indispensable—under conditions to which no self-respecting tradesman or working-man would submit.

Recently I ventured to send you a letter for which you were unable to find room in the *BRITISH MEDICAL JOURNAL*. I concluded that letter by suggesting that the British Medical Association might materially help in promoting that unity without which we should always be at the mercy of any who tempted us to part with our birth-right of freedom for a mess of pottage—no matter how unsavoury.

The mess of pottage is now offered us. Must we partake of it? Cannot the combined intellects of the profession save us from the fate of Esau, who "found no place of repentance though he sought it carefully with tears"?—I am, etc.,

South Brent, Devon, Nov. 9th.

F. W. STYLE.

Craft Guild Control.

SIR,—It may interest your readers to know that in the estimation of costs in the Lancashire cotton trade as regards the Insurance Acts cost, manufacturers are making a profit of from 1½d to 2d. per week per insured hand. Thus, a manufacturer with 1,000 to 1,500 work-people is in the transfer of this burden alone making in profit on cloth the annual income on insurance account of a panel practitioner. When one considers the other leakages to the profession—or is it a trade, and a cheap one at that?—now, as in the heavy cost of the insurance company bookkeeping and the unnecessary costs on the drug account, is it not time that the whole profession as a craft guild took out of the control of layman and bureaucrat its own business affairs?

These losses, which go into the pockets of manufacturers and the limited companies, would, under a guild craft control united with every member of the profession in, go to those practitioners who earn them. Thus those who with-

out capital cannot purchase a practice would, under a fair guild tariff, be able to develop individually. At present the younger element of the profession, if it is impossible to buy, have either to take subsidiary positions as assistants or locumtenents, or remain comparatively idle, especially where a contract system is uncongenial, unacceptable, and intolerable.

Dr. Hoffman in his analysis of work under the Insurance Act proves that of 1,000,000 cases, 80 per cent. were of illness of short duration, the medical charge for which could have been paid by the patients themselves under a moderate tariff of a united craft.

Besides the waste over a single bureaucracy controlling drugs and book-keeping, all these vested interests under the Act could be dispensed with, thus making for some reduction at least in the cost of commodities.

The massing of the population under contract for attendance also militates against the full employment of all practitioners, besides lessening the field of good careful observation and time to do it in, which is a neglected element in these days of mere base commercial materialism.—I am, etc.,

Burnley, Nov. 10th.

J. I. HALSTEAD.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

The following notifications are announced by the Admiralty:—
Surgeon Captain E. A. Penfold, D.S.O., to the *Fivid*, for R.N. Barracks, Devonport. Surgeon Commander A. G. Eastment has been placed on the retired list. Surgeon Commanders: W. E. Mathew to R.M. Division, Plymouth; H. B. Hill to the *President*, additional, as Inspecting Medical Officer R.N. Auxiliary Sick Berth Reserve; C. K. Bushe, O.B.E., to the *President*, additional, for Medical Department, Admiralty; R. Hughes to Pembroke Dock Hospital and Dockyard, C. R. Sheward to Malta Dockyard; A. L. Sheldon to the *Diligence*; A. R. Schofield to the *Greenwich*. Surgeon Lieutenant Commanders: H. H. Babington to the *Tamar*, R. Willan to the *Caledon*. Surgeon Lieutenants: R. E. Rampling to the *Malaya*, P. C. Wright to the *Osborne*, additional, for R.N. College, Osborne. Surgeon Lieutenant (temporary) J. L. Lamond to the *Eaglet*.

ARMY MEDICAL SERVICE.

Colonel W. W. O. Beveridge, C.B., C.B.E., D.S.O., to be Director of Hygiene at the War Office, and to be temporary Brigadier-General whilst so employed.

The notification in the *London Gazette* of April 30th, 1919, regarding temporary Colonel H. Alexis Thomson, C.M.G., is cancelled.

Temporary Colonel A. G. Phear, C.B., relinquishes his commission and retains the rank of Colonel.

ROYAL ARMY MEDICAL CORPS.

Temporary Colonel H. Burrows, C.B.E. (Captain R.A.M.C., T.F.) relinquishes his temporary commission on reposting.

Lieut.-Colonel J. E. Brogden, half-pay list, retires on retired pay on account of ill health.

Lieut.-Colonel P. S. Lelean, C.B., to be a Professor at the Royal Army Medical College.

Lieut.-Colonel W. H. W. Elliot, D.S.O., ret. I.M.S., to be temporary Lieutenant-Colonel.

Lieutenant-Colonels relinquish the temporary rank of Colonel: J. H. Campbell, C.B.E., D.S.O., A. W. N. Bowen, C.B.E., D.S.O. (Brevet Colonel) L. Humphry, C.M.G., H. S. Roch, C.M.G., D.S.O., B. F. Wingate, D.S.O., B. B. Burke, C.B.E., D.S.O. (Brevet Colonel) J. Powell, D.S.O., D. O. Hyde, C.B.E., D.S.O.

Lieutenant-Colonels relinquish the acting rank of Colonel: H. Hewetson, D.S.O., C. J. O'Gorman, D.S.O., G. M. Goldsmith, C.B.E. (Brevet Colonel) W. R. Blackwell, C.M.G., A. E. Hamerton, C.M.G., D.S.O. (Brevet Colonel) W. R. P. Goodwin, D.S.O., W. L. Steele, C.M.G., H. R. Bateman, D.S.O., (Brevet-Colonel) G. J. A. Ormsby, D.S.O.

To be acting Lieutenant-Colonels whilst specially employed: Temporary Captains (acting Majors) F. R. Fraser, F. D. Saner.

Major and Brevet Lieut.-Colonel E. Ryan, C.M.G., D.S.O., relinquishes the temporary rank of Lieutenant-Colonel.

Temporary Major E. B. Pooley, T.D. (Major 4th Royal Lancashire Regiment, T.F.), relinquishes his temporary commission on reposting.

The following officers relinquish the acting rank of Major: Captain W. B. Allen, V.C., D.S.O., M.C.; temporary Captains J. B. Lester (on ceasing to be specially employed), R. Charles, O.B.E., G. Richardson.

Temporary Captain W. G. T. Story to be acting Major whilst commanding troops on a hospital ship from August 21st to October 15th, 1919.

Captain F. J. Stuart to be Major, with seniority next below Major G. Pett, M.C.

Captain A. L. Foster to be acting Major whilst specially employed (August 1st, 1919, substituted for notification in the *London Gazette*, October 2nd, 1919).

Captain H. W. Browne, M.C., from T.F., to be Captain, March 30th, 1918, but not to reckon for pay or allowances prior to October 1st, 1919, precedence next below R. G. Martyn.

Captain K. P. Mackenzie is seconded for service with the Egyptian Army.

Temporary Captain Bruce Malabar to be Captain, January 26th, 1919, but not to reckon for pay or allowances prior to October 1st, 1919, with precedence next below R. Stewars.

Captain D. C. Bowie from S.R., to be Lieutenant, and to be temporary Captain, August 29th, 1918, but not to reckon for pay or allowances prior to October 1st, 1919, precedence next below J. C. Coutts.

E. P. Peake, late Captain C.A.M.C., to be temporary Captain.

Temporary Captain T. S. Law to be Lieutenant, and to be temporary Captain, June 19th, 1916, but not to reckon for pay or allowances prior to October 1st, 1919, precedence next below W. E. Hodgins.

Lieutenants (temporary Captains) to be Captains: W. H. Ferguson, M.C., J. A. Crawford, P. R. O'R. Phillips.

J. F. Cooper, late temporary honorary Captain, to be temporary honorary Captain.

To be temporary Lieutenant J. A. A. P. Scott.

The following officers relinquish their commissions:—Temporary Lieutenant-Colonels and retain the rank of Lieutenant-Colonel: S. L. Jones (on ceasing to be employed at Notts County War Hospital), H. G. Ashwell (on ceasing to serve with the Bagthorpe War Hospital, Nottingham), J. V. Blachford (on ceasing to be employed at the Beaufort War Hospital). Temporary Majors and retain the rank of Major: J. R. P. Phillips (on ceasing to be employed at the Beaufort War Hospital), (brevet Lieut.-Colonel) S. Flemyng, A. E. Morrison (on ceasing to be employed at the Sunderland War Hospital). Temporary Captain (acting Lieut.-Colonel) C. J. West, O.B.E., and is granted the rank of Lieutenant-Colonel. Temporary Captains and are granted the rank of Major: D. M. Hunter, M.C. (January 20th, 1919, substituted for notification in the *London Gazette*, March 4th, 1919), A. Fullerton, M.C., D. J. Glen, (acting Major) J. Taylor, O.B.E., W. S. S. Berry, O.B.E., R. Semple, O.B.E. Temporary Captains and retain the rank of Captain: S. Melville, N. M. Boyce, R. K. G. Graves (on a count of ill health contracted on active service), H. Appleton, P. J. A. Keane, J. A. Quinn, C. R. Edwards, H. A. de Morgan, J. B. McFarland, M.C., J. D. Robertson, M.C., D. McDougall, C. J. Marshall, P. D. Scott, J. M. Forsyth, M.C., P. W. MacLagan, M.C., N. S. Neill, P. Rose, J. A. O'Dea, A. W. Frew, S. Littlewood, J. Lyons, G. Pirie, D. W. Ritchie. On account of ill health: A. C. Dickson, B. Wood-White, W. Hughes. On account of ill health caused by wounds: J. Stevenson, M.C. Temporary honorary Captains and retain the honorary rank of Captain: J. L. Dickie (on ceasing to serve with the British Red Cross, Netley, November 18th, 1915, substituted for notification in the *London Gazette*, November 25th, 1915), J. F. Harvey. Temporary Lieutenant: O. K. Lang, and retains the rank of Lieutenant. Temporary honorary Lieutenant: S. J. Cattley, and retains the honorary rank of Lieutenant.

ROYAL AIR FORCE. MEDICAL BRANCH.

Flight Lieutenants to be Squadron Lieutenants: W. A. S. Duck, A. E. Panter, A. R. Sharrod.

Transferred to the unemployed list:—Captains: W. B. Loveless, M.C., L. R. Stringer, R. J. Hearn, J. I. Russell, C. Peacock. Second Lieutenant W. Jones.

INDIAN MEDICAL SERVICE.

Colonel J. K. Close, M.D., Officiating Surgeon-General with the Government of Bengal, has been appointed to officiate as Inspector-General of Civil Hospitals, United Provinces, with effect from the date on which he assumes charge of his duties.

Major W. P. G. Williams, M.B., to be a Deputy Medical Store Keeper to Government, as a temporary measure, with effect from August 31st.

Major R. H. Bött, M.B., F.R.C.S., appointed to be Professor of Surgery, King Edward Medical College, and First Surgeon to the Mayo Hospital, Lahore, substitively *pro tempore*, with effect from August 20th.

Major W. J. Powell, Staff Surgeon 4th (Quetta) Division, appointed to hold charge of the current duties of the office of the Civil Surgeon, Quetta, in addition to his own duties, with effect from August 17th.

Major H. B. Drake appointed substitively as Deputy Assay Master, Calcutta, with effect from February 7th.

Major-Generals W. E. Jennings and W. H. B. Robinson, C.B., appointed Honorary Physician and Honorary Surgeon to the King respectively.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonel H. Jones relinquishes his commission on account of ill health and retains the rank of Lieut.-Colonel.

Lieut.-Colonel (brevet Colonel) G. S. Woodhead, K.B.E., V.D., relinquishes his commission on account of ill health and retains his rank.

Captain C. Forbes, O.B.E., relinquishes his commission on account of ill health and retains the rank of Captain.

Captains (acting Majors) relinquish the acting rank of Major on ceasing to be specially employed: R. M. Vick, O.B.E., G. E. Mar in, G. L. Findlay, A. K. MacLachlan, J. Muir, O.B.E.

1st London Sanitary Company.—Lieutenant W. G. Gibbs to be Captain.

TERRITORIAL FORCE RESERVE.

ROYAL ARMY MEDICAL CORPS.

The announcements regarding the following officers in the *London Gazette* of the dates indicated are cancelled: Majors J. Leach (March 11th, 1919), R. Corfe and E. C. Stack (January 9th, 1919), A. B. Murray (January 14th, 1919), W. B. Armstrong (December 21st, 1918), G. W. McIntosh (December 12th, 1918), F. N. Grinling (December 31st, 1918); Captain (acting Major) R. M. Vick, O.B.E. (January 14th, 1919).

VOLUNTEER FORCE.

Derbyshire R.A.M.C.(V.).—Temporary Captain G. S. Sims and temporary Lieutenant W. R. Paton relinquish their commissions and are granted the honorary rank of Captain and Lieutenant respectively.

QUEEN MARY'S ARMY AUXILIARY CORPS.

Auxiliary Section R.A.M.C. attached.—Recruiting Medical Controller A. M. Roberts, O.B.E., to be Controller of Medical Services.

APPOINTMENTS.

BIBBY, James R., M.B., C.M. Edin., Medical Officer of Health, City of Gloucester, vice W. M. Hope, M.R.C.S., D.P.H., deceased.

COLLETT, Henry R. P., L.D.S., R.C.S. Eng., Honorary Dental Surgeon to the Salford Royal Hospital.

DIGGLE, F. Holt, O.B.E., F.R.C.S., Assistant Honorary Surgeon, Birmingham and Midland Ear and Throat Hospital, Birmingham.

FORTY, A. Alan, M.R.C.S., J.R.C.P., Medical Officer and Public Vaccinator, Hornton District, Banbury Union.

HALLIWELL, T. O., M.R.C.S., L.R.C.P., Medical Officer of Institution of Dewsbury Union.

HARDYMAN, G., M.B., F.R.C.S.E., Honorary Consulting Surgeon of the Royal Mineral Water Hospital, Bath.

LUMB, John, M.B., B.S. Durh., B.Hy., D.P.H., Medical Officer of Health for Wrexham.

PHILLIPS, Hugh R., M.D. Edin., Anaesthetist, Hospital for Sick Children, Great Ormond Street.

RUSSELL, Douglas W., M.B., D.P.H., Visiting Physician to the Victoria Infirmary, Glasgow.

TRETHOWAN, W. H., M.B., B.S. Lond., Orthopaedic Surgeon, Queen Mary's Hospital, Metropolitan Asylum District.

DISTRICT MEDICAL OFFICERS.—K. E. Crompton, M.B. (Thornbury Union); J. L. M. Govan, L.R.C.P. and S. Edin., L.R.F.P.S. Glas (Mahnesbury Union); J. McMillan, M.B. (Birkenhead Union).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTH.

WARD.—On the 9th November, at Enborne Grange, Newbury, the wife of George E. S. Ward, M.D., M.R.C.P., of 16, Queen Anne Street, W.1, a daughter.

MARRIAGE.

MAYNARD—TULLY.—At St. Philips, Kensington, by the Rev. A. Ryder Mitchell, on November 5th, Edwin Maynard, M.D., F.R.C.S., of 81, Oxford Terrace, Hyde Park, W., to Nancy Frances Tully.

DEATH.

CAMPBELL.—On September 25th, 1919, at Swiss View, Yercaud, Madras Presidency, India, George Gunning Campbell, M.R.C.S., L.R.C.P., youngest son of the late James Campbell, Esq., in his 43rd year.

DIARY FOR THE WEEK.

HARVEIAN SOCIETY, 11, Chandos Street, W.—Thursday, 8.30 p.m., Dr. William Hill: Prevalent Misconceptions, often Mischievous, concerning the Oesophagus and its Diseases.

LONDON DERMATOLOGICAL SOCIETY, 49, Leicester Square, W.C.—Tuesday, 4.30 p.m., Cases and Specimens; 5.30 p.m., paper by Mr. H. K. Prosser.

ROYAL SOCIETY OF MEDICINE.—General Meeting of Fellows, Tuesday, 5 p.m. Pallot for Fellowship. Section of Therapeutics and Pharmacology: Tuesday, 4.30 p.m. Discussion: Treatment and Management of Diseases due to Deficiencies in Diet, to be opened by Dr. F. G. Hopkins, and continued by Dr. F. D. Boyd, Dr. Marion Delf, Dr. A. Harden, Miss Hume, Dr. W. H. Willcox, and Dr. S. S. Zilva. Section of Pathology: Laboratory Meeting at the Lister Institute for Preventive Medicine, Chelsea Gardens, S.W.1, Tuesday, 8.30 p.m. Section of History of Medicine: Wednesday, 5 p.m.: Dr. Archibald Leitch: Farquhar Leitch, Medicus Regius; Dr. Charles Singer: The Earliest Medical Text by an English Hand. Section of Dermatology: Thursday, 4.30 p.m., Cases. Section of Otolaryngology: Friday, 5 p.m., Cases. Section of Electro-Therapeutics: Friday, 8.30 p.m., Dr. G. B. Batten: Apparatus for Obtaining Morton Wave Current and Static Modalities from a Coil; Major G. Cooper, R.A.M.C.: The Artificial Stimulation of Muscle, with Demonstration of a New Form of Faradic Coil.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11 Chandos Street, W.—Friday, 8.30 p.m., Major E. E. Austen, D.S.O.: Anti-Mosquito Measures in Palestine during the Campaigns of 1917-1918.

POST-GRADUATE COURSES AND LECTURES.

BROMPTON HOSPITAL FOR CONSUMPTION.—Wednesday, 4.30 p.m., Dr. Jex-Blake: Bronchiectasis.

FELLOWSHIP OF MEDICINE, 1, Wimpole Street, W.—Monday, noon, Dr. H. MacCormac: Diagnosis of Skin Diseases. Wednesday, noon, Mr. E. A. Peters: Rhinopharyngeal and Sphenoidal Sinus Sepsis in Relation to General Disease.

MANCHESTER ROYAL INFIRMARY.—Tuesday, Dr. Clegg: Glaucoma.

ROYAL EYE HOSPITAL, Southwark.—Tuesday, 5 p.m., Diseases of the Choroid. Thursday 5 p.m., Tumours of the Eye.

DIARY OF THE ASSOCIATION.

Date. Meetings to be Held.

NOVEMBER.

- 18 Tues. London: Scrutiny Subcommittee, 2.30 p.m.
- 19 Wed. London: Propaganda Subcommittee, 2.15 p.m.
- 20 Thur. London: Dominions Committee, 3.30 p.m.
- 21 Fri. London: Naval and Military Committee (Special Meeting), 3 p.m.

North of England Branch, Royal Victoria Infirmary, Newcastle-on-Tyne, 2.30-5.15 p.m. Demonstrations.

- 25 Tues. London: Standing Subcommittee of Central Ethical Committee, 2 p.m.
- 27 Thur. London: Conference of Local Medical and Panel Committees, Memorial Hall, Farringdon Street, London.

DECEMBER.

- 17 Wed. London: Council.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, NOVEMBER 22ND, 1919.

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British Medical Association.

INSURANCE ACTS COMMITTEE.

REJOINDER TO THE MINISTER OF HEALTH ON REMUNERATION OF INSURANCE PRACTITIONERS (M. 26).

1. The Insurance Acts Committee has carefully considered the reply of the Minister to its Memorandum (M. 22) on Remuneration. The Committee notes with satisfaction that the Minister "fully recognises the importance of providing proper remuneration for the doctors engaged in giving medical services under the Insurance Acts," and it agrees that "any proposal for increased expenditure must receive the closest scrutiny." Such scrutiny the case put forward by the Committee has evidently received, and the Minister's reply leaves the Committee of opinion that its case has been "conclusively established" both by those points which that reply subjects to criticism and by those other considerations which the reply has almost completely ignored.

2. The Committee endeavoured in its Memorandum to approach the subject in as dispassionate and scientific a spirit as possible. In view of the fact that on many points exact or sufficiently numerous data are not forthcoming, and that some of the conditions which it was desired to put forward are not susceptible of mathematical demonstration, the Committee was careful to under-state rather than to over-state the case, and such figures as are used seem extremely moderate and not at all difficult to maintain.

3. The criticisms of the Minister on these figures appear to be:—

(a) That the estimate of 60% increase required on the basic fee by reason of the altered value of money requires considerable reduction by reason of (i.) an improper or irrelevant reference to income-tax, and (ii.) an incorrect application to urban practices of figures relating to the increase of working expenses in rural or semi-rural practices.

(b) That the case as to increased attendance required as the result of war conditions, is "of a conjectural character" and is "a very large over-estimate."

(c) That the suitability of a gross annual income of £1,800 at the present value of money for a practitioner of good ability occupied during the whole of his ordinary working time is doubtful; and that the estimate that 4/5ths of this time might be required by responsibility for 1,000 insured persons is "difficult to accept as the finally-considered view of the profession," mainly because many members of the profession have themselves opposed the maximum limit of 3,000 such persons for all practitioners.

(d) That the "additional work" required by any new obligations or changed conditions of service cannot "constitute more than a very small proportion of the doctor's daily work."

4. The Committee proposes to examine these criticisms seriatim, and to point out, in connection with the last of them, what appears to be an extremely unfortunate difference of attitude on this matter as shown by the Memorandum of the Committee and the Minister's reply thereto.

5. The Committee is in entire agreement with the observations of the Minister in paragraph 12 of his reply on the subject of income-tax. It agrees that the income produced by any suitable capitation fee "must contribute its proper share to public burdens," and it admits that if the present income-tax presses with undue hardness on the professional classes (as it does) the proper remedy for this is to be sought in a reform of the incidence of the tax rather than in an increase of remuneration. At the same time it is to be noted that the manufacturers and the merchants can, and usually do, fix the price of their commodities after taking into account the amount of income-tax they have to pay, thus in effect to a considerable extent passing on their burdens to the purchasers of those commodities.

6. In its Memorandum, however, the Committee made reference to income-tax for an entirely different purpose. The argument was that what is known as the "Civil Service Award" is inapplicable in this connection, both because the circumstances of a general practitioner differ in some material respects from those of the Civil Servant and because the award itself, in a case of a fairly ordinary character and not far removed as to income from that of a successful general practitioner, could be shown to produce an effective addition to the income quite insufficient to compensate for those particular additional expenses in respect of which the bonus was given. The propriety of taking account of income-tax for this purpose is evident when it is remembered that it would be possible to award a bonus which, by reason of the effect of income-tax would actually result in a lessened instead of an increased spending power. It must be noted that comparison is made not with the pre-war income tax but with the present income-tax payable if there had been no bonus. The propriety of these points is evident from the fact that the Civil Service Arbitration Board, in its award dated 11th November, 1919, not only recommends an increased bonus to civil servants, but in doing so states that it thinks "that the argument is not without force that, in determining the extent to which the different classes of civil servants should be called upon to share in the national burden by foregoing full compensation for the decrease in the purchasing power of money, the extent to which they are already sharing in that burden by paying increased income tax is a relevant consideration."

7. Throughout the Memorandum the Committee had in mind not urban practices only, but urban, semi-urban, and rural alike, in so far as the last two classes are conducted within the conditions regarded in the capitation fee, i.e., without dispensing and within a two-mile radius for travelling. The chief arguments based upon the figures given as to expenses of practice, is not that the proportion of expenses to gross receipts has increased, but that the percentage of increase of the expenses themselves between 1914 and end of 1919 is considerably greater than the percentage of increase asked for on account of the cost of living; and that therefore

the percentage of increase proper to the gross income should be greater than that proper to the net income. It is probable that the cost of drugs is the item which has increased proportionately least between 1917 and 1919; and whatever be the relative proportion of expenses to gross income in rural and in urban practices respectively, the Committee can have no doubt, for the reasons given in the Memorandum, that the percentage of increase of the expenses themselves has been distinctly greater in the latter than in the former. This is all that matters for the purpose of the immediate argument, but the figures seem to show also that percentages distinctly in excess of the 25% and 33% which the Committee has later on taken as the proportion of expenses to gross income in non-dispensing and dispensing practices, would be quite legitimate.

8. In spite of the difficulty of exact calculation, to doubt the propriety of an increase of remuneration of 50 per cent. net or 60 per cent. gross on account of the altered value of money seems to the Committee a surprising blindness to facts. Practitioners know from universal experience that the cost of food, clothing, fuel, light, cleaning materials, servants, and the education of their children has, on the average, increased to a far greater extent than this. Rates are materially higher, and now practitioners are experiencing, as their leases terminate, a very substantial raising of the rents of their houses or surgeries. Many of the less financially successful practitioners are now in very difficult economic circumstances, and even the more successful, in spite of economies carried to the extreme, are beginning to find the margin of income which enabled them to make some provision for the future disappear. The Committee is convinced, by the experience of its own members, and by the expressions of opinion on this point which it has received from all parts of the country, that so far from any "necessary correction" of the 60 per cent. being in a downward direction, as Dr. Addison thinks is proper, a greater increase than this could justifiably be asked for.

9. The Minister regards as a "very large over-estimate" the suggestion that some 10 per cent. increase is required by reason of the increased attendance necessitated by the effects of the war on discharged and demobilised sailors and soldiers, and similar effects on other insured persons. The Minister states that the case showing increase of work on these grounds is "conjectural," and asks the impossible when he complains that "no attempt is made to estimate the actual amount of extra attendance for which provision should be made under any of these heads." There are three classes of persons concerned, (a) discharged disabled men, (b) men demobilised in impaired health, (c) other insured persons whose health (nervous health especially) has been unduly disturbed by war strain. It is true that actual figures are available with regard to the first of these classes only, but the Committee repudiates strongly the suggestion that the case with regard to the others is conjectural. Very wide-spread experience demonstrates the reality of the increased attention required by all these classes, and the fact that it is necessarily impossible under present conditions to demonstrate with anything like mathematical accuracy the extent of this increased attention does not in the least alter the fact of its existence. The figures with regard to discharged disabled men are valuable, but the Committee has given in its Memorandum reasons for believing that they under-state the case. They do show, however, that such men require twice the attention required by an ordinary insured person, and that not less than 2½ per cent. increase is required in respect of them. The Committee would point out, too (a) that considerable numbers of disabled men were retained in the Army during the last few months of the war and after the Armistice, and have since been demobilised instead of being discharged disabled, and have been left to get their pensions in the ordinary way, and (b) that it is only now, or in the early future, that many disabled men are completing or will complete their institutional treatment, and will pass under the care of an insurance practitioner.

10. Experience has led practitioners to believe that the extra attendance required by men demobilised in impaired health is materially greater in bulk than that required by discharged disabled men; and though the extra attendance required by the third class varies somewhat in different localities, there are many practices in which the effect of this class is at least equal to the effect of either of the others. This is reinforced by the experience of Approved Societies as is evidenced by the statement made by Mr. A. C. Thompson, President of the Annual Conference of Industrial Approved Societies, in his presidential address on October 29th last that, "the effect of the war upon the health of the community has been a matter for serious consideration by Approved Societies in many ways, not the least of which is its effect upon the payment of sickness and disablement benefits,

not only to men who have been serving in the forces, but also to the general body of members, particularly perhaps those women members who have been employed in ways to which previously they were unaccustomed." On the other hand, though the Committee is not concerned to dispute the fact stated by the Minister that there are some individual "former soldiers or other members of the community whose health may have benefitted directly or indirectly from military training or from special war conditions," the profession has not experienced any diminished call on its services on the part of any considerable number, or whole class of such persons. While, therefore, the Committee is not in a position to demonstrate that exactly 10 per cent. is the increase required on these grounds, it is of opinion that this figure can be justified as being about three times the percentage properly applicable (and in part demonstrated as applicable) to discharged disabled men alone.

11. The Committee has mentioned £1,800 a year as the gross income at present day values which an efficient medical practitioner might expect to earn in middle-age when working his ordinary full time. On the propriety of this amount Dr. Addison expresses no opinion, but suggests that an opinion on this point will be formed by the "public generally." The Committee believes that a fully-instructed public opinion would regard its contention as not unreasonable, but it had hoped that the Minister of Health would have been in a position to form an opinion and to aid the formation of an instructed public opinion. This amount of £1,800 gross would be received partly for attendance on private patients and partly as remuneration under the insurance arrangements. If therefore 30 per cent. be taken as the proportion of working expenses this modest estimate would leave a net income of £1,260, or approximately £800 in pre-war money values, taking a very moderate view of the alteration in such values. It is to these figures that public opinion should be directed. How does this compare with the income of medical men doing work which can more easily be gauged on a time money basis? The recognised present pay at school clinics, maternity and child welfare centres, and under the Ministry of Pensions, is a guinea and a half per session of 2½ hours, i.e., £1,510 net for 2,400 hours. In the Navy or Army a successful officer of comparable age or position would be receiving with allowances and pension, approximately £1,400 net. The maximum salary of a medical officer of health in a large town should certainly under present conditions reach £1,250. The Committee is aware that these cases are not in every way comparable to that now under consideration, but the differences are not all in one direction. If the public are to judge, it should be pointed out that the medical profession is one in which nearly all the circumstances which justify high remuneration operate. These are (a) it is the calling which has the longest and most expensive period of training, and in which therefore actual earning of income begins very late; (b) income is more continuously dependent on personal health and exertion than in almost any other profession or branch of commerce; (c) there is no other calling in which the tie to work is so absolutely continuous and in which any holiday or break is so difficult to obtain; (d) it is a dangerous occupation, involving exposure to infection in various virulent forms; (e) it involves taking responsibility of the highest order and the exercise of the most skilful judgment. It can safely be said that if a medical man cannot look forward, if completely successful in his career, and devoting his whole time to his work, to earning in middle age a net income of between £1,000 and £1,500 (at present values) a year it is not financially worth while to enter the profession, and young men of good ability and education would be well advised to adopt some other career.

12. The Minister's reply suggests that there is some inconsistency between the contention that the proper care of 1000 insured persons would, under the proposed conditions, require 3/8ths of the 2,400 hours accepted as the ordinary time of a practitioner for this purpose, and the opposition which a large number of insurance practitioners have made to a limit of 3,000 such persons. The Committee is not aware of any such inconsistency. The opposition to the 3,000 limit has never been based on the contention that the average practitioner could always be relied upon to give proper attention to that number of insured persons in addition to a certain amount of private practice, but on the fact that there were some practitioners whose personalities and the circumstances of whose practices might justify them in accepting more than that number, and that therefore a universal maximum limit was undesirable. However, the Committee is now recommending practitioners to accept this limit, and it will be remembered that a resolution of the last Conference laid it down that the conduct of such large practices as would be indicated by a list of more than 3,000 might from time to time be the subject of enquiry.

13. The Committee cannot accept any other fraction as being more reasonable than the 3/8ths which they have suggested; though here again it is impossible to demonstrate with mathematical precision that this is exactly the appropriate one. There will always be some practices more concentrated than others, and some practitioners who are able to work effectively for a longer time than others, but taking all practices and all practitioners into the average, and taking account of all varieties of service, including minor operations under an anæsthetic, the Committee thinks that some four visits and ten or eleven consultations may well occupy almost or fully two hours and a half, and that an extra half hour at least may be allocated to the correspondence, reports, notes, records, and professional reading necessitated by that number of patients. In addition to this, the Committee has pointed out in its Memorandum, and it desires again to emphasize, that the conditions of the insurance service really constitute a prior claim on the practitioner's time for his insured persons. If such persons were to be placed in every respect on an equality with other patients, and were to take an equal chance with them of being able to secure at any time the practitioner's services this would not hold good, but, in that case, several of the Regulations would require to be deleted or materially altered.

14. The Committee observes that the Minister offers no observations in his reply on the third variety of method of calculating the fee used in the Memorandum, and it supposes, therefore, that the propriety of the figures put forward under this head is not seriously impugned.

15. The Committee, however, cannot agree that the nature of the decision to be arrived at is completely stated in the first sentence of the last paragraph of the Minister's reply; nor that in attempting to fix the remuneration appropriate to such a revision of the service as will make it more completely efficient and a satisfactory than it has been it is necessary to attach paramount importance to "additional work expected" to "the actual increase of work," or to the fact that "changed conditions will require more time to be devoted to the work" in any particular proportion. These considerations have their place, and the Committee is prepared to maintain the conclusions it has arrived at by the more or less imperfect methods of calculation adopted in its Memorandum. But it is a high degree of skill and the acceptance of heavy responsibilities which have primarily to be recompensed in professional remuneration, whatever may be the exact amount of "work" involved or "time" used in the rendering of particular items of service. The Committee notes with great satisfaction that Dr. Addison "desires that it should be made clear that his eventual estimate will be based on the assumption that insurance practitioners will render to insured persons the highest standard of work of which they are capable." That is the standard of work which the profession wishes to give, which the Committee and the Local Medical and Panel Committees represented desire to encourage, and which has been constantly in the mind of the Committee in preparing its Memorandum. It is obvious that the standard of remuneration should correspond to the high standard of work expected and accepted. The object of Regulations is to maintain such a standard, and the profession, in the belief that it is itself the most powerful instrument for maintaining the honour and conduct of its members, is anxious to co-operate. This being so, it appears to the Committee to be entirely irrelevant to refer, as the Minister does in his reply, to the fact that there are some practitioners in some places who have not always maintained that standard. Dr. Addison can scarcely intend to suggest that the remedy for this should be found in a relatively lower general rate of remuneration.

16. The Committee goes further than this. It believes, and has set out in its Memorandum, not only that the Insurance practitioner must give his best services to his insured persons, but that he is capable of rendering and should render to the best of his ability and opportunity, very valuable services to the community both in the sphere of preventive medicine and in that of medical research. The paramount importance of the general practitioner in these respects is only now becoming adequately and generally recognised, and the Committee is somewhat surprised that the Minister of Health, whom it regards as the chief custodian of the public health, apparently attaches so little importance to this. To suggest, as seems to be done in paragraph 18 of Dr. Addison's reply, that because the results of this work may not be apparent for a considerable time it is almost unnecessary to take account of it as regards the period for which the present arrangements are being made, appears astonishing from a Ministry the success of whose administration must depend to an overwhelming degree upon preventive measures and research work. The Committee is strongly of opinion that the insurance service offers the most valuable opportunities for this kind of

work, and that, even though under present conditions it is not possible to expect it in a higher degree from every practitioner, it is this fact which should be made a means of attracting to and maintaining in the service practitioners of the desirable type and status. For this purpose, as for others, the remuneration must be sufficient. The State can have what it pays for. If the insurance service is to be what the Committee, the profession, and (it is believed) the Ministry of Health wish it to become, the remuneration can scarcely be calculated on a basis less than which the Committee has suggested. It is possible that a service might be secured at a somewhat lower rate of remuneration, but the Committee is firmly of opinion that in those circumstances the service, however suitable for some purposes, must necessarily be less zealous, less satisfactory, less useful to the community than would otherwise be the case.

CURRENT NOTES.

Central Medical War Committee.

At the meeting of the Council on November 5th the Treasurer reported that he had received the sum of £5,000 from the Government as a contribution towards the expenses incurred by the Central Medical War Committee. The expenses of the Committee were nearly three times this amount, and the Treasurer expressed the opinion, in which the Council concurred, that it was very satisfactory to receive this recognition of the Government's appreciation of the services rendered by the Committee during the war.

The Journal Committee.

At the meeting of Council on November 5th Mr. Albert Lucas, who has been re-elected Chairman of the Journal Committee, presented a report in the course of which it was stated that Dr. C. Herbert Hall and Dr. C. O. Hawthorne had been elected to serve as representatives of the Committee on the Finance Committee, and that a joint subcommittee with the Finance Committee had been appointed to consider various financial and other questions with regard to the printing of the JOURNAL, the time of going to press, and the proposal to discontinue the practice of stitching the SUPPLEMENT into the JOURNAL. It was also reported that in response to the suggestion of Dr. Keppie Paterson (honorary secretary of the Edinburgh and Leith Division) it had been resolved to form a permanent list of members desiring to receive copies of the indexes of the JOURNAL, SUPPLEMENT, and Epitome.

Increase of Private Fees.

It will be recalled that the Representative Body of the Association referred to the Council the question of the raising of fees for medical attendance owing to the increased cost of living and increased practice expenses; and the Council has strongly recommended each Division to urge the practitioners in its area, both members and non-members, to increase their pre-war fees for private practice by not less than 50 per cent. In some areas action has already been taken with good results, but where this has not been done the necessary steps should at once be taken. After the meeting at which the decision is arrived at, a notice should be sent to all the newspapers in the area stating that the step is taken in accordance with the wishes of the Council of the Association. It is evident that the Association cannot consistently make demands on public bodies for increases of salaries of medical officers, increases of insurance remuneration, etc., unless the profession shows by raising those fees over which it has full control that it considers an increase necessary.

Colonial Medical Services.

The British Medical Association will, at an early date, give evidence before the Colonial Medical Services Committee recently appointed by the Secretary of State for the Colonies to inquire into the position of the medical services of the various Colonies and Dependencies, and matters arising therefrom. Medical officers belonging to, or with recent experience of, any of the colonial medical services are invited to communicate to the Medical Secretary of the Association—which is now engaged in the preparation of its evidence—any matters which in their opinion should be brought to the notice of the Colonial Medical Services Committee by the Association.

Election of Representatives.

The Annual Meeting of the Representative Body at Cambridge in 1920 will begin on Friday, June 25th, and will be continued on the following week-days. Under the by-laws of the Association, Representatives and Deputy Representatives, if not already elected, must be elected not later than May 28th and their names notified to the Medical Secretary not later than June 4th. It is entirely a matter for each constituency to decide whether it shall elect its Representatives and Deputy Representatives by general meeting or by postal vote. Officers of Divisions are urged to consider carefully by which of these two methods most interest may be aroused. Where the election is conducted by means of the postal vote a meeting of the constituency must subsequently be held to instruct the Representatives. The grouping of constituencies for 1920-21 is the same as that for the current year, except that the North Northumberland Division of the North of England Branch and the new Willesden Division of the Metropolitan Counties Branch are made independent constituencies.

The Panel Conference.

The annual conference of representatives of Local Medical and Panel Committees will be held in the Memorial Hall, Farringdon Street, London, E.C., on Thursday next, November 27th. The proceedings will begin at 10 a.m., and will be continued on the following day, if necessary. The chairman will be Dr. H. G. Dain of Birmingham. In the printed agenda of the conference will appear all notices of motions received up to, and including, Monday, November 17th, except any that may be contrary to the decisions of the July Conference. The printing of such notices does not, however, affect the position of relevant amendments or motions received later; but in order to secure consideration these should be sent to the Medical Secretary before November 27th, or handed in, in writing, at an early stage of the conference. The main topics before the conference will be the question of remuneration and the 1920 draft Regulations. The Chairman of the Insurance Acts Committee will propose a motion that the Regulations cannot be accepted unless at the same time the remuneration is upon a satisfactory basis.

Meetings of Branches and Divisions.**SOUTHERN BRANCH.***British Medical Association Lecture.*

THE autumn general meeting of the Southern Branch was held at Southampton on November 13th, when the President, Dr. J. LOCKHART LIVINGSTON, took the chair. The new Ethical Rules, a copy of which had been sent to every member of the Branch, were unanimously adopted. Sir THOMAS J. HORDER gave an interesting lecture on "Preventive treatment in influenza," which was much appreciated. Questions were asked and points raised by Drs. LIVINGSTON, STANCOMB, BOSWORTH WRIGHT, PURVIS, SCOTT-RIDOUT, FULLER ENGLAND—to which Sir T. J. HORDER replied. The PRESIDENT, on behalf of those present, warmly thanked the lecturer, and expressed the hope that on some future occasion he would again address them. The lecture will be published at an early date.

METROPOLITAN COUNTIES BRANCH: WILLESDEN DIVISION.

A MEETING of the Willesden Division was held on November 4th. The revised ethical rules were adopted. The insurance agreement for 1920 was discussed in part, more particularly emergency treatment for insured persons, and it was agreed to express the opinion of the Division as follows:

That in emergency cases occurring in the patient's own area (that is, his doctor's area) the doctor called should render first aid only, and should be paid by the patient's own doctor.

In cases occurring outside the patient's own area the doctor called should be paid out of the pool, the patient's panel doctor not being responsible for treatment outside his area.

In cases occurring in factories the employer should be responsible for first aid fees.

THE HONORARY SECRETARY read some notes on comparison of private fees with capitation fees and insurance work. The general opinion was that private fees should be increased. It was decided to continue the discussion at the next meeting.

It was unanimously decided to invite Dr. Buchan, M.O.H. for Willesden Urban District, to read a paper on work of municipal hospital, clinics, and welfare centres; and Dr. Macevoy, medical referee to Willesden Pensions Committee, a paper on his work with disabled soldiers.

INSURANCE.**INSURANCE ACTS COMMITTEE AND SCOTTISH SUBCOMMITTEE.****ELECTION OF DIRECT REPRESENTATIVES.**

THE following practitioners have been elected as direct representatives of Local Medical and Panel Committees on the Insurance Acts Committee and the Scottish Subcommittee for the session 1919-20. The counting of the votes has been verified by Mr. Gray, Assistant Secretary of the Proportional Representation Society.

Insurance Acts Committee.

- Group "A."—Dr. M. Dewar (Edinburgh); Dr. J. Goff (Bothwell).
Group "B."—Dr. H. L. Kutter (Newcastle-on-Tyne).
Group "C."—Dr. A. Forbes (Sheffield); Dr. P. V. Fry (Sowerby-Briggs).
Group "D."—Dr. H. F. Oldham (Morecambe); Dr. F. Radcliffe (Oldham).
Group "E."—Dr. Hugh Jones (Dolgelly).
Group "F."—Dr. T. Ridley Bailey (Bilston).
Group "G."—Dr. T. G. Miles (Ruarden).
Group "H."—Dr. T. Wood Locket (Molksham).
Group "I."—Dr. J. P. Williams-Freeman (Andover).
Group "J."—Dr. C. P. Lankester (Guildford).
Group "K."—Dr. H. B. Brackebury (Hornsey); Dr. H. G. Cowie (London); Dr. C. H. Panting (Leyton).
Group "L."—Dr. A. Linne (Pankerspur).
Group "M."—Dr. C. J. Palmer (Mansfield Woodhouse).

Scottish Subcommittee.

- County Panel Committees—Dr. William I. Ir (Edinburgh); Dr. C. E. Douglas (Cupar, Fire); Dr. J. W. Little (Newmans); Dr. W. R. Martine (Weston, Haddington).
Burgh Panel Committees.—Dr. J. Andrew (Coathbridge); Dr. J. Hume (Perth); Dr. C. Nairn (Greenock); Dr. J. Todd (Glasgow).

COUNTY OF LONDON PANEL COMMITTEE.

A SPECIAL meeting of the London Panel Committee was held on November 11th to decide upon the instructions to be given to the Committee's representatives at the forthcoming Conference of Local Medical and Panel Committees. It was agreed, in the first place, to put forward a resolution that practitioners on the panel should not be recommended to accept service under the proposed Regulations and new terms of service for 1920 until a satisfactory rate of remuneration had been agreed upon. Subject to this qualification a general approval was given to the new Regulations, but it was agreed that certain emendations should be pressed for. The discussion principally centred upon the new conditions relating to the disposal of practices on retirement or death, and after several suggested amendments had been lost it was resolved to ask the Insurance Acts Committee to endeavour to obtain an emendation to the effect that the new article should not apply in the case of the death of any practitioner whose name was included in the medical list on December 31st, 1919. Various other emendations were agreed to, designed to bring the Regulations into harmony with the views expressed at the two meetings of London practitioners which were convened by the Committee and reported in the SUPPLEMENTS of November 8th and 15th.

MEETING OF LONDON PRACTITIONERS.

THE Panel Committee for the County of London has called a mass meeting of insurance practitioners, to be held at Wigmore Hall on Sunday next, November 23rd, at 3 p.m. The chair will be taken by Dr. H. J. CARDALE, Chairman of the London Panel Committee.

The object of the meeting is to discuss the Medical Benefit Regulations, 1920, and the New Terms of Service and Remuneration for 1920.

The following resolutions passed by the London Panel Committee will be considered:

1. That the Panel Committee for the County of London cannot recommend the practitioners on the panel in London to accept service under the Medical Benefit Regulations, 1920, until a satisfactory rate of remuneration has been agreed to.
2. That the Panel Committee for the County of London do express a general approval of the new Regulations for 1920, and request the Insurance Acts Committee of the British Medical Association to endeavour to obtain the following emendations thereto—

(i) That the new Article 16 (1) (c) should not apply in the case of the death of any practitioner whose name was included in the medical list on the 31st day of December, 1919.

(ii) That fair compensation be paid on account of the altered value of the goodwill of practices, by taking this into consideration in fixing the new capitation fee and/or by a contribution to a pension scheme established by insurance practitioners.

(iii) That Article 27 (2) (a) should read as follows: "Where a complaint has been substantiated, the Committee may, if the insured person so desires, make arrangements for his immediate transfer to the list of another practitioner."

(iv) That provision be made in Article 34 for the Panel Committee to be supplied free of cost with all the necessary information for the investigation of cases of excessive prescribing.

(v) That in Clause 8 (6) of Part I of the First Schedule the words "for the purpose of sickness and disablement benefit under the Insurance Acts" be inserted after the word "certificates" in line 1, if the point be not met in any other way.

(vi) That the certification rules should allow of (a) a final certificate being given in urban areas similar to that allowed in rural areas; (b) a certificate being given to cover a period of necessary absence at the seaside or away from home for a period of not more than three weeks.

(vii) That in Clause 10 (3) of Part I of the First Schedule the words "which consent shall not be unreasonably withheld," be inserted after the word "Committee" in line 2.

3. That the Panel Committee for the County of London hereby authorize the Insurance Acts Committee of the British Medical Association to negotiate the remuneration on the basis of the proposals in M. 22, and contained in the sixth Quarterly Circular to insurance practitioners issued on November 5th, 1919.

The following resolution which has been sent by the London Panel Committee for adoption by the Conference of Panel Committees on November 27th, 1919, will be considered:

4. That the suggested pension scheme as outlined in the memorandum of the London Panel Committee be adopted by the Conference and the Insurance Acts Committee be authorized to negotiate with the Government so that it may become an integral part of the remuneration.

The following resolution will be submitted: "That this meeting of practitioners on the London panel approves of the action taken by the Panel Committee, and supports the demands made."

CORRESPONDENCE.

The Panel Conference.

SIR,—After attending the last three conferences of Local Medical and Panel Committees, I should like to make the following suggestions in view of the next conference on November 27th:

1. Commence the meeting at 9, or at least 9.30. Up to now 10.30 has meant nearly 11 before any real business is transacted. Most of the representatives have to come up the day before, having to travel long distances, and want to get as much done as possible.

2. Do not have a type-written supplemental agenda to be added on the day of the meeting; the original one is already long enough.

3. Do not allow anyone to speak more than once on the same subject—except, of course, the mover of resolutions or amendments.

4. Let representatives say what they and their constituents think about the Regulations and the capitation fee instead of being told so often by certain members of the Insurance Acts Committee what they must do or will have to accept.

Half a dozen men take up most of the time of the meetings.—I am, etc.,

W. H. PIMBLETT,

Chairman Preston Panel Committee.

Preston, Nov. 16th.

Insurance Remuneration.

SIR,—The Memorandum (M. 22) forwarded by the Insurance Acts Committee to the Ministry of Health (October 25th, 1919) must have filled many of us with dismay, whilst Dr. Addison's reply is even worse.

Why did the Committee take figures for 1917? The greatest rise in prices has surely occurred since then—and we are living in 1919, whatever the Insurance Acts Committee of the British Medical Association may be doing. It would only take a few days to find out what expenses are at the present time in typical practices. If a 60 per cent. increase represents the bare increase in cost of living and working expenses in urban districts, it is certainly far below the mark for rural practices, as I will endeavour to show by actual figures for such a practice. I have no knowledge of urban work.

The Government, in dealing with certain classes of State employees—the railwaymen, for instance—admit that the cost of living has risen 110 per cent. on the pre-war cost, and agree to maintain 100 per cent. increase in the wages while such continues. Dr. Addison thinks 60 per cent. increase too large when dealing with another State-employed class—the doctors!

First, let us consider the pre-war conditions. The 7s. 6d. (maximum) was never an adequate remuneration. It was forced on the profession, which had practically no experience of State or official employment, and had not the "tradition" of resistance to "the law." It would not have been tolerated for so long had not patriotism (which is a tradition) demanded it for the last four years.

In an average agricultural district 1,000 insured persons would be scattered through ten villages if the practice were unopposed, but if other practitioners overlapped the

insured persons would be scattered through fifteen villages. The practice would then have a radius of five miles. This would give a daily mileage of about thirty miles: that is, five miles out, five miles back, an arc of fifteen miles and five miles (average) for additional visits to country not covered on that particular day and special visits in cases of urgency. The average number of cases seen each day would probably be over fourteen. (Any medical officer who has served with a battalion will know that the average daily sick parade is twelve to fourteen, and that among physically picked men, any one who is very seriously ill, is promptly "passed on.")

Of the number seen (1912 and 1913) 43 per cent. were visited at home and 57 per cent. were attendances at surgery, but over half of these latter were at branch surgeries to which the doctor had to travel. Such work would occupy, not three-eighths of the doctor's time, but over four hours, and with the dispensing and clerical work five hours, or five-eighths of an eight-hour day.

For this the rural practitioner (additional to the urban practitioner) was given (a) allowances for mileage and in-accessible places—negligible amounts of a few shillings in the average country practice; (b) what he could make out of dispensing at 1s. 6d. a head. Against this his expenses may be put at—

1. Travelling (at 3d. a mile)	£117
2. Drugs, etc.	50
3. Part rent of his surgeries, lighting, heating, etc.	40

Total expenses, £207, leaving him net about £243 per annum.

Such was the position of the rural practitioner in, say, 1913. How does this compare with 1919? The distances are the same. The numbers of patients seen are increased:

1. By discharged men suffering from malaria, etc.
2. By civil patients sent from towns to convalesce—for example, war neuroses.
3. By increased sickness in the population—for example, from war conditions as regards foods (especially sugar).

The general physique of the country districts is lowered by the deaths of some of the best manhood, and is in no conceivable way raised. The doctor's time is thus more fully taken up than before.

For this the practitioner receives his £450 as before, plus a bonus (a percentage which unfairly varies with his total professional income, and not with that from the insurance), let us assume, of £25 per cent., or £112 10s., plus a small varying amount on disabled soldiers (a healthy class as a rule), say, £17 10s. Total, £580.

Against this are the increases in expenditure:

1. Travelling at 7d. a mile instead of 3d.	£273
2. Drugs, etc.	80
3. Rent of surgeries	60

Total, £413, leaving net £167.

Against this the cost of living (bare living) has risen 110 per cent. Justly the net income—to put the rural practitioner where he was before the war—should amount per thousand insured persons to £500, or gross £900—a capitation fee of 18s.

In fact the insurance work has never "paid its way" in rural districts. It has been bolstered up by private practice, just as was "club practice" formerly; and until the comparatively enormous expenses of rural practice are recognized and paid for it never will. Will the new mileage fund cover this? There is not a rural practitioner in the whole country who has the faintest hope that it will.—I am, etc.,

Daddington, Nov. 13th.

G. M. HODGES

Rural and Urban Practice.

SIR,—I think it very necessary to have a definition of a rural and an urban practitioner in the new Regulations. Some years ago I applied for a Special Medical Certificate Book, Med. 40 A., but I was refused on the grounds that No. 9 Area, co. Lanes, was not a rural area.

Now I dispense for all my patients except three, and I have the most hilly and worst roads in the neighbourhood to travel, several of my panel patients living between 700 and 900 ft. above the sea level, and if I am not a rural practitioner there cannot be many in the Pennine Range. I have about eighty panel patients in a village two and a half miles away. To get to them I have to mount a hill 800 ft. high, with a most dangerous gradient, and if this is covered with snow I have to travel by a roundabout road nineteen miles there and back. You will wonder why I keep these patients on my list; but I have had a practice in this village for thirty-two years; if, however, the terms for such work are not very much improved I shall have to give it up, for the expense of a motor car and chauffeur far exceeds the receipts I get from my

panel patients there. My whole panel list is only about 850, and you will wonder how I live. Well, I could not if my forebears had not left me a comfortable house to live in, or had I taken holidays, to which I think a medical man is as much entitled as the rest of mankind.

In the Memorandum by the Insurance Acts Committee (M. 22), printed in the SUPPLEMENT of November 8th, 1919, Paragraph 10, Expenses of Practice (iv), it is stated that "owing to the more frequent stoppages leading to less economical consumption of petrol and more wear and tear" the cost would be relatively higher in urban than rural areas.

The sophistry of this obscures the point; a practitioner with a large urban practice might have relatively more expense than a rural one, but the cost of attending each panel patient in a rural area would be relatively much more than in an urban area. It is absurd to regard frequent stopping, and an insured patient or more seen at every stoppage, causing such wear and tear and using so much petrol, as a set-off against the requirements of a rural area, where roads have bad surfaces, and where so much time is expended in getting to a hamlet with frequently only one insured person to visit.

I notice that Dr. Addison in his reply sees this clearly. He says:

The cost of travelling is, of course, a much smaller item per person attended, or person entitled to be attended, in an urban than in a rural area.

And this argument goes to prove the fact that the difference by which the Insurance Act is regarded by different members of the medical profession is that whereas a capitation fee may be sufficient for an urban practitioner with, perhaps, 3,000 on his panel, in a crowded area that necessitates little travelling expenses, yet it is ruinous for the rural or semi-urban practitioner with a list of 500 to 1,000 persons which occupy so much of his time and cost so much in travelling expenses.

The rural practitioner has the difficulty of getting to his patients, responsibilities, and emergencies to contend with that the urban practitioner knows not of.—I am, etc.,

Sabden, co. Lancs, Nov. 17th.

J. A. LAYCOCK.

The Income Tax Factor.

SIR.—A good deal of adverse criticism has been poured on the Insurance Acts Committee for taking into consideration the question of income tax as an argument for an increased capitation fee, and this has been done not only by many members of the British Medical Association but also by Dr. Addison in the reply by the Ministry of Health to M. 22. Is it so *very* absurd then to take income tax into consideration?

On November 12th, 1919 (only last week), the award of the Civil Service Arbitration Board "on the claims by permanent Government officers and employees for *further* (italics are mine) temporary increases of remuneration owing to the abnormal conditions resulting from the war" was issued.

The organizations which put in applications comprised almost the whole of the permanent Civil Service. Now mark well that these civil servants have been awarded *further* substantial increases by the arbitrators. This award or a summary of it is well worth reading.

The arbitrators say:

We recognize that the expectation of a sustained fall in prices that existed at the time when Award No. 84 was issued, has been falsified.

Now let us see what they say about the income tax:

We agree—and indeed the applicants' representatives admit—that it would be contrary to public policy to relieve any citizens from obligations imposed by Parliament. But we think that the argument is not without force that in determining the extent to which different classes of civil servants should be called upon to share in the national burden by foregoing full compensation for the decrease in the purchasing power of money, the extent to which they are already sharing in that burden by paying increased income tax is a relevant consideration.

You see by this, Sir, that the question of income tax has been put forward by others and its justice has been accepted by the Civil Service Arbitration Board. How different this is from the one-sided consideration of the matter by Dr. Addison and his permanent officials. I strongly recommend them to study this award.

In comparing the position of panel doctors with that of civil servants enough has not been made of the fact that these latter have about a seven hours' day, while the unfortunate doctor must be on duty for every hour of the twenty-four; also, that little is said of the pension rights of the civil servant, the said pension being merely

deferred pay, and this was not brought into calculation when comparing the remuneration of the two services.

In the final paragraph of the reply of the Ministry of Health Dr. Addison states:

That his eventual estimate will be based on the assumption that insurance practitioners will render to insured persons the highest standard of work of which they are capable.

In reply to this I would say that they (with few exceptions) already do so, and that where the National Insurance system fails is in the neglect of the Insurance Commissioners or the Government to supply, when necessary, consultants and hospital and sanatorium treatment.

Let Dr. Addison treat the profession generously, and depend upon it they will not fail to respond. It is not by trying to sweat them that he will obtain their best services.

As a panel doctor I could say a good deal more on the question of our remuneration, but my letter is already long enough.—I am, etc.,

Steeple Claydon, Bucks, Nov. 16th.

PHILIP L. BENSON.

The Draft Regulations.

SIR,—I have to complain that I am not being given an opportunity to discuss the draft Regulations. They are a distinct improvement, on the whole, on the old Regulations, but one or two clauses will have to come out and some others (for example, records) can only be accepted if they bear a special fee.

I submit that—

1. The new Regulations be held over till July 1st, so as to give every doctor a chance to discuss the draft Regulations and also the revised Regulations before they come into force.

2. The Government be required to guarantee to every potential panel doctor, *before* January 1st, 1920, an 80 per cent. advance in fees and adequate mileage, to take effect *from* January 1st, 1920. (These fees to be on the *present* conditions of service; some of the new conditions will require extra fees.)

I agree that 80 per cent. advance is very fair indeed. I did advocate a 50 per cent. advance, but that was before the railway strike, which has somewhat altered matters. It being always understood that the 80 per cent. advance is for the same standard of service as at present in force.—I am, etc.,

GEOFFREY PRICE, M.R.C.S., L.R.C.P.

Kington, Warwick, Nov. 15th.

Principles of Distribution.

SIR.—While the question of the amount of the capitation grant for the new conditions of service is under discussion, it is well not to overlook the equally important question of its equitable distribution. The present inequality of adjustment of pecuniary reward to service rendered has done far more towards preventing the more educated and capable practitioner from accepting service under the Insurance Act or has made him more dissatisfied, if serving, than the inadequate sum offered by the Government.

To illustrate my meaning I will take three typical cases:

A. starts in general practice in an industrial area immediately after obtaining a qualification and without holding any hospital appointment or working under the supervision of a man of experience.

B. spends two or three years after qualifying in holding various hospital appointments, attending post-graduate courses, and in making himself really efficient, and then starts in a similar class of practice.

C., after spending some time much as B. has done, starts practice in a scattered rural area.

A. will probably soon obtain his 3,000 panel patients and a net income from this source of about £900. If he so desire it, his service may consist in little more than treating minor ailments and acting as a clearing house for the more severe ones. Nearly all the more serious cases and practically all those requiring surgical interference can be, and generally are, passed on to hospital either as in-patients or out-patients, and A. is spared the time and expense of treating them. He is, however, paid for them, and can in addition employ the time saved in taking on a larger number of other cases, either private or panel, and thus further increase his income.

B., on the contrary, although starting some years later than A. and during the interval expending and not earning money, finds his increased knowledge and skill, thus expensively acquired, a positive disadvantage from a pecuniary point of view. He can and does give "adequate service" to nearly all his patients "off his own bat" and spends on an average very much more time in the treat-

ment of his patients than does A. A little later he is probably appointed upon the staff of the local hospital, and finds he is spending a considerable amount of his time in treating a number of A.'s panel patients. For this he receives nothing. Also, as he has set a high standard of general practitioner service for himself, he cannot charge any panel cases for the special or extra service he has rendered above or beyond the general practitioner service of A.

What inducement has B. to go on the panel? Or, *per contra*, what inducement has A. to become better qualified, or to raise his standard of general practitioner service?

Comparing the case of C. with that of A., the latter has nearly all his patients within perhaps a mile's radius, so that it is easy for him to deal with a panel of 3,000. But a panel of 1,000 in C.'s case will occupy more time and energy and entail more expense, on account of the much greater average distance and proportionately larger number of visits than a panel of 3,000 in A.'s case. For this service C. will receive on a corresponding scale of payment about £450 gross, which would mean little more than £250 net.

What can be done to remedy these very glaring injustices and causes for discontent which contribute so largely towards the failure of the panel system? I would suggest:

1. The formation of large local pools, and the payment to the men practising in each area of adequate fees for the extra work done beyond the general practitioner service of the *least* competent, not of the *most* competent in the area. This service might be assessed at possibly two-thirds of the capitation grant, the other one-third going to the local pool.

2. The payment to the rural practitioner of a much higher capitation rate from the central pool. This capitation rate should vary, in accordance with the average distance of his panel patients, from two to even four times the rate paid to the man practising in a densely populated urban area.

If some scheme founded on these two principles were introduced it would do more towards attracting the willing service of the more skilled and better equipped practitioner than a mere raising of the capitation grant, however necessary that may be. In addition, it would offer an inducement to the practitioner whom I have referred to as A. to increase his efficiency instead of being content to remain on a lower level or possibly drift into real incompetence.—I am, etc.,

Nuneaton, Nov. 15th.

E. N. NASON.

Aims and Negotiations.

SIR,—In reading the various reports and memoranda that have been sent the round of the profession concerning the new Insurance Regulations, one wonders what ideal the Association and the Government have set before them. What is being aimed at? Are we asked to perpetuate the old "club practice" practices in their worst form, or is an honest endeavour being made to improve the attendance upon the insured classes? Nothing short of an attempt to bring the attendance given to the working classes up to the best should be tolerated; it is a matter of national importance that they should be able to obtain it. But if such is to be their lot it is also essential that the remuneration should be ample, not only a living wage. It is open to question whether the 3,000 limit is not too high. Can a man give thorough attendance to that number? will they get the same attention as if he were getting 5s. or half a guinea for each attendance?

The evidence appears to point to our negotiators being outwitted by the Ministry. If they will only show that they are putting backbone into the affairs of the profession they will get support; but if they appear all out for peace at any price we shall have another fiasco, and be bound down to a further existence of slogging to earn a living, and knowing that our patients are not getting as thorough treatment as they might because the price paid is worth even less than is what they get.—I am, etc.,

Mumbles, Nov. 16th.

F. DE COVERLY VEALE.

Transfer of Practices.

SIR,—Dr. Garratt, whose letter is in the SUPPLEMENT of November 15th, does not appear to know that the present method of transferring a panel does not interfere in any way with patients' free choice of doctor.

All patients on the list are circularized to the effect that unless they notify the local Insurance Committee before a certain date that they wish to select another doctor it will be presumed that they wish to go on the panel of the incoming man and that their names will be duly transferred—that is, they are given free choice.—I am, etc.,

Hove, Nov. 17th.

V. C. HACKWORTH.

Remuneration under the 1920 Scheme.

SIR,—In dealing with this matter one should confine oneself to concrete facts. To introduce factors such as cost of educating children and income tax is irrelevant. It confuses the issue and weakens our case, for the former is entirely a personal matter and the latter an obligation of common citizenship.

Under the old Agreement we were entitled to a capitation fee of 7s. at the lowest. As a matter of fact, in this area we did not get anything like that sum. No one who endeavours to treat his panel patients in the same manner as he treats his private patients can stay that such a fee was excessive. Now we are asked to contract further obligations, and surely our remuneration should not be less. We contracted then to attend panel patients for 7s. a year, and in order to maintain ourselves, under present conditions, in a position to give these services, we are entitled to a fee that is not less than the present day equivalent of that sum. In short, we must have the present day equivalent of 7s. 3d. that is, capitation fee of 7s. and half the floating sixpence. Taking the increased cost of "carrying on" as not less than 110 per cent. over the pre-war standard (vide Prime Minister's reply to railwaymen's demands) our capitation fee should not be less than 15s. 3d. To accept 13s. 6d. is to admit that our previous remuneration was more than adequate. Do the members of the Insurance Acts Committee seriously mean this?—I am, etc.,

Skipton, Yorks, Nov. 15th.

N. A. MACLEOD.

Payment for Work Done.

SIR,—As a non-panel general practitioner I have been much interested in the various articles and letters published in the SUPPLEMENT and other portions of your JOURNAL.

It appears to me that the Insurance Act, as it now stands, is not a success, in so far that it has not given satisfaction either to the insured or to the profession; that in the near future there is going to be a great struggle, and that now is the time for some bold, united, and determined action.

I would suggest that we all fall into line and agree to work the Act, but only on the system of payment for work done. The fees should be 4s. 5d. for visit and medicine at the patients' homes; 2s. 6d. for consultation and medicine at own surgeries; night calls and emergency calls, 6s.; accounts to be made out either monthly or quarterly and sent to the county secretary. The book-keeping would not be so very great a task, and would not take up more than half an hour, if done methodically and regularly each evening.

The cost to the State would be no greater than it is at the present time, one very cogent reason being that the payments would only be made in respect of illness or accident. There should be no panel lists, each insured person being allowed to have the doctor of his choice. As members of an old and honourable profession we should no longer forfeit our self-respect. The general public would esteem us all the more, and would have more faith in the profession generally.

Considerations of space forbid my writing at any greater length, but at the risk of being considered somewhat antiquated in my opinions, I venture to say that there are many non-panel men like myself who would willingly fall into line and do our utmost to make the amended Act a great success both to the general public and to the profession.—I am, etc.,

Nuneaton, Nov. 16th.

GEO. A. WOLFENDALE.

The London Pension Scheme.

SIR,—I see that the Panel Committee for the county of London are bringing a pension scheme for insurance practitioners before the Conference of Medical and Panel Committees. The scheme seems quite a good one, and as I personally have four insurance policies running I cannot be classed as an opponent of this form of provision for the future, but I do protest against the proposal to make it compulsory.

The medical profession is a body of educated men, and should not require to be treated as children, even in their financial affairs. In fact, I would go so far as to say that it is not good for them to be so treated. I know that the bureaucrats think that it is their mission in life to manage everybody else's private affairs. But they are becoming rather a back number, and even their warmest supporters show a disposition to turn and rend them (see the *New Statesman* recently).

I do not understand the last paragraph of the circular with regard to this scheme. I have heard of a conference of representatives of Panel Committees, and I happen to be

going to attend it. The conference of *delegates* of Panel Committees has escaped my notice. Perhaps it is being held under the auspices of the Medico-Political Union.—I am, etc.,

Cambridge, Nov. 13th.

C. M. STEVENSON.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

The following notifications are announced by the Admiralty:—Surgeon Captains: W. J. Colborne, C.B., to the *Factory*, for R.N. Barracks; A. Maclean, D.S.O., to R.N. Hospital, Haslar. Surgeon Commander (ret.) G. G. Barrett has been promoted to the rank of Surgeon Captain (ret.). Surgeon Commanders: T. P. O'Keefe to the *Pekin*; A. I. Sheldon to the *Colombo*. Surgeon Lieutenant A. E. Malone to the *Tiger*. Surgeon Lieutenants (temporary): J. Ryan to the *King George V*; R. Buddle, O.B.E., to the *Caledon*.

ROYAL NAVAL VOLUNTEER RESERVE.

Surgeon Lieutenant (temporary) A. Macpherson to the *Crescent*, additional, for staff of Commander-in-Chief, Coast of Scotland.

ARMY MEDICAL SERVICE.

Colonel C. W. R. Healey, C.M.G., retires on retired pay.

Colonel Sir W. H. Horrocks, K.C.M.G., C.B., ret. pay, relinquishes the temporary rank of Brigadier-General on ceasing to be employed.

ROYAL ARMY MEDICAL CORPS.

The following temporary Lieutenant-Colonels relinquish their temporary commissions: Percy W. G. Sargent, C.M.G., D.S.O. H. J. Hargrave (Lieutenant-Colonel T.F. Res.).

Lieut.-Colonel and Brevet-Colonel L. W. Harrison, D.S.O., K.H.P., retires on retired pay.

Majors relinquish the temporary rank of Lieutenant-Colonel: W. J. S. Harvey, D.S.O., (Brevet Lieut.-Colonel) F. D. Howell, D.S.O., M.C.

The following relinquish the acting rank of Lieutenant-Colonel: Major and Brevet Lieut.-Colonel F. W. Lamballe (on ceasing to be specially employed); Majors R. J. Franklin, J. E. H. Gatt, A. W. A. Irwin; Captain J. B. A. Wismore; temporary Captain C. J. West, O.B.E., (and reverts to the acting rank of Major).

To be acting Lieut.-Colonels: Major E. T. Potts, C.M.G., D.S.O.; Captain D. C. G. Ballingall, M.C., from June 21st to October 14th, 1919. Whilst commanding medical units: Majors L. A. Andrews (December 1st, 1918), C. M. Drew, D.S.O. (from August 19th to October 9th, 1919). Whilst specially employed: Major and Brevet Lieut.-Colonel R. B. Ainsworth, D.S.O., Major A. J. Williamson.

To be acting Majors: the acting rank of Major: Captains J. W. O'Brien, M.C., W. T. Graham, O.B.E., C. G. G. Keane. On reposting: Temporary Captain H. C. Gibson. On ceasing to be specially employed: Captain R. R. Phillips; temporary Captains R. K. Robertson, S. A. W. Munro, M.C., W. M. Oaken, W. E. Graves.

To be acting Majors: Temporary Captains B. Knowles, M.C., R. H. Stevens (from March 26th to August 19th, 1919). Whilst specially employed: Captain and Brevet Major W. L. Webster; temporary Captain E. J. Maxwell; Captain R. S. Cumming, M.C.

Temporary Captain (acting Major) W. H. Fleetwood to draw the pay and allowances of his acting rank (March 18th, 1919).

Temporary Captain G. H. Wood to be Captain, October 13th, 1918, but not to reckon for pay or allowances prior to October 1st, 1919, with precedence next below J. T. McConkey.

D. L. Lindsay and G. J. Arnold, late temporary Captains, to be temporary Captains, October 27th, 1919, seniority from May 16th, 1917, and November 1st, 1916, respectively.

The notifications regarding temporary Captains James McDonnell, M.C., and Octavius de B. Burgh, O.B.E., printed in the *London Gazette* of June 7th and October 15th, 1919, are cancelled.

Late temporary Captains to be temporary Captains, with seniority as indicated: D. L. Lindsay (May 16th, 1917), G. J. Arnold (November 1st, 1916), J. D. Judson (March 25th, 1917).

J. C. J. Callanan to be temporary Lieutenant.

The following officers relinquish their commissions:—Temporary Lieut.-Colonels and retain the rank of Lieut.-Colonel: H. C. Marr, E. G. Coward (on ceasing to be employed with the Huddersfield War Hospital). Majors (acting Lieut.-Colonel) D. K. McDowell, C.M.G., O.B.E., (and is granted the rank of Lieutenant-Colonel), K. Standish-White, O.B.E., (and retains the rank of Major). Temporary Major F. N. Holden, on account of ill health, and retains the rank of Major. Temporary Captain (acting Lieut.-Colonel) A. N. Price, and is granted the rank of Lieutenant-Colonel. Temporary Captains and are granted the rank of Major: D. G. Wishart, J. Gib on, M.C., A. P. Saint, M.C., (acting Major) E. A. Lindsay, (acting Major) O. C. G. Shields, M.B.E., O. de B. Marsh, O.B.E., A. T. W. Forrester, J. H. Bankes, A. W. Tabuteau, J. Morrison, G. Richardson, H. W. Turner, W. F. Morgan, (acting Major) G. McNeill. Temporary Captains and retain the rank of Captain: A. H. Davies, J. G. Scott, D. D. Pincock, J. D. Batt, M.C., W. H. G. Patrick, R. A. Morrell, H. C. Duffy, T. O. Robson, A. J. O'Leary, C. F. O. White, J. L. Waller, J. Fanstone, J. W. Gilbert, M.C., D. P. Blair, J. R. Dickson, D. C. M. Page, M.C., A. G. Christian, R. I. Wolfe, H. M. Anderson, R. C. McMillan, A. B. Appleton, C. Lundie, J. P. O'Hea, C. M. Jones, J. N. J. Hartley, O.B.E., R. S. Snowie, H. G. Janion, M.C., E. H. Shaw, J. Harvey, W. A. Russell, G. M. Brown, O. Pitt, W. L. M. Day, A. H. Style, G. W. L. Kirk, M. Douglas, F. K. Marriott, M.C., F. D. Nicholson, G. B. Burwell, M.C., A. J. M. C. Morrison, (acting Major) G. W. Rea, A. Newton-Brady, E. W. Falconer, W. W. Pearce, G. H. Alabaster (on account of ill health contracted on active service), S. A. Burn, E. W. G. Young, M.C., H. W. Gilmore, G. Milne, J. M. Land, A. S. Carter, A. G. Bryce, J. E. A. Underwood, H. C. M. McManus, J. F. C. Haslam, M.C., D. A. Chalmers, E. A. T. Green, M.C., J. N. F. Fergusson, H. W. Scott-Wilson, D. S. MacBean, H. E. Gaulien (on account of ill health). Temporary Lieutenants and retain the rank of Lieutenant: M. D. B. Tonks, S. J. Healy, J. Dwan, A. L. Lynch.

ROYAL AIR FORCE.

MEDICAL BRANCH.

Captain J. A. Giles to be acting Major whilst Major.
Flight Lieutenant G. Cranston to be acting Squadron Leader whilst Squadron Leader.

Flying Officers to be Flight Lieutenants: S. A. Clark, S. R. E. Davies, J. Gorsky, V. I. Levy, K. F. D. Waters.
Transferred to unemployed list: Captains N. Rumbold, H. C. Cox, G. W. Harbottle.

QUEEN MARY'S ARMY AUXILIARY CORPS.

Auxiliary Section R.A.M.C. attached.—Medical Controller K. J. S. Clark and Medical Officer M. E. Douglass relinquish their appointments.

APPOINTMENTS.

BEAUMONT, G. E., D.M.Oxon, M.R.C.P., D.P.H., Assistant Physician, Hospital for Consumption and Diseases of the Chest, Brompton.

BLAIR, Mary A., M.D.Lond., Medical Officer to the Post Office, for the female staff, Westminster Division of the South-Western District.

DAVIS, J. H. E., L.R.C.P. and S.I., Medical Referee for the Bangor District under the Ministry of Pensions.

LUMB, J. M.B., B.S.Durh., B.Hy., D.P.H., Medical Officer of Health, Wrexham Rural District and Town Councils.

YOUNG, G., M.B., Medical Superintendent, Booth Hall Infirmary, Manchester Union.

DISTRICT MEDICAL OFFICERS.—C. A. R. Gatlley, M.R.C.S., L.R.C.P. (Westbury and Whorwellsdown Union), E. J. F. Hardenberg, M.R.C.S., L.R.C.P. (Epping Union), H. E. H. Mitchell, M.B., B.S.Lond. (Epsom Union), M. H. Pearson, M.B., Ch.B.Dub. (Manchester Union), C. S. E. Wright, M.B., Ch.B.Camb. (Spilsby Union).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

BARNES.—On November 13th, at 89, Lower Baggot Street, Dublin, to Dr. and Mrs. Percival Barnes, of Finbar House, Tottenham, N., a daughter.

DOBBIE.—On November 12th, at 7, Bristol House, Southampton Row, W.C., the wife of J. Nairn Dobbie, M.B., Ch.B.,—a son.

PIRRIE.—On November 11th, at the Dispensary, Newcastle-on-Tyne, the wife (née Evelyn Ritson, M.B., B.S.) of Ivau M. Pirrie, M.C., M.B., B.S.—a daughter.

DEATH.

ACWORTH.—On the 13th November, 1919, at her residence, 9, Buckland Crescent, Hampstead, N.W., Mary S. Acworth, M.D.

DIARY FOR THE WEEK.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, W.—Monday, 8 p.m.—Discussion on the Treatment of Malaria, introduced by Lieut.-Colonel S. P. James, M.D., I.M.S., continued by Dr. G. Newton Pitt, Colonel Aldo Castellani, Major W. Bvam, R.A.M.C., Dr. Gordon Ward, and Dr. W. H. Wilcox, C.B., C.M.G.

ROYAL SOCIETY OF MEDICINE.—Section of Otolaryngology: Monday, 7.30 p.m., Demonstration of Microscopical Slides, 8 p.m., Mr. J. Howard Mummery: The Dental Follicle and Pathological Conditions. Section of Medicine: Tuesday, 5.30 p.m., Dr. G. Graham: Arthritis in Dysentery. Section of Study of Disease in Children: Friday, 4.30 p.m., Dr. Eric Pritchard: Hypertrophy of Pylorus and of Lower End of Oesophagus. Cases. Section of Epidemiology and State Medicine: Friday, 8.30 p.m., Colonel William Hunter, C.B., M.D.: Epidemiology of Typhus Fever in Serbia. Dinner will be provided at the Welbeck Palace Hotel at 7 p.m. Those intending to dine are requested to send their names to Dr. Major Greenwood, Lister Institute, Chelsea, S.W.1, by Wednesday, November 26th.

POST-GRADUATE COURSES AND LECTURES.

BROMPTON HOSPITAL FOR CONSUMPTION.—Wednesday, 4.30 p.m.—Dr. Dundas Grant: Tuberculous Laryngitis and Diseases Simulating it.

FELLOWSHIP OF MEDICINE, 1, Wimpole Street, W.—Tuesday, noon, Dr. Heranman-Johnson: Value of Combined Treatments, with special reference to Surgical and Electrical Methods, 5 p.m., Dr. C. Singer: Priests and Sons of Esculapian—Greek Medicine in Hippocratic Times. Wednesday, noon, Dr. J. Burnett Rae: Psycho-therapeutics in Practice, 5 p.m., Sir William Hale-White: Prognosis of Exophthalmic Goitre. Thursday, 5 p.m., Myopia and its Treatment.

MANCHESTER ROYAL INFIRMARY.—Tuesday, 4.30 p.m., Dr. Craven Moore: Di-ordered Action of the Heart.

ROYAL EYE HOSPITAL, Southwark.—Tuesday, 5 p.m., Diseases of the Retina. Thursday, 5 p.m., Diseases of the Orbit.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea, S.W.—Monday, 4.30 p.m., Mr. C. J. Marshall: Congenital Talipes. Tuesday, 4.30 p.m., Dr. J. M. Carr: Congenital Pyloric Stenosis. Wednesday, 3 p.m., Dr. J. M. H. Macleod: Skin Cases, 4.30 p.m., Dr. Melville, Demonstration in X-ray Department. Thursday, 4.30 p.m., Mr. W. F. Fidden: Hernia. Friday, 4.30 p.m., Dr. Helen Ingleby: Congenital Morbus Cordis. Saturday, 11 a.m., Sir Humphry Rolleston: Jaundice in the Newly Born.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
NOVEMBER.	
25 Tues.	London: Standing Subcommittee of Central Ethical Committee, 2 p.m.
26 Wed.	London: Hospitals Committee, 3 p.m. London: Insurance Acts Committee, 8 p.m.
27 Thur.	London: Conference of Local Medical and Panel Committees, Memorial Hall, Farringdon Street, London, 10 a.m.
DECEMBER.	
17 Wed.	London: Council.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, NOVEMBER 29TH, 1919.

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GENERAL COUNCIL

OF

MEDICAL EDUCATION AND REGISTRATION.

WINTER SESSION, 1919.

Tuesday, November 25th, 1919.

Sir DONALD MACALISTER, K.C.B., President,
in the Chair.

THE one hundred and tenth session of the General Council of Medical Education and Registration was opened at the offices of the Council, 44, Italian Street, London, W., on Tuesday, November 25th, 1919, at 2 p.m.

PRESIDENT'S ADDRESS.

Sir DONALD MACALISTER said:

Gentlemen.—Thirty years have passed since I was elected a member of this Council by the graduates of the University of Cambridge. Fifteen years have passed since, by your favour, I was first appointed to be your President. None of those who were my colleagues in November, 1889, are now with us, though some happily survive in well-earned retirement. The time cannot be far distant when you will properly desire to entrust the responsibilities of my office to younger hands. But in the meantime I am pleased to think that the efficiency of the Council, in its work for the public and for the profession, is unimpaired. Its membership may change, but its devotion to the due performance of its functions, defined and limited as they are by the Medical Acts, does not diminish. And I am pleased to note also that its influence in the counsels of the nation on medical matters, and its effectiveness in the guidance of professional training and the maintenance of professional standards throughout the empire, are steadily increasing. It possesses a heritage of accumulated experience and recorded service which will be handed on from generation to generation of its members.

Changes in Membership.

An unusually large number of changes in the composition of the Council has occurred since we last met. Dr. Cash, after eight years of office, during which he gave invaluable assistance on the Pharmacopoeia Committee, retires in favour of his eminent Aberdeen colleague, Dr. Matthew Hay, whom we welcome on many grounds, but especially for the help he can give us in questions of public health and preventive medicine. A highly distinguished anatomist, Dr. Elliot Smith, unique among us as being registered in the Colonial List, has, on his transfer from Manchester to London, yielded place on the Council to a highly distinguished pathologist, Dr. Henry Roy Dean. Sir Arthur Newsholme, K.C.B., long and honourably associated with the Public Health service in England, has

undertaken important duties in America, and has resigned his seat with us. The Crown has appointed a worthy and welcome successor in Sir George Newman, K.C.B. We shall expect much from his energy and initiative power in aid of our efforts for the improvement of medical and dental education. Mr. R. J. Pye-Smith, our zealous and painstaking colleague from Sheffield, has resigned on the ground of advancing age; and his university has appointed its Professor of Physiology, Mr. J. Beresford Leathes, F.R.S., in his room. We shall be the richer for his varied experience in the medical schools of England and Canada, and for his distinction as a man of science.

The Election of Direct Representatives.

The general election of direct representatives, to take office on January 1st, 1920, which had been postponed on account of war conditions from the date of its regular incidence in 1916, was duly carried out in accordance with the rules of the Privy Council. The result, announced by me as returning officer on November 20th, is that all our present members who allowed themselves to be nominated are re-elected. They are to be congratulated on the renewed vote of confidence they have received from the registered practitioners of the United Kingdom who exercised their professional franchise. For our own part we have reason to be gratified that our sense of their value as members of the Council is fully shared by their constituents. Our esteemed fellow-workers for twelve years, Dr. Langley Browne and Dr. Latimer, did not stand for re-election. They remain with us till the end of the year; but you will allow me to say to them, in your name, that they will carry with them the cordial and grateful acknowledgements of the Council for what they have been and what they have done while they shared in its important tasks. We shall have the opportunity next session of offering the right hand of fellowship to their able successors, Dr. Bolam of Newcastle-on-Tyne and Mr. Turner of London.

The statistics of the general election have been reported to the several Branch Councils. They will repay some study by the profession. The dislocations of war time may account for the large number of voting-papers returned through the Dead Letter Office. But other causes must be invoked to explain the fact that more than half the practitioners resident in the United Kingdom failed to give any indication that they were personally interested in the election. Out of a total of 34,026 voting-papers issued, only 13,227, or 38.9 per cent., were returned in accordance with the regulations and recorded as valid. In some parts of the country it is plain that, under present conditions, the time allowed for the issue and return of voting-papers is less than sufficient. The fresh experience of the Registrars and of the Returning Officer confirms the view expressed by the Council eight years ago (*Minutes*, 1911, p. 85) that the time allowed by the Medical Act

1886, should be extended. I propose, with your approval, to ask the Lord President to reintroduce a short measure for this purpose, on the lines of Lord Morley's bill of 1912 (Minutes, 1912, p. 192).

Honours.

His Majesty has honoured the Council by conferring on Sir Gilbert Barling a Baronetcy and the Commandership of the Order of the British Empire, and the Commandership of the same Order on Sir Arthur Chance. Our late Solicitor, Mr. W. H. Winterbotham, has received a Knight-hood. A civic honour also has been bestowed on Dr. Latimer, who has accepted the unanimous invitation of the Corporation of Tunbridge Wells to be its Chief Magistrate during the current municipal year. We express our best wishes to His Worship the Mayor.

Medical Registration.

Two years ago I ventured to predict that, in the present year, 1919, the number of new practitioners registered in the *Medical Register* with home qualifications would be far below the average. The registrations up to this date show that the prediction will be fulfilled. But some compensation is afforded by the fact that, during the year, nearly 400 British practitioners, holding qualifications gained in Canada, Australia, and elsewhere, have been admitted to the Colonial List of the *Register*.

Students' Registration.

The numbers of registered medical and dental students for 1919 are, as was also foreseen, very greatly in excess of former records. They are filling the schools to overflowing; some schools indeed have had to postpone all fresh admissions until next April. There is apparently no doubt that in a few years the professional ranks will be more than replenished. In some minds the expected influx is giving cause for anxiety, lest the new practitioners may not all find suitable employment when they reach the *Register*. But it must be remembered that, on the one hand, the wastage of war has been great; and, on the other, that the openings for skilled men and women will be multiplied by the increased activities of the new authorities concerned with the conservation of the health and physical welfare of the people. There will, in fact, be many new demands, and I for one do not doubt that they will ultimately match the new supplies. Under the Ministries of Health Acts, various preliminary Orders in Council have been issued and transmitted for consideration to the Executive Committee. They deal with questions of machinery. The Secretary for Scotland has requested the Scottish Branch Council to send for his consideration the names of four persons specially fitted for appointment by him to the Scottish Consultative Council on Medical Questions, and his request has been complied with.

Nurses Registration Bill.

As I indicated last May, the two Nurses Registration bills then before Parliament have been displaced by a new bill, introduced in the House of Commons by Dr. Addison. It avoids certain disputed questions, chiefly by leaving them to be decided, under the directions of the Minister of Health, by a General Nursing Council, which has power to frame rules. These rules have to be approved by the Minister, but it is not provided that, as in the case of the Midwives Acts, they are first to be transmitted to the Council or its Executive Committee for consideration. You will probably desire me to call attention, through the Lord President, to this omission. Dr. Addison's bill does not extend to Scotland or Ireland, but I learn that separate legislation for these parts of the United Kingdom is contemplated. The Executive Committee will bring to your notice this and other points, on which representations might be made.

Dental Practice.

The framing of a bill based on the recommendations of the Departmental Committee on Dental Practice, which you discussed fully last session, is in hand; but its precise lines are not yet known. The Government has explained in the House of Commons that "the issues involved are numerous and complex, and must be considered in their relation to the other health services for the community." The Council will agree that the draft bill will be all the better if in framing it the Government takes account

of all relevant considerations, including those set forth in the Council's own resolutions on the subject.

With a view to inducing its Licentiates in Dental Surgery to pursue more advanced study after obtaining their primary qualification, the Royal College of Surgeons of Edinburgh proposes to institute a higher diploma in dentistry. The College has submitted its proposal to the Council, which, under Section II (6) of the Dentists Act, 1878, may make order for the registration of the higher diploma as an additional qualification if it appears that it is granted after examination "in respect of a higher degree of knowledge than is required to obtain a certificate of fitness" under the Act. The Executive Committee will report to you on the question of recognition.

Reciprocity.

The Province of Alberta, Canada, has now legislated in favour of medical reciprocity with the United Kingdom. The terms of the new law are such that His Majesty may be pleased to regard them as justifying the application to the province of Part II of the Medical Act, 1886. In that case the necessary Order in Council may be expected shortly—I understand it has been issued this (Tuesday) morning—and the Executive Committee has intimated its readiness to give it immediate effect. One province of the Dominion—namely, British Columbia—will alone remain outside the agreements for reciprocity concluded between the United Kingdom and the several parts of the British Empire beyond the seas. Representatives of the National Board of Medical Examiners of the United States of America recently visited this country with the object of studying and reporting on the methods employed here for the testing of candidates for medical qualifications and for the control of their registration as practitioners. The Registrar, by my instructions, placed at their disposal the fullest information on these subjects which the office possessed. The representatives, by the courtesy of the licensing bodies, also attended a number of the qualifying examinations. We are informed that they derived much valuable knowledge from their visit. Their report will be awaited with interest on this side of the Atlantic. The influential movement towards the establishment of a high and uniform standard of professional qualification throughout the American Commonwealth, of which the National Board is the expression, may have issues of importance extending beyond the United States.

Numerous applications from American and Canadian dentists desiring registration in the United Kingdom will be reported to you by Sir Charles Tomes's Committee. They indicate at once the ambition of many ex-service practitioners to acquire a legal status here, and the need for greater uniformity in the conditions for qualification on the American continent.

The provisional reciprocity established with Belgium for the period of the war may terminate with peace, unless fresh legislation is undertaken by the Belgian Government. I am informed that the legal question is now being studied by that Government. We may express the hope that the experience of our hospitality to Belgian practitioners may lead to the admission of British practitioners to the privilege of practising in Belgium on equitable terms.

Inspection of Examinations.

Your Standing Committees will report to you on the inspection of examinations for diplomas in public health; on the resumption of the cycle of visitations and inspections of final or qualifying examinations interrupted by the war; on the teaching of the preventive aspects of medicine in connexion with the successive stages of the medical curriculum; and on other matters of ordinary business remitted to them. In order to promote economy in printing, the cost of which has become exceedingly heavy, many of the drafts have been circulated in typed copies, and I do not propose by any remarks of my own to anticipate their issue in printed form when completed.

Disciplinary Cases.

Fortunately, we have little to print in connexion with our judicial procedure. The Penal Cases Committee has had a number of more or less imperfectly formulated complaints before it. But, either because the complainants withdrew their charges or were unable to furnish the *prima facie* evidence required by the Standing Orders; or

because the complaints themselves were not of a nature that called for further inquiry at your hands; or because the accused persons were at a distance and could not be summoned in time to attend at this session, the actual inquiries now to be conducted by you are very few. Some, however, must be regarded as merely postponed to a later date, when the evidence is more complete.

I venture to think that all the business before you can be fully and effectively dealt with by Thursday evening.

ELECTION OF DIRECT REPRESENTATIVES.

The result of the election of direct representatives for the three kingdoms was reported in the JOURNAL of last week (p. 677).

England and Wales.

The Registrar of the General Medical Council (Mr. Norman King) made a report to the English Branch Council, from which we quote the following passages:

The total number of papers issued was 26,539, as compared with 25,215 issued in 1911, and of this number 1,771 were returned through the Dead Letter Office marked "Gone away." This is very regrettable, but unavoidable. During the war the issue of circulars of inquiry under Section 14 was suspended owing to difficulties of labour and materials; even if it had been possible, it would have been undesirable, because to inquire and to take no action in the case of those from whom no reply can be obtained is useless, and it would have been most unfair to penalize the many who might not answer owing to having left their practices at short notice to engage in national service during the war. It is probable that the great majority of these practitioners will be traced before the issue of the Register for 1921. Great efforts are made to save practitioners from the consequences of their own carelessness, though it is very seldom that any thanks are received. At the election in 1911 the number of dead letters was only 296, and it is hoped that before the next quinquennial election takes place the Register may have been so brought up to date as to bring its number of imperfections down to a similar number or less.

The statistics of the election may be conveniently given in the following table:

Number of papers issued	26,539
Deduct dead letters and practitioners notified as abroad temporarily	1,796
Possible number of voters	24,743
Good votes received	9,857
Votes invalid for the following reasons:	
Identification envelope not fastened	142
Ditto unsigned	125
Ballot papers loose	13
Envelopes empty	8
Sundries	5
Received too late	54
	808
Number who took no part in the election	14,886

The percentage of the constituency who took part in the election was 43.14, which may be compared with 51.02, 48.61, 48.3, 47.6, and 39.4 in the five previous elections.

Scotland.

Dr. John McVail reported for the Scottish Branch Council that voting papers were forwarded by post on November 7th to 4,898 registered practitioners in Scotland, and of these 2,154 were returned within the specified time. The analysis was as follows:

Voted for Dr. Norman Walker	974
Voted for Dr. Ebenezer Duncan	823
Voted for Dr. Michael Dewar	252
Rejected for informality	105
Returned through Dead Letter Office	338
Received too late	100
Not returned in any way	2,305
Majority for Dr. Norman Walker	4,898
Percentages:	151
Returned within specified time	2,154 = 44.0%
Returned too late	100 = 2.0%
Returned through Dead Letter Office	338 = 6.9%
Not returned in any way	2,306 = 47.1%

The total number of invalidated papers (105) was 4.87% of the possible votes returned.

Ireland.

Sir J. W. Moore reported that the analysis of the voting in Ireland was as follows:

Voted for Dr. Leonard Kidd	695
Voted for Dr. James C. McWalter	616
Spoiled votes	47
Received too late	11
Did not vote	2,217
Total voting papers issued	3,589

The percentage of the constituency who took part in the election would thus appear to be 38.22.

British Medical Association.

CURRENT NOTES.

Indian Medical Service.

The following letter, dated November 24th, has been addressed by the Medical Secretary of the British Medical Association to the Under Secretary of State, India Office:

Sir,

The Naval and Military Committee of the British Medical Association, at its meeting on Friday, 21st instant, gave further consideration to the present position regarding the Indian Medical Service in the light of the recent deputation to Mr. Montagu. The matters put forward on that occasion were reviewed, and I was instructed to inform you that, after the most careful consideration, the Committee has come to the conclusion that the new medical officers required for the Indian Medical Service are not likely to be secured on terms less favourable than the following:

1. A 50 per cent. increase on an officer's pre-war total pay.
2. An increase in pensions.
3. Free passages out and home.

Further, the Committee is of opinion that it would be unwise for the Association to hold out any hope of these terms being successful in securing the officers required unless they are adopted within the next six months. The Association's experience after the deputation on February 10th, and the probability of a continued rise in the cost of living, confirm the Committee in the conviction the last deputation expressed to Mr. Montagu, namely, that concessions are greatly reduced in value if there is any avoidable delay in putting them into force.

I was also instructed to say that, in order that there may be no misunderstanding of any kind as to what the Association means when speaking of pre-war total pay, it is to be understood that the term refers to the pay set out in column 2 headed "Old rate for charge of a regiment," of a circular headed "Indian Medical Service," and dated August, 1919, issued by the India Office (ref. 10 I.M.S.101.300.8/19).

With a view to obtaining short term officers who could be used for the purpose of relieving those officers of the Indian Medical Service to whom leave is long overdue, the Committee desires to bring to your notice the following suggestions:

1. That a two years' contract be offered.
2. That the salary offered be 650 rupees per mensem.
3. That a free passage out and home should be given.
4. That those appointed should be allowed the option of joining the I.M.S. during, or on the completion of their contract if they desire to do so and if they are found suitable.

The Committee would urge that this latter matter should be considered a very pressing one.

Medical Policy in Parliament.

The House of Commons Medical Committee will, on Monday next, receive a deputation from the British Medical Association, which will place before it the Association's policy on coroners' law, death certification, and proprietary medicines. The statement of policy on these subjects and the directions in which help is desired from the medical members of the House of Commons are under consideration by the Parliamentary Subcommittee of the Association. It will be remembered that the House of Commons Medical Committee was constituted after the last general election, with Sir Watson Cheyne as chairman and Dr. A. C. Farquharson as secretary.

Council By-Election

Dr. William Snodgrass of Glasgow has been duly elected to fill the casual vacancy in the Council of the British Medical Association in respect of the four Glasgow City Divisions.

Association Notices.

PROPOSED CHANGES OF AREA.

Woolwich and Lewisham Division.

NOTICE is hereby given to all concerned of a proposal made by the Woolwich and Lewisham Division that a Woolwich Division be formed of area to consist of Woolwich borough and Plumstead and Eltham parishes.

The matter will be determined in due course by the Council. Any member affected by the proposed change and objecting thereto is requested to write, giving his or her reason therefor, to the Medical Secretary, 429, Strand, London, W.C.2, not later than December 29th, 1919.

INSURANCE.

REPLY BY THE MINISTRY OF HEALTH
TO M. 26.

The following communication from the Ministry of Health, dated November 25th, 1919, has been received by the Insurance Acts Committee in reply to the Memorandum M. 26 printed in last week's SUPPLEMENT (p. 121):

I am directed by the Minister of Health to state that your letter of November 17th, enclosing a further Memorandum on the subject of medical remuneration, has been duly submitted to him, and will receive his careful attention in connexion with the whole subject to which it relates.

After full consideration, the Minister considers that it is due to the representatives of the Panel Committees that he should defer his decision until after the discussion at their Conference on November 27th. He will then be glad, if it should be desired, to receive a deputation who may be in a position to convey to him the views of the Conference, and to discuss, on behalf of insurance practitioners, any points which may remain to be examined.

In the meantime Dr. Addison does not consider that any useful purpose would be served by further comment from him on any of the considerations stated either in the Memorandum last received or in the previous Memorandum of the Committee. This abstention from comment must not, however, be understood to imply his concurrence in the arguments put forward in either document. It appears necessary to say this plainly, in view of the assumption in the last Memorandum that certain inferences may be drawn from his omission to comment upon particular arguments advanced in the Memorandum M. 22. Such observations indicate a misconception which it is desirable to remove. Dr. Addison's letter was not sent as a controversial "reply" to the Memorandum of the Insurance Acts Committee, but because he considered that it might be of assistance to the profession that he should indicate to them certain points which, from the public standpoint, appeared to him to require further elucidation.

He does not propose now to add further to the discussion, but feels it to be due to the medical practitioners concerned to say, quite frankly, that the case before him does not satisfy him that the Government and Parliament should be asked to sanction the large expenditure of public money which the capitation payment of 13s. 6d. suggested by the Insurance Acts Committee would involve.

The Memorandum which you desire, with regard to the probable dates of the coming into operation of the new Regulations and of the issue of the necessary notices, is enclosed. [*This will be printed in next week's SUPPLEMENT.*]

MEETINGS OF THE PROFESSION.

MEETING OF LONDON PRACTITIONERS.

A MASS meeting of insurance practitioners, called by the London Panel Committee, was held at Wigmore Hall on Sunday afternoon, November 23rd, to discuss the new terms of service and remuneration for 1920. Dr. H. J. CARDALE presided over a gathering which numbered about 300. The meeting lasted almost four hours, and was occasionally on the verge of disorder. The various emendations of the new Regulations which the Panel Committee through its representatives is bringing forward at the Conference this week were set out on the agenda, and a general resolution was submitted approving the action taken by the Committee and supporting the demands made.

Dr. H. J. CARDALE said that the Panel Committee in the first place could not recommend London practitioners to accept service under the new Regulations until a satisfactory form of remuneration had been agreed to. Among the Regulations themselves the one which he thought would be most obnoxious related to the disposal of practices at death or retirement. The Committee's position was that this new article should not apply in the case of the death of any practitioner whose name was included in the medical list on the last day of the present year; also that fair compensation should be paid on account of the altered value of the goodwill of practices, either by taking this into consideration in fixing the new capitation fee, or

by a contribution to a pension scheme, or by both expedients. If there was traffic in the disposal of practices, the obvious thing to do was to frame a very definite regulation to deal with it, not to penalize all practitioners.

Dr. J. A. ANGUS moved the resolution expressing approval of the demands which the Panel Committee was putting forward for the emendation of the Regulations. He paid a high tribute to the Insurance Acts Committee for zeal and discretion, and he considered it the duty of all practitioners to aid that Committee, which was now fighting line by line an unsympathetic Ministry of Health. Dr. Angus's recital of what the Committee had done was cut short by exclamations of impatience from various parts of the hall. With regard to the capitation fee, he said that two considerations had to be borne in mind—one the altered value of money, and the other the impairment of the health of the community. The Ministry of Health did not deny some impairment of health, but endeavoured to belittle it. Yet it was obvious that both among ex-service men and those who had remained civilians the standard of general health would be diminished as a result of the war. He described the reply from Dr. Addison on the question of remuneration as "carping and quibbling." Every communication from the Ministry of Health bore the evidence of political manoeuvring. If practitioners were more or less compelled to participate in an inferior type of service, it would be with a sullen acquiescence. The country would then realize that the Ministry of Health had had the greatest opportunity of making the service ideal, and had made of it a ghastly failure.

The resolution was seconded by Dr. R. S. PEARSON, and was ultimately adopted, but it was not put to the vote until the end of the meeting, after the various emendations set out on the agenda had been considered. A long discussion took place on the question of remuneration. The Panel Committee's representatives at the Conference were instructed to support the authorization to the Insurance Acts Committee to negotiate on the basis of the proposals in M. 22—that is, for a capitation fee of 13s. 6d. Dr. T. F. KEENAN complained that in calculating the new remuneration at 13s. 6d. the Insurance Acts Committee had taken 60 per cent. as the sufficient addition to meet the extra cost of living, whereas the Prime Minister, in dealing with the railwaymen, had admitted that 120 per cent. was the proper figure. Dr. Keenan accordingly proposed that they demand for present services an increase of 120 per cent. Dr. H. B. BRACKENBURY pleaded for unity in the demands which should be made on the Ministry of Health. After prolonged consideration the Insurance Acts Committee had made up its mind that it would put forward a reasoned argument in favour of 13s. 6d. as the capitation fee. The Committee was determined to put up a case which could stand cross-examination, and the figure of 13s. 6d. had been arrived at by various sound lines of argument. The reply of the Minister was disappointing, not because of some of its arguments, but because of its general tone, and to that reply a rejoinder had been dispatched. The difficulty was that there was no agreement as yet upon the basic fee which was to be increased by 60 per cent. or by another proportion. The 13s. 6d. suggested was, in fact, rather more than 80 per cent. addition upon the present remuneration. He called attention to an article in the *National Insurance Gazette*, the organ of approved societies, which stated that, in the view of approved society workers, 10s. would be ample as the figure for practitioners' remuneration; that there was the strongest indignation in the health insurance world at the proposal of 13s. 6d.; and that if Dr. Addison should meet with a recalcitrant profession, the approved societies would support him in setting up a State medical service in any area. Dr. Brackenbury therefore urged that they should be united in the figure for which they stood, and he thought that the great majority of the men at present engaged in insurance service would feel that the figure which the Insurance Acts Committee had taken would enable them to render a good, zealous, and efficient service.

After some further discussion, the amendment urging a 120 per cent. increase upon the remuneration for present services was lost by a large majority, and the original recommendation of the Panel Committee was adopted, with the safeguarding clause, "but the remuneration shall not fall below 13s. 6d."

The new article dealing with the disposal of practices was then discussed. Dr. COODE ADAMS moved an amendment:

That the present arrangements for transference of insured persons to a successor on retirement or death of the practitioner be continued, and that all new clauses and regulations whereby the practitioners shall have the present

vested interests in the capital selling value of his practice curtailed shall be removed.

He said that about 200 practices a year changed hands, which meant an annual turnover of £100,000.

Dr. BRACKENBURY said that although they were not satisfied to accept the new article as it stood, on the other hand it behooved them to find out whether it was the best plan to fall back upon the present position. If there were abuse in the commercial transfer of practices, it was one which experienced State administrators were quite justified in trying to get over, and he believed the best course might be for the profession to authorize the Insurance Acts Committee to go back and reopen negotiations. Dr. H. G. COWIE was afraid that there might be considerable difficulty in maintaining in the House of Commons the *status quo* indicated in the amendment. If it was accepted, the Insurance Acts Committee would be shut out from negotiating some other modification.

The amendment, however, was carried, but on its being put as a substantive motion Dr. BRACKENBURY moved:

That this meeting protests against the new Article 16 (1) (c), and instructs the London Panel Committee to induce the Insurance Acts Committee to reopen negotiations on this matter with a view to maintaining as far as possible the present position.

Dr. COODE ADAMS remarked that the Committee had already been negotiating for eighteen months with the Government, and he thought the time for negotiation had passed. Dr. J. A. ANGUS said that if the meeting refused to accept Dr. Brackenbury's amendment the door to all further negotiations would be shut. Ultimately the amendment of Dr. Brackenbury was carried by 124 to 89, and was accepted as the substantive resolution.

On a further recommendation of the London Panel Committee that fair compensation should be paid on account of the altered value of the goodwill of practices, Dr. KEENAN moved that the market value of the practices should be taken as the basis of compensation, and this was agreed to. Various emendations relating to procedure in the investigation of cases of excessive prescribing, transfer of insured persons, and certification, were accepted without discussion.

Dr. H. H. MILLS then brought forward the pension scheme elaborated by the London Panel Committee, but the proposal met with considerable opposition in what remained of the meeting, and on the motion of Dr. R. DUNSTAN was referred back for further consideration; but the principle of a pension scheme was adopted, and it was agreed to ask the Insurance Acts Committee to make it a matter of negotiation.

MEETING AT IPSWICH.

A meeting of the South Suffolk Division (to which all Suffolk practitioners were invited) was held on November 14th, at the Town Hall, Ipswich, to hear Dr. Alfred Cox, O.B.E., Medical Secretary of the Association, who gave an address on "Current medical politics with special reference to the new Regulations of the National Insurance Act." The chair was taken by Dr. A. M. N. PRINGLE, chairman of the Division.

Dr. Cox on the Draft Regulations.

Dr. COX, in a few introductory remarks, stated that the British Medical Association had a very long and honourable history but had no intention of living on its history. It was a live body which had always been subject to criticism and no doubt always would be. But personally he would much rather have criticism than apathy.

Dealing with the changes in the National Insurance system he remarked that some people had talked as if practitioners had not been thoroughly consulted in regard to the changes. This could only be said by people who would not take the trouble to follow the reports sent to them. There had been more complete consultation of the profession on this matter than on any other similar subject in the course of his career, and the Insurance Acts Committee, which was the body authorized to conduct these discussions on behalf of the profession, had in June last faithfully reported to the profession the gist of the coming changes in document M. 25, which had been thoroughly discussed all over the country. It was foolish for any one to say that the profession had not been told what line the new Regulations were likely to take. They now had the draft Regulations before them, and while there were some points to which strong exception was taken, they were comparatively few, and people were apt to forget the many things the profession had gained. He had made an analysis and found that there were at least eighteen points in the new Regulations for which the profession had been asking, while he could only find nine to which objection was taken, and professional opinion was by no means unanimous on

all these nine. He mentioned these facts because he thought the profession was more likely to get improvements on the points to which strong objection was taken if they recognized that they had gained a good deal and concentrated on the few points on which there was practical unanimity. The most valuable gains were those connected with the formation of the Central Pool and the method of distributing it, which had been approved by their own actuary, and would undoubtedly lead to greater simplicity and prompter payment. Medical referees were at last to be appointed, a thing for which the profession had been asking since 1914, and there was at last the likelihood that certification in chronic cases would be put upon a proper footing.

Practically unanimous objection had been taken to the new Regulation regarding transfer of practices on death or retirement, and he thought there was no doubt the Conference would insist on some changes being made in this Regulation. But he felt that some of the opponents were oversteering their case by talking as if it would be impossible to transfer panel practice. Even if the new Regulation remained as it was the transfer of panel practice would be on the same footing as private practice, namely, it would depend on the efficiency of the introduction given. He believed that the Allocation Scheme would be a great safeguard so far as death vacancies were concerned. There was one distinctly new obligation put upon practitioners in the new Regulations. That was the provision of emergency treatment, and he thought it would be agreed that no service could call itself a National service which did not provide such treatment. Of course the new obligation would have to be paid for, and it had been used as one of the factors in the case for increased remuneration.

On the question of remuneration Dr. Cox said the aim of the Insurance Acts Committee had been to put up a carefully reasoned case which would stand examination, and he thought they had succeeded. To his mind the 13s. 6d. which the Insurance Acts Committee had indicated as the correct sum could and ought to be defended vigorously, and if the Panel Committees were unanimous, or practically so, on the question the Insurance Acts Committee would be quite prepared to fight the matter to a conclusion. But the responsibility now rested upon the Panel Committees, and upon the forthcoming Conference.

Dr. Cox answered a good many questions, and said that the strong weapon of the profession in a dispute with the Government was not that of a "strike." A strike which did not cut off the supply of a necessity frightened nobody. But the Association was quite aware, and so was the Government, of the great strength of the profession's real weapon, which was that everybody concerned—the insured persons, Insurance Committees, approved societies, members of Parliament, the Ministry, and the Government—would be affected if there were a thoroughly dissatisfied service. In mere self-defence, therefore, he believed the Ministry would try to offer such terms as would produce a reasonably satisfied service; to satisfy everybody was, of course, impossible. In reply to several questions on the position of the rural practitioner, Dr. Cox said he had great hopes that the new mileage fund, which had nothing whatever to do with the capitation fee, would be a substantial one which would place the rural practitioner for the first time in a fair position as compared with his urban colleague. A hearty vote of thanks was accorded to Dr. Cox for his address.

NOTES ON THE MEDICO-POLITICAL UNION CIRCULAR.

The Medico-Political Union has circulated to all insurance practitioners a Memorandum dealing with the draft Medical Benefit Regulations. As this is inaccurate and misleading, it is thought desirable to ask practitioners who have read it to compare it closely with the following Notes drawn up by the Medical Department of the British Medical Association and with the draft Regulations themselves, a copy of which can be had on application to the Secretary, Ministry of Health, Whitehall, S.W. As explained in the quarterly circular of the Insurance Acts Committee to insurance practitioners, there are several points in the new Regulations to which the Committee objects, and which it trusts may yet be altered; but in coming to a conclusion about them it is necessary to have regard to the facts. In the following Notes the references are to the numbered paragraphs in the Medico-Political Union's Circular:

Preamble.—The insinuation that insurance practitioners have not had ample opportunity of considering the line which would be taken in the Regulations is unfounded.

M. 25 outlined the substance of practically every proposed alteration in the present terms of service, and this document was in the hands of every insurance practitioner in June last; was considered at meetings all over the country; was thoroughly discussed at the conference in July last; and the resolutions arising from this discussion were placed before the Ministry, which has acted on very many of them.

1. *Alteration of Terms of Service.*—The clause objected to is essentially the same as the arrangement under which practitioners are now working. At present the Insurance Committee may (Regulation 16), after consultation with the Local Medical and Panel Committees, make alterations in the terms of service, subject to the approval of the Commissioners; the alterations take effect at earliest from the commencement of the succeeding year. This Regulation has been in force for six years, and was introduced in the interests of the practitioners themselves. It allows of minor variations being made in the Regulations as embodied in the agreement in any particular area when such local variations are asked for by the Panel Committee of that area. Practitioners know from experience how far it has been used, or is likely to be used in future.

2. *Termination of Service.*—The alleged right of the Minister to "give twenty-four hours' notice to the practitioner to clear out" does not exist. Presumably the reference is to the power given to the Commissioners under Clause 15 (proviso) in the 1911 Act to dispense with the panel system if they are satisfied *after inquiry* that the practitioners on the list are not such as to secure an adequate service in any area. There is no new power under the draft Regulations. The rhetoric about "cracking the whip of twenty-four hours' notice," etc., is therefore nonsense.

3. *Transfer of Practices.*—The new terms were foreshadowed in M. 25, and the Insurance Acts Committee has drawn pointed attention to the new arrangements as to transfer of panel practices on death or retirement in its Circular. The Conference will no doubt deal with these. But important as the change is there is no need to exaggerate it. The chances of transferring the panel practice will be as good as those of transferring private practice, and better than the chance of transferring contract appointments before the insurance service began. Transference during lifetime can be made fairly certain by an adequate introduction; and it is believed that the interests of a deceased practitioner will be safeguarded to a great extent by the Allocation Subcommittee, consisting as it does half of insurance practitioners, and administering a scheme to which the Panel Committee has to consent. "The State" has nothing to do with the allocation of individuals as alleged; in no sense whatever does the State acquire the goodwill in any case.

4. *Liability for Emergencies.*—The July Conference agreed that this liability should be undertaken; a motion against it was defeated. It agreed that the Panel Committees should make arrangements for it, and the Panel Committee under the new Regulations will have a very considerable voice in these arrangements. The payment for these emergency attendances does not "come out of the common pool," but out of the pocket of the doctor who would have given the attendance had he been available. As all doctors are liable not to be available at times, and as by the definition of an emergency in the Regulations the cases will necessarily arise but seldom, it is probable that on balance it will be found that the new duty costs any individual practitioner little or nothing. But the liability to pay for these attendances will discourage those practitioners who do not make adequate and proper arrangements for their own emergency work. As the Insurance Acts Committee has pointed out, the liability for emergency treatment is a new obligation and as such has been made a factor in the demand for more remuneration.

5. *Allotting of Patients who Fail to Secure a Doctor.*—There is nothing new in this. In every area at present arrangements have to be made by the Panel Committee for the allocation of patients who fail to get a doctor to take them on his list. The paragraph dealing with this subject seems to have been written by someone unacquainted with the present system.

6. *"Rep. Mist."*—Nothing can be found in Regulation 8 which justifies the comment:

Clause 8 is framed to point out the horrible indignity which may be inflicted on any chemist if in dispensing the prescription he has to refer to any previous occasion on which he made up the mixture.

In plain English, "Rep. Mist." is abolished by the new Regulations. Insurance practitioners were told in 1916 that this would be done; it has been abolished in most

areas for some time, usually with the concurrence or even at the request of the doctors themselves.

Records.—The July Conference agreed that records should be kept; a promise has been given that the form of the record shall be the subject of consideration by a Committee on which insurance practitioners shall be represented. The characteristic phrase in the circular of the Medico-Political Union about "Departmental tyrants" who "never keep records if they can get other people to keep them" is beside the mark. If records are to be kept, who could keep them except the doctor?

Reports.—This is not new. A similar provision was made in 1917 as regards any services which were provided by a public authority—for example, V.D. centres. The Insurance Acts Committee has made the possible increase of reports a factor in its demand for increased remuneration, and the Minister has acknowledged it. The requirement that the nature of the reports shall be further considered with the profession is also being insisted on.

7. *Assistance.*—The object of the clause relating to the employment of assistants is to secure that doctors shall not habitually employ other people to do the work they have personally contracted to do. There is no reason to believe that consent to employ such assistance will be withheld; if it were withheld, this would indeed be "a flagrant interference with a man's right to obtain such help as he needs in order to do his work," and the profession would know how to deal with it. It is foolish to suggest that there must be "rules" for providing that reasonable steps shall be taken to secure continuity of treatment. What are "reasonable steps" may safely be left for reasonable men to decide.

9. *Temporary Residents.*—The comment on this is quite mistaken. The method of payment for temporary residents is left to be decided locally. The Model Scheme of Remuneration, issued as a guide for Insurance and Panel Committees, nowhere suggests that temporary residents shall "be paid for by one quarter's capitation fee." The writer here, as elsewhere in the Medico-Political Union Circular, would appear to be more anxious to create alarm than to elucidate the Regulations. This may be due to want of acquaintance with the system.

The Insurance Acts Committee has already called attention to points in the Regulations which it thinks should have the earnest attention of practitioners; nothing would have been easier than to "write up" these points in inflammatory language with a fine carelessness as regards the facts. But the Committee did not believe that this was the proper way for a responsible body to deal with matters of such importance.

CORRESPONDENCE.

Transfer of Practices.

SIR,—I disagree with Dr. Hackworth (SUPPLEMENT, p. 127). The Regulations prescribe that a panel doctor may send to all his panel notice that he has already, without reference to them, made arrangements to transfer them, whereafter, if they do not within fourteen days protest, they are, in fact, transferred to a doctor whom they have not chosen but may not quit for perhaps six months. Since the average insured person at work takes from one to six months or more to choose a doctor, about 95 per cent. of a panel are thus transferred. The purchaser may, if so minded, sell again shortly and depart with the profits, to repeat a similar speculation elsewhere. Such procedure, as also unlimited panel with limited freedom to change, stands condemned.

Surely there are in the new Regulations objectionable features enough, in contesting which we may, if only we have sense to enlist it, count upon popular support. It is folly to denounce changes which are inevitable, and will be endorsed by public opinion. There remains the unfair contract binding only ourselves, and now are added legal liability in any so-called emergency in any part of the district—such, if genuine, require no legal claim; unreciprocal liability for expenses in case of complaint; undefined liability as to records and extras; and last, but not least, the absolutely despotic power vested in the Minister of Health. Let us by all means fight these grievances. I would advise letters to the lay press, deputations to members of Parliament, and even meetings with representatives of societies.—I am, etc.,

Chichester, Nov. 23rd.

G. C. GARRATT.

SIR,—In common with other medical men, I volunteered early in the war and was invalided home because of ill health. I found my practice very much depreciated and was glad to acquire one in a place subject to air raids. I have not yet paid off the purchase price of this practice;

and I notice with dismay that Dr. Addison proposes to take away the goodwill of panel practices after 1922, or to make it certain that a great many patients would be lost in the event of a sale. This seems to me outrageous. True the "panel" exists in its present form only by the will of the Government, but so, for example, does the trade of the licensed victualler. Would the brewers and publicans allow the Government to sequester their goodwills without compensation? Not likely, and it behoves us to repudiate absolutely this proposal of Dr. Addison.

What is wrong with the present system, where insured persons have every facility to change their doctor if a practice changes hands? What is Dr. Addison getting at? Is it a gratuitous insult to please our Bolsheviks, or is it a means of cutting down expense in insurance staffs and putting the onus of rearranging a panel in the event of death or a sale on to the doctors? What would happen to a widow of a medical man at his death? Hitherto the practice has rightly been regarded a realizable asset. What is to happen to a man with whom the climate of a place does not agree, or for other good reason requires a change? Is he not to realize on what he has got together or bought and held by hard work and endless risks, or has he simply to go as a tramp on the roads?

If a member of the public, or even Dr. Addison, required his portrait painted, he would hardly commence by what he knew was unfair bartering and insult to the painter—he would know the result would be poor. Similarly with all brain work: you cannot get good results, let alone the best, unless you treat the man decently who is called upon to give you of his best professional skill.

Dr. Addison says the public should decide. I quite agree. I think it has already decided that Dr. Addison is a huge white elephant as a builder of houses, and I believe the public will insist on Dr. Addison mending his manners or going, if he persists in annoying and outraging the feelings of the profession on whom they rely in their direst need. We require publicity, and this is a matter the BRITISH MEDICAL JOURNAL should see to. The public should have the facts put plainly before them, and I am sure that nothing mean and despotic would have their sanction. As a body we more than "did our bit" in the war, and we have a right to insist on our public servants, who happen to be temporarily our rulers also, addressing us courteously and treating us fairly.—I am, etc.,

Sittingbourne,
Nov. 23rd.

ANDREW S. McNEIL, L.R.C.P.S.E.

The Draft Regulations.

SIR,—The draft Regulations are being subjected to much criticism in detail, but I venture to suggest that there are certain points of principle which have been overlooked. Once upon a time there were certain cardinal points, in 1912 and also in the reign of King John (the date escapes me). These at least served the purpose of a standard to which any doubtful principle might be referred. May I be permitted to outline a new Magna Charta for doctors?

1. *To no practitioner or insured person shall the Minister deny justice.* Regulation 53 provides that the Minister may absolutely on his own initiative hold an inquiry as to whether a practitioner should be allowed to continue on the panel. Regulation 61 provides that the Minister or Inquiry Committee "may dispense with any requirement of this part of these Regulations respecting notices, applications, documents or otherwise" in any case where it appears proper to the Minister or Inquiry Committee to do so. Regulation 58 (1) announces that the Minister, after considering the evidence, shall give his decision and "may cause it to be published in such manner as he may think fit." The Minister may therefore be prosecutor and judge, may dispense with even the few safeguards in the draft Regulations and may publish the default of a practitioner without the latter even having had notice that an alleged fault was to be inquired into. The practitioner has no appeal except possibly on a point of law, but if these Regulations become law there will not be much ground of appeal on points of law left. The Minister is the law for us.

2. *No practitioner shall be compelled to attend more than once a patient not on his list and whom he does not desire to attend.* No insured person shall be deprived of his free choice of doctor, either by reason of his ignorance, inability to understand official documents, or for any other cause. Paragraph 5 (1) (c) of the terms of service requires that a practitioner shall attend a patient and continue to attend him until he is accepted by or assigned to another practitioner. "Assigning" may take months. Regulation 15 (1) (f) and some others provide for the wholesale assigning of insured persons to practitioners.

3. *No practitioner shall be made responsible for other than medical services.* Regulation 15 (1) (b) provides for the laying down of "steps to be taken by an insurance practitioner to enable an insured person... to be accepted by or assigned" to some other practitioner. I maintain that all this should be done by the societies; the dense ignorance and natural bewilderment of the insured person already takes up too much of our time.

4. *No practitioner shall be compelled to act as dispenser or pharmacist against his will.* Paragraph 8 (3) of the terms of service provides that "a practitioner is required to supply to a patient where requisite drugs and appliances... needed for use before a supply can conveniently be obtained otherwise under the Regulations." Paragraphs 4 and 5 of the terms of service for chemists only provide for their dispensing "with reasonable promptness" and at such hours as they elect to be open. In Kent this may be as late as 9 o'clock. After that the onus of supplying drugs is on the practitioner. We are to give treatment at all hours of day and night, the chemist only when it suits him. Regulation 10 (1) provides that the practitioner may be compelled to supply drugs to rural patients who happen to be more than a mile from the nearest chemist.

5. *No practitioner shall be compelled to give treatment to any person who produces no evidence of being entitled thereto.* Paragraph 7 (2) of the terms of service contains this compulsion. Visits, etc., may be charged for if the patient has any money, but a receipt must be given. It must not be withheld in any circumstances. But the practitioner may not order free drugs from the chemist for any such patient. This is like compelling a railway company to accept passengers who say they think they are entitled to a ticket—whether the passenger can pay or not.

It is very obvious that the Minister is trying to provide for every possible misdemeanour of a medical man, and is attempting in so doing to usurp the functions of the General Medical Council, and to transcend the common law—for example, 10 (7), of terms of service. He would do well to study the example of military law, wherein it is provided that "conduct detrimental," etc., or "conduct unbecoming an officer," etc., shall be sufficient charge without the addition of rules specifying every possible sort of unbecoming conduct. He might further copy court-martial rules, which provide for the observance of the laws of evidence and for a prosecutor free from bias. It may seem strange that martial law should seem preferable to the present system, but no one with experience of both can doubt which is the fairest, quickest, and most satisfactory for the culprit, and these regulations do not seem to envisage the possibility of culprits other than medical men. If the Minister would profit by this example we should be spared a list of insulting phrases and disparaging innuendoes applicable to the occasional scoundrel to be found in all professions and ministries but intensely annoying to every one else. One found many gross injustices in the army, but they were the acts of individuals and not prescribed by regulations.

One final word to the Minister. He may force a practitioner to accept but he cannot force him to comply with the Regulations. There is such a thing as passive resistance. Is he yet aware that the cutting down of the fee for notification of infectious diseases has already vitiated the statistics and their value for years to come?—I am, etc.,

Sevenoaks, Nov. 23rd.

GORDON WARD.

Costs of Country Practice.

SIR,—With regard to policy towards the 1920 Regulations I am glad to see Dr. Hodges' letter in the SUPPLEMENT of November 22nd. I can quite understand his point of view. I am in practice about twenty-five miles from London and have a panel list of about 1,000. To the north are the North Downs, and it is quite common for me to go thirty miles a day in travelling over this thinly-populated area, and only once in about three weeks do I get any lunch if I want to finish my distant visits before dark. I have four surgeries to visit (two of them daily). How I am to run a motor car and motor cycle as spare, including chauffeur at £2 5s. per week, lay aside £50 per year towards a new Ford car at end of five years, under £450 per year, when I average 12,000 miles a year, I cannot imagine. I have to do all my own dispensing, too! I should like Dr. Addison to come and spend a week end with me to show him what work is like. I mention week end on purpose, as Sunday is the same as any other day to me. I am sure that, if he did, he would see that time and car expenses could not possibly be paid for out of present panel fees. I also am

sure that drugs, car expenses and rent of surgeries cost at least £200 more than the whole of my panel money will come to for the year. As to using an English car, well, one could not start to buy one to work in this district at the present prices.

Surely the Government would gain more votes by being just to medical men by giving them adequate remuneration. For their information, however, I have told the insured people in my district whom I have seen this week that the Government are grousing about giving us 60 per cent. increase. Now, in his answer to the Insurance Acts Committee, Dr. Addison says that the public will think they ought to say what a medical man is worth. Well, their answer to me is in this vein: If it is true about the 60 per cent., it is an adjective shame, or why do not you belong to a union like me? I suggest £2,000 per year limit and 15s. per head for panel patients. We must live, I am, etc.,

Wrotham, Nov. 23rd.

E. H. WALKER, M.B., B.S.

Pension Scheme for Panel Practitioners.

SIR.—The Committee of the Medical Sickness Society, at their meeting on November 21st, had brought to their notice the Circular Letter No. 157 from the County of London Panel Committee dealing with the proposed formation of an Insurance Society for Panel Practitioners for the purpose of providing them with pensions, life assurances, etc.

The Medical Sickness, Annuity and Life Assurance Society was founded in 1884, by medical men for medical men only, has invested funds of £300,000 and has had thirty-five years' experience of dealing with the profession on insurance matters, and it is felt that a fresh company is quite unnecessary.

The society is mutual and registered under the Friendly Societies' Act, but as is known to all its members, is now in process of being turned into a mutual company under Assurance Companies' Act, so as to enable it to work unhampered by friendly society regulations, and to give greater scope for the requirements of the profession generally.

Accordingly the Committee ask that these facts should be widely known before any decision is made which might, in any way, be detrimental to the existing Medical Sickness, Annuity and Life Assurance Society, and they would be greatly obliged if you would find space in your JOURNAL to publish this letter.—I am, etc.,

W. KNOWSLEY SIBLEY,

London, W.C., Nov. 22nd. Vice-Chairman and Acting Chairman at above meeting.

SIR.—I wish to protest against the proposed compulsory life insurance and pension scheme of the London Panel Committee on the following grounds:

1. The profession generally, including no doubt the members of the London Panel Committee, are continually calling out for the maintenance of their freedom, and yet here is a body of medical men wanting to force all of us to arrange our personal financial affairs according to the plans of others.

2. There are no doubt others besides myself who cannot afford to have further deductions made from their incomes. At present there is a considerable percentage of insurance pay held back from us for a year or more. I am already insured, and have heavy annual premiums to pay, and now I am to be forced into further insurance which I cannot afford.

3. I do not wish to practise till the age of 70 if I can possibly help it, and may even not want to do so till the age of 65, and yet I am to be compelled to pay to a fund from which I do not hope to derive any benefit, except by dying or working to the age decided on by others. Any sum to which one would be entitled on withdrawing before the fixed age would be only part of the money held back. Therefore, I would be dragged into this scheme for the benefit of others at a loss to myself.

4. It is suggested that some of the profits might be used for scholarships for sons and daughters of medical men. At my age I cannot afford to provide for the families of younger men, who are the only ones who can reap any benefit from this.

5. This scheme has been sprung on us, the circular only having been delivered within five days of the Panel Conference, thus allowing no time to hear the views of the profession.—I am, etc.,

Ramsgate, Nov. 23rd.

C. E. TRIMBLE.

APPOINTMENTS.

- DONALDSON, Malcolm, M.B., B.Ch.Camb., F.R.C.S., Obstetric Physician to the Great Northern Central Hospital.
HAYNES, G. S., M.D.Cantab., Assistant Physician, Addenbrooke's Hospital, Cambridge.
INNES, Ian G., M.B., Ch.B.Aberd., Lecturer in Experimental Physiology, Aberdeen University.
LISTER, Sir William T., K.C.M.G., M.B., B.Ch.Camb., F.R.C.S., Surgeon to the Royal London Ophthalmic Hospital (Moorefields Eye Hospital).
WALKER, James, M.B., Ch.B.Vict., Tuberculosis Officer and Assistant Medical Officer of Health for Borough of Preston.
ROYAL FREE HOSPITAL, Gray's Inn Road, House-Surgeons: Major J. A. Andrews, M.B., Ch.B.Edin.; Miss E. Glynn, M.B., B.S. Clinical Assistant Gynaecological Department: Miss Pfeil, M.B., B.S.
ROYAL DENTAL HOSPITAL.—F. St. J. Steadman, D.P.H., M.R.C.S., L.R.C.P., L.D.S., Lecturer on Dental Diseases in Children; H. Stobie, M.R.C.S., L.R.C.P., L.D.S., Lecturer on Operative Dental Surgery.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

- GILMOOR.—At 97, The Drive, Fulham Road, S.W.6, on November 20th, the wife of Captain Colin C. B. Gilmoor, M.A., M.B., of a son.
JOBSON.—At Beechwood, Epsom, on November 12th, the wife of J. Stanley Jobson, M.B., F.R.C.S., of a daughter.
MACINTYRE.—On November 22nd, at 55, Peel Street, Liverpool, the wife of H. R. Macintyre, M.D.—a son.

DEATHS.

- BOWDEN. On November 13th, 1910, at 11, Royal Terrace, Weymouth, Deputy Inspector-General Walter Bowden, D.S.O., R.N. (retired).
JOYCE.—On November 15th, at Shirebrook, Derbyshire, after a brief illness, Herbert Woodley Joyce, surgeon, second son of Dr. Joyce, Shepherds House, Cranbrook, Kent, aged 51 years.
NISBET.—On November 19th, at St. Ishmaels, Forde Park, Newton Abbot, South Devon, Adam T. Nisbet, M.D., in his 55th year.

DIARY FOR THE WEEK.

- RÖNTGEN SOCIETY, 11, Chandos Street, W.—Tuesday, 8.15 p.m., Major Cooper, R.A.M.C.: Demonstration of New High Speed Interrupter.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Wednesday, 5 p.m., Thomas Vicary Lecture by Sir John Tweedy: The Surgical Tradition.
ROYAL SOCIETY OF MEDICINE.—Monday, 8.30 p.m., Social Evening. The President, Sir Humphry Rolleston, and Lady Rolleston will receive guests. The Library will be open with a display of interesting exhibits. Light refreshments and smoking. *Section of Surgery, Subsection of Orthopaedics:* Tuesday, 5 p.m., Cases. *Section of Pathology:* Tuesday, 8.30 p.m., Dr. F. H. Teale: Antitrypsin and its Relation to Bactericidal Toxicity and Infection. *Section of Surgery:* Wednesday, 5.30 p.m., Discussion: The Surgery of the Urinary Bladder, to be opened by Mr. Percy Sargent, C.M.G., D.S.O. *Section of Ophthalmology:* Wednesday, 8 p.m., Cases. 8.30 p.m., Discussion on Dr. Rayner Batten's paper on 'The Need for Ophthalmic Physicians for the Advancement of Ophthalmology,' read on November 5th. *Section of Bacteriology and Climatology:* Thursday, 5.30 p.m., Dr. C. F. Sonntag: The History of Baths and Bathing in Britain before the Norman Conquest. Members will dine at Pagani's Restaurant at 7 p.m. Those intending to be present are requested to send their names to Dr. C. F. Sonntag, 80A, Belsize Park Gardens, by December 4th. *Section of Obstetrics and Gynaecology:* Thursday, 5 p.m., Discussion on recently published report on The Teaching of Obstetrics and Gynaecology to Medical Students and Graduates in London, to be introduced by Dr. T. W. Eden, Chairman of the Teaching Committee. A criticism of the report will be read by Dr. Herbert Spencer. *Section of Laryngology:* Friday, 4 p.m., Cases and Specimens. *Sections of Anaesthetics:* Friday, 8.30 p.m., Dr. C. H. Mott: Intratracheal Insufflation of Chloroform. Exhibition of apparatus and documents of the late Mr. Clover.

POST-GRADUATE COURSES AND LECTURES.

- BROMPTON HOSPITAL FOR CONSUMPTION.—Wednesday, 4.30 p.m., Dr. Fenton: The Dispensary in Pulmonary Tuberculosis.
FELLOWSHIP OF MEDICINE, 1, Wimpole Street, W.—Tuesday, noon, Dr. Murray Leslie: Vaccine Treatment of Pneumonia. Wednesday, noon, Mr. Victor Bonney: Tubal Disease; 5 p.m., Dr. J. Strickland Goodall: The Heart in Graves's Disease. Thursday, noon, Mr. J. D. Mortimer: After-Effects of Anaesthesia.
MANCHESTER ROYAL INFIRMARY.—Tuesday, 4.30 p.m., Dr. F. Craven Moore: Disordered Action of the Heart (continued).
ROYAL EYE HOSPITAL, Southwark.—Tuesday, 5 p.m., Optic Nerve. Thursday, 5 p.m., Amblyopia.
VICTORIA HOSPITAL FOR CHILDREN, Tite Street, S.W.—Monday, 4.30 p.m., Dr. R. C. Jewsbury: Congenital Syphilis. Tuesday, 4.30 p.m., Mr. C. Max Page: Congenital Dislocation of the Hip. Wednesday, 3 p.m., Dr. S. Wyard: Demonstration of *Spirochaeta pallida*. Thursday, 4.30 p.m., Mr. Val Kay: Primary Dentition. Mr. C. A. Joll: Cleft Palate and Hare Lip.

DIARY OF THE ASSOCIATION.

Date. Meetings to be Held.

- DECEMBER.
1 Mon. London: Parliamentary Subcommittee, 3.30 p.m.
2 Tues. London: Scrutiny Subcommittee, 2.30 p.m.
4 Thurs. London: Science Committee, 2.30 p.m.
London: Territorial Force Subcommittee, 3 p.m.
12 Fri. South Essex: Division informal dinner, Hotel Victoria, Southend-on-Sea.
17 Wed. London: Council.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, DECEMBER 6TH, 1919.

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ANNUAL CONFERENCE OF REPRESENTATIVES OF LOCAL MEDICAL AND PANEL COMMITTEES.

London, Thursday and Friday, November 27th and 28th, 1919.

The annual conference of representatives of Local Medical and Panel Committees, called together by the British Medical Association, was opened on Thursday morning, November 27th, at the Memorial Hall, Farringdon Street, London. The Chairman was Dr. H. G. DAIN, of Birmingham, in the absence of Dr. J. A. Macdonald, Chairman of Council, who was detained by his duties at the winter session of the General Medical Council. The number of representatives present was 147, together with 9 members of the Insurance Acts Committee other than those who were also representatives. Of the 127 Panel Committees in England, 115 were represented; of the 17 in Wales, 10 were represented; and of the 56 in Scotland, 28 were represented.

Procedure.

The returns of representatives and substitutes and apologies for absence were received and the standing orders adopted, together with a new standing order proposed by the Insurance Acts Committee, that an Agenda Committee be appointed each year to secure for matters of principle a more prominent place in the agenda. The CHAIRMAN pointed out that this course had been followed on the present occasion; the agenda had been arranged so as to bring into the first part of the proceedings certain fundamental questions.

Dr. E. BURCHELL (Brighton) moved:

That no motion or amendment which involves the alteration of any decision of the Conference held in July, 1919, shall be in order unless its consideration be approved by a vote of the Conference.

He said that his purpose was to protect the representatives against possible arbitrariness on the part of a chairman. On a previous occasion the Chairman had ruled out a motion of his own on the ground that in his (the Chairman's) opinion it conflicted with a previous resolution.

The CHAIRMAN said that the course of action he had decided for himself at this Conference was to rule out of order all discussions relating to matters which had been decided by the July Conference, unless circumstances in the meantime had so changed as to make rediscussion advisable. The Conference must preserve some continuity, but, on the other hand, steps must be taken to regularize matters which needed discussing again.

Dr. E. R. FOTHERGILL thought that if the responsibility was placed upon the representatives in the manner suggested by the Brighton motion, the majority

necessary to put such a motion or amendment forward should be not less than three-fourths.

Dr. H. B. BRACKENBURY said that at the July Conference a binding resolution was carried instructing the Insurance Acts Committee to continue negotiations with the Government on the basis of the resolutions passed by that Conference. Since then the Committee had been guided by that mandate. If it was to be open to this new Conference to pass a resolution altering the basis on which negotiations had been conducted, it placed the Committee as a negotiating body in an impossible position. The rescinding of one of the resolutions on the basis of which the Committee had been negotiating up to this penultimate stage would mean that all the negotiations would have to be gone over again on an altered footing.

Dr. Burchell's resolution was lost, and a motion by the Chairman was agreed to, referring to the Agenda Committee the question of framing a standing order to deal with the subject.

In reply to Dr. P. MACDONALD, the CHAIRMAN said that since the agenda was published resolutions had been received so continuously that it had been impossible to prepare a supplementary agenda; but he had a list of such later motions, and he hoped that the representatives in charge of them would bring them forward at an appropriate stage.

REMUNERATION.

The Conference then passed to the consideration of remuneration.

Dr. BRACKENBURY (Chairman of the Insurance Acts Committee) moved:

That the Regulations cannot be accepted unless, at the same time the remuneration is upon a satisfactory basis.

He said that this was an unusually important Conference, and his Committee thought it worth while at the very beginning to make it perfectly clear by some such motion as this that they were engaged on one bargain, not on two bargains. The acceptance of the Regulations depended upon an appropriate payment being granted to them for their work under those Regulations.

The resolution was agreed to unanimously and without discussion.

Dr. BRACKENBURY then moved that the Conference receive the memorandums of the Insurance Acts Committee on remuneration, the reply of the Minister of Health, and the rejoinder thereto. Since the rejoinder a

letter had been received from the Minister of Health (which was read at this point) stating that he would defer his decision on the question of remuneration until after the Conference, but that his abstention from comment must not be understood to imply his concurrence in the arguments contained in the Committee's rejoinder. This letter was printed in last week's SUPPLEMENT, p. 132.

The CHAIRMAN said that his own impression was that, although the Minister stated definitely that he would not consider such a capitation fee as 13s. 6d., he was in a position to be influenced by argument, and the deputation which was to wait upon him on Thursday next might convince him as to the necessity of some higher figure than the one he had provisionally fixed in his mind.

Mileage.

Before the question of remuneration was further proceeded with, another report had to be received on the question of mileage.

Dr. BRACKENBURY said that although the announcement was somewhat premature, in that the figure had not yet received the approval of the Minister, it was possible to state that the Mileage Subcommittee of the new Distribution Committee had reported only on the previous day to its parent body, and he believed its recommendation would be thought very satisfactory. Before it was announced he wished to say how largely a satisfactory issue was due to the extraordinary persistence, energy, and grasp of detail of his one professional colleague on that subcommittee, Dr. Williams-Freeman.

The CHAIRMAN then made the announcement that the recommendation to the Minister was that the sum of £300,000, for England and Wales only, was to be allocated to the Mileage Fund for 1920 (applause). The present Mileage Fund, with the increased allowance for practice expenses, was something between £80,000 and £85,000. The new allocation was entirely in addition to the capitation fee, which had still to be settled.

Dr. T. C. ASKIN (East Suffolk) said that it was not to be concluded that the rural practitioners were of necessity satisfied with the new sum. ("Oh!")

Dr. J. P. WILLIAMS-FREEMAN said that the figure of £30,000 or £85,000 was not the original mileage grant, as the Chairman had said, but the original mileage grant *plus* the addition that was made last year—and, he thought, also the year before—for extra practice expenses. The original mileage grant, he believed, did not exceed £50,000. He regarded the £300,000 now proposed as representing nothing more than payment that had been owing to the rural practitioner for six years. Rural practitioners, in his view, had been working at a loss as regards mileage during the whole period of their contract. At last at the end of those six years they had succeeded in getting a certain amount, but the thing for rural practitioners to be congratulated upon was that their claim had been recognized by the Minister. He wished to reciprocate the compliment which Dr. Brackenbury had paid him, and to say how much the case of the rural practitioner had been helped by Dr. Brackenbury's advocacy.

The Amount of the Capitation Fee.

Dr. BRACKENBURY moved:

That the Conference at this stage maintains the opinion that 13s. 6d. is the lowest capitation fee that can properly be accepted for an effective service.

He said that this was perhaps the most important resolution before them, and he wanted to ask the Conference to realize accurately the present situation. He was not going to enter into the arguments which had led to the fixing of 13s. 6d. The Conference had received the three reasoned documents which were concerned therewith; the three must be read together. Together they put forward the case which the Insurance Acts Committee thought ought to be put forward on behalf of practitioners, not as a final, dogmatic, decided case, but as an interim case, pending the meeting of the Conference. And he believed that the Conference, like every other professional gathering he had attended, would agree that the case for 13s. 6d. was thoroughly established and overwhelmingly strong. (Hear, hear.) They were determined to be as scientific and as moderate as possible, and to put forward a case which they would be able to maintain under cross-examination. They approached the subject in three or four different ways, and he asked

the Conference not to concern itself so much with the intricacies of one particular line of reasoning, but to remember that the 13s. 6d. was arrived at as the result of several lines of argument, and was determined upon as the lowest figure they could accept if they were to give the full and efficient service they wanted to give. The figure to some minds appeared quite moderate; others could make out a case for something higher. Judging by the letter from Dr. Addison it was clear that the Minister had made up his mind that something considerably short of 13s. 6d. was what he was prepared to offer. It might be that the persuasive powers of the deputation which was to wait upon him on the following Thursday would overcome his prejudices. There was still hope that whatever figure he had provisionally decided upon might be increased under the arguments of the deputation. Practitioners must face the fact, however, that there was formidable opposition elsewhere than in the Ministry; he again quoted the *National Insurance Gazette* (as he had done the previous Sunday at the Wigmore Hall meeting) which stated that in the opinion of approved society workers a 10s. capitation fee would be ample. That was not a negligible, but, on the contrary, a formidable opposition, and it had to be met and overcome. He believed that the right thing—the only strong and effective thing—for that Conference to do would be to drop any divisions, any contention over the little less and the little more, and unite upon this figure, push it for all that they were worth, and maintain it—as it was—to be the minimum they were prepared to accept. (Applause.)

Dr. P. MACDONALD (York) congratulated Dr. Brackenbury upon the fighting lead he had given, but in order that it might be strengthened he would like to add a rider: "And instructs the Insurance Acts Committee to endeavour by all means to secure the refusal of all insurance practitioners to take service at any less sum." He feared that the formidable forces of the approved societies might be the means of pushing the Ministry in a direction contrary to the practitioners' claims. In his own area already half the insurance practitioners had given a personal pledge that they would not accept service at any lower figure than that stated by the Insurance Acts Committee, and he was confident that a very large number—probably most of them—would, in the event of Government insistence upon a lower figure, cease service under the Act, whatever was done in any other area.

Dr. H. J. CARDALE (London) seconded the York rider, saying that his view was that the Conference should clearly set out, whatever might be the result, its determination to demand a capitation fee of 13s. 6d.

A long discussion then took place, in the course of which Dr. G. G. GENGE (Croydon), Dr. SIDNEY CLARKE (Hertfordshire), Dr. W. HODGSON (Cheshire), Dr. G. M. FOX (Walsall), and other representatives gave indications of the feeling in their respective constituencies, some asking that the resolution might be made more specific in its statement, to show that not a penny less than 13s. 6d. would be accepted, and others urging that the rider should be the subject of a separate resolution, or that action urged in the rider should be left to the discretion of the Insurance Acts Committee at the time.

Dr. D. F. TODD (Durham) hoped that the profession would not repeat the regrettable fiasco of 1911. He congratulated the Insurance Acts Committee on putting forward the claim in the way it did, and hoped that it would receive the united support of the profession. He believed that the article in the *National Insurance Gazette* was an inspired article written to warn practitioners off.

Dr. D. O. TWINING (Devonshire) said that the 10s. fee suggested by the approved societies was a preposterous figure for the work that insurance practitioners had to do. He wished the Committee in its arguments would not talk so much about an eight-hour day—which practitioners never had.

Dr. G. H. L. HAMMERTON (Dewsbury) said that in his own district the men were absolutely solid, and would strike if they did not get the figure. He was certain that if the Insurance Acts Committee stood out for the minimum of 13s. 6d., at least 75 per cent. of the profession would back it up.

Dr. J. HARRISON (Lancashire) said that in his Panel Committee 13s. 6d. had secured adhesion by a vast majority. They had every possible confidence in the Insurance Acts Committee. Dr. T. C. ASKIN (East Suffolk)

and other representatives thought that the line of action indicated in the rider might, without a specific vote of the Conference, be left in the hands of the Insurance Acts Committee.

Dr. BRACKENBURY said he was not prepared to accept the rider; he would rather the Conference voted upon it. The Insurance Acts Committee must be trusted to have a certain amount of knowledge of conditions throughout the country. He agreed that strong language in that room was not necessarily equivalent to strong action in all the constituencies. Nevertheless, the Committee was going to Dr. Addison with the full understanding that every representative present—as would be seen when the vote was taken—thought that this was a reasonable demand to make. By December 10th Dr. Addison would give them his final figure. If, then, an irreconcilable difference appeared, there would automatically come into operation—unless both sides agreed to a proposal for arbitration—the scheme for collective bargaining, which involved sending down to the Panel Committees a statement on the position, and discovering what backing the Insurance Acts Committee might expect to have if it persisted in its demand. Upon the discovery as to the precise strength of that backing would depend the nature of the further action.

Dr. J. A. ANGUS (London) regretted that Dr. Brackenbury could not accept Dr. Macdonald's rider. His argument with regard to getting the backing at a future date seemed extraordinary; the backing was wanted now and all the time. In London, at all events, there was no uncertainty of mind, and he hoped the unanimous voice of the Conference would favour absolute insistence upon the minimum of 13s. 6d.

Dr. E. H. M. STANCOMB (Southampton) said that in his area the practitioners were untroubled by the question whether they were all going to be ruined, for already they accepted no adult person into their medical service under 13s. a year. This the people paid with the greatest willingness, and wondered why they did not have to pay more. There, at all events, the practitioners could tell the Government that they could make better terms than any the Government could offer them. If men only ceased their individualized habits and organized themselves, they could in any district make a contract between a willing seller and a willing buyer for a medical service that would remunerate them far better than the Government had done. Southampton practitioners to a man were prepared to support the Insurance Acts Committee in any claim it made on their allegiance and in any requirement that they should withhold their services until they got reasonable remuneration. If medical men only exercised their natural abilities, they had the power to make a better medical service for the community and at a better remuneration for themselves than any the Government could undertake.

Dr. J. HOLMES (Bury) said he was instructed by his Panel Committee—which was in the curious position of consisting of the whole of the panel practitioners in the area—strongly to support the Insurance Acts Committee.

Similar expressions of support were forthcoming from Dr. C. E. T. SCOTT (Middlesex), Dr. MICHAEL DEWAR (Edinburgh), and other representatives.

Dr. PETER MACDONALD, in replying on the discussion, said that allusion had been made to the fiasco at the time the Insurance Act was started, but now the circumstances were entirely different; practitioners now had good organization and most able leadership. He relied very strongly upon the rural practitioners to give the necessary backing. His rider was intended not to embarrass the Insurance Acts Committee, but to give it an additional weapon.

On a vote being taken, Dr. Macdonald's rider was lost.

Amendments putting forward a higher figure than 13s. 6d. were then withdrawn by their various sponsors, in the interests of unity. Several representatives wished to strengthen the wording of the resolution moved by the Chairman of the Insurance Acts Committee.

Dr. BRACKENBURY agreed to omit the words "at this stage." As to whether this was an irreducible minimum would depend, not upon the Insurance Acts Committee, but upon practitioners throughout the country. If the motion were now agreed to, the Committee would tell the Minister that this was the demand of the representatives at the Conference. If a stage came which found the

Government in final opposition, it would not be the Insurance Acts Committee that would accept something less than 13s. 6d.; if something less were accepted, the accepting party would be the practitioners throughout the country.

The resolution in its altered form—

That the Conference maintains the opinion that 13s. 6d. is the lowest capitation fee that can properly be accepted for an effective service—

was then put to the meeting and carried unanimously, the result being received with cheers.

The Question of Arbitration.

Dr. SIDNEY CLARKE (Hertfordshire) moved:

That in the event of the Government offer being deemed inadequate, the Insurance Acts Committee be authorized to ask for an independent arbitration board to fix the capitation fee.

If the case for 13s. 6d. were as strong as they all believed it to be, why need they hesitate at arbitration?

Dr. J. P. WILLIAMS-FREEMAN (Hampshire) supported the idea of arbitration in this eventuality, and suggested that a committee should be asked for consisting of an equal number of nominees from each side, with an independent chairman, to thresh out the whole subject on the logical and scientific lines of M. 22. He was confident that the practitioners' case was unanswerable. They had nothing to lose and everything to gain by arbitration.

Dr. LAURISTON SHAW (London) said that the London Panel Committee had instructed its representatives to endeavour to get this question postponed. To commit the Conference now to arbitration would be a mistake; although for the Conference to say that the case should not go to arbitration would be a still greater mistake. A stage in the negotiation might arise when the Insurance Acts Committee would have to acquaint the profession with a final offer of the Government different from the demand that the practitioners had made, and ask the profession whether the case should be submitted to arbitration or whether the scheme of collective bargaining should be put in force. Insurance practitioners would then be in a much stronger position to decide than if they now bound down the Insurance Acts Committee to submit the matter to arbitration.

Dr. D. F. TODD (Durham) supported the proposal for arbitration, which was often the only way for parties to gain their rights. Practitioners should try to anticipate the position and be prepared for eventualities, not act when the door was shut upon them.

Dr. BRACKENBURY agreed that certain of Dr. Lauriston Shaw's points were worthy of serious consideration. He wanted to suggest a possible eventuality. If the Government offered a sum very close indeed to the sum they were demanding the Insurance Acts Committee might think it wiser to transmit the offer to the profession than to submit the case to arbitration.

Dr. J. D'EWARD (Manchester) said that those of them who came from working class districts would recognize the importance of carrying their working class patients along with them in any action they undertook. The working classes were accustomed to arbitration in their disputes with their own employers; therefore the acceptance of arbitration would enormously strengthen the practitioners' case in their eyes, and the working classes would be all the more likely to support them if it became necessary to take stronger action. Moreover, arbitration might provide a welcome way out for the Government.

In reply to a question by Dr. F. B. THORNTON (Surrey) whether insurance practitioners would have the power to refuse a figure decided upon by the arbitration board, the CHAIRMAN said that, as a matter of general business, it was understood that persons who went to arbitration agreed to accept the award.

Dr. STANCOMB said that in the previous discussion Dr. Brackenbury had stated that 13s. 6d. was the irreducible minimum, and that whether it was gained or not would depend ultimately upon the attitude of the profession. To insinuate now that the matter might be put into the hands of an arbitration board was at variance with what the Conference had already passed. It was stated that if 13s. 6d. was not granted, the matter would have to come back to the profession to give such support or instruction as might be deemed expedient. The present proposal would mortgage their case in advance. It was true

that the working classes had gone to arbitration, but it was always with something in the scale against the weight of the other side.

Dr. J. ORTON (Warwickshire) pleaded that the Insurance Acts Committee might be allowed to act upon its discretion. If practitioners stood solidly together for 13s. 6d. and gave the Insurance Acts Committee the power to go to arbitration if necessary, he could not see that they were weakening their position or giving anything at all away.

Dr. J. A. ANGUS (London) said that the position of the Insurance Acts Committee was necessarily difficult and delicate, all the more so because varying degrees of inadequacy might arise which would need to be dealt with somewhat differently. If the inadequacy were not too pronounced, and the Government desired arbitration, and public opinion was in favour of it, arbitration might be the desirable course. It was the correct thing to give a permissive right to the Insurance Acts Committee to act in this matter, but the right could not be made anything other than permissive. He paid a tribute to Dr. Brackenbury and his colleagues for the strenuous and splendid fight they had made.

Dr. F. COKE (Kent) entirely objected to any suggestion of arbitration, which was an attempt to reconcile two immovable forces. In any case, to decide on arbitration was altogether outside the scope of the present Conference. He wished to see the whole question dropped.

Dr. J. HOLMES (Bury) said that he was a thorough believer in arbitration. The award need not be accepted permanently if after a sufficient experience it was found to be unworkable.

Dr. CANDLER-HOPE asked whether, if the resolution were passed, the Insurance Acts Committee would have power to go to arbitration without further consultation of the profession.

The CHAIRMAN replied that the statement of the Minister as to the amount the Government was prepared to offer would be received and considered by the Insurance Acts Committee, and, in the event of the offer not meeting their demands, if the Committee thought it better to go to arbitration—supposing this resolution were passed—it would suggest that course to the Minister; if, however, the offer very nearly approached the demand, the Committee might submit it to the profession without asking for arbitration.

The motion authorizing the Insurance Acts Committee to request an independent arbitration board in the event of the Government offer being deemed inadequate was then put to the meeting and carried by a large majority.

Deputation to the Minister of Health.

The CHAIRMAN said that it was desired to invite three representatives at the Conference to accompany the deputation from the Insurance Acts Committee to the Minister of Health on December 4th. The deputation would include the Conditions of Service Subcommittee, a body of eleven persons who had been dealing with the matter throughout. The three from the Conference whom the Committee suggested were Dr. J. D'Ewart (Manchester), Dr. J. Orton (Coventry), and Dr. P. Macdonald (York).

Dr. COKE said that at a conference of the Medico-Political Union the Minister had been asked to receive a deputation from that body, and he thought it would be well, as a demonstration of unity, for the Insurance Acts Committee and the Union to go together and lay their resolutions before the Minister.

Dr. BRACKENBURY said that the deputation must go as the executive body of the Conference.

The CHAIRMAN pointed out that there was no exclusion of members of the Medico-Political Union. One of the three representatives he had proposed was an important member of that body. What was chiefly in mind when selecting the names had been the capacity of the men to advance arguments at this stage of negotiation.

Other names were suggested from the meeting, but on the matter being put to the vote the proposal to invite the three gentlemen nominated from the chair was carried.

Disabled Sailors and Soldiers.

Dr. E. BURCHELL (Brighton) wished to move that if remuneration were to be on a capitation basis for disabled sailors and soldiers, whether discharged as such, or so found after demobilization, it should be calculated on figures to be obtained down to the end of 1919. In

Brighton, at the beginning of 1919, the number of discharged disabled men was 505, and at the close it was 920. Any figure arrived at as being the capitation payment for discharged disabled men was calculated on figures for 1918, while obviously, according to the Brighton statistics, it ought to be nearly doubled. The numbers throughout the country had gone up enormously.

The CHAIRMAN said that the Insurance Acts Committee was well aware of this, and it was one of the arguments to be used in meeting the Minister of Health; whereupon Dr. BURCHELL withdrew the motion.

Duration of the New Bargain.

Dr. BRACKENBURY next moved:

That the Conference request from the Ministry of Health an undertaking that the new bargain continue for three years. He thought the period a practical one. Certainly no negotiators would want to go through every year what they had gone through this year.

Dr. D. F. TODD (Durham) opposed the motion on the ground that it was impossible to forecast conditions, and that before three years were out a much larger remuneration might be necessary than that now asked for. A three years' agreement would be unbusinesslike, and he moved that the duration be twelve months.

The CHAIRMAN said that under the new Regulations it would be a continuous agreement, and so there must be a fixed period for the bargain.

Dr. F. REES (Wigan) remarked that the amendment would cut both ways, for the other side might feel that they had had the worse of the bargain, and at the end of a year want to cut down the capitation fee.

Dr. BRACKENBURY said that under the new Regulations no definite period was fixed for the termination of the agreement. Some of the arguments they had put forward in their memorandums were based upon the consideration of circumstances which extended over more than one year. If they argued the question of remuneration with a limited reference to 1920, he was afraid the other side would have some very good reasons for discounting certain of their arguments. If the Insurance Acts Committee had every year to go through a similar process to that which it had gone through this year, an entirely new committee would have to be brought into being every time, because no body of men could survive it. The balance of advantages lay on the side of a three years' bargain. If the cost of living went up still further it would be open to them to ask for a bonus on that ground, also to make it a condition of acceptance of any alteration in service that the capitation fee should be varied accordingly. He denied, in answer to a suggestion by Dr. Todd, that there was anything sinister or any *arrière-pensée* about this proposal.

The amendment was lost by a large majority, and the resolution in favour of the three years' bargain was adopted.

In reply to Dr. T. C. ASKIN, who asked that expert financial advice should be obtained before the deputation went to the Ministry of Health, the CHAIRMAN said that the Committee had already had expert financial advice. The Editor of the JOURNAL had enabled them to secure advice on many of the points brought out in the memorandums.

Dr. WILLIAMS-FREEMAN, while he had every confidence in the officials of the Association, thought an expert ought to go with the deputation to answer questions on matters of finance.

Dr. BRACKENBURY assured the Conference that if arbitration was resorted to, the Committee would take every possible step to prepare a complete case, and then it would obviously be necessary to have expert financial assistance.

Dr. COKE asked whether, before arbitration took place, the Insurance Acts Committee would come back to that Conference.

The CHAIRMAN: Not necessarily.

Dr. STANCOMB said it was understood that there would be some reference to the general body of the profession before action was taken.

Dr. BRACKENBURY distinguished between making an offer of arbitration and placing their case before an arbitrator. The Conference had decided that if the Committee thought fit to make an offer to the Minister to have the matter referred to arbitration, and the Minister accepted, it would be for the Committee to think in what way the support of the profession could best be got; but it

would not be obligatory upon them to call the Conference together on this point, nor even to consult the Panel Committees; it was left to their discretion.

Pensions Scheme.

Dr. H. J. CARDALE (London) moved that the principle of a pensions scheme should be agreed to by the Conference. The motion was in a different form from the one first placed on the agenda, which asked for the adoption of the pensions scheme outlined in the memorandum of the London Panel Committee, and permission was only given to Dr. Cardale to vary the form of the motion after a vote, which showed 59 for the permission and 47 against.

Dr. Cardale said that the London scheme might be regarded merely as a pointer in the direction which such a scheme should take. The subject was so big that it required to be thoroughly discussed up and down the country before practitioners bound themselves to any particular arrangement; but to have some promise of financial aid for themselves on retirement or for their dependants in the event of death would be a great comfort. In the opinion of his own Committee such a scheme must be practically compulsory; if voluntary, it would be in competition with existing insurance companies. Under a compulsory scheme there would be a large premium income, not a penny of which would have to go in interest to shareholders. Various objections had been formulated, the most serious being that of many men who had already committed themselves to insurance and thought it most unfair that they should be asked to increase their commitments. But if there were a contracting-out clause, or some arrangement whereby such men could turn their premiums over into this scheme, that objection would disappear. He realized also that at the outset the younger men must be prepared to make some sacrifice in view of the fact that the scheme was less advantageous to the older men than to them, and therefore it was proposed that as regards the list of a practitioner between the ages of 50 and 55 one insured person might count as 1.25 insured persons, and this in an increasing ratio according to age, until a person on the list of a doctor aged from 65 to 70 would count as two. The Government must have no hand in management, but at the present difficult crisis it might at some stage of the negotiations be an advantage to have a pensions scheme in being. Should the Government and the practitioners approach within measurable distance, a contribution to the pension scheme by the Government might possibly bridge the gap.

Dr. B. A. RICHMOND (London) said that the London Panel Committee had been concerned with this matter for the last four or five years, but now was the psychological moment for the establishment of such a scheme. The time, however, had been too short for adequate consultation with the whole profession, and his Committee wanted it to be understood with absolute certainty that there was no idea of foisting upon the profession the particular scheme which had been sent round. The scheme was simply an object lesson. He pointed out certain of its advantages; for instance, the deduction of premiums at the source would save the expense of collection.

Dr. J. D'EWART (Manchester) heartily complimented London on bringing the scheme forward, and said that in Manchester they hung their heads in shame to think that at last London had been able to give Manchester a lead. The cases of doctors' widows and daughters benefited by the Royal Medical Benevolent Fund made most painful reading in the *BRITISH MEDICAL JOURNAL*, and such a scheme as was proposed would prevent these distressing cases. The scheme should be compulsory, and while they were not going to have Government control, they would be quite willing to accept a Government subsidy.

Dr. H. C. BRISTOWE (Somerset) thought the matter should be referred back to the London Panel Committee because there had not been sufficient time for consideration. As a rural practitioner who was no longer young he failed to see the advantages for men in his position.

Dr. D. F. TODD (Durham) moved, and Dr. P. A. HENDLEY (Isle of Ely) seconded, that it be referred to the Local Medical and Panel Committees for consideration, and this was agreed to.

1920 DRAFT REGULATIONS.

Dr. BRACKENBURY moved:

That this Conference do express a general approval of the new Regulations for 1920, and requests the Insurance Acts Committee to endeavour to secure such emendations thereto as may be approved by this Conference.

If this resolution were adopted it would become the immediate duty of the Conference to consider what emendations

it desired. Meanwhile, he asked that the resolution, which involved a general approval of the Regulations apart from any subsequent emendations, should be passed, although, of course, they would approve the Regulations in an increasing degree as their emendations were incorporated. The Committee desired a general approval because, in its view, the new Regulations offered great advantages over the old. In the first place increased importance was attached to the professional committees. The position of importance given to the Panel Committee in the administrative service under the new Regulations was vastly greater than under the old; and the more they got matters of professional administration into professional and not lay hands the better. A good many things had been said against these Regulations, but he was sure they had been said without full consideration. What he himself had to say was spoken with some knowledge, for since April, 1918, he had attended meetings connected with these Regulations one day out of every five. The Regulations, if their bearing was to be appreciated, needed an immense amount of consideration. Besides enhancing the importance of the professional committees, they increased local option in administration. Some points hitherto doubtful were now made clear, and even if the points were against them, certainty was an advantage; practitioners would know now what to do in certain difficult circumstances. He believed also that on the whole the Regulations would mean a more satisfactory service for the insured population, and that was a source of satisfaction also to the profession. Again, there were improvements in the judicial or quasi-judicial procedure; the machinery for dealing with complaints before medical service subcommittees and for preventing frivolous complaints had been improved. Lastly, there was the great advantage that it was an integral part of the Regulations that practitioners should receive the whole of their money quarter by quarter within a few days—fourteen at the most—of the end of each quarter, instead of having a system of payment which went for many months unsettled, so that they did not know the exact sum they were eventually to receive. Believing that the new Regulations were a definite improvement upon the old, he asked the Conference to express approval of them.

The motion was then put, and carried with three dissentients, one of whom, Dr. F. Coke (Kent), asked that his name might be recorded as a protest.

Transfer on Death and Other Vacancies.

Dr. H. B. BRACKENBURY then moved:

That the following be inserted in Regulation 15, between (1) and (2):

The Allocation Scheme shall provide that in the case of insured persons who have become entitled to select another practitioner owing to the death or withdrawal from the Medical List of the practitioner in whose list their names were previously included the assignment after the specified time shall be to the successor of that practitioner unless for some specific reason the Allocation Subcommittee otherwise determine and that such assignment shall take effect as from the date of such death or withdrawal.

He said that the Insurance Acts Committee had tried in its negotiations with the Ministry of Health to maintain the position with regard to disposal of practices which was taken up by the Conference in July. But the Ministry did not feel able to leave matters as they were; for reasons good or bad, it was not prepared to allow the present plan to stand. He wanted to suggest that the best course for the Conference was not to pass a bald resolution saying that it wanted the old Regulation to remain; that would mean that the unwillingness of the Ministry had still to be overcome. Grievances had arisen in the insurance service—probably in only a few cases—in which transfer of practices had taken place for purely commercial purposes. That was a thing which, even though it only happened occasionally, a good administrator would wish to eliminate altogether. The only question was whether abuses of that kind were best met by the new Regulations proposed. The Committee believed that it ought still to go on negotiating, and fighting if necessary, to arrive at as near an approximation as possible to the position which had hitherto obtained. Under the new system, directly a man's name was taken off the panel all the insured persons on his list were automatically

released; that, of course, was so now, but at present, if these persons took no action within fourteen days, they were transferred to the successor in the practice. In future the persons would be told by the Insurance Committee that they had a right to make a fresh choice, but at the same time there would be sent round to them the name of the successor in the practice. A further safeguard was that at the end of two months all those who had not during that interval made a fresh choice would be assigned, and that assignment, to whomsoever made, would date back to the day of the retirement or death of the original practitioner. In his view—and he had consulted experts on the subject—whereas in the existing circumstances there was a 97½ per cent. chance of the insured persons being transferred to the successor, in the new circumstances, even if left as at present proposed, the chance would be about 90 per cent. The Insurance Acts Committee suggested that this assignment, to be made in the two months, should, in the absence of specific reasons to the contrary, be made to the successor. This, if adopted, would help to bridge the gulf. Other suggestions might be forthcoming.

Dr. F. COKE (Kent), after putting forward some arguments against the proposed new regulation, said he could not understand why Dr. Brackenbury was at such pains to demonstrate its virtual innocuousness.

Dr. E. H. M. STANCOMB (Southampton) thought the cases of the widow who was cheated of her full rights in her husband's practice by some speculator in practices were very few, although it was hinted that they were becoming more numerous, which he hoped was not true. In any case there was no justification for depriving the whole profession of the capital value of their practices, for that was what it amounted to. There was considerable danger that this proposal would make it easier for the Government to establish the nucleus of a State service. He did not think it was over-stretching a point of suspicion to say that this was in the minds of some persons who supported the regulation. Dr. Brackenbury had said that practitioners had to take it because the Government said they must. (Dr. BRACKENBURY dissented.)

Dr. STANCOMB maintained that there was no reason why any attempt should be made to meet the Government on this matter.

Dr. E. R. FOTHERGILL questioned Dr. Stancomb's hint that the new plan of allocation might be so used as to aid the "squatter" and bring in a State medical service. Who was going to do the allocation? A committee containing three of their own number, with three others, and a chairman. Had medical men no faith in the integrity of their colleagues? (Dr. STANCOMB: It is four to three, and there is no guarantee that the three will turn up). Dr. Fothergill remarked that the profession was rather apt to be at the mercy of a glib rhetorician, who easily misled those who had no time to go into the matter.

Dr. E. BURCHELL (Brighton) said he was instructed by his committee to move that the present arrangements for the transfer of insured persons be maintained. The necessity for the change was not evident.

Dr. A. FORBES (Sheffield) moved an amendment instructing the Insurance Acts Committee to use every endeavour to have this regulation deleted. He said the proposed change was a distinct breach of faith. The goodwill of a practice had always been recognized as a capitalizable asset, and it was this that the new regulation set out to confiscate. Practices were bought and sold long before the Insurance Act, and at the Representative Meeting in 1911 Mr. Lloyd George said distinctly that the selling value of practices would be increased by the acceptance of insurance service. The Government had no more right to take away this property than to deprive doctors of the houses in which they lived, and if the Ministry of Health persisted in its refusal to reconsider the regulation, a deputation should go to the Prime Minister to remind him of his pledge.

Dr. W. HODGSON (Cheshire) said that from his experience of the country this was the most serious objection which insurance practitioners in general took to the new Regulations. It was more serious even than the question of the capitation fee. He hoped the protesting resolution would be carried with unanimity. The right to retain a property value which they themselves had created should never be surrendered. He regarded Dr. Brackenbury's estimate,

that 90 per cent. of the value of the insurance part of a practice would still remain, as the merest guesswork.

Dr. J. OXON (Warwickshire) said that a great many representatives were sent to that Conference to urge that wherever else ground might be given, none must be given here. Scandals might very occasionally arise under existing conditions in the sale and resale of practices, but to no such extent as to warrant a change with consequences so serious for the profession.

Dr. H. B. PALMER (Plymouth) suggested that if the Government were so determined to adhere to this regulation it must have a reason for so doing other than the superficial one put forward. He believed the Government wanted to do away with the vested interest in practices, and had taken warning from the trouble it had had from this cause in the liquor trade. The idea was to get rid of a vested interest, so that if at some future date the need arose to establish a State system the case for compensation need not arise. Practitioners were willing to accept any measures to prevent the occasional abuses, but not to see their property disappear.

Dr. M. DEWAR (Edinburgh, Selkirk, Roxburgh) said that in Scotland the doctors were fighting the Scottish Board of Health and the Insurance Committees' Association, which were determined to have this regulation put in. Speaking for the committees he represented, all of them were actively opposed to any interference with the procedure of transfer on a death vacancy. For the sake of the widows and children it was essential that the insurance goodwill should go to the successor who had arranged with the trustees to carry on the practice.

Another Scottish representative, supporting his colleague, added that if this regulation were enforced, not only the goodwill of the insurance part of a practice, but the goodwill so far as concerned dependants of insured persons would disappear.

Dr. C. M. STEVENSON (Cambridgeshire) thought that a somewhat different position arose in the case of a partnership. Here the patients were held jointly—(Several representatives indicated dissent.)—so that when one member of the partnership retired the names would naturally remain on the list of the other.

Dr. E. L. LILLEY (Leicester) suggested that, failing something better, the substitution of "four weeks" for "fourteen days" in the regulation would take away some of the objection.

Dr. D. F. TODD (Durham) asked why the Government could not make some provision to cover the cases of abuse. Why must all practitioners because of the delinquencies of a few? If the Government wanted to absorb the practice values, let it provide a sinking fund. The profession must stand firm.

Dr. G. HILLMAN (Yorks, West Riding, and Wakefield) said that in the West Riding this was held to be pure confiscation. It was not merely a question of the transfer of the insurance patients; a large proportion of private patients would go with the others. Other representatives added to the volume of protest, Dr. A. MANKNELL (Bradford) urging that this was another effort to establish a State service and to crowd out the private practitioner; and Dr. W. R. HADWEN (Gloucester) that the Government would give way if it were only acquainted with the angry opposition which the proposal aroused.

Dr. BRACKENBURY pointed out that the regulation in question—Regulation 16 (1) (c)—consisted of two parts, a statement and a proviso. The statement in the first five lines was word for word the existing regulation; the remainder was a proviso which, so far as it went, if there were no other alternatives, would be rather advantageous than otherwise. What practitioners protested against was not the whole of the regulation. If they simply asked for its deletion that would leave the matter in the air, with neither the existing arrangement nor a new arrangement in force. They must either say that they wanted the existing arrangement and would have nothing else, or they must suggest some substitute. His motion was one form of compromise. The Sheffield amendment would be more commendable to him if there were added to it the words "and to maintain the existing arrangements as nearly as possible"; but he would ask the Conference not to tie the Committee down to the existing regulation and to that alone.

Dr. FORBES, mover of the amendment, accepted this

addition, whereupon Dr. Brackenbury withdrew his own motion in its favour. In its new form it ran:

That this Conference protests against those Regulations referring to the transfer of practices and instructs the Insurance Acts Committee to use every endeavour to have these regulations deleted and to maintain the existing arrangements as nearly as possible.

Dr. P. HENDLEY moved that the words "as nearly as possible" be deleted, and this amendment was carried by a small majority.

Dr. BRACKENBURY interpreted this as meaning that the Insurance Acts Committee was to try to get a renewal of the existing arrangements. Did the Conference mean that, supposing remuneration were satisfactory and every other regulation met with approval, they were to go the length of calling a strike to maintain the existing position in this particular?

Dr. C. F. T. SCOTT (Middlesex) hoped it would be left open to the Insurance Acts Committee to endeavour to get some form of regulation which would cover the abuses that had crept in, which practitioners resented as much as anyone else.

The motion, with the omission of the words "as nearly as possible," was then put and carried, with four dissentients.

THE REGULATIONS IN GENERAL.

The Conference then proceeded to discuss some of the regulations appearing earlier in the draft whose consideration had been postponed in order that the feeling of the Conference might first be taken on Regulation 16. Several motions on the agenda were disposed of after a few words of explanation from the Chairman; in some cases the proposed regulation had been misunderstood, and in others the point which was pressed in the motions had already been met in another way. A large number of motions covered the same ground, and an endeavour was made to select the one which raised the most definite issue, and then the others were ruled out. On some questions passages were read from a letter from the Ministry of Health explaining or defending the insertion of certain words, and this made other motions needless. Nevertheless, every part of the Regulations which was at all controversial was fully discussed, and the Chairman but rarely applied the closure. The discussion of the Regulations and schedules, apart from the question of remuneration and certain other matters, occupied nine hours during the two days.

Dispensing by Practitioners.

Dr. C. P. LANKESTER (Surrey) moved the deletion of the compulsory clauses of Regulation 10 (dispensing by practitioners). This was supported by Dr. T. C. ASKIN (East Suffolk), who thought it most objectionable that practitioners should be compelled to dispense.

Dr. WOOD LOCKET (Wilts) said that as a member of the Rural Practitioners Subcommittee he felt a certain amount of responsibility for these clauses. The subcommittee had made an effort to keep the dispensing to some extent in the hands of the rural practitioners, and the only way in which the Government would allow it was by insisting that the insured person should have the right to say that he would have his drugs from the doctor if he chose. He suggested words which had the effect of exempting those doctors who had previously informed the Insurance Committee that they did not wish to dispense.

Other rural practitioners supported the motion.

Dr. BRACKENBURY recalled that it was as a result of two prolonged deliberations by the Rural Practitioners Subcommittee that the regulation had taken its present form. All that this regulation meant was that in an emergency, such as the death of the local chemist, the Insurance Committee could instruct insurance practitioners to dispense for the persons who had been in the habit of getting their medicines from that chemist, and were deprived of other means of getting them, until some permanent arrangement could be made.

Dr. J. P. WILLIAMS-FREEMAN said he was against compulsion as much as anybody, but they had an official statement that the compulsory provision was only put in to meet such cases as Dr. Brackenbury had instanced; provided the clause was enforced only in such emergencies, the Subcommittee had accepted it.

The motion of Surrey was then put to the meeting and lost. It was agreed, on Dr. Williams-Freeman's motion, that when an insured person signed a card marked "D," it should be taken to be a notification to the Committee

that he desired to be dispensed for by the practitioner; and also (on a motion by Northumberland) that it should be made clear that there was no obligation on a doctor to supply drugs and appliances to an insured person at any place other than the practitioner's surgery.

Emergency Treatment.

A letter was read from the Ministry of Health elaborating certain expressions in the regulation governing emergency treatment, in view of some motions believed to be founded on a misapprehension.

Dr. J. D'EWART protested against the procedure whereby the Minister put in a certain regulation and modified it by a private letter. A "serious emergency," from the patient's point of view, arose whenever the patient thought he needed a doctor's services. Better definition in the regulation itself was badly needed.

Dr. BRACKENBURY pointed out that the regulation was drafted to carry out what was determined by the Conference in July. In the Insurance Acts Committee there was no dispute as to the meaning of an emergency. The Panel Committee was required to include in its scheme some satisfactory arrangements to ensure that the necessary treatment was obtained from an insurance practitioner in a case of accident or sudden emergency which needed immediate treatment, provided that neither the insured person's own doctor nor his deputy was available. Any additional words which would tighten up the clause would be welcomed both by the Committee and the Ministry.

In reply to a representative who wanted the radius within which the practitioner was liable for emergency service put into the regulation, Dr. BRACKENBURY said that this would appear in the practitioners' agreement or letter of acceptance, together with the surgery hours; the practitioner was not expected to give emergency treatment outside the district in which he had contracted to attend patients. The Conference passed a resolution accepting the regulation, provided that the practitioner who had the insured person on his list was immediately informed by the Insurance Committee. It was also agreed that the word "necessitated" be substituted for the word "required" in Regulation 15 (1) (g).

Dr. G. G. GENGE (Croydon) moved that the Allocation Committee should have power to exempt certain practitioners from attendance on accidents and emergencies in the case of insured persons not on their lists, subject to appropriate percentage reduction in capitation fee. Dr. BRACKENBURY said that the allocation scheme would be drawn up between the Panel and Insurance Committees in each area, subject to the sanction of the Ministry of Health, and any dispute between the committees would be settled by the Ministry. The Croydon resolution was carried.

The Conference agreed to the limitation of lists to 3,000, subject to reconsideration of the limit should the scope of the service be increased at any future date; also that the regulation governing limitation of lists should apply to the members of the staffs of approved institutions.

Friday, November 28th.

The Conference reassembled at 10 a.m., with Dr. H. G. DAVIS again in the chair. A drastic time limit for speeches was imposed in order to get through the volume of business still remaining.

The Regulations for Scotland.

A number of questions relating to the position in Scotland were addressed by Dr. J. McDONALD (Motherwell) to Dr. J. R. DREVER, the Scottish Medical Secretary. He asked whether M. 25 applied to Scotland, whether the draft Regulations applied to Scotland, and, if they did not apply, whether this division of administration had been brought about by the Insurance Acts Committee.

Dr. DREVER replied that the answer to the first question was in the affirmative, and to the second and third in the negative. It was not believed, however, that the Regulations for the two countries could differ materially, and it was most improbable that the rate of remuneration would be different. On the former matter he had a verbal assurance that the Scottish Board of Health did not intend any material difference in the Regulations for Scotland; and as to the second point, he had intimated on behalf of the Scottish Subcommittee that practitioners could not consent to any difference in the rate of remuneration as between the two countries. Neither Scottish practitioners nor the Subcommittee were yet in possession of the Scottish Regulations. The draft was now being

printed, and would be submitted to the Insurance Acts Scottish Subcommittee, and thereafter to the profession, and it would probably be necessary for the Scottish practitioners to have a separate conference to consider the Regulations.

Dr. McDONALD asked further what was the position of Scottish representatives in the present Conference.

The CHAIRMAN replied that their position on matters of principle and matters regarding remuneration was the same as that of their English and Welsh colleagues.

Distribution Committee.

The Conference then resumed the discussion of the new Regulations.

The MEDICAL SECRETARY said that the Insurance Acts Committee had asked for an assurance that in appointing insurance practitioners to the Distribution Committee the Ministry would accept nominations from that Conference, or, rather, from its executive body, and that assurance had been received.

The CHAIRMAN, in view of certain motions asking for power to appoint the majority on the Distribution Committee, said that the Committee was a piece of administrative machinery, and if a sufficient number of representatives of the profession to give an effective medical view were upon it that answered for working purposes without necessarily constituting a majority. The other members represented different departments, and each came to the committee for the specific purpose of putting forward his own point of view. In practice the Committee would be found to work very satisfactorily.

Dr. B. A. RICHMOND endorsed the Chairman's remarks, and assured the Conference that no purpose would be served by having on the committee a larger number of medical men. The medical men who were now members were there to present the medical view, as part of a composite committee.

Dr. H. F. OLDHAM asked the Conference to convey its heartiest thanks to the medical members of the Distribution Committee and the Mileage Subcommittee for the zealous and valuable services they had rendered to the medical profession. Since the second week in September last these gentlemen had met weekly at least for a whole day, besides attendance at subcommittees, and had gone through masses of figures. The Mileage Subcommittee had already attained its results, which were announced on the previous day. The Distribution Committee's work was not so apparent, but its value was known to anyone at all acquainted with the character of the undertaking. The least reward which these gentlemen could be given for the expenditure of so much time, energy and vigilance was a vote of thanks, and in the name of the Conference he would like to convey such thanks to Drs. Dain, Lewys-Lloyd, Linnell, and Richmond, members of the Distribution Committee, and Drs. Brackenbury and Williams-Freeman, of the Mileage Subcommittee.

Dr. T. C. ASKIN thought that the Medical Secretary should be included in the compliment—(Hear, hear.)—but Dr. Cox explained that he did not deserve this as he had had no part in the work.

The vote of thanks was carried by acclamation.

Payment for Drugs and Appliances.

Dr. A. LINNELL (Northamptonshire) moved that the capitation payment for drugs and appliances supplied by dispensing practitioners should be uniform in all areas and the amount be negotiated centrally. The point should be made clear in the model scheme or in the Regulations.

The resolution was agreed to.

Dr. T. C. ASKIN (East Suffolk) moved that at least 2s. a head, as promised in 1912, be demanded for 1920 as the rate of remuneration for dispensing.

Dr. WILLIAMS-FREEMAN said that the position at present was that the "floating sixpence" became merged in the general capitation fee, and the Treasury undertook the cost of all drugs dispensed by rural practitioners or by chemists. The difficulty was to determine under the new Regulations the amount to be paid every year to the dispensing practitioner. He could assure the Conference that the point was not lost sight of by the rural practitioners on the Committee.

Dr. B. E. A. BATT (West Suffolk) objected to a figure being fixed, as it was in the East Suffolk motion.

Dr. BRACKENBURY said that the individual rural practitioner could choose in each case whether he would receive payment for his drugs on the same system and at the same

rate as the chemists, or whether he would commute that into a specified capitation fee. It was proposed that the rural practitioner, whatever he dispensed, should be paid in full by the Treasury at the same rate and according to the same calculation as the chemist in his area. As to a capitation rate, he thought it a little dangerous at this stage to stereotype the 2s. rate. A further question arose as to what the figure included. The doctor was supposed to supply all drugs and those appliances which were in the schedule, but the list being at present blank they had the opportunity of putting in a list excluding certain things from this arrangement. They proposed at present to exclude all serums and vaccines, salvarsan and its equivalents, and certain expensive preparations of the internal secretions.

Dr. HENDLEY asked whether colloidal preparations would be omitted, and Dr. BRACKENBURY said that this was suggested, and the Committee would take it into consideration.

The East Suffolk motion was carried.

Dr. C. M. STEVENSON (Cambridgeshire) had a motion excluding various appliances from the list covered by the dispensing capitation fee.

Dr. BRACKENBURY feared that such a motion would add to their difficulties. The rural practitioners must make up their minds one way or another. They could elect to be paid for all these things at the cost at which they supplied them, plus something equivalent to the chemists' establishment charges; and, under that system, if they supplied splints, they got paid for them; or they could choose the capitation rate, when the question arose, What was an equivalent capitation fee? The Conference had just passed what he thought an unfortunate resolution—suggesting 2s. If these exclusions were made they could not possibly maintain the sum of 2s.

Dr. STEVENSON said, in reply, that the rural practitioners did not approach the problem unintelligently. If the list of drugs and appliances were cut down, he presumed they would agree to a smaller capitation fee.

The Cambridgeshire motion was lost by a large majority.

The Administrative Bodies.

Dr. F. RADCLIFFE (Oldham) moved to amend the Regulations so as to exclude officials of approved societies from the chairmanship of Medical Service Subcommittees. It was most important that this subcommittee should have an impartial chairman, who was neither an insured person, nor a practitioner, nor a pharmacist. The most dangerous person of all was an official of an approved society.

Dr. BRACKENBURY said that the Insurance Acts Committee had put this before the Ministry of Health, and would do so again if it were backed, because, in his opinion, it was rather important.

The motion was carried.

Dr. P. MACDONALD (York) moved:

That under the 1920 Regulations the statutory duties of Panel Committees are so greatly enlarged that Panel Committees should not have to pay for their expenses out of the practitioners' funds for remuneration.

Dr. CRAWFORD TREASURE (Cardiff) hoped the Conference would pause before passing this resolution.

Dr. J. D'EWART (Manchester) pointed out that under the old Regulations the duties of Panel Committees related to the work of insurance practitioners simply; but under the new Regulations the Panel Committees had to undertake work which was not essentially for the benefit of panel practitioners, but of the Treasury, and for this work they had to pay out of their own funds without sharing in the result of their labours.

Dr. BRACKENBURY said that the Insurance Acts Committee had been very much exercised on the point whether the whole of the administrative expenses of a Panel Committee should be provided for out of a Treasury grant, but the Committee had come unanimously to the conclusion that it would be a dangerous course. It would mean that Treasury officials would be inquiring into every particular in the accounts, whereas if the money came out of the practitioners' fund it could be spent in what proportion and by what method they pleased.

The CHAIRMAN, in reply to a question, said that he foresaw no great increase in administrative expenses as a result of the new Regulations, though doubtless more time would be occupied in committee and subcommittee work.

Dr. P. MACDONALD said that in the country, whatever might be the case in London, they did not find any difficulty in getting a voluntary levy. In his own area they had a voluntary fund in addition to the statutory fund. That rather ruled out part of the danger of Government audit and control.

The motion was lost.

COMPLAINTS AGAINST PRACTITIONERS.

Dr. P. MACDONALD moved that an endeavour be made to secure deletion from the Regulations of words which enabled the Medical Service Subcommittee, if a complaint against a practitioner was substantiated, to notify all his insurance patients of their right to be transferred from his list. That was a great power to be put into the hands of a subcommittee. Several representatives supported this view.

Dr. BRACKENBURY agreed that the penalty suggested here was certainly greater than a small fine, but, on the other hand, it was not so great as the removal of the name from the list, and if this provision were taken away, the Insurance Committees might adopt the sharper alternative.

Dr. J. ORTON thought the medical members of the Medical Service Subcommittee could prevent the penalty being inflicted where it would be unjust.

Dr. LAURISTON SHAW supported retention of the regulation because it made possible a greater gradation of penalty, which was a desirable thing. It was one of the limitations of the General Medical Council that in a penal case its practical alternatives were either to strike a man off the *Register* or to leave him alone.

Dr. Macdonald's motion was carried.

The Right of Appeal.

Dr. W. HODGSON (Cheshire) moved a resolution affirming a final right of appeal for practitioners to an independent judicial body. It was manifestly unfair that any man should lose a large panel without any right of appeal, such as was granted even to the worst criminals.

Dr. SIDNEY MATTHEWS (W. Sussex) moved, on behalf of Brighton, as an amendment:

That any person aggrieved by the removal of his name from the list may, within three months after the date on which notice is given to him by the Minister that his name has been so removed, appeal to the High Court, and on any such appeal the High Court may give such directions in the matter as it thinks proper, including directions as to the costs of the appeal, and the order of the High Court shall be final and conclusive, and not subject to an appeal to any other Court.

Dr. HODGSON agreed to withdraw his motion in favour of this Brighton amendment.

Dr. H. G. COWIE said that this was an exceedingly important question, which had been coming up again and again. They must clearly recognize their position under the Regulations. The question was whether they were not already in a privileged position. In the first place, they had a considerable voice on the Medical Service Subcommittee. After a full inquiry it was for the Minister to decide whether a man should be taken off the panel or not, and it might easily be argued that in any business or service the person responsible for the administration of the service must have the final decision. He thought it would be a great mistake to have the publicity inseparable from a court of law, especially as unpleasant matters might be discussed and reported in the press, with resulting damage to the profession, as well as to the man whose position was at stake.

Dr. P. A. HENDLEY pointed out that the servant dismissed had a right of appeal against the employer.

Dr. B. A. RICHMOND said that it would be useful to hear of concrete cases of injustice resulting from the findings of the Commissioners. In one recent case a practitioner had been most leniently dealt with, in the opinion of the members of the London Panel Committee. If a man had any defence whatever there seemed no reason why he should not trust his case to the authorities prescribed. Moreover, in a court of law matters might be brought out which would not be to his advantage.

Dr. G. M. FOX (Walsall) thought that a man had the right of appeal to the courts already under the existing regulations. He remembered a case in which a man went to the Court of Appeal, but was not replaced on the panel.

Dr. WILLIAMS-FREEMAN said that they were well aware that technically they were servants who must be under a certain amount of discipline, but every day the service was growing more important, and probably would soon be extended to other classes of the population. There would be an increasing number of men whose living practically depended upon remaining in insurance practice. He supported the Brighton motion, and pointed out that although the Minister had the final decision, he was not present when the evidence was taken.

Dr. BRACKENBURY agreed that the matter was important, but Drs. Richmond and Cowie were right in suggesting that there was a good deal to be said for the present practice. Every man had the right of appeal to the courts in certain matters, and there had, in fact, been such appeals. The General Medical Council could remove any practitioner from the *Register*, but in any service within the profession it was for those who were administratively responsible to say whether a given person should remain in the service or not. Of course, as Dr. Williams-Freeman had pointed out, the extension of the service was an important point, and as the question increasingly affected the whole livelihood of practitioners it might be necessary to reconsider it.

Dr. W. HODGSON said that what he complained of was the absence of any right of appeal against the decision, not of a committee, but of one man.

The SOLICITOR (Mr. Oswald Hempson), said that their rights of appeal were really very similar to those of the criminal. The criminal had the right of appeal on questions of procedure, misdirection, improper admission of evidence, and things of that kind of a purely technical character, occurring at his trial. The panel practitioner was virtually in the same position. The tribunal of inquiry found the fact, but the practitioner had the right always to go to the courts and say that, while he did not dispute the fact, he maintained that there had been a wrongful administration of the Regulations, and therefore, that the finding had been improperly arrived at and should be set aside; and in comparable cases it had been set aside. With regard to the powers of the Commissioners, they could, instead of removing a man from the service, determine that he should have to pay the costs of the inquiry, and that might be a very heavy penalty. Thus the body of final authority under the Regulations had the power to penalize a man, if it chose, to a smaller extent than the drastic course of removing him from the panel.

The Brighton amendment was then put to the meeting and carried.

Dr. G. M. FOX moved to exclude, in cases of complaint, the consideration of previous reports, believing that each case of complaint should be considered on its merits.

Dr. WILLIAMS-FREEMAN pointed out that a series of complaints, each of them trivial, might be brought against a man, who would be several times admonished, until at last a complaint was made which was serious, when all the old offences would be recalled, although they might have been on quite a different footing, and in some cases so slight that possibly the man concerned had not troubled to put up a defence. If the regulation stood as drafted, a man would be obliged to appeal against everything that was brought against him in the Medical Service Subcommittee, no matter how trifling, in view of the possibility that this case might subsequently be used to his detriment.

Certain difficulties were pointed out by other representatives, and on the motion being put to the vote it was lost.

Duty of Practitioner Refusing to Accept Applicant.

Dr. SIDNEY CLARKE (Hertfordshire) complained of the steps which had to be taken, under the model allocation scheme, by the practitioner who declined to accept an insured person on his list.

Dr. BRACKENBURY said that this was a matter for local arrangement. The model allocation scheme had not become part and parcel of the Regulations. In the clause referred to the alteration of the word "and" to "or" was all that was needed to meet the case, and there would be no objection to that, he believed, on the part of the Ministry.

Dr. CLARKE replied that the difficulty of getting local changes in allocation schemes was very great.

It was agreed that the Committee should be instructed to ask for the alteration in the model allocation scheme as suggested by Dr. Brackenbury.

Temporary Arrangements.

Dr. CANDLER-HOPE (North Riding) moved to extend from two to six months the time allowed for a temporary arrangement after the death of a practitioner.

Dr. BRACKENBURY pointed out that during the interim the person who conducted the practice was supposed to be acting as deputy of the deceased, but all this time every one of those for whom he was liable might choose another doctor. To prolong the term would surely be detrimental, and the Conference would not want the

insured persons to have this greater opportunity of making a change.

The motion was lost.

Various motions relating to paragraph 7 of the First Schedule were lost or withdrawn, the point at issue being one purely of drafting. A motion to penalize an insured person by a fine when he had not his medical card with him was withdrawn; but on Dr. D'EWART asking what remedy practitioners had if the default were due to the negligence of the approved societies, the CHAIRMAN said that under the new Regulations the approved societies would have nothing to do with the issue of medical cards. Anyone proving to the Insurance Committee that he was an insured person, presumably by producing the card stamped by his employer, would be entitled to have a medical card at once, so there would be no delay.

Surgery Accommodation.

Dr. WILLIAMS-FREEMAN moved to support the minute of the previous Conference objecting to Insurance Committees having power to order alterations and additions to surgery and waiting-room accommodation.

Dr. BRACKENBURY said that they had got from the Ministry the undertaking in this connexion that there should be no action by the Insurance Committee with regard to inadequate surgery and waiting-room accommodation until the matter had been discussed with the Panel Committee.

Dr. D'EWART asking why such an undertaking could not be embodied in the Regulations, the CHAIRMAN said that many of these matters related to questions which had been raised since the Regulations were drafted, and Dr. BRACKENBURY said that there were certain things, regarded as more or less subordinate and detailed, with regard to which the Insurance Committees had to take their instructions from the Ministry of Health. The Insurance Committees were merely channels of communication between the Ministry and approved societies, insured persons, and insurance practitioners. If everything of a detailed character were inserted in the Regulations, they would become even more bulky and troublesome than at present.

"Rep. Mist."

Dr. P. MACDONALD moved to delete the clause prohibiting the use of the term "Rep. Mist."

Dr. BRACKENBURY said that the majority of Panel Committees had already of their own free will abolished "Rep. Mist." He believed that if practitioners could add to the convenience of the great body of chemists it would be good policy for them to do so, and apart from that consideration there were abuses which had grown up with the use of the term.

The motion was lost.

Records and Supply of Drugs.

The CHAIRMAN announced that the committee which had been promised on the subject of records was now being set up, and it had been hoped to announce its membership at the Conference. The form of record on which it decided would be submitted to the Insurance Acts Committee, and sent down to the local committees.

Several motions were also met by the Chairman's statement, with regard to the Regulation dealing with the duty of practitioners to supply drugs, that the wording of the paragraph was admittedly obscure, and that the Committee had an undertaking that it would be made more intelligible.

Deputizing Arrangements.

Dr. W. DAVIDSON (Bournemouth) moved to substitute one month for one week as the period of notice to be given to Insurance Committees with regard to deputizing arrangements.

The motion was lost by a narrow margin.

It was agreed, on Dr. BRACKENBURY's proposal, that the First Schedule, Part 1, Clause 10 (3) should read as follows:

(a) A practitioner shall not employ a permanent assistant to attend his insured patients without the previous consent of the Committee to the employment of such an assistant.

(b) The Insurance Committee shall not unreasonably withhold such consent, and shall in no case withhold consent without previous consultation with the Panel Committee; and in case of disagreement between the Committee and the Panel Committee the practitioner shall be entitled to appeal to the Minister, whose decision shall be final.

(c) Before consenting to the employment by a practitioner of more than one assistant, the Committee shall obtain the approval of the Minister.

(d) The Committee may require that the name of any assistant so employed shall be placed on the medical list.

Certificates.

A letter was read from the Ministry clearing up the point that the only certificates practitioners were liable to give under these Regulations were certificates for sickness and disablement benefit.

A motion was agreed to expressing the opinion that all insurance practitioners should be permitted to make use of the form of certificate described in the Second Schedule as the special final certificate in rural areas. Another motion, also agreed to, was that "week" in this part of the schedule should be so defined as to exclude Sunday.

Dr. B. A. RICHMOND (London) moved:

That certification rules should allow of a certificate being given to cover a necessary absence at the seaside or away from home for a period of not more than three weeks.

Dr. D'EWART said that this would eliminate half or more of the temporary residents, which he thought an argument in its favour. Dr. BRACKENBURY, too, supported the motion, which was carried.

Dr. D'EWART moved, and it was agreed to, that instructions to patients should be printed, preferably in red ink, on both sides of the certificate forms.

Referees.

The DEPUTY MEDICAL SECRETARY read a letter from the Ministry with regard to referees, stating that it was not possible as yet to furnish a full statement, but it was hoped before the Regulations were finally published to make the necessary addition to the conditions of service in the First Schedule. A statement as to the provisions to be so included was appended to the letter:

Conditions of service will include the provision that the insurance practitioner should, when required by the medical officer, (1) furnish to the medical officer any requisite information with regard to the cases under the medical officer's consideration in which a medical certificate of incapacity for work has been given or withheld; (2) examine in consultation with the medical officer any patient referred to him by the practitioner for advice; and (3) give information reasonably required by the medical officer in regard to records, prescriptions, or reports, and afford access to records while in the practitioner's keeping.

Dr. WILLIAMS-FREEMAN moved, and it was agreed—

That, whilst accepting the principle of the provision of referee-consultants by the Ministry, this Conference asks that it should be made clear or provided accordingly that no approved society shall have further authority to require an insured member to be examined by any referee under arrangements made by the society.

Dr. G. W. HARBOTTLE (Northumberland) moved that the medical referee should not be engaged in insurance practice, but have a competent knowledge of general practice. The motion was withdrawn after a statement by Dr. BRACKENBURY, who said that they wanted to rule out from these appointments young men straight from hospital, and to make sure that the men employed were general practitioners of at least ten or fifteen years' standing. Nor did they want consultants to jump into these offices. They put forward the requirements expressed in the motion, and understood that it was accepted. They had not stipulated that the referee should have had insurance practice, but they had made it a condition that he should be considered as a general practitioner, and be a whole-time officer with a good salary; the minimum suggested was £750 a year, with a pension.

NATIONAL INSURANCE DEFENCE TRUST.

The MEDICAL SECRETARY made a statement as to the position of the National Insurance Defence Trust Fund. He said that in March, 1918, the Insurance Acts Committee, on an instruction from the Conference, sent to all local Medical and Panel Committees a circular pointing out the advisability of setting up this fund. Other communications had been sent subsequently. There had been a persistent campaign against the success of the Trust by an outside organization which did not feel itself bound by the decisions of that Conference, and this, no doubt, had militated against its wider acceptance. Nevertheless, only seven Panel Committees in the country had definitely decided not to support the fund, although a large number of others (81) had not yet given their adhesion; these had either stated that they were postponing their reply or had not replied at all. The number of committees which had definitely decided to support the Fund was 109. The seven committees which had decided not to support it were: Essex, Kent, Leicestershire, Lincoln (Lindsey), Southampton, Paisley, and Bristol. The representative for Lincoln (Lindsey) (Dr. BAKER) here intervened to say that at a meeting some little while ago his committee had decided to support the Fund, but Dr. Cox said that the office had not yet received official notification.

Dr. J. A. ANGUS said that in London they were enthusiastically in favour of this Fund. Dr. J. D'EWART said that in Manchester, while they were in entire sympathy with the Fund, their internal arrangements made it difficult immediately to fall in.

Several representatives explained that while their committees had not as yet sent in any money, they were prepared to do so immediately at call to the full extent of the levy. Dr. DAIN said that in Birmingham his Panel Committee divided the area into districts, and the representative for each district was made responsible for the progress of the fund in his own locality. At each monthly meeting a statement was brought forward giving the names of those whose promises had not yet been received, and other men were appointed to interview them. The list of outstanding names had already been reduced in this way from 250 to less than twenty, apart from six or seven others who were still on army service.

Dr. F. RADCLIFFE said that in Oldham within the last fortnight fifty-two out of sixty-eight men on the panel had agreed to subscribe to the Fund. Dr. J. DIVINE said that in Kingston-on-Hull, out of a panel of seventy-three, only four or five had definitely not signed. Dr. H. F. OLDHAM said that in Lancashire, which the Medical Secretary appeared to have regarded as rather an uncertain area, a very great number of the men had signed.

Dr. WILLIAMS-FREEMAN raised the question of the relationship of the Trust to the British Medical Association.

Dr. BRACKENBURY said that hitherto the whole expenses of the Insurance Acts Committee had been met out of the subscriptions of members of the British Medical Association. That was all very well so long as the Committee was primarily and mainly responsible to the Representative Meeting of the British Medical Association, but it was now primarily and mainly responsible to that Conference, and, such being the case, the position became anomalous. The British Medical Association had not complained, because it had felt that in doing this work it was acting in the best interests of the profession; but the Insurance Acts Committee thought that it would emphasize its own position if the subscriptions to this Fund were so wide as to cover at any rate part of the administrative expenses of the Committee and the Conference, as well as to serve the purpose of insurance against possible eventualities.

In reply to a question on the liability involved in signing the form, the SOLICITOR (Mr. Oswald Hempson) said that he thought the concluding undertaking and agreement unnecessary in the light of the direct authority to pay given in the penultimate paragraph.

Dr. ANGUS hoped that all who had joined in the discussions at the Conference would feel that it was absolutely necessary to back up in this practical way the opinions they had expressed. He felt also that inasmuch as a great change was made in the constitution of the Insurance Acts Committee, whereby anyone not a member of the British Medical Association could serve on it, it was specially incumbent upon those non-members of the Association to rally to the support of the Fund.

Dr. Angus's motion calling for support for the Fund to the utmost extent was carried without a dissentient.

CONCLUDING PROCEEDINGS.

The revised scheme of grouping of insurance areas for the election of direct representatives upon the Insurance Acts Committee was approved.

Dr. J. A. ANGUS moved that the Conference express hearty thanks to Dr. Brackenbury for his most able guidance. He was unable to imagine what they would have done without it. (Applause.)

Dr. BRACKENBURY said that he was particularly glad to have this kind expression of opinion, for he had sometimes received expressions far less gratifying.

A vote of thanks to the Chairman concluded the proceedings.

INSURANCE.

MEDICAL BENEFIT REGULATIONS, 1920.

THE following memorandum has been issued by the Ministry of Health as to the date of operation and as to the issue of notices in connexion therewith:

1. *Date from which the New Regulations will Operate.*—The precise date on which the new Regulations for 1920 will come into force has not yet been determined, but will probably be April 1st.

2. *Advance Copies of the Draft of the Proposed Regulations.*—These advance copies have been issued to all bodies concerned, and to individual practitioners on application, in order that there may be the fullest possible opportunity for their consideration before the Regulations are published as a formal draft.

3. *Publication of Formal Draft.*—Immediately after the date on which the new terms of remuneration are announced—which, it is hoped, will be before December 10th—notice of the formal draft of the new Regulations will be published in the *Gazette*, and copies of the draft will be sent to every Insurance Committee and to every Local Medical and Panel Committee.

4. *Notice to Individual Practitioners.*—A letter will be sent by Insurance Committees to every individual practitioner affected as early in January as possible, giving him notice of the new terms and conditions of service and of the date upon which they will come into operation. The existing Regulations require that at least eight weeks' formal notice should be given before the new terms and conditions come into operation; but Insurance Committees on this occasion will be asked to give as much longer notice as possible in order that any individual practitioner who desires to terminate his contract shall have at least four weeks, and possibly longer, from the date of the Insurance Committee's letter, in which to determine whether he will terminate his contract with the Committee. For example, if an Insurance Committee is in a position to issue the necessary notice by January 10th, and the new conditions come into operation on April 1st, any practitioner who desires to terminate his contract must send in notice to the Insurance Committee by February 18th, as he is required to give six weeks' notice under the existing Regulations. This will give him between five and six weeks (January 10th to February 18th) after the date of the formal notice from the Insurance Committee in which to consider the matter, over and above the considerable period during which the proposed terms and conditions of service will have been under examination by central and local bodies representative of insurance practitioners.

CORRESPONDENCE.

How to Raise the Capitation Fee.

SIR,—There is one point in connexion with the financial side of national insurance which has a very considerable bearing on the question of remuneration, and which I have nowhere seen mentioned. In these days of the strident cry for economy—chiefly at other people's expense—there is no doubt that the Minister of Health will endeavour to secure the services of doctors at the lowest possible cost, and he will be supported by a large body of parliamentary critics of public expenditure, who may not take into consideration that if a good article is wanted it must be paid for according to its value.

Now, it is estimated that the cost to the Exchequer of the raising of the capitation fee to 13s. 6d. will amount to between three and four millions annually. There is a very simple way by which this sum can be raised without adding to the burdens of the taxpayers, and that is by increasing the contribution of the beneficiaries under the Insurance Act by one penny a week. There are some fifteen millions of insured persons, and fifteen million pence per week amounts to £3,250,000 per annum.

When the National Insurance Bill was introduced, Mr. Lloyd George promised rare and refreshing fruit to the value of 9d. a week in return for a contribution of 4d. At the present rate of monetary values the insured person must be receiving fruit to the value of much more than 9d. for his 4d. Even recognizing that the amount of sick pay has not been increased (the other benefits must have greatly appreciated in value, and the 9d. must by now have swelled to over the 1s. at a very conservative estimate).

When we remember the phenomenal increase in wages and the improved and extended services foreshadowed in draft Regulations, and, further, the fact that the income limit has been extended from £160 to £250, it is difficult to see any unfairness or injustice to the insured person in this suggestion; and, personally, I cannot see what reasonable argument can be brought against it. While the National Insurance Act is being revised and the Regulations redrafted it will be the appropriate time for making the change; and I commend the suggestion to the Insurance Acts Committee to pass on to the Health Minister, or, alternatively, propose that one of the medical members of Parliament should take the matter up.—I am, etc.,

Barnet, Nov. 25th.

I. CLAUDE EVILL.

Remuneration and Status.

SIR,—While the matter of increased remuneration of panel practitioners is *sub judice* I would like to write a few words. For twenty years I have practised outside England and have no experience of previous years under the Insurance Act. I came home to volunteer for duty during the war, and having served during 1914-1919, I was demobilized at the age of 51 years and had to begin life again as a general practitioner. I decided not to return to the colonies and bought a panel practice.

All my savings were absorbed by this process, and now I find that plans are being made to rob me of my vested interests, and also there does not appear in those appointed by Government a true perspective of the position of a medical practitioner in this country. While the cost of living has gone up (more especially since the armistice) to 120 per cent. above pre-war conditions, and all classes are clamouring for increased and proportionate remuneration, efforts are being made to prevent doctors from receiving similar treatment.

Although no class has made more sacrifice on the altar of national service, yet Ministers of the Crown are conducting a campaign to plunder the medical profession and reduce their status. One Minister makes a gross slander against the profession, asserting in a public speech that the profession was not up to the mark, and that the work was done by only a few. (These are not the exact words, but their meaning.) I was in various fields of operation, and I saw the work of very many medical officers drawn from the general practitioner class, and I assert unhesitatingly that the Minister is ignorant and ill informed. Whom is he attacking—the original R.A.M.C. or the general practitioner? Let me tell him that the general practitioners did wonders in this war. Of course they were not specialists, but they were constantly called upon to specialize. The medical profession as a whole responded nobly to the nation's need, and showed that the capacity for great things is there if the nation will only take advantage of it.

But the Ministers of the Crown are ignorant of this. They disparage the services they have received, and they lack the foresight to set to work to improve and elevate a profession so capable of valuable national work. Men who have to see and visit a vast number of panel patients must receive enough remuneration to make them independent of private practice, or, of course, the panel practitioner will be degraded into a money grabber and a drudge. A State system of medical service must provide adequate remuneration and full facilities for professional development. All work of a kind which is mere drudgery tends to reduce a man, whatever his training, to an automatic machine. Limit the number of patients on a single man's panel, and give adequate payment for the number allowed, and the result will be to raise the standard of the profession. The working classes recognize this, and often do not go to the panel doctor except for minor ailments. They think, as the panel doctor is underpaid, he will not give the best service, so thousands prefer to go to another practitioner.—I am, etc.,

Barrowford, Lancs, Nov. 23rd. ALFRED E. SELLER, Major.

Pension Scheme for Panel Practitioners.

SIR,—Will you allow me to enter a protest in your columns against the proposed scheme of compulsory insurance of practitioners on the panel? That long-suffering class have surely suffered enough in the way of loss of liberty and self-respect without the infliction of this fresh indignity. That any of them should be in favour of it is to my mind only a proof of the demoralizing effect upon them of the Insurance Act. The profession has tamely submitted in time of peace to a condition of State control which in time of war has been found galling and vexatious as well as detrimental to their interests by the mercantile classes.

The agitation is on every side for the removal of State control, and yet a section of medical men is found who wish not only to perpetuate their bondage but for the sake of a pitiful sixpence or shilling, to add to their chains. I should like to point out to them that any Government grant for their insurance for which they apply, cap in hand, to Dr. Addison will, if graciously bestowed, be deducted from what would otherwise be given as increased pay. There are insurance offices enough for those who wish to insure without the creation of another department for the purpose, and without compelling those who are unwilling to do so. One would have expected after the war a revulsion of feeling against the Insurance Act, "made in Germany," and even there revolted against by the profession; but instead of that we have freedom-loving Englishmen hailing "compulsion" as a blessed

word. Is this part of the "new world" that we have been fondly promised?

Another consideration suggests itself. Is it fair or kind towards a professional brother who has blossomed into a Minister of Health to bother him about our personal affairs which we can manage for ourselves, when he is already over-burdened with tasks of a national character for which a super-Hercules would be insufficient?—I am, etc.,

Aylesford, Kent, Nov. 22nd.

THEOBALD A. PALM.

Insurance Terms and Conditions.

SIR,—I have very grave doubts as to the reliability of the sum of £1,800 per annum fixed on by the Insurance Acts Committee as the gross income of a good single-handed general practice. I think it is too high, and it certainly is so for a country practice. I look down the columns of the BRITISH MEDICAL JOURNAL of November 22nd, page 40, where practices are advertised for sale, and what do I find? In fourteen practices advertised I find the highest is £2,400 per annum gross (may require an assistant) and the average is £1,170. I am not taking any notice of nuclei, partnerships, or practices outside England and Wales; and practices where an assistant is employed should also be ruled out. Men in general practice may make £1,800 a year gross single-handed, but in the language of Sir Harry Lauder, "it takes a bit o' doin'."

With regard to the percentage of increase required for the treatment of discharged soldiers and sailors I may say that I have always carefully booked my attendances, etc., on them, and have urged my brother practitioners to do likewise, but I am sorry to say that many have not done so. I find in my practice with a panel of 600 that, taking the average of the last two years, it would require an extra capitation fee of 1s. 8d. per head of my whole panel to pay for my attendance with drugs on discharged soldiers and sailors, and this means 18 per cent., not 2½ per cent.

In the new Regulations, Part III, Sect. 15, Subsect. 9, the insurance practitioner is required to provide treatment on emergency for another man's insurance patients. I consider it is monstrous that this provision of treatment should be required of us. Members of the profession are always anxious and willing to help a brother practitioner in emergency, but it is another matter when this service is demanded of us as a right. Medical men have done so much voluntary and unpaid service in the past that the official mind is emboldened to try and make such service compulsory.

With regard to the capitation fee, I hope the profession will stand out for the full amount asked—namely, 13s. 6d. In asking for this the Insurance Acts Committee, in my opinion, have not put it high enough. Without entering into elaborate arguments we ought to have based our claim on the depreciation in the value of the sovereign alone, as this applies to all increased prices more or less. What increases have miners, railwaymen, and agricultural labourers got? Over 100 per cent.; while doctors, on asking for 60 per cent., are met with a refusal of their demand. And why? Because they have not the voting power of the other classes. It is now rumoured that the Government have increased their offer of payment to the railwaymen.

At the meeting of London panel practitioners on November 23rd I see Dr. Brackenbury called attention to an article in the *National Insurance Gazette*, which is the organ of approved societies. I have read it, and it is an article quite hostile to the demand of the profession for a 13s. 6d. capitation fee. It writes about the large incomes medical men can earn, but it does not say that these are gross incomes, subject to a deduction of about 33 per cent. for expenses; and it also fails to inform the public that many of these practices are run with two, three, or even four partners, while many doctors employ assistants. The long hours of medical men and the constant strain are never alluded to, while other trades and professions—even chemists—have fixed and limited hours of work. I would say to members of approved societies: "Do as you would be done by."

We shall have to fight for all we are worth against an unsympathetic Minister and permanent officials. The reduction in the notification fee shows us what to expect from Governments who strain at a gnat and swallow a camel (Slough), and I feel very strongly that this reduction was the meanest and shabbiest trick ever perpetrated by a Minister against an honourable and learned profession. Such treatment by a Government will recoil on itself, and, as Dr. Gordon Ward says in his letter last week, "the cutting down of the fee for notification of infectious diseases has already vitiated the statistics and their value for years to come."

I have not yet heard anything about the outcome of the meeting in London on November 27th and 28th, so am writing in the dark.—I am, etc.,

Steeple Claydon, Bucks, Nov. 30th.

PHILIP L. BENSON.

Association Notices.

MEETING OF COUNCIL.

The next Meeting of Council will be held on Wednesday, December 17th, in the Council Room, 429, Strand, London, W.C. 2.

ELECTION OF REPRESENTATIVE BODY.

(a) Home Constituencies.

NOTICE is hereby given that the Council has provisionally grouped the Home Divisions for election of Representatives in the Representative Body, 1920-21, in the same way as for 1919-20, except that it has made the North Northumberland Division of the North of England Branch, and the new Willesden Division of the Metropolitan Counties Branch, independent constituencies.

Any Division objecting as regards itself to the proposed arrangements, is requested to notify the Medical Secretary of such objection, its reason therefor, and what change the Division would desire the Council to make, not later than December 31st, 1919.

(b) Oversea Constituencies.

The Council has made each Oversea Division and Division Branch possessing an Honorary Secretary and the necessary organization, an independent constituency for election of a Representative.

(c) Mode of Election.

It is entirely a matter for each Constituency whether it shall elect its Representative(s) and Deputy Representatives by General Meeting or Postal Vote. If by Postal Vote, a Meeting must subsequently be held to instruct the Representative(s).

(d) Time of Election.

The Annual Representative Meeting at Cambridge, 1920, commences on Friday, June 25th. Representatives and Deputy Representatives must therefore be elected not later than May 28th, and their names notified to the Medical Secretary not later than June 4th. They come into Office on June 25th.

BRANCH AND DIVISION MEETINGS TO BE HELD.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—Dr. R. Wallace Henry, Honorary Secretary (6, Market Street, Leicester), gives notice that a meeting of the Division, to which all members of the profession are heartily invited, will be held at the Public Medical Service Building, Bond Street, Leicester, on Tuesday, December 9th, at 3.45 p.m., when an address will be given by Dr. Alfred Cox, O.B.E., Medical Secretary of the Association, on the British Medical Association: its work and its critics. Those who think they have a grievance of any kind against the Association and its actions are specially urged to attend. There will be ample opportunity for discussion and questions.

Meetings of Branches and Divisions.

EDINBURGH BRANCH: SOUTH-EASTERN COUNTIES DIVISION.

A MEETING of the South-Eastern Counties Division was held on November 12th, at the Railway Hotel, Newtown St. Boswells, when Dr. W. T. BARRIE, of Hawick, presided, in the absence of the Chairman and Vice-Chairman. Dr. J. J. McMILLAN introduced a discussion on experiences of war service, and described his experiences from arriving at Salonica towards the end of 1915 to his departure eleven months later. He was then sent to a field ambulance in a forward area in France, and had acted as medical officer to a battalion in the line. He gave an interesting account of the collection of the wounded and the first stages of treatment, which conveyed a good idea of the conditions under which early surgical treatment was applied. Dr. JEFFREY gave a description of surgical work in Egypt and Palestine, which clearly indicated the importance of organization and team work on the treatment of cases passed to the rear from station to station. He alluded to the difficulties due to lack of full equipment and to the nature of the country in which the force was operating. He referred to the mobile operating unit which was successfully evolved during the campaign, and members were particularly interested in his account of the treatment of wounds by means of biplan, and his clear description of the mode of using it if success were to be obtained. In a subsequent discussion the authors of the papers gave information on points raised by various members. On the motion of the CHAIRMAN a vote of thanks was heartily accorded to Drs. McMillan and Jeffrey.

GENERAL COUNCIL

OF

MEDICAL EDUCATION AND REGISTRATION.

WINTER SESSION, 1919.

Tuesday, November 25th, 1919.

Sir DONALD MACALISTER, K.C.B., President,
in the Chair.

Vote of Thanks.

At the conclusion of the President's address (printed in last week's SUPPLEMENT) Sir CHARLES TOMES proposed, and Sir BERTRAM WINDLE seconded, a vote of thanks to him, and conveyed the congratulations of the Council upon his decoration with the Cross of Commander of the French Legion of Honour.

Introduction of New Members.

The following new members were introduced and took their seats: Sir George Newman, K.C.B., as Crown nominee for five years from October 9th, 1919; Dr. Matthew Hay, as representative of the University of Aberdeen for two and a half years from June 13th, 1919; Dr. Henry Roy Dean, as representative of the Victoria University, Manchester, for two years from October 22nd, 1919; and Dr. John Beresford Leathes, as representative of the University of Sheffield until October 27th, 1920.

New Member of Executive Committee.

Owing to the retirement of Dr. Elliot Smitin, a ballot was taken for the election of a member of the Executive Committee in his place, and resulted in the election of Sir Gilbert Barling.

Application for Removal of Name.

The Executive Committee reported that a request had been received from Mr. Louis Courtauld, registered as of Common Room, Lincoln's Inn, L.S.A. Lond., 1903, B.Ch. U.Camb., 1905, for the removal of his name from the Medical Register on the ground of his having ceased to practise. A statutory declaration had been supplied, and the Apothecaries' Society of London stated that it had no objection to the removal of the name. The University of Cambridge had not yet replied. The Executive Committee of the Council recommended that the request be acceded to, subject to no objection being received from the University of Cambridge.

The PRESIDENT said that the standing order required that the Council should order the removal of a name under such circumstances. He proposed, therefore, that the report be received, entered on the minutes, and adopted; and this was agreed to.

Higher Dental Diploma of the Royal College of Surgeons of Edinburgh.

The Executive Committee presented a report on an application from the Royal College of Surgeons of Edinburgh for the recognition of its Higher Dental Diploma under the Dentists Act, 1878, Sec. 11 (6). The Committee recommended that the Council should recognize the diploma for registration in the Dentists' Register as a higher qualification.

The PRESIDENT said that the Executive Committee was satisfied that the diploma in question required a considerably higher degree of scientific and medical knowledge than was necessary for the ordinary licence, and the Committee thought it well that dentists should be encouraged to advance in their profession above the minimum required. Sir CHARLES TOMES and Mr. HODGSON endorsed these remarks, and it was agreed that the report of the Executive Committee should be received, entered on the minutes, and adopted.

Restoration of Names.

After the Council had deliberated in camera the PRESIDENT announced that the Registrar had been directed to restore to the Medical Register the names of Edmund Heskin, William Dutton Akers, and Frederic Cecil Robinson.

Disciplinary Cases.

The Council further considered the case, adjourned from the previous session, of Dr. Hugh Mowat, registered as of 116, Salisbury Road, Everton, Liverpool, M.B., U.C.M. 1892, U.Aberd., against whom the Council found certain convictions for drunkenness proved to its satisfaction, but had suspended judgement. (BRITISH MEDICAL JOURNAL, Supplement, June 1th, 1919, p. 123.)

Dr. Mowat now appeared and submitted letters from a number of medical men and others testifying to his excellent conduct in the interval, and gave an assurance as to his future behaviour.

After the Council had deliberated *in camera*, the PRESIDENT announced the decision as follows:

Mr. Mowat, I have to inform you that the Council has taken note of the testimonials in your favour which you have supplied, and also of your undertaking given here not to offend again; and they do not see fit to direct the Registrar to erase your name from the *Medical Register*. That closes the case.

The Council considered a report by the Dental Committee on a charge against Mr. Thomas Hitchcock Osmer, with regard to whom it was alleged by the complainant, Mr. Edmund A. Lewes, that after Mr. Osmer had been his assistant for thirty-one years, on the breaking of the connexion he endeavoured by wrongful means, having access to the books, to detach a large number of the complainant's clients by sending out certain notices to them. For Mr. Osmer it was stated that he fully recognized now that he had acted irregularly, and expressed regret. At the time he thought he was justified in doing as he did, but he realized that he had overstepped the line of professional etiquette. He had been regarded as the complainant's partner, though technically he was only an assistant.

After the Council had deliberated *in camera*, the PRESIDENT announced its decision as follows:

Mr. Osmer, I have to inform you that on the facts found in the report of the Dental Committee, the Council has not seen fit to direct the Registrar to erase your name from the *Dentists' Register*.

Wednesday, November 26th.

APPOINTMENTS ON COMMITTEES.

THE President (Sir Donald MacAlister) in his personal capacity was appointed, on the nomination of the Scottish Branch Council, a member of the Examination Committee in the place of Dr. Cash; and Dr. Matthew Hay took the place on the Public Health Committee vacated by the President. Sir George Newman was appointed, on the nomination of the English Branch Council, a member of the Public Health Committee in place of Sir Arthur Newsholme, and Dr. J. A. Macdonald a member of the Examination Committee in place of Dr. Elliot Smith.

DUTIES OF THE MEDICAL PROFESSION TO THE STATE.

Dr. J. C. McVAIL said that in May, 1915, he raised the question of giving to medical students instruction in the relation of the practitioner to the State and in medical ethics. The matter was referred to the Education Committee, which brought up a report, and on May 27th, 1916, the Council adopted the following resolution:

Instruction should be given in the courses of forensic medicine and public health, or otherwise, on the duties which devolve upon practitioners in their relationship to the State, and on the generally recognized rules of medical ethics. Attention should be called to all notices on these subjects issued by the General Medical Council.

During these last four years, Dr. McVail said, the various relationships of the profession to the State had become more numerous and definite. In connexion with the Pensions Ministry, for example, the medical profession was now asked to perform what seemed to be the extraordinarily difficult task of assessing percentage of incapacity with a view to a pension. Certification, again, with regard to which the Council had issued a warning notice, was becoming always more onerous and important. The profession had also been drawn into a new relationship to the State with regard to the diagnosis and treatment of venereal disease. In the case of school children, again, medical inspection had extended into treatment. Maternity and child welfare supplied another illustration of the expanding relation of the practitioner to the State. At the present time there were indications that not merely general practitioners but consultants and specialists might be brought into new State relationships. For all these reasons he thought that the attention of the medical schools should again be directed to the resolution of the Council. A most gratifying feature of this session of the Council was the absence of penal cases, and it was possible to hope that by further instruction in medical ethics something might be done towards rendering penal cases considerably infrequent. It would doubtless be asked that this matter be deferred until the whole subject of education in preventive medicine, on which at present the Education Committee was only able to prepare an interim report, had been dealt with; but the questions which arose in connexion with preventive medicine were not exactly new questions, whereas the question he was urging in this resolution was a new question so far as the Council was concerned. If the answer of the schools was that,

owing to the depletion of the teaching staffs and to concentration of work in other directions, there had not been opportunity to act on the lines indicated in the resolution, that would be a reasonable reply, but the effects of the war only furnished an additional argument for bringing this matter again before medical schools, so that if for any reason it had been neglected it might again come up for attention. He moved accordingly:

That it be remitted to the Education Committee to make inquiry as to the instruction which is now being given to medical students on the duties which devolve upon practitioners in their relationship to the State, and on the generally recognized rules of medical ethics, and to report to the next meeting of the Council.

The motion was seconded by Sir JENNER VERRALL, who had seconded the previous resolution. The Council, he said, should make it plain that it did not consider this a small or passing question.

Dr. J. Y. MACKAY, Chairman of the Education Committee, said that he wished Dr. McVail could have left the matter over for a year or two until both his committee and the schools had had an opportunity to put their houses in order; there was this added difficulty at the present time, that so many students were rushing to the schools, which lacked teachers, places, and material to deal adequately with the situation. He would not oppose the motion, but he would be very glad if the proposer and seconder would allow it to stand over for another year.

Professor ARTHUR THOMSON pointed out that many of the schools were not in a position to undertake so serious a financial burden as the suggested instruction might entail. As stress had been laid by the mover upon the importance of impressing upon future practitioners the nature of their relationship to the State, the help of the State might be sought in order that the necessary assistance might be placed at the disposal of the schools.

Dr. J. A. MACDONALD, dealing with this last suggestion, said that he was afraid permanent State officials would have an explanation of the duties which medical practitioners owed to the State not quite on all fours with that which practitioners themselves would give. He was surprised to hear Dr. Mackay using as an argument for opposing the motion the fact that so many students were going into the universities at the present moment. That fact seemed only to strengthen the value of the course the resolution indicated. While it might put an additional strain on the schools and the teachers, it would have the advantage of enabling the future practitioner to go out into the world with some strengthening of what had been the weakest joint in his armour.

Sir JOHN MOORE reminded the Council that the letter which was addressed in 1915 by the Acting Registrar to all the teaching bodies elicited the information that in most cases the subject of the relationship of practitioners to the State was dealt with as part of the regular work in forensic medicine and public health; but there were also a number of instances in which no such instruction was regularly given; he suggested that the Council now should communicate again only with those bodies which in 1915 were not giving such regular instruction.

Professor LITTLEJOHN thought that in most medical schools where there were courses in public health the various laws directly concerning medical practitioners in that respect were expounded, and the same with forensic medicine. Then, again, in connexion with the classes, which were compulsory in many schools, for teaching with regard to venereal disease, the recent legislation on the subject would naturally be brought forward at the very beginning of the instruction; and the same would apply in the case of tuberculosis and other subjects. He believed, therefore, that the student had the opportunity of becoming acquainted with the more important of his responsibilities to the State. With regard to medical ethics, no man could do more than indicate in a couple of lectures the general relation between the medical practitioner on the one hand and the State, the patient, and his fellow practitioners on the other.

Sir GILBERT BARLING said that at the present time the authorities of the medical schools were really overburdened, and every time anything further was asked for it meant more crowding into a medical curriculum already full. As to ethics, he considered that, like education, it was "that which remains when we have forgotten all that we were taught." He did not favour a "short course on ethics," and hoped the matter would not be pressed.

Dr. H. ROY DEAN felt that there was a serious danger in dislocating subjects from their normal environment. Surely, for example, the assessment of disablement was a matter which could be better dealt with by the surgeon.

Sir NORMAN MOORE begged the members of the Council to put away from their minds the idea of having a course of lectures on medical ethics. There were no ethics in the medical profession that did not apply equally to all civilized society. With regard to conduct towards patients and manner of procedure, that was learned by example, chiefly through the student going round the wards with the physician or surgeon to whom he was attached. With regard to the other subjects it was inevitable that in relation to preventive medicine, for example, there must be gaps in the medical education, however much the curriculum was rearranged.

Dr. MATTHEW HAY thought that there should be separate courses in public health and forensic medicine. If medical ethics was to be taught, he would prefer that it should be by some one in practice rather than by a regular teacher.

Dr. McVAIL said, in reply, that the Council was committed by its previous resolution to the opinion that this instruction should be given. The question of whether there should be a separate course for ethics or not did not arise. All that he asked the Council to do was to remit the matter again to the Education Committee to make inquiries as to the instruction which was now being given. Sir John Moore had put forward a fair case for limiting the inquiry to those bodies which did not make a positive reply in the first instance, and he was prepared to modify his resolution in accordance with that suggestion.

After some further discussion as to the form of the motion, it was agreed to insert the word "further" before the word "inquiry," so as to make it plain that the Education Committee was merely continuing its investigation, and not starting a fresh one. With this modification the motion was carried, 16 voting in its favour, and 11 against. It was agreed that Sir George Newman and Dr. McVail should be co-opted members of the Education Committee for this special purpose.

THE TEACHING OF PREVENTIVE MEDICINE.

Dr. J. Y. MACKAY presented the report of the Education Committee on the teaching of preventive medicine. He said that, in accordance with the previous instruction, a communication asking for observations on the organization of medical teaching in the schools, with a view to enabling the student to realize the meaning and importance of preventive care, had been issued to forty-one medical schools and clinical hospitals in the United Kingdom. Only twelve replies had been received, although the attention of the bodies had been called to the matter a second time. It was now suggested that another notice should be sent to them, more exactly defining the term "preventive medicine," on which there might be some misunderstanding, and also that the interim report now presented, containing the replies of the twelve bodies which had been received should be sent out to the other bodies, in the hope that this might be the means of eliciting a further response. In the circumstances his committee could only issue the report as an interim one, and it was hoped that at the next session a complete report might be forthcoming.

Dr. F. G. HOPKINS supported the suggestion to send the report to the teaching bodies. He noticed that, among others, no answer had been received from the University of Cambridge—except from an individual professor—and this was because the original questionnaire was not understood.

It was agreed to adopt the report and to circulate it among the teaching bodies.

The Apothecaries' Hall of Ireland.

Dr. NORMAN WALKER presented the report of the Examination Committee and moved certain recommendations, two of which related to the Apothecaries' Hall. The first of these requested the Hall to continue to furnish tables of exemptions from and results of examinations as heretofore, and the second postponed the appointment of a deputy to attend on behalf of the Council the professional examinations held by the Hall. Dr. Norman Walker explained that this latter course was recommended in view of the impending resumption of visitation and inspection of all Final Examinations by the Council.

The recommendations were agreed to, and Dr. MAGENNETS said that he recognized and fully appreciated the action of the Council, which would have no reason to regret its action in waiving for a time the appointment of a deputy.

Teaching of Ophthalmology and Certain Other Subjects.

Dr. NORMAN WALKER, on behalf of the Examination Committee, moved a further recommendation, which was agreed to, affirming that the Council would welcome further communications from the licensing bodies showing how their regulations were in accord with the Council's recommendation in regard to the teaching of ophthalmology; and yet another, that an inquiry should be addressed to the licensing bodies as to the provision made for ascertaining the knowledge of the diseases of the ear, throat, and skin possessed by candidates for medical qualification.

The PRESIDENT, speaking with regard to this last, said that it was a somewhat unusual course for a committee to make a recommendation without any reference to the subject in the preamble of the report. He also said that to pile inquiries upon the Education Committee in the first instance and upon teaching bodies in the second was not the way to get satisfactory replies.

Sir JOHN MOORE asked where this process of inquiry would end. Dr. RUSSELL said that the recommendation was put forward in order to bring these subjects into line with what the Council had already determined with regard to ophthalmology. Dr. NORMAN WALKER, in deference to the feeling of the Council, withdrew the recommendation on this occasion.

Resumption of Inspection and Visitation of Qualifying Examinations.

The PRESIDENT submitted a report from the Education and Examination Committees conjointly on the question of resuming the inspection and visitation of qualifying examinations. The Joint Committee advised that such inspection and visitation should be resumed early in 1920, and that the Executive Committee at its meeting in February should make the necessary arrangements and, after receiving suggestions of suitable names from the members of the Joint Committee, appoint three inspectors in medicine, surgery, and midwifery respectively for a period of two years in the first instance.

The President added that it was necessary that power should be given to the Executive Committee. A working plan could be easily formulated by February, but if the subject were allowed to wait over until the next session of the Council it would be impossible to start until the beginning of the following academic year. On the previous occasions it was arranged that members of the Council should be invited to volunteer to act as visitors, and it was proposed again to approach them in due time with a view to getting a sufficient number to serve in that capacity; the Council would thus have useful information with regard to examinations apart from the reports of the inspectors.

The report was adopted.

Thursday, November 27th.

Laboratory Instruction at the Royal Naval College.

Sir JOHN MOORE, in submitting the report of the Public Health Committee, said that it was proposed to send a letter to the Medical Department of the Admiralty asking that a syllabus of laboratory instruction proposed to be given at the Royal Naval College might be submitted to the licensing bodies which grant diplomas in public health. This recommendation and the report were approved.

THE TEACHING OF MIDWIFERY.

Dr. J. Y. MACKAY referred to a report by the Committee of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine on the teaching of midwifery in the schools (BRITISH MEDICAL JOURNAL, August 30th and September 13th, 1919). It would, he said, be very carefully considered by the Education Committee of the Council and a report presented. The Committee recommended that an inquiry should be addressed to the various teaching centres as to the extent to which they had been able to carry out the recommendations the Council formulated on the subject in 1906.

Sir FRANCIS CHAMPNEYS said that midwifery had been the Cinderella in medical education, but it had come into greater prominence lately because of the new interest in

maternity welfare generally. Medicine and surgery had to deal with abnormalities, while midwifery dealt with the normal, and was largely at the foundation of the health of women. In his opinion a satisfactory solution of the difficulty of teaching midwifery would not be found until thoroughly equipped lying-in wards could be provided for teaching purposes. At present there was not only the building difficulty, but the diminishing birth-rate meant a scarcity of teaching material. The whole medical curriculum would have to be reconsidered. There could not be a proper rota or succession of cases unless there were a certain number of beds, and it would be wasteful for each London teaching school to have its separate lying-in wards; rather should there be a large centre for such teaching. The medical curriculum could not be indefinitely prolonged unless the extra sum to be spent on the education of the doctor were returnable in a more generous scale of emolument.

The recommendation was adopted.

Reports of Committees.

Sir NORMAN MOORE submitted the reports of the Pharmacopoeia and Students' Registration Committees, and both were agreed to without discussion. The Council considered the report of its Executive Committee *in camera*.

Dental Education and Examination.

Sir CHARLES TOMES, Chairman of the Dental, Education, and Examination Committee, presented a report which, after a brief introduction, consisted wholly of an account of the manner in which various applications for registration on the colonial or foreign lists had been dealt with. He said that at the time the *Dentists' Register* was formed there were very few reputable dental qualifications, and therefore it was so drawn that recognition of qualifications other than British should be limited to those persons who naturally might be expected to take other than British qualifications. The object was to prevent persons going hither and thither seeking to obtain a cheap qualification. The result now was that the Council's hands were much tied in the recognition of foreign and colonial qualifications. Sometimes a qualification could not be recognized purely on its merits, and regard must be had to whether the claimant came under the provisions of the Act. A colonial applicant either must not have been domiciled in the United Kingdom or must not have practised for more than ten years in the United Kingdom, and in order to get on to the colonial list he must present a colonial qualification. To get on to the foreign list he must either not be a British subject, or must have practised for more than ten years elsewhere than in the United Kingdom. The effect was to rule out many qualifications which, on their merits, might commend themselves to the Committee. This was the idea at the root of the treatment of exceptional cases.

Sir JOHN MOORE pointed out that Section 7 of the Act required only application to the Registrar with payment of the fee, and it was unfair to require Irish, Scottish, and provincial men to communicate direct with London; many had come up personally to carry through their registration.

The matter was not pursued, and the report was duly received and adopted.

CONCLUSION OF PROCEEDINGS.

The usual arrangements for dealing with urgent business arising before the next session were made, and the Council rose after according a vote of thanks to the President for his conduct of the chair.

RECIPROCITY WITH ALBERTA.

The PRESIDENT in his address (SUPPLEMENT, November 29th, p. 130) said that the Order in Council applying Part II of the Medical Act, 1886, to the province of Alberta, Canada, had just been issued. In consequence the Registrar of the Council has been instructed as follows:

(a) That any person who holds the Licence (or Membership) of the College of Physicians and Surgeons of Alberta, granted after examination in Medicine, Surgery, and Midwifery by the University of Alberta, together with the Licence to practise in the Province, shall be entitled to be registered in the Colonial List of the *Medical Register*, provided he satisfies the Registrar

of the General Medical Council regarding the other particulars set forth in Part II of the Medical Act, 1886;

And (b) to direct the Registrar to register in the Colonial List of the *Medical Register* any person who holds the Licence (or Membership) of the College of Physicians and Surgeons of the North-West Territories, obtained after examination in Medicine, Surgery, and Midwifery, together with the Licence of the College of Physicians and Surgeons of the Province of Alberta (both facts to be certified by the Registrar of the College of Physicians and Surgeons of Alberta), provided he satisfies the Registrar of the General Medical Council regarding the other particulars set forth in Part II of the Medical Act, 1886.

APPOINTMENTS.

BATES, William, L.R.C.P. and S.Edin., L.R.F.S.Glasg., D.P.H., Radiologist and Electro-therapeutic Physician, North Canterbury and Christchurch Hospital, New Zealand.

BIRD, G. W. H., M.B., B.C.Cantab., Medical Officer of the Bridgewater Union Institution.

BOYD, W. H., M.R.C.S., L.R.C.P., Assistant Medical Officer of the Infirmary, St. Mary Abbott's, Kensington Parish.

BRYAN, C. W. G., M.C., F.R.C.S., Surgeon to Out-patients at the Hampstead General and North-West London Hospital.

GOODALE, C. C., M.R.C.S., L.R.C.P., Medical Officer, District and Cottage Homes, Kendal Union.

MOORE, Percy, M.B., Ch.B., D.P.H., Assistant Medical Officer of Health, Dorset County, has been appointed County Medical Officer of Health and School Medical Officer to the County of the Isle of Ely.

SALEFORD ROYAL HOSPITAL.—Anaesthetists: William A. Helm, M.B., Ch.B.Manch., J. Ghosh, F.R.C.S.I., D.P.H.Dubl., L.M.

DISTRICT MEDICAL OFFICERS.—R. H. Allport, M.R.C.S., L.R.C.P. (Malden Union), W. L. Brown, M.B., C.M. (Auckland Union), R. W. Eddie, M.B., Ch.B., and J. S. Soutter, M.R.C.S., L.R.C.P. (Sculcoates Union), S. R. Glead, M.R.C.S., L.R.C.P. (Barnet Union), A. L. Heiser, M.R.C.S., L.R.C.P. (Staines Union), V. Lloyd-Evans, M.R.C.S., L.R.C.P. (Holywell Union), J. C. MacWatters, M.R.C.S., L.R.C.P. (Thornbury Union), F. E. W. Rogers, M.B., B.C. (North Wiltshire Union), J. E. S. Smith, M.B., B.S.Lond. (Luton Union), F. A. Unwin, L.M.S.S.A. (Downham Union), J. B. Wallace, M.B., C.M.Glasg. (Wandsworth Union), B. Whitehead, M.R.C.S., L.R.C.P. (Salisbury Union).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

ALLAN.—On November 28th, at Battersea Park, London, the wife of C. H. Allan, W.A.M.S., of a daughter.

DAVIES.—On the 22nd November, at Charlemont, Oakcroft Road, Lewisham, to Violet (née Ake), the wife of Arthur Davies, M.D., M.R.C.P., a son.

MARRIAGE.

DONALDSON—GILROY.—On November 26th, 1919, Malcolm Donaldson and Evelyn Gilroy, at St. Peter's Church, Worfield, Shropshire.

DEATH.

GRAY.—On November 23rd, Temporary Captain William Harrington Gray, R.A.M.C., of 169, Auckland Hill, West Norwood, in his 44th year.

DIARY FOR THE WEEK.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, W.I.—Monday, 8.30 p.m., Professor Arthur Keith, F.R.S.: The True Nature of the Condition known as Multiple Exostosis. Dr. Bernard H. Spilsbury: The Medico-Legal Significance of Haemorrhage.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Bradshaw Lecture by Sir Charles A. Ballance, Thursday, 5 p.m.: The Surgery of the Heart.

POST-GRADUATE COURSES AND LECTURES.

BROMPTON HOSPITAL FOR CONSUMPTION, S.W.—Wednesday, 4.30 p.m., Dr. Imman: Examination of Sputum.

FELLOWSHIP OF MEDICINE, 1, Wimpole Street, W.—Monday, noon, Dr. H. W. Barber: Focal Infections in Certain Diseases of the Skin. Tuesday, noon, Dr. W. Harris: Facial Neuralgia and Facial Spasm. Wednesday, noon, Mr. A. W. Ormond: Sympathetic Ophthalmia; 5 p.m., Dr. Jobson Horne: Tuberculosis of the Larynx. Thursday, noon, Mr. H. W. Carson: Abdominal Pain in Children; 5 p.m., Dr. J. Strickland Goodall: Arteriosclerosis.

MANCHESTER ROYAL INFIRMARY.—Tuesday, 4.30 p.m., Mr. Alexander Wilson: Toxic Symptoms of Salvarsan.

ROYAL EYE HOSPITAL, Southwark, S.E.—Tuesday, 5 p.m.: Eye Injuries. Wednesday, 5 p.m.: Use of X Rays and Magnet in Injuries. Thursday, 5 p.m.: Heterophoria.

ROYAL SOCIETY OF MEDICINE.—War Section: Monday, 5.30 p.m., paper by Lieut.-General Sir John Goodwin, K.C.B. Section of Psychiatry: Tuesday, 5.30 p.m., paper by Dr. Henry Devine: The Psychogenic Psychoses. Section of Neurology: Thursday, 8.30 p.m.: Cases illustrating certain Late Effects of Injuries of the Nervous System. Clinical Section: Friday, 5 p.m.: Paper by Mr. C. Firmin Cuthbert (Gloucester). Cases.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
DECEMBER.	
9 Tues.	Leicester and Rutland Division, Leicester, 3.45 p.m.
12 Fri.	South Essex Division informal dinner, Hotel Victoria, Southend-on-Sea.
17 Wed.	London: Council.

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, DECEMBER 13TH, 1919.

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British Medical Association.

THE ANNUAL MEETING, CAMBRIDGE, 1920.

THE arrangements are going steadily forward for the Eighty-eighth Annual Meeting of the British Medical Association, to be held next summer at Cambridge, under the presidency of Sir Clifford Allbutt, K.C.B., F.R.S., Regius Professor of Physic in the University. The Association has twice before met in Cambridge. The first occasion was in 1864, with Sir George Paget as president, and the second in 1880 under the presidency of Sir George Murray Humphry.

The proceedings will open on Friday, June 25th, 1920, when the Representative Body will begin its annual meeting, the sessions being continued on the following week-days. Council meetings have been provisionally fixed for the mornings of Monday, Wednesday, and Friday. The statutory Annual General Meeting will be held at 2.30 p.m. on Tuesday, June 29th, on which day the social and scientific business of the Annual Meeting will commence with the delivery by Sir Clifford Allbutt of his presidential address to the Association in the Senate House at 8.30 p.m. The sectional meetings for scientific and clinical work will be held on Wednesday, June 30th, Thursday, July 1st, and Friday, July 2nd, the mornings (from 10 a.m. to 1 p.m.) being given up to discussions, and the afternoons (from 3 o'clock) to clinical and laboratory demonstrations, of which a special feature will be made.

The list of Sections and their Presidents is as follows (the first five sections will meet on each of the three days; the remaining seven sections will meet each on one day):

Medicine: Sir Humphry D. Rolleston, K.C.B.
Surgery: Sir George H. Makins, G.C.M.G., F.R.C.S.
Neurology and Psychiatry: Dr. Henry Head, F.R.S.
Pathology and Bacteriology: Professor J. Lorrain Smith, F.R.S.
Physiology and Pharmacology: Professor F. Gowland Hopkins, F.R.S.
Obstetrics and Gynaecology: Dr. Herbert Williamson.
Tropical Medicine: Professor G. F. H. Nuttall, F.R.S.
Naval and Military: Colonel Joseph Griffiths, C.M.G.
Venereal Diseases: Mr. E. B. Turner, F.R.C.S.
Electro-Therapeutics: Dr. A. E. Barclay.
Medical Education: Sir George Newman, K.C.B.
Medical Sociology: Dr. G. E. Haslip.

There will be religious services on Wednesday, June 30th, at 5 p.m., and on the same day will be held the Secretaries' Conference and dinner. The Annual Dinner has been fixed for Thursday at 7.30, and on Friday evening a popular lecture will be delivered by Dr. G. S. Graham-Smith, F.R.S. Saturday, July 3rd, the last day of the meeting, will be set apart for excursions to places of interest in the neighbourhood. The Guildhall, in the centre of the town, has been secured for use as a reception

room, and the Annual Exhibition will be held in the Corn Exchange.

There will be ample accommodation for the discussions within the various sections in the lecture theatres and classrooms of the New Museums, which fill up a great part of the space between the market place and Pembroke Street, and overflow Downing Street. The new medical school buildings, where most of the afternoon demonstrations will be given, were opened by King Edward VII in 1904. The main block contains the departments of medicine, surgery, midwifery, and pharmacology, and provides partial and temporary accommodation for the departments of public health, medical jurisprudence, and pathology. Within this range of buildings is the Humphry Museum, commemorating the services to the University of Sir George Murray Humphry, as professor of anatomy and later as the first professor of surgery. Further accommodation for the laboratory demonstrations will be available near at hand, in the new buildings of the department of physiology on the Downing estate. Dr. J. Aldren Wright will act as Director of Demonstrations in the Section of Medicine, Sir G. Sims Woodhead, K.B.E., in the Section of Pathology and Bacteriology, Professor J. N. Langley, D.Sc., F.R.S., and Professor W. E. Dixon, F.R.S., in the Section of Physiology and Pharmacology, and Mr. Arthur Cooke, F.R.C.S., in the Section of Surgery. The honorary local secretaries of the Annual Meeting are Dr. J. F. Gaskell, The Uplands, Great Shelford, near Cambridge, and Dr. G. S. Haynes, 58, Lensfield Road, Cambridge.

CURRENT NOTES.

British Medical Association Lectures.

It will be remembered that the Council, at its meeting in April last, approved the recommendation of the Science Committee as to the institution of a scheme for providing British Medical Association lecturers. We are glad to record that Divisions and Branches are availing themselves of this opportunity for securing the attendance of leading authorities to give lectures to the members of the profession in their localities on some subject of special interest and importance. The success of the first two lectures has been most encouraging. The first was given to the Sheffield Division, on October 24th, by Dr. Thomas Lewis, F.R.S., on cardinal principles in cardiological practice; the second was given at Southampton to the Southern Branch, by Sir Thomas Horder, who spoke upon preventive treatment in influenza. Full reports of each lecture have been given in the JOURNAL of November 15th and 29th respectively. Arrangements have now been made for a lecture to be given to the Norfolk Branch, at Norwich on December 19th, by Sir Humphry Rolleston, on the dyspeptic and other remote symptoms associated with the presence of gall stones; and for a lecture to the Nottingham Division on January 7th, 1920, by Dr. Bernard Hart, on modern methods of treatment in functional nervous disorders.

Ministry of Health Committee.

The Council at its last meeting reappointed a special Ministry of Health Committee to consider and report from time to time what should be recommended to the Minister of Health as being the ideal system of medical and allied services which would receive the support of the profession and towards which the Government should work. It was felt that the first stage of the Committee's work had been completed and that the views of the Association had to a very large extent been adopted by the Government in the Ministry of Health Bill and by the Minister in setting up his Consultative Councils. It will be the duty of the new Committee to press on the Minister the views as to the future which it conceives to be those of the profession in general, and thus to aid the Consultative Council in framing a comprehensive and efficient scheme of medical services. The following were appointed members of the Committee: The officers of the Association, Dr. M. G. Biggs (London), Dr. H. B. Brackenbury (Hornsey), Dr. H. J. Cardale (London), Dr. J. F. Gordon Dill (Hove), Sir Bertrand Dawson (London), Dr. E. J. Domville (Bridport), Mr. W. McAdam Eccles (London), Dr. C. E. S. Flemming (Bradford-on-Avon), Dr. E. R. Fothergill (Hove), Dr. P. V. Fry (Sowerby Bridge), Mr. N. Bishop Harman (London), Sir T. Jenner Verrall (Bath), Mr. E. B. Turner (London), together with representatives of the following bodies: The British Dental Association, the Society of Medical Officers of Health, the Poor Law Medical Officers' Association, and the Medical Women's Federation.

Machinery of the Association.

A special subcommittee is at present giving preliminary consideration to Minute 167 of the Annual Representative Meeting to the effect that a scrutiny of the local and central machinery of the British Medical Association should be made, with a view to discovery of any defects and their correction. The subcommittee invites members to forward to the Medical Secretary, 429, Strand, W.C.2, any comments or suggestions on this subject that they may have to offer. In sending them it will be helpful if members will kindly do so under one or more of the following heads: (1) Membership and subscription, (2) relation of Divisions and Branches, (3) position of Council and Representative Body, and (4) any other points.

The Middlemore Prize, 1920.

The Middlemore Prize, awarded from a fund endowed by the late Richard Middlemore, F.R.C.S., of Birmingham, consists of an illuminated certificate and a cheque for £50. It is awarded usually every three years for the best essay or work on a subject selected by the Council of the British Medical Association in any department of ophthalmic medicine or surgery. The last award was made in 1917 to Captain William Clark Soutar, R.A.M.C.(T.F.), for an essay on "Disorders of the eye and of its functions induced by war injuries not directly affecting the eye." In accordance with an instruction of the Science Committee of the Association, Lieut.-Colonel R. H. Elliot and Sir W. T. Lister were selected to choose a suitable subject for the Middlemore Prize to be awarded in 1920. It was announced at the last meeting of the Science Committee, held on December 4th, that they had recommended the following subject for the approval of the Council—"Perimetry and scotometry, their methods and value to the ophthalmic surgeon." An advertisement giving particulars will appear in the course of the next few weeks.

Research Scholarship

On the recommendation of the Science Committee the Council has elected Dr. H. A. W. Compton to an ordinary research scholarship of the British Medical Association for the year 1920. The ordinary research scholarships (three in number) are awarded to candidates whom the Science Committee recommends as qualified to undertake research into some subject relating to the causation, prevention, or treatment of disease. The subject approved for the research to be undertaken by Dr. Compton is "investigation of cellular enzymes (especially blood and tissue ferments) with special reference to the determining general laws of action, in view of ascertaining the part, if any, which these biochemical reagents play—and the method of controlling their activities—in such pathological processes as those met with in the problem of cancer and other diseases."

Profiteering in Medicinal Preparations.

The Profiteering Act Department of the Board of Trade recently informed the British Medical Association that it was proposed by the Standing Committee for the Investigation of Prices to form a subcommittee to inquire into the exact position of the price of aspirin and other medicinal preparations. The Association was asked to nominate a representative on this subcommittee, and Dr. C. O. Hawthorne (London) has consented to act for the Association.

Meetings of Branches and Divisions.**NORTH OF ENGLAND BRANCH.****Post-graduate Course.**

At the conclusion of the monthly winter scientific meeting of the North of England Branch, held at the Royal Victoria Infirmary, Newcastle-on-Tyne, on November 21st, a general meeting was held to receive the report of the committee appointed to go into the scheme of the proposed extension of post-graduate instruction. Twenty-nine practitioners signified their intention of joining the class.

It was decided to hold a meeting from 2.30 to 5.30 p.m. every Friday for twelve consecutive weeks from January 9th, 1920, onwards. The already arranged winter scientific meetings on January 16th, February 20th, and March 19th are to form three of these twelve meetings. A fee of £3 3s. for the course (payable in advance) is to be charged. Meetings will be held at either the Royal Victoria Infirmary, Newcastle, or the College of Medicine, Northumberland Road, Newcastle, or at both places on one day.

Time Table.

2.30 to 3.15 p.m. and 3.15 to 4 p.m.—Two practical demonstrations in medicine or surgery, where the post-graduate students will personally handle the cases.

*4 to 4.30 p.m.—Tea, at the College of Medicine Students' Café.

4.30 to 5.30 p.m.—Demonstration or address.

Syllabus.

The following is the proposed syllabus for nine meetings. The number of demonstrations in each subject is given in brackets:

- The early diagnosis of pulmonary tuberculosis; practitioners to be invited to bring their own cases (2).
- Systematic examination of nervous diseases, together with diagnostic points (5).
- Venereal department (3).
- Diagnosis of uterine diseases (2).
- Abdominal emergencies (2).
- Operations: herniae, haemorrhoids, circumcision, amputation of the fingers, empyema, suprapubic cystostomy, tracheotomy, acute osteitis, catheterization of the bladder, lumbar puncture (3).
- Surface anatomy (2).
- Diagnosis and treatment of all fractures (3).
- Treatment of diabetes (1).
- Morbid anatomy of blood diseases (1).
- The clinical aspect of blood diseases (2).
- Post influenza sequelae (1).
- Thyroid disorders (1).
- Routine post mortem examination (1).

It is intended to hold a more ambitious three months' post-graduate course from mid-April to mid-July next. It is then intended to have four classes running concurrently. The size of each class is to be limited in order to ensure individual attention to the members of the class.

The names of medical practitioners wishing to join the class should be sent at once to Mr. R. J. Willan, F.R.C.S., 6, Kensington Terrace, Newcastle-on-Tyne.

METROPOLITAN COUNTIES BRANCH.

A SPECIAL general meeting of the Branch was held at 429, Strand, W.C., on November 11th, with Mr. W. McADAM ECCLES, President of the Branch, in the chair, to consider the adoption of revised Ethical Rules for the Branch, in accordance with the following Minute passed by the Branch Council on October 14th, 1919:

That the Council advise the Branch to adopt the revised Ethical Rules, and that a copy of the same be circulated to every member of the Branch beforehand.

The Chairman reported that in accordance with Minute 176 of the Representative Meeting of July, 1919, all the Divisions and Branches were urged to adopt the revised rules governing procedure in ethical matters. The rules had been drafted in close co-operation with the legal advisers of the Association, adopted by the Annual Representative Meeting, and he thought

* This time to include the journey between the infirmary and the College of Medicine when this is necessary.

they did not need any detailed consideration. If the Branch wished to be in possession of rules by which it could make its decisions binding on its members, and, when necessary, undertake ethical investigations, it was necessary to adopt these revised rules.

Dr. LANGDON-DOWN (Chairman of the Central Ethical Committee) moved:

That the Metropolitan Counties Branch hereby adopts the revised rules governing procedure in ethical matters of a Branch composed of several Divisions, as approved by the Annual Representative Meeting, 1919, without modification and in substitution for any ethical rules now in use by the said Branch.

He said it was a matter of profound importance, both to the Association as a whole and to the Branch concerned, that the members should have a clear understanding of the reasons for the adoption of such rules. The position concisely was that if the Branch did nothing now, after December 31st, 1919, it would be without any ethical rules. The rules came down from the Representative Meeting, counsel's opinion had been taken, and the members might take it that they had been prepared with the utmost care under legal advice. The rules retained the fullest possible powers which in the opinion of counsel they could take. Dr. Langdon-Down then discussed the need for having rules of this kind and the value of an ethical tribunal; he pointed out the reasons why such work should be undertaken by the Association, and the immense importance of this work to members in many industrial districts, and he appealed to the members of the Metropolitan Counties Branch, where the conditions were not quite the same, to support strongly the demand for this protection which came from the other Branches.

Dr. JAMES NEAL seconded the motion, and stated that he remembered the position of affairs which existed prior to any code of ethical rules being formulated. Every man was then a law unto himself, and it was impossible now to revert to that chaotic state of affairs. He felt that medical practitioners in every area should be in a position to set up a tribunal not only to adjust professional differences which might arise, but also to control the terms and conditions upon which appointments in these areas might be held, and that when necessary an investigation concerning the professional conduct of individual practitioners could take place. He hoped the Metropolitan Counties Branch would set an example to other Branches and Divisions by adopting the rules. He was satisfied, after having had intimate knowledge of the discussions with counsel, that they now had a code of rules which furnished the maximum of protection with the minimum of risk. He felt that the ethical procedure was essential in these days when it behoved the profession to uphold its honour and dignity, and he hoped therefore the rules would be adopted. He realized that a man could not be made honourable by regulation, but though these rules did not impose penalties he believed a man who might not hesitate to defy the opinion of his immediate neighbours and rivals would shrink to incur the censure of a properly constituted professional tribunal, and there was no body so competent to form a tribunal as the British Medical Association.

Dr. M. G. BIGGS (a former chairman of the Central Ethical Committee) supported the resolution and drew attention to the alteration in Rule 29 in which mandatory words were replaced by "undesirable."

Dr. C. O. HAWTHORNE said that he and others had opposed the former rules in so far as they had attempted to extend the authority of the Association to non-members and because in certain respects they penalized the patient in the endeavour to punish the practitioner. Events had justified this opposition. He agreed that ethical rules were necessary, and in view of what had been urged by the responsible authorities of the Association he felt compelled to accept the present scheme, though personally he would have preferred a much more radical modification of the penal clauses.

The CHAIRMAN said he knew the other Branches and Divisions were looking to the Metropolitan Counties Branch for a lead, and urged that they be adopted unanimously.

The motion for the adoption of the rules was then put and carried unanimously.

SOUTH MIDLAND BRANCH: NORTHAMPTONSHIRE DIVISION.

A MEETING of the Northamptonshire Division was held at the General Hospital, Northampton, on December 5th, when Colonel W. H. BULL was in the chair. It was decided to urge practitioners in this area, if they had not already done so, to increase their pre-war fees by not less than 50 per cent.

An address was given by Dr. ALFRED COX, O.B.E., Medical Secretary of the Association, on "The British Medical Association: its work and its critics." A good discussion followed.

Association Notices.

MEETING OF COUNCIL.

THE next Meeting of Council will be held on Wednesday, December 17th, in the Council Room, 429, Strand, London, W.C. 2., at 10 a.m.

BRANCH AND DIVISION MEETINGS TO BE HELD.

SURREY BRANCH.—Dr. Cecil P. Lankester, Honorary Secretary (1, Rectory Place, Guildford) gives notice that a general meeting of the above Branch will be held at the offices of the Association, 429, Strand, on Wednesday, December 17th, at 3.30 p.m., to consider amended ethical rules of the Branch.

MEDICAL REMUNERATION.

CONFERENCE BETWEEN THE MINISTER OF HEALTH AND THE INSURANCE ACTS COMMITTEE.

THE following is the report of a Conference held on December 4th, 1919, at the Ministry of Health, between Dr. Addison and representatives of the Insurance Acts Committee of the British Medical Association. There were present:

The Minister, Sir Robert Morant, Sir George Newman, Mr. Harris, Dr. Meredith Richards, Dr. McCleary, Dr. Pearse, Dr. Smith Whitaker, Mr. Strohmenger (part of time), Mr. Crooke.

Sir T. Clifford Allbutt (President of the Association), Dr. A. Cox (Medical Secretary), Dr. H. B. Brackenbury (Hornsey), Dr. H. G. Cowie (London), Dr. H. G. Dain (Birmingham), Dr. H. Rutter (Newcastle-on-Tyne), Dr. T. Ridley Bailey (Bilston), Dr. J. P. Williams-Freeman (Weyhill), Dr. A. Linnell (Pamlersbury), Dr. J. R. Drever (Scottish Medical Secretary), Dr. E. R. Fothergill (Hove), Dr. J. D'Ewart (Manchester), Dr. G. E. Haslip (London), Dr. E. N. Nason (Nuneaton), Dr. G. C. Anderson (Deputy Medical Secretary), Dr. P. Macdonald (York), Dr. J. Orton (Coventry).

Sir CLIFFORD ALBUTT, after expressing his gratification at the establishment of the Ministry of Health, stated that some twenty years ago the parallel to the present insurance practice was club practice, where the average capitation fee was 4s. a head. In some cases the service given was poor, but in other cases expensive drugs were used, and the service on the whole was not unsatisfactory. The club doctor, however, did not entirely depend on his club practice for a living, and not infrequently this part of his work resulted in a loss. With the passing of the Insurance Act the capitation fee had to be regarded in the majority of cases as a sum which should provide reasonable remuneration for a doctor whose insurance patients occupied the greater part of his time. They had now to consider:

- (1) The fall in the value of money, with which he did not propose to deal himself; and
- (2) The increased demands on the doctor and the improved standard of work.

In his experience, in consulting practice a patient required one hour of the doctor's time for work for which twenty years ago a quarter of an hour would have been regarded as ample, and this applied to a lesser degree to general practice. He also referred to the increased cost of medical training, especially at the universities, and emphasized the need of a good standard of remuneration in order to attract young men of the best type to take up insurance practice.

Dr. BRACKENBURY said that the recent Panel Conference called by the British Medical Association passed a resolution maintaining the opinion that 13s. 6d. was the lowest figure that could be paid, as a flat rate, for an efficient service. He explained that some members of the Conference had pressed for a higher fee, but 13s. 6d. represented what the Insurance Acts Committee and the Conference generally regarded as a reasonable and irreducible amount, the same fee to be applicable to Scotland. For the purposes of the present meeting the Conference had added to the Committee Dr. D'Ewart, Dr. Orton, and Dr. Peter Macdonald, who were prepared to give their experience on special points. Dr. Brackenbury laid emphasis on the amount of time necessary to deal satisfactorily with patients as compared with twenty years ago, and said that the general experience was that insured persons were increasingly appreciating their opportunities, and were increasingly asking the insurance doctors to visit them at their homes. They had particularly in mind the requirement of a high standard of service. Expectations of a high standard had not always been justified, but in order to establish the service on the highest possible level the terms must be adequate. They regarded this as a unique opportunity for setting the general practitioner service of the industrial population, and ultimately of their dependants also, on a proper basis, of fixing its status and determining its character in a way which would be of the highest advantage to the community, and would fit it in as a completely satisfactory part of the larger complete provision for the health of the people under the control of the Ministry of Health. He quoted passages from Sir George Newman's

memorandum on Preventive Medicine as indicating the view that the general practitioner must be regarded as the pivot of medical service, and that it was only by effort on the part of the general practitioner that research work would make headway. The general practitioner service must be supplemented by specialist service, but it must itself be of the highest grade, and in order to attract men of the best quality it was necessary to offer sufficient remuneration; 13s. 6d. was the figure which, in their view, would be the minimum necessary to provide this.

Dr. DAIN said he proposed to deal with the extra work involved as a direct result of the war, from his own personal experiences. Men discharged from the army as permanently unfit were treated on the attendance basis, and records showed that each man in this class required, on an average, double the attendance of the ordinary insured person. As for demobilized men, they had not the pension and the special treatment which were important factors in considering the "invalided" class, but, at the same time, were very often suffering from disabilities when demobilized. He instanced the cases of men suffering from bronchitis and rheumatism, who were often permanent invalids in the winter, and, in any case, required constant treatment; and also cases of disordered heart, neurasthenia, malaria, and dysentery. This all meant a tremendous increase in work for the doctor. He was able to speak from experience as his practice had a panel of 2,500. It had been argued that men had benefited in health owing to military training. He agreed that up to a certain stage of the war this was so, but beyond that point, as the war dragged on, the strain had caused them to lose more than they had gained. This showed itself on their return to civil life. The only class of men who could really be said to have permanently benefited by their training were those who were in training at the time of the armistice and had not had war service. He agreed, as regards civilian workers, that there was a tendency to improvement in health owing to economic conditions; but as in order to earn high wages they had had to work constant overtime, owing to this and the general war strain on everyone this improvement was largely counteracted.

Dr. D'EWART produced a statement showing records of attendances in Manchester since 1913. He explained that in Manchester insured persons were treated on an attendance basis, and the doctor paid for work done. He stated that in 1913 claims were made for 1,400 operations, and in 1918 only for 118. Figures for anaesthetics were 192 in 1913 and only 8 in 1918. It was evident from these figures that insurance doctors disposed of the majority of their difficult cases by sending them to hospitals. As regards visits, the number paid in 1913 was about 250,000, and in 1918 only just over 200,000. Surgery attendances in 1913 were 1,250,000, and in 1918, 866,000. These figures were based on approximately the same number of insured persons over the whole period. His claim was that the insurance practitioners had consciously designed their work to represent a fair return for the remuneration they received. Even on this restricted service the insurance doctor in Manchester was being paid less than half what he was paid by guardians for treating patients under the Poor Law. He himself had suggested to his insured patients that they were not paying enough in contributions, and he thought that this was fairly generally recognized. The better type of doctor was dropping off the list. Since 1913 only one doctor who was not originally on the panel had come on the panel, and from ten to twelve had resigned.

Dr. LINNELL said that rural doctors had suffered in the operation of the Insurance Act, as they were required to treat many persons, such as the domestic servants of their well-off patients, in respect of whom they had previously received very good fees; they were very hardly hit owing to the increase in the cost of petrol, and wages of chauffeurs and other employees had doubled; they were also at a disadvantage, as compared with the urban practitioners, as they could not send their difficult cases to hospitals, but had to treat them themselves. In his experience patients expected about double the time that they formerly did, and this was confirmed by inquiries he had made among his colleagues.

Dr. COWIE said that as regards practice in the industrial districts of London the number of doctors was quite inadequate, and in order to secure a better supply the

remuneration must be largely increased. The new limit of 3,000 would go some way towards meeting this difficulty, but the quality of the service would continue to be bad unless the remuneration was improved. The large number of institutions in London resulted in the general practitioner passing on his troublesome cases to hospital, and treating minor ailments only. Some sort of a service could doubtless be secured for less than 13s. 6d., but it would not be a satisfactory service unless the best elements in the profession were included.

Dr. P. MACDONALD explained that he was not a general practitioner nor an insurance practitioner, but as chairman of a Panel Committee and vice-chairman of an Insurance Committee he said with some confidence that the insurance service was and is regarded as unsatisfactory owing to (a) its incompleteness, and (b) its lack of attraction to medical men. The capitation fee fixed before the war was regarded as inadequate, consequently many men, particularly the ambitious men, even in working class practices, kept outside the scheme, and many of those who had accepted service were dissatisfied, and would have resigned had it not been for the war. The men he referred to were the best practitioners in the service, who were now awaiting satisfactory terms before deciding to continue to accept service under the Act. When these men began to drop out there would be a sharp division of practitioners into two groups—those who attended the rich and those who attended the poor—which was an undesirable distinction. In his own town of York men with the best class of private practice were also on the panel, but he thought this would not continue for long unless good remuneration were offered. He drew a parallel with the Army Medical Service some twenty years ago, when the standard gradually deteriorated, through the badness of the terms, till reform was introduced, and with the Indian Medical Service of to-day, which was in the same condition.

Dr. ORTON, speaking as a practitioner from a munitions centre (Coventry), dealt briefly with the effect of war conditions on munition workers. At the outset there was not much increase in disease, which he attributed to the liquor control regulations. Later on, when new workers came into the munition industries, neurasthenia and similar ailments became very prevalent; he also drew attention to increase in venereal disease and to the increased number of cases of skin disease among women due to the industrial conditions. In his view, the good results of better nourishment owing to high wages were more than counterbalanced by the nervous strain caused by working at high pressure over prolonged periods.

Dr. BRACKENBURY briefly summed up the discussion, adding that war strain was now making itself acutely felt among the civil population, with a result that greatly increased calls were made on the doctors' services. He asked that any capitation fee which might be fixed should be made operative for three years; the Conference had passed a resolution to that effect.

The Minister's Reply.

Dr. ADDISON, at the outset, thanked Sir Clifford Allbutt for his generous remarks with regard to the setting up of the Ministry of Health, and for the high plane on which the discussion that morning had been introduced and subsequently followed. He also thanked the members of the deputation generally for the moderation which they had shown, and for stating their case with an evident desire to arrive at a good understanding. He recognized that there were increasing demands in the community generally for an improved standard of service, and that an impetus had been given to these demands by the illustration that had been afforded during the war of what could be done by medical science. The Minister agreed with Dr. Brackenbury as to the position of the general practitioner in any scheme of medical services, and said that no service, however dressed up with clinics, laboratories, and other provisions, could be an efficient service unless there were an efficient and contented general practitioner service.

On the subject of remuneration Dr. Addison pointed out that there was no possibility of hoping to satisfy extremists, but that he intended to do his best to secure for the fair-minded man with a proper professional standard what that man would recognize to be a fair remuneration. He was confronted with the important question of the availability of funds, and said that whatever might be the ideal

arrangement, regard must be had to the state of the public finances in any settlement which would be arrived at. The Government had to consider not only what might be fair to medical men, but also what was fair to the community. Dr. Dain had stated the case of the increased burden involved in the treatment of the demobilized man fairly and moderately, but in the absence of detailed evidence Dr. Addison said that while he recognized that there was a considerable demand under this head, it was impracticable to measure the extent; in this respect he would welcome the co-operation of the Committee in any efforts which might be made to measure what was undoubtedly one of the most important elements of the case. Dr. Orton's statements with regard to the increased demands made by munition workers and to the increase of disease in the area, due to the presence of military camps, was noteworthy; but it was more important to have regard to such lasting factors as the permanent increase in the number of women employed and the increased demands brought about by improved standards of education amongst the public generally. Dr. Addison said that Dr. D'Ewart's figures were startling, and that they would be carefully examined. He was not quite clear as to the inferences to be drawn from these figures, but they seemed to show that insured persons in Manchester, at any rate, had been led to expect a better service from the same doctors if treated as private patients rather than as insured patients, and, if this were so, it was a matter for grave concern.

The Minister reminded the deputation of the possibility of large developments of public medical services of various kinds under the Ministry of Health, and said that the Advisory Council, set up by him, was already considering most important questions and opening up numerous issues which might emerge in the form of definite proposals some time next year. In these circumstances he frankly regretted that the immediate problem before him should have arisen for settlement just now, as he did not want to do anything which would in any way prejudice the future with its great opportunity for medical men in work of more extended scope amongst the middle and working classes. He recognized, however, that the problem of the terms of service for insurance doctors was one which would not admit of any further delay in settlement, and that, therefore, he hoped to be able to give to the deputation a result of the consideration by the Government of his proposals within the next few days. He felt that the members of the deputation ought to be informed of the proposals immediately before the Government in regard to old age pensions, unemployment benefit, and extension of cash benefits under the Health Insurance Acts, which involve expenditure of very large sums of Exchequer money. He said that the present claim for an increase in doctors' remuneration must be considered in conjunction with these other large items in expenditure.

Dr. Addison said that, quite frankly, the case for a 13s. 6d. capitation fee was not, in his view, made out. He drew a distinction, which he felt all must recognize, between the percentage increase in wages of the labouring classes (which must almost inevitably go in actual expenditure on food) and the case, for example, of men in positions in the Civil Service receiving an income more or less comparable with the income of the average general practitioner. He was quite sure that the Government could not give 13s. 6d., involving an increase of 4s. 9d. on the present payment of 8s. 9d., including war bonus, or an increase over the original 7s. 3d. of 6s. 3d.—that is, something like 80 per cent. or 90 per cent. The demand was for a further 3½ millions on top of the existing war bonus. He did not see how it could be possible for the Government to accept such a proposal.

Dr. Brackenbury had asked that whatever fee was fixed should be so fixed for a limited term of years—say three years—and thus avoid the necessity for an annual revision. With regard to this, Dr. Addison said that an alternative which would be examined might be to fix:

(1) A standard capitation fee for a limited term of years, subject only to revision in the light of general alteration in the law; and

(2) A temporary addition to this amount which would have regard to the present quite abnormal circumstances, and be subject to revision annually in the light of experience as to the high cost of living—which, it was hoped, would diminish—and the diminution in special services directly attributable to the war, which would certainly diminish, and perhaps quite soon.

In reply to a question from Dr. Cox as to why the insured person should not pay more in contributions, which, it was contended, he could well afford, Dr. Addison said that impending legislation regarding sickness and unemployment insurance would involve a very substantial increase in the weekly contributions, and in connexion therewith there would doubtless be some adjustment of the proportions between the cost of medical benefit borne by the Exchequer and that borne out of insurance funds. He concluded by saying that he was satisfied that there was a case for a substantial increase over the pre-war fee and that the new fee to be fixed must be one which would give a good average general practitioner, fairly doing his duty, what he himself would feel would pay him properly for treatment—in other words, something like the same payment that he would expect for his patients generally, other than the more wealthy patients.

Dr. Addison promised to see the deputation again within a few days to discuss with them the actual amount of the fee to be fixed after the Government had considered his proposals.

CORRESPONDENCE.

Pension Scheme for Insurance Practitioners.

SIR,—Two letters appear in the SUPPLEMENT of the BRITISH MEDICAL JOURNAL of November 29th on the subject of the suggested pension scheme. As regards that from the existing Medical Sickness, Annuity, and Life Assurance Society little need be said. The proposed scheme is supplementary, not eliminative. There will still be work for the older society.

Dr. Trimble is to be congratulated on his criticism, as he very ably states the probable objections to the scheme:

1. Compulsion. Many of us have to be compelled to do things we do not want to do. Many of us are compelled, much to our disgust, to work to keep ourselves, but some of us neglect to work or save for our dependants. Does Dr. Trimble approve? As a result, these dependants have to be kept by others. Here is a method—and, so far as we can see, the only method—which will assist those helpless persons to make them depend on their legal protectors rather than upon the community. Surely Dr. Trimble does not disapprove of this compulsion. Further, this scheme "compels" a man to invest his money for life assurance to better advantage than he can elsewhere. Does Dr. Trimble disapprove of anyone compelling him to make a further 10 per cent. on his life investments? I trow not.

2. Further deductions from their incomes. This scheme does not propose to make any further deduction. What it does propose is to allocate some of his increase in capitation fee to a specific purpose. He will be no poorer, but richer now and still richer prospectively.

3. Age of retirement. No specified age for retirement is fixed. Anyone can go when he has accumulated what he himself thinks is sufficient for his needs. He can remain till 80 or go at 45 as he thinks fit. If Dr. Trimble is elderly now there will be no question of a "benefit of others at a loss to himself." The suggested scheme is rather the other way. The elderly practitioner makes an extra good bargain at the expense of the probable profits.

4. No profits will accrue from the practitioner over 55 under the scheme, so this suggested benevolence on Dr. Trimble's part falls by the board.

Full discussion will take place in every panel area, and I am sure that on more mature deliberation Dr. Trimble will welcome the scheme enthusiastically.—I am, etc.,

Manchester, Dec. 4th.

JOHN D'EWART.

SIR,—The "pension scheme" outlined by Mr. Reginald Simmonds, F.I.A., in circular 157 of the London Panel Committee should be carefully and critically considered by every insurance practitioner, in view of the fact that if approved it is to be compulsory. A reservation of 6d. or 1s. per insured person per annum is to be made under agreement with the Government so that a large insurance company may be established.

The principal advantages offered are: (1) Lower cost; (2) no medical examination.

As regards the lower cost, in view of the fact that Mr. Simmonds's figures are rough, it would perhaps be unfair to criticize in detail, but the suggested figures are considerably less favourable to the insured person than those of many first class offices, and in the finished estimate may be more favourable or even less favourable.

Under this scheme it is only necessary to provide some evidence of fitness before allowing benefit (b) to be taken. (A sum of money to be paid either upon a member attaining a fixed age—say 65—or upon previous death.) It will

be seen, then, that by undergoing a medical examination the practitioner who is accepted at ordinary rates can always secure more favourable terms from a life office, and the only question for him to consider is whether he wishes to pay more so as to provide his less fortunate brother practitioner with benefit on equal terms. As regards the terms upon which it is proposed to convert accumulations at age 65 into pension, the terms are again less favourable than those of a life office, so that the inclusion of doubtful lives does not even help matters in the question of purchasing an annuity.

All these considerations apply equally to the existing body and to future entrants, but there is one point of extreme importance to the existing body in the fact that most of us have already made provision for our dependants and for our own old age. The question is barely touched in Section (b) on page 2 of the circular. The suggestion here apparently is that loans should be raised on the benefits under the scheme in order to provide for maintaining existing provision. This proposal is thoroughly impracticable, and should be strenuously opposed by those who already hold life policies and have no desire for a crazy inflation of their liabilities.

The disadvantages of the scheme are:

1. The premiums depend as to their amount on the gross receipts from one source of a practitioner's income, and in cases where the insurance receipts are a very large portion of the income the burden may be unbearable.

2. It will not be possible for one office to give the number of variations of benefit required by different practitioners, and which are provided by the multitude of first class offices. Most practitioners will feel that they are entitled to use their own judgement as to provision for the future, and will not feel inclined to sacrifice their liberty for a scheme which provides benefits which vary according to their receipts under the Insurance Act; besides which, keeping a separate account of each member's contributions from year to year and translating these odd amounts into different kinds of benefit cannot fail to be very laborious and enormously expensive.

3. Mr. Simmonds proposes to meet the investment difficulty by bringing in the Public Trustee. This would appear to be out of the question in view of the report of the Departmental Committee on the Superannuation of Teachers. That Committee actually asked the Public Trustee, and he refused to undertake the investment of a similar fund. The investment of these funds requires the closest attention and great experience.

It will be found that the depreciation which has gone on during the past twenty years has resulted in many mutual funds developing deficits or reducing benefits. At the same time life offices have prospered and declared large bonuses, the case being that these are the survivors of numerous offices which have started in the past just as a mutual fund might to-day. It is analogous to an inexperienced player at a game giving points to a professional. —I am, etc.,

London, S.E., Nov. 28th.

V. S. PARTRIDGE.

* * As reported in last week's SUPPLEMENT, the Panel Conference on November 27th decided to refer the question of a pension scheme to the Local Medical and Panel Committees for their consideration.

The Draft Regulations.

SIR,—I disagree entirely with the remarks of Dr. Cox to the South Suffolk Division, as reported in the SUPPLEMENT of November 29th. I cannot see how it can be maintained that practitioners have been thoroughly consulted in regard to the changes contemplated in the Insurance Act. I had the opportunity of attending in the summer of this year one meeting only on the subject, when M.25 was run through very hurriedly, with Dr. Cox, as it seemed to me, acting as an apologist and advocate for the Government proposals. No vote was taken at the meeting as to the general desirability or otherwise of the new Regulations. Since then more far-reaching changes are set forth, and there is no indication that the practitioners in a scattered district such as this will have any opportunity of voting upon these before they become law.

Dr. Cox, I see, further expressed the opinion at the meeting on November 14th that the strong weapon of the profession in a dispute with the Government was not that of a "strike." I think recent history shows that the only weapon likely to prove successful with our present bureaucratic rulers is a strike. The Government is committed to the Insurance Act, and if this were made temporarily

unworkable, the "powers that be," with their invariable submission to superior force, would rapidly come to terms. I feel sure that Dr. Addison attacked would turn out to be a very different person from Dr. Addison attacking, and that the hectoring and bullying tone which the Ministry has lately adopted in its communications with the profession would soon give place to a manner of sweet reasonableness.

In my opinion we are making a huge mistake in haggling with the Government over terms of remuneration. Surely the first thing to be settled is whether the profession as a whole is willing to accept a series of Regulations which many, if not most of us, consider as impossible and degrading. Having settled on conditions of service agreeable and honourable to medical men we could then fix a fair price for those services. Medical men, to put it mildly, are at least as likely as any Government department to frame their demands in a spirit of equity and fair-mindedness.

The draft regulation with regard to the sale of panel practices is such a piece of unblushing piracy as no Government would ever be likely to suggest to any body of men whom they thought could in any way protect themselves.

Might I suggest to the Association that they take a card vote of all their members who are panel practitioners on two points: (a) As to whether they generally approve or disapprove of the draft Regulations, and (b) if the latter, if they would be willing to give notice to terminate their agreements if called upon to do so.

I know that our last experience of fighting the Government has led to a general distrust of our fighting powers, but on this occasion I cannot see that (taking the Regulations generally, and considering not only remuneration but the conditions of service all round) the changes are going to pay any one now in panel practice.

We know that if we were united we could dictate our own terms to the Government and, considering the Government's abominable attitude, I do not see why we should hesitate to do so. If the Association would take some action of this nature I feel sure that it would rehabilitate itself in the eyes of the rank and file of the profession who are at the present time, and with some reason, inclined to think that our representatives have delivered us into the hands of a Philistine Government.—I am, etc.,

Chasetown, nr. Walsall, Dec. 2nd.

WILLIAM FRASER.

Liability for Emergencies: A Compromise.

SIR,—In the Notes on the Medico-Political Union Circular (see SUPPLEMENT, November 29th) it is stated that emergency cases will necessarily arise but seldom under the definition of the new Regulations.

Now, Sir, the principle for which we contend has nothing to do with the number of cases. They may be few; as the Insurance Acts Committee anticipates, or they may be many, as in the last influenza epidemic. By agreeing to the clause as it stands the man of 70 equally with the man of 25 will be conscripted into a service, suitable only for the "Grade I" man. The areas should be made liable for all emergency work, but every practitioner in an area should not be made liable to be called out against his will.

A voluntary service—as will, no doubt, be tried, and tried successfully too—is infinitely better than compulsion. Why, then, not add a clause to the effect that "such arrangements of the Panel Committees be put on a voluntary basis." This would safeguard the health and the freedom of the older and the "Grade III" men, without their having to confess to physical disability, or to ask for a physical examination.

A man of 65 to 70 with a small panel should not be rendered liable (as he will be with the clause as it now is) to be asked to rush out at 1 a.m. to see a patient of his young energetic neighbour (with a list of 3,000) who is away enjoying himself at a dance.—I am, etc.,

Dundee, Dec. 2nd.

JOHN CRAWFORD, M.B., C.M.

The Capitation Fee.

SIR,—In settling the new capitation fee only one factor need be considered—that is, the old one. In 1912 the Government agreed to pay us 7s. 6d. per annum for rendering certain service. In 1919 that fee has a money value of about 2s. 8d. To equalize, two alternatives present themselves:

- (a) To diminish the service required in corresponding ratio; or,

- (b) To increase the fee to its present-day value in money.

Under (a) the Government proposes to increase the services required; so (b) the capitation fee expressed in terms of present-day value of money is 16s. 8d. Therefore

any capitation fee of less than 16s. 8d. will be reducing the capitation fee. Since 1914 we have been working for a gradually diminishing fee. In any discussion involving the question of the capitation fee we should start at 16s. 8d. If new duties are to be added this fee must be increased. A guinea has always been regarded as a physician's fee, and would make a good starting point.

The beneficiaries of the Act must pay the increased fee in as far as the diminished value of money goes. An increase of 2d. a week per insured equals 8s. 8d. per annum, which, with the basis of 7s. 6d., comes to 16s. 2d.—near enough to what is right to be sufficient. The insured like to think that their doctor is well paid and are quite prepared to pay extra. Having to pay more for every commodity, they cannot understand why they have not had to pay more for their medicine and regard the proposition as most reasonable. The Government must find money to pay for new duties and responsibilities under the new Regulations.

The Government owes us a huge sum, running into many millions, for arrears in the value of capitation fee since 1914. This sum should be estimated and used to finance a pension scheme.

We shall never get fair play from the Government. They are pledged to a ruthless economy where medicine is concerned. Let us, therefore, break off all direct negotiations with the Government and approach the matter through the trade unions. A campaign conducted by sending speakers to lay our case before the trade unions, the official organs of the insured, would lead to success.—I am, etc.,

Corsham, Dec. 6th.

ROBERT J. SIMONS.

DR. GEOFFREY PRICE (Kineton, Warwick) writes: Two shillings a head dispensing fee is not enough. Also a 500 per cent. increase of mileage fee would be only 1s. 6d. a head, or 6d. a visit. It might come in handy as a tip to the chauffeur to buy fags with.

MEETINGS OF THE PROFESSION.

SOUTH-WEST ESSEX.

A MEETING of medical practitioners resident in South-West Essex was held at Leyton on November 25th, with Dr. POTTINGER ELDER in the chair. Dr. C. PANTING was the principal speaker, and explained the new insurance Regulations. The following resolutions were adopted:

1. That service under the Medical Benefit Regulations, 1920, can only be accepted when a satisfactory rate of remuneration has been agreed to.
2. That this meeting authorizes the Insurance Acts Committee of the British Medical Association to negotiate the remuneration on the basis of the proposals in M. 22 and contained in the sixth quarterly circular to insurance practitioners on November 5th, 1919.
3. That this meeting desires to enter the strongest possible protest against such a disturbance of the present arrangements—arrangements which already sufficiently safeguard the right of choice of doctor by the patients.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following announcements are notified by the Admiralty:—
Surgeon Commanders: T. A. Smyth and J. H. Lightfoot to the *Caesar*; C. H. J. Robinson to the *Conqueror*; J. A. Forrest to the *Courageous*; W. C. Smith to the *Triad*; B. S. Robson to the *Pegasus*, on commissioning; J. H. Pead to the *Hermione*; A. R. Thomas, O.B.E., to the *Crescent*, for South Queensferry Hospital; W. R. Harrison, O.B.E., to the *Victory*, additional, for disposal on closing down; E. D. J. O'Malley to the *Indomitable*; G. E. Hamilton to the *Lucia*, on recommissioning. M. W. Haydon to the *Victory*, additional, for disposal on paying off. Surgeon Lieutenant Commanders promoted to the rank of Surgeon Commanders: R. H. McGiffin, O.B.E., M. W. Haydon, E. L. Atkinson, D.S.O., L. Warren, O.B.E., L. L. Greig, M.V.O., E. Cameron, P. F. Minett, F. G. Goble, H. A. Browning, R. Connell, J. L. Barford, J. C. F. D. Vaughan, T. Cresser, H. M. Langdale, W. H. Hastings, S. F. Dudley, O.B.E., W. W. D. Chilcott, C. V. Griffiths, D.S.O., G. P. Adshedd, C. Ross, G. G. Vickery, O.B.E., H. D. Drennan, D.S.O., J. S. Austin, A. R. Fisher, W. H. Edgar, D. H. C. Given, J. H. McDowall, A. B. Marsh, J. M. Gordon, J. D. Kerr, L. C. Rowan-Robinson, G. Nunn, O.B.E., W. C. B. Smith, T. E. Blunt, G. E. Hamilton, W. T. Haydon, W. L. Hawkins, L. F. Cope, O.B.E., H. B. Hill, H. M. Braithwaite, D. G. Addison-Scott, L. C. Hunt, P. M. Rivaz, J. R. A. Clarke-Hall, H. Cooper, D.S.O., J. McA. Holmes, D.S.O., E. Rutherford, R. Willan, G. O. M. Dickenson, N. S. McKeljohn, D.S.O., W. P. Hingston, R. H. St. E. Hughes, A. H. S. Richardson, E. R. Kenny, F. J. Gowan, E. R. Townsend, J. O. Brinkman, O.B.E., G. L. Buckridge, A. D. C. Cummins, T. Jeffery, O.B.E., P. D. Ransay, G. D. Walsh, J. H. Johnston, F. Cook, B. R. Bickford, D.S.O., A. R. Davidson, F. G. Wilson, H. A. Kellond-Knight, A. R. Cox, D. D. Turner, H. S. Robson, B. Pick, G. T. Verry, G. B. Scott, D.S.O., F. H. Holl, C. H. L. Petch, H. H. Babington, G. Carlisle. Surgeon Lieutenant Commanders: A. C. Paterson to the *Indus*; B. R. Bickford, D.S.O., to R. M. Division, Plymouth, additional, and temporary for *Temer*; W. L. Hawkins to the *Conterbury*; A. A. Sanders to the *Tamara*, for Hong Kong Hospital; L. Moss to the *Valiant*; J. McA. Holmes to the *Furious*; P. B. Egan to the *Fusard*; K. H. Hole to the *Triad*, additional, for disposal on paying off. Surgeon Lieutenants promoted to Surgeon Lieutenant Commanders:

C. H. Symons, A. B. Clark, G. B. Cockrem, H. R. B. Hull, C. M. R. Thatcher, E. St. G. S. Goodwin, G. D. G. Fergusson, R. J. Barlee, G. D. Macintosh, L. Moss, J. A. O'Flynn, J. P. Shorten, D.S.C., A. R. Price, G. V. Hobbs, F. J. D. Twigg, G. E. D. Ellis, O.B.E., F. J. Burke, A. E. Malone, H. M. Whelan, R. F. P. Cary, P. L. Gibson, G. A. Finigan, J. D. S. Higgins, J. G. Roal, F. St. B. Wickham, A. M. Henry, G. F. B. Page, A. J. Patterson, W. A. S. Duck, O.B.E., F. C. Wright, B. P. P. Sayers, A. Simpson, H. E. Y. White, D. P. H. Pearson, I. S. Gabe, A. J. Tozer, P. B. Wallis, A. R. Sharrod, J. S. Elliot, A. E. Panter, G. S. Harty, W. H. Murray, G. H. Hayes, H. C. A. T. Cannon. Surgeon Lieutenants: I. H. Beattie to the *Triad*, additional, for disposal on relief in *Indus*; H. S. Bryan to the *Victory*, additional, for disposal on *Impregnable*, reducing; G. M. Graham to the *Victory*, additional; A. G. McKee to the *Mutine*; F. L. H. MacDowell to the *Maidstone*; T. Gwynne-Jones to the *Aphis*; P. W. Carruthers to the *Fantome*; A. C. V. Green to the *Mutine*; G. Aubrey to the *Edmont* for R.N. Hospital, Malta; W. J. Colborne to the *Victory*, additional, for Haslar Hospital; O. D. Broadfield, O.B.E., to the *Magnolia* on commissioning; J. S. McGrath to the *Victory*, additional, for disposal on paying off. H. W. F. Williams to the *Widgon*. To be Surgeon Lieutenant: Surgeon Sublieutenant G. L. Stanley, late R.N.V.R. Surgeon Lieutenants (temporary): J. T. Wylie, F. L. H. MacDowell, J. D. Clarke, N. D. de M. Greenstreet, L. R. Warburton, O.B.E., and G. E. Heath, transferred to the permanent list as Surgeon Lieutenants; D. A. P. Clarke and J. D. B. own to the *Victory*, additional, for disposal; I. D. J. Mich to the *Commonwealth*; A. Ritchie to the *Pembroke*, additional, for disposal; E. S. Thompson to the *Aquid*; R. Mart to the *Graville*; R. R. O. B. Robinson to the *Triad* on relief; D. S. Prentice transferred to the Australian Navy.

ROYAL NAVAL VOLUNTEER RESERVE.

Surgeon Lieutenants (temporary) W. S. Ellis to the *Triad*, for R.N. Barracks, for duty in *Indus*, and to assist at Devonport Barracks; W. E. A. Sampson to the *Victory*, additional, for disposal.

ARMY MEDICAL SERVICE.

Temporary Major-General Sir Berkeley G. A. Moylan, K.C.M.G., C.B. (Major R.A.M.C.T.F.), relinquishes his temporary commission on reposting.

Colonel A. G. Thompson, C.M.G., D.S.O., is placed on half-pay.

Colonel E. M. Hassard, half-pay list, retires on retired pay.

Temporary Colonel Sir Henry Davy, K.B.E., C.B. (Lieutenant-Colonel R.A.M.C.T.F.), relinquishes his temporary commission on reposting.

Temporary Honorary Colonel Sir Peter J. Freyer, K.C.B. (Surgeon Lieutenant-Colonel ret. I.M.S.), is granted the honorary rank of Colonel on ceasing to be re-employed.

Major D. G. Marshall, ret. I.M.S., is granted the rank of Lieutenant-Colonel on ceasing to be employed.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonel C. W. H. Whitstone is placed on retired pay.

Lieut.-Colonel E. P. Sewell, C.M.G., D.S.O., relinquishes the temporary rank of Colonel.

The following officers relinquish their commissions: Temporary Lieut.-Colonels J. W. H. Brown, R. L. Joynt (and retains the rank of Lieutenant-Colonel), P. B. Giles, C.B. (Colonel ret. T.F.), W. T. Prout (and retains the rank of Lieut.-Colonel). Temporary Majors and retain the rank of Major: W. B. Cosens, J. M. Macmillan, F. B. G. Stabelford. Temporary Captain (acting Lieut.-Colonel) D. Fletcher and is granted the rank of Lieutenant-Colonel. Temporary Captains and Brevet Majors and retain the brevet rank of Major: A. E. Giles, J. S. Dunn (January 17th 1919, substituted for notification in the *London Gazette*, July 1st, 1919). Temporary Captains and are granted the rank of Major: A. L. Krogh (June 12th, 1919, substituted for notification in the *London Gazette*, July 12th, 1919), C. E. Dukes, O.B.E. (September 2nd, 1919, substituted for notification in the *London Gazette*, September 23rd, 1919), F. C. Lees, M.C., R. C. Alexander, H. H. L. Ellison, H. F. Wilson, M.C., T. H. Oliver, Harold Parsons, H. C. Watson, R. H. Rollinson-Whitaker (acting Major) W. H. Fleetwood, G. Wilson, W. G. Mumford, O.B.E. Temporary Captains and retain the rank of Captain: H. G. Joyce (June 23rd, 1919, substituted for notification in the *London Gazette*, July 4th, 1919), F. J. Cleminson, H. Topham, R. S. Roper, T. P. Greenwood (on ceasing to be employed at the Notts County War Hospital), W. G. T. Story, F. J. McIlhenny, M. Cahill, E. W. S. Wooler, J. Jenkins, C. J. B. Buchanan, A. E. Chisholm, A. L. Candler, A. R. Fuller, S. F. Fouracre, H. W. Drew, F. E. Dannt, W. McConeil, A. G. Caldwell, S. V. P. Pill, A. McNally, G. T. Symons, B. S. Simmonds, G. A. C. Gordon, E. J. Griffiths, R. T. Taylor, R. H. Ratray, E. Prall, H. J. McCurric, T. Taylor, G. T. Walker, J. Pryce-Davies, D. M. Livingstone, W. J. B. Lavery, D. McCormack, F. E. Tillyard, J. A. Tippet, M.C., C. L. Wigan, R. P. Marshall, J. A. Wellwood, A. J. Ireland, M.O., J. McClellan, W. M. Thunder, H. L. Pearson, H. E. Kitchen, P. Smith, M.C., W. K. MacDonald, A. L. Jackson, D. J. McLaren, H. Joslen, G. Kirkhope, D. A. Evans, R. M. Stewart, J. Walker, M.C., I. M. Byers, H. P. Cathness, A. Stokes, O.B.E., D.S.O., J. L. Dunlop, M.C., J. G. Johnstone, G. M. Grundy, W. Montgomery, G. M. Adam, M. C. H. H. Butcher, W. J. Olivey, C. H. Hart, W. K. Anderson, D. Wood, H. H. Carleton, L. W. Roberts, D. M. McGillivray, L. H. Terry, A. H. Richardson, A. H. Duckett, F. E. R. Laborda, W. H. Maling (on ceasing to be employed at the Sunderland War Hospital), J. C. Warwick (on account of ill health). On account of ill health contracted on active service: G. H. Ensing, W. G. Gordon, F. E. Marshall, C. H. Edwards, J. Swears. Temporary Captains on transfer to the I.M.S.: R. A. Leembruggen, L. Blake, M.C. Temporary honorary Captains and retain the honorary rank of Captain: S. H. Kagan, E. A. Cayo. Temporary Lieutenants (and retain the rank of Lieutenant): C. R. Kidd, F. Campbell, C. E. Pengetley, E. S. Littlejohn, H. R. F. Towne.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Captains relinquish the acting rank of Major: S. R. Armstrong, O.B.E., A. H. Hubbard, D.S.O. (on ceasing to be specially employed), O. J. O'B. O'Hanlon, F. Crossie, H. C. Roak, J. Inkster.

Captains to be acting Majors whilst specially employed: J. A. Stewart, M.C., H. D. Gardner.

Captains relinquish their commissions: J. G. McCann, H. S. Evans (on account of ill health contracted on active service and retains the rank of Captain), T. H. Almond, R. Wiggins (on account of ill health and retains the rank of Captain), T. W. Shaw (on account of ill health contracted on active service and retains the rank of Captain).

Lieutenants to be Captains: C. O. Anderson, S. E. Critchley, A. Eidnow, W. S. Herman, C. P. Hines, C. G. J. Royner, E. E. R. Spurway, J. Handy, A. Abelson, C. B. Dyson, P. J. Corcoran, W. M. Casper, W. H. Simmons, G. F. Peters, W. A. Hawes, R. A. Olphert.

INDIAN MEDICAL SERVICE.

Lieut.-Colonel J. H. Hugo, D.S.O., has been posted as Chief Medical Officer, North-West Frontier Province, with effect from September 29th.

Lieut.-Colonel H. Burden, C.I.E., Residency Surgeon and Chief Medical Officer, Baluchistan, has been granted combine leave for one year with effect from September 24th.

The services of Major R. Kelsall, D.S.O., have been placed permanently at the disposal of the Government of Burma with effect from April 29th, 1919.

Major H. C. Brown, C.I.E., Assistant Director, Central Research Institute, Kasauli, has been granted combined leave for nine months.

Major S. R. Christophers, C.I.E., O.R.E., appointed Assistant Director, Central Research Institute, Kasauli.

Major J. H. Murray, C.I.D., Senior Medical Officer, Port Blair, has been granted privilege leave for six months.

Major F. W. Cragg, Assistant Director, Central Research Institute, Kasauli, has been granted privilege leave for one month.

Lieut.-Colonel P. W. O'Gorman, C.M.G., has been permitted to retire from the service with effect from July 11th, 1919.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

The following relinquish the acting rank of Lieutenant-Colonel on ceasing to be specially employed: Majors (acting Lieut.-Colonels) W. R. N. Smithard, T.D., J. H. Stephen, D.S.O., T.D., A. Milne-Thomson, C.M.G., Captains (acting Lieut.-Colonels), H. N. Barnett, P. T. Rutherford, O.B.E.

Captain J. W. Simpson relinquishes his commission on account of ill health contracted on active service and retains the rank of Captain.

Captains to be acting Majors whilst specially employed: J. A. Cooke, C. G. Strachan, M.C., L. Beesley, E. L. Forward.

Captain G. S. Glass is seconded under paragraph 112 T.F. Regulations, November 14th, 1919.

The following relinquish the acting rank of Major on ceasing to be specially employed: Captains (acting Majors) H. J. Gorrie, O.B.E., A. Rodger, C. W. J. Brasher.

1st London Sanitary Company.—Captain (acting Major) E. R. Marle relinquishes the acting rank of Major on vacating appointment of Chief Instructor, Agricultural Wing, Army Science College, Lieutenants I. E. Macdonald and L. N. Duguid to be Captains.

3rd London General Hospital.—Captain E. N. Keys-Wells relinquishes his commission on account of ill health and retains the rank of Captain.

2nd Northern General Hospital.—Captain (acting Major) A. L. Whitehead relinquishes the acting rank of Major on ceasing to be specially employed.

4th Scottish General Hospital.—Lieut.-Colonel (Brevet Colonel) A. Napier, V.D., having attained the age limit is retired and retains his rank, with permission to wear the prescribed uniform.

3rd Southern General Hospital.—Major G. S. Abram is restored to the establishment.

1st Western General Hospital.—Officers seconded for duty with Alder Hey Special Military Surgical Hospital: Captain (acting Major) T. R. W. Armour; Captains J. L. Roberts, T. P. McMurray.

TERRITORIAL FORCE RESERVE.

ARMY MEDICAL SERVICE.

To be Colonels: Lieut.-Colonel Sir Ronald Ross, K.C.B., K.C.M.G., F.R.S., from 1st Western General Hospital; Captain H. A. Thomson, C.M.G., from 2nd Scottish General Hospital.

ROYAL ARMY MEDICAL CORPS.

Captain Sir B. E. Dawson, G.C.V.O., C.B., from 2nd London General Hospital, to be Captain, and is granted the honorary rank of Major-General.

The announcements regarding the following officers which appeared in the *London Gazette* of the dates indicated are cancelled: Lieut.-Colonel D. L. Hamilton (December 18th, 1918), Major J. M. Gover (January 13th and February 6th, 1919).

VOLUNTEER FORCE.

Clackmannanshire R.A.M.C.(V.).—Temporary Captain D. W. Currie, V.D. (Lieut.-Colonel (ret.) R.A.M.C.T.F.), relinquishes his commission and is granted the honorary rank of Captain.

Derbyshire R.A.M.C.(V.).—Temporary Lieutenant A. Court relinquishes his commission and is granted the honorary rank of Lieutenant.

Devonshire R.A.M.C.(V.).—Temporary Captain W. Langran and temporary Lieutenant W. W. Stabb relinquish their commissions and are granted the honorary rank of Captain and Lieutenant respectively.

Dumfriesshire R.A.M.C.(V.).—Temporary Captain J. R. F. Cullen relinquishes his commission and is granted the honorary rank of Captain.

Forfarshire R.A.M.C.(V.).—Temporary Lieutenant J. D. Gilruth relinquishes his commission, and is granted the honorary rank of Lieutenant.

Isle of Wight R.A.M.C.(V.).—Temporary Captain E. F. W. Buckell (Captain late R.A.M.C.) relinquishes his commission and is granted the honorary rank of Captain.

Lincolnshire R.A.M.C.(V.).—The following officers relinquish their commissions:—Temporary Captain C. W. Pilcher, and is granted the honorary rank of Captain. Temporary Lieutenants R. A. Glegg, H. S. McIntosh, J. Williamson, and C. H. D. Robbs, and are granted the honorary rank of Lieutenant.

Northern Counties Highland R.A.M.C.(V.).—Temporary Captain A. C. Balfour relinquishes his commission, and is granted the honorary rank of Captain.

Peeblesshire R.A.M.C.(V.).—Temporary Lieutenant G. H. Wilson relinquishes his commission and is granted the honorary rank of Lieutenant.

Perthshire R.A.M.C.(V.).—Temporary Lieutenant T. W. Dewar relinquishes his commission, and is granted the honorary rank of Lieutenant.

Surrey R.A.M.C.(V.).—The following officers relinquish their commissions:—Temporary Major H. W. Phillips, and is granted the honorary rank of Major. Temporary Captains A. E. Porter and W. Gripper, and are granted the honorary rank of Captain. Temporary Lieutenant H. Rosling, and is granted the honorary rank of Lieutenant.

APPOINTMENTS.

ARCHER-HALL, H. W., D.O.Oxon., M.R.C.S., Assistant Surgeon to the Birmingham and Midland Eye Hospital.

DAVIDSON, M., M.D.Oxon., M.R.C.P.Lond., Physician in Charge of Out-patients, Royal Waterloo Hospital for Children and Women.

EDMONDS, Arthur, C.B., M.B., M.S., B.Sc., F.R.C.S., Surgeon to King's College Hospital.

HAINES, Rupert Lawrence, M.R.C.S., L.R.C.P., appointed Assistant Surgeon to the Gloucestershire Royal Infirmary and Eye Institution, Gloucester.

ROYAL VICTORIA AND WEST HANTS HOSPITAL, BOURNEMOUTH.—Honorary Physician: A. C. Coles, M.D., D.Sc., F.R.S.E., M.R.C.P.Lond. Honorary Surgeon: W. S. Richardson, F.R.C.S. Edin., vice Bernard Scott, M.R.C.S., elected Honorary Consulting Surgeon.

ST THOMAS'S HOSPITAL.—The following house appointments have been made:—Casualty Officers and Resident Anaesthetists: E. N. Showell Rogers, B.A., M.B., F.Ch.Cantab. (Ext.), A. H. J. Smart, B.A., M.B., F.Ch.Cantab. (Ext.), E. P. Brockman, B.A.Cantab., M.R.C.S., L.R.C.P. (Ext.), F. Moor, M.C., M.A.Cantab., M.R.C.S., L.R.C.P. (Ext.), A. F. Potter, M.R.C.S., L.R.C.P., L. G. Higgins, M.B., F.Ch.Cantab., H. G. Stormer, M.R.C.S., L.R.C.P., J. D. M. Cardell, M.R.C.S., L.R.C.P. Resident House-Physicians: J. Forest Smith, M.R.C.S., L.R.C.P. (Ext.), R. C. P. Whitcombe, B.A.Cantab., M.R.C.S., L.R.C.P., C. Y. Eccles, M.R.C.S., L.R.C.P. (Ext.), R. A. W. Procter, M.C., M.A.Cantab., M.R.C.S., L.R.C.P. Resident House-Surgeons: H. R. Friedlander, M.R.C.S., L.R.C.P., J. W. Wayte, M.C., M.R.C.S., L.R.C.P., J. P. S. Walker, M.A., M.B., F.Ch.Cantab. (Ext.), H. S. Evans, B.A.Cantab., M.R.C.S., L.R.C.P. House-Surgeon to Block 8: J. F. Ryan, M.R.C.S., L.R.C.P. (Ext.). Obstetric House-Physicians: W. G. Bigger, D.S.O., B.A., M.B., F.Ch.Cantab., A. H. Richardson, M.A., M.B., B.C.Cantab., F.R.C.S. Ophthalmic House-Surgeon: D. McMDickson, M.C., M.R.C.S., L.R.C.P. (Ext.).

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

BIRTHS.

CARDEW.—On November 25th, the wife of A. Barrett Cardew, M.C., M.B., F.R.C.S.E., Overbury, Charlton Kings, Cheltenham, a daughter.

CLAYTON.—On December 6th, at 1, Newbold Terrace, Leamington Spa, to Dr. and Mrs. Frank Clayton, a daughter.

FRETZ.—On November 4th, at Stonehaven, St. Kitts, British West Indies, the wife of H. E. King Fretz, F.R.C.S., of a daughter.

MARSHALL.—At 7, Coates Crescent, Edinburgh, on December 1st, the wife (née Christian Haig Ferguson) of Herbert F. Marshall, F.R.C.S.E., of Macclesfield, of a daughter.

MARRIAGE.

BRAITHBRIDGE-SOUTHWELL.—On December 2nd, at Paxter Church, Kidderminster, by the father of the bridegroom, Captain O. V. Braithbridge, R.A.M.C., son of Rev. E. D. and Mrs. Braithbridge, St. Aubyns, Kidderminster, to Jane Murray, daughter of Mr. and Mrs. E. Southwell of Mazoe, Southern Rhodesia.

DEATH.

GAY.—On November 21st, at "Villa," Shardlow, near Derby, Sydney Baker Gay, L.R.C.P., L.R.C.S., aged 52, youngest son of late Dr. Gay, Swindon.

DIARY FOR THE WEEK.

ROYAL SOCIETY OF MEDICINE.—Tuesday, 5 p.m., General Meeting of Fellows. Section of History of Medicine: Wednesday, 5 p.m., Professor F. J. Cole: The History of Anatomical Injections. Professor Clifford Dobell: The Discovery of the Intestinal Protozoa of Man. Section of Dermatology: Thursday, 4.30 p.m., p.m., Cases and Specimens. Section of Electro-Therapeutics: Friday, 8.30 p.m., Dr. J. C. Mottram: The Leucocytic Content in Radium Workers. Adjourned Discussion on Major Cooper's Paper, The Artificial Stimulation of Muscle, with Demonstration of a new form of Faradic Coil.

POST-GRADUATE COURSES AND LECTURES.

BROMPTON HOSPITAL FOR CONSUMPTION, S.W.—Wednesday, 4.30 p.m., Dr. Gosse: Auricular Fibrillation.

FELLOWSHIP OF MEDICINE, 1, Wimpole Street, W.—Monday, noon, Mr. Major Greenwood: Epidemiology of Influenza. Tuesday, noon, Dr. Harry Campbell: The Neuron. Wednesday, noon, Mr. Philip Franklin: Clinical Aspects of Tonsils and Adenoids. Thursday, noon, Dr. Harry Campbell: Intrathecal Medication.

LONDON DERMATOLOGICAL SOCIETY, 49, Leicester Square, W.C.2.—Tuesday, 4.30 p.m., Cases. 5.30 p.m., Dr. Knowsley Sibley: Baths in Diseases of the Skin.

MANCHESTER ROYAL INFIRMARY.—Tuesday, 4.30 p.m., Mr. J. Howson Ray: Tumours of the Thyroid.

ROYAL EYE HOSPITAL, Southwark.—Tuesday, 5 p.m., Prescribing Glasses. Thursday, 5 p.m., Suint.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
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DECEMBER.

12 Fri.	South Essex Division informal dinner, Hotel Victoria, Southend-on-Sea.
16 Tues.	London: Scrutiny Subcommittee, 3 p.m.
17 Wed.	London: Council, 10 a.m.
	Survey Branch, 429, Strand, London, W.C.2, 3.30 p.m.
19 Fri.	Norfolk Branch, Norwich. British Medical Association Lecture by Sir Humphry Rolleston, K.C.B.: The Dyspeptic and other Remote Symptoms Associated with the Presence of Gall Stones.
	North of England Branch, Royal Victoria Infirmary, Newcastle-on-Tyne, 2.30-5.15 p.m.: Demonstrations.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, DECEMBER 20TH, 1919.

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INSURANCE.

CORRESPONDENCE.

Transfer on Death or other Vacancies.

SIR,—I think that the most humiliating and objectionable result of the enforcement of Regulation 16 has been overlooked by the Insurance Acts Committee, and probably also by the Government. We are told that Regulation 16 is considered vital by the Minister of Health. It should have been considered equally vital by the Insurance Acts Committee. If Dr. Addison had thought it vital to reduce the capitation fee to half a crown, would the Committee have acquiesced? Possibly. I admit there is something awe-inspiring in the word "vital."

But we now gather that the uncompromising attitude of the Government on this point is due to pressure from the approved societies, and, since Dr. Addison has advanced no adequate reason for his stubbornness, we may assume that this explanation is correct.

Why, then, are the approved societies so insistent on this point? The reason is obvious to anyone who has been familiar with their activities in the past. The approved societies are out to get the panel practitioners under their thumb and to grab for themselves the vested interests of our practices.

Consider the position. Under present Regulations, when a doctor dies each of his insured patients remains on the panel. The patient is transferred automatically to the successor in the practice, unless he wishes to exercise his right of transfer to another doctor. But, if he is satisfied, he need do nothing. There is nothing for him to do—no advice to be sought, no complicated trick to perform with a pen on an intricate and incomprehensible card, no necessity to search out a doctor and solicit acceptance; and, so content is he to do nothing, that 97 per cent. of him is transferred to the successor's panel.

On the other hand, what is the panel patient's position under the new Regulation 16? After the death of his doctor, he finds himself off the panel. He has to do something to get on again, but he knows not what. He wants advice, and his only handy source of information is the ubiquitous insurance agent who comes to his door. So to him he turns and receives direction. The agent, wielding a more facile pen, readily fills up the dreaded card, and incidentally informs the patient of a doctor who is waiting to welcome him with open arms. Under such circumstances a couple of active insurance agents will transfer the whole of a panel practice within a fortnight. The widow and children of the dead man will be robbed, but those doctors who have found favour in the eyes of the approved societies will reap the reward of their subservience. "Get yourself quickly on Dr. Pander's list, lest worse befall you," will be the agent's advice to the perturbed and unattached panelite. And so the profession will come under the thumb of the societies.

But these astute corporations are not likely to have overlooked the fact that there is profit as well as power to be won at this game. It will not be long before we have the pleasure of reading advertisements in the following style: "Medical death vacancy. Excellent prospects. Panel 2,000, easily transferable. Moderate premium. Apply Head Office, United Scoop-the-Pool Society."

"Fantastic and impossible," do you say? Not a bit of it. We have only to play the passive jelly-fish a little longer, and we shall see it done.—I am, etc.,

Whittlesey, Cambs, Dec. 7th.

ALEC S. ROBERTSON.

The New Regulations.

SIR,—Mr. Anderson, solicitor, clerk to the Insurance Committee of the County of Renfrew, supplies to the *National Insurance Gazette* of December 6th an admirable article in which he utterly condemns, from the point of view of insured persons and insurance officials, the new regulation as to transfer, and quite convinces me of its impractical nature. As safeguards to the old regulation he recommends—a very clear and detailed notice to be sent to each insured person; leave to change at any time within twelve months to be given to every person who is automatically transferred; a declaration by the purchaser that he intends to stop for five years; finally, power to refuse transfer *en bloc* in case of any who sell within a less period without sufficient reason. I would suggest that three years should be the limit. The interests of the insured would thus be amply defended, and perhaps the old regulation thus modified would be more acceptable to doctors than the new. I commend it to the notice of our representatives.

The regulation as to emergencies resembles that outrageous innovation of 1915 in respect to chronic cases, and displays similar ignorance of rural practice among the panel class. Apart from confinements and serious accidents (for which cases a hospital is now generally available), urgent calls from such may generally be divided into two classes: Acute emergencies where the patient is dead or the crisis passed long before the message is received, and cases that are not urgent at all, indeed quite commonly the message has only acquired urgency in course of transit. Many a time formerly did I irretrievably disorganize my day's work by treating as urgent these calls to "come at once" to some outlandish spot. Now I am wiser; but, if I am out, under this sapient regulation, some unfortunate neighbour, who knows not the patient, nor how to reach him, will be under legal liability to go, and I must pay for his wasted time. Rarely is one called to sprained wrist or ankle but some local oracle has diagnosed "a little bone broken or displaced." Are we to hunt all over a strange district for such as these? If bone is broken, the outside doctor will, in most cases, leave it to the regular attendant to set. This regulation is an insult to a profession that needs no legal call to genuine duty; it is superfluous, dangerous to the lives of our private patients, is likely to cause friction between doctors, may drive the best men off the panel, and should follow ignominiously its equally foolish and dangerous predecessor to the limbo of noxious and discarded things.

I have mentioned the *National Insurance Gazette*. I have taken and read it regularly for four years, and my opinion of approved society officials has undergone change. Many of these men are enthusiasts in the cause of public health, improvement of housing, and suppression of tuberculosis. Our interests and theirs are really identical, and they should be our allies. I should like to see permanent committees, on the lines of the medical service sub-committees, set up in every district, where both parties

could meet on equal terms once or twice a year, not to hear complaints but to devise methods for their avoidance, to frankly exchange views, discuss any new regulation, and generally to help and inform one another. The friendly—not trades—union of ourselves with these powerful and wealthy societies would forge a weapon far more potent to deal with Governments than any we can fashion alone, and both parties could profit by the alliance. This suggestion is no idle dream, for in West Sussex such meeting was in 1915 actually achieved, and I opened the debate. The society officials were on that occasion in large majority, yet passed *nemine contradicente* a resolution condemning weekly certificates and visits in chronic cases, and positively the sole argument produced by those laymen in defence of that utterly indefensible regulation was—that the doctors had approved it.—I am, etc.,

Chichester, Dec. 7th.

G. C. GARRATT.

Insurance Terms and Conditions.

SIR,—I have read the letter of Dr. Philip Benson (SUPPLEMENT, December 6th) with interest as I have been wondering when some country practitioner would take notice of the sum of £1,800 per annum being selected by the Insurance Acts Committee as an example of the income earned by a country practitioner however capable. I think this is a very mischievous assumption, as giving the public the idea that large numbers of competent medical men in the country may make this income. In my young days it was my lot to assist three doctors in three different counties. They each had what was considered a good country practice, but the incomes from them were £1,200 in one case and £1,500 in the other two, and to earn this amount required the keeping of an assistant, a groom, and three to five horses. It is possible that the existence of the National Insurance Acts may have increased the value of these practices to a certain extent, provided that there is no increased opposition, but even so the expenses must have increased in proportion or more so; an assistant is now an expensive luxury, and motor cars cost more than horses, and chauffeurs more than grooms.

In my old age I find myself in a similar type of practice but of smaller financial possibilities as I have never been able to reach the four figure income; neither have I ever been able to keep an assistant, though in the winter months I feel the need of one, and could earn more money, as two men can earn more than one, but this would not be sufficient to pay for the extra costs.

The assumption by the Insurance Acts Committee that a country doctor's work is based on a certain number of hours—say eight per diem—must also lead the public to imagine that we have an easy time in addition to making a lot of money. As a matter of fact, we are on duty from 9 a.m. till 9 p.m., and then for the rest of the night if required, which is a very different thing from having a settled eight hours in the twenty-four—and you find it out as you get older.

What actual proportion of my time is taken up by my panel work it is impossible to estimate; it provides about one-fourth of my income; but for both purposes a car is a necessity; if my private practice for any reason should diminish in value the car would still have to be retained for panel work. During the war many of us have had to dispense with our chauffeurs and do all our driving and attend to the toilet of the car, which takes up time when we might be earning money; since peace was declared we find it either impossible to replace them, or, otherwise, that it is at double pre-war wages. I do not know anything about town practices and their incomes, but I do know that, as far as my country colleagues are concerned, though some of them may make a little more than I do, there are others who make less, and we probably regard it as "pure swank" to pose as making £1,800.—I am, etc.,

Ravenglass, Dec. 7th.

W. A. JOHNSTON.

Medical Remuneration.

SIR,—In your issue of December 13th Dr. Addison, in reply to a question from Dr. Cox, is reported as having said that "the new fee to be fixed must be . . . something like the same payment that he would expect for his patients generally, other than the more wealthy patients." I am glad to hear this, for then the new fee will really pay me for working under the Act.

In my practice there are no wealthy patients, for it is conducted on the formula—leave me the mews and let whoever will have the mansions. I have been keeping accurate figures relating to both my "private" and panel work. And but for the labour of compiling them I could produce statistics for a longer period than the seven weeks I now proceed to consider.

I make no distinction between private and panel patients, except that I visit the latter more frequently and have no hesitation in instructing them for treatment as soon as they feel ill and to continue to come until I discharge them as fit. I take no account of the war bonus as my object is to consider the adequacy of the capitation fee we are supposed to be getting.

I am being paid during this quarter on a basis of 1,388 insured persons at 1s. 4d. a head=£46 5s. 4d. for the half-quarter, and £92 10s. 8d. for the quarter. To this, if I am lucky, may be added, a year hence, a matter of, say, £14. Total for the quarter; £106 10s. 8d. Taking the seven weeks from October 20th to December 7th last, I find I had 100 names of private patients on my visiting list, to whom I paid 139 visits, receiving £34 5s. In the same period 46 panel patients had 93 visits. Private patients had 394 consultations at my surgery, and paid me £68 17s. 6d. Panel patients had 503 consultations.

Totals: Private patients, consultations and visits 533, yielding £103 2s. 6d. Panel patients, consultations and visits 595, yielding £56 (?). And in addition to this problematical £56 I shall possibly get the sum of £1 4s. 6d. for twelve consultations given to soldiers, sailors, and temporary residents during the seven weeks in question.

My books of account may be inspected, Sir, by anyone you or Dr. Addison may appoint for the purpose.

In conclusion, though I do not wish to overload this statement, I would like to say that a large part of my income is derived from panel patients who are on the lists of other medical men, and that should the clauses in the new Regulations relating to emergency treatment, and the treatment of persons who say they are entitled to it without producing evidence, be enforced, I for one shall find it far more profitable to go off the panel. I should then have my freedom and, in the matter of income, be better off by 50 per cent., and my present "panel" patients cordially support me in this view.—I am, etc.,

London, W., Dec. 14th.

A. R. EATES.

The Capitation Fee.

SIR,—I have waited to see if some doctor who had experience of the medical treatment, and payments for such treatment, of Post Office employees prior to the Insurance Act would take up Dr. Addison's statement in para. 9 of his answer, dated October 30th, 1919, to the Insurance Acts Committee Memo. 22, on remuneration.

I have not seen such a letter, so I wrote to a colleague who does this work; he informs me that in pre-insurance days he was paid 8s. 6d. per patient per annum. But also this rate was for picked lives; there was, and is, a most stringent entrance examination. So stringent was the examination that one insurance society at least will accept Post Office employees as first-class lives within five years of their passing the medical examination for the Post Office without any further examination whatever.

The 1912 insurance rate gave 8s. 6d. for treatment and medicine and 6d. for tuberculosis (the latter being a special payment). The Post Office rate is 8s. 6d. for picked lives, and is, I believe, the rate fixed by the Government.

Dr. Addison states that the "Government cannot ignore the opinion of many who have been conversant with the working of the Insurance Act that the 1912 rate afforded an excessive remuneration for the services rendered." Well, then, what about the 8s. 6d. for Post Office employees? It seems to me that the 1912 rate was not excessive as compared with previous Government payments. Also, I do not like Dr. Addison's witnesses. He does not give their names nor their callings; these remain veiled in a decent anonymity—"many who have been conversant," etc.!

Sir, doctors are never properly paid in times of epidemic. For the last four years we have been called for in season and out of season. For 1918 I see we are to get 81,356 of our credits in this county.—I am, etc.,

Appleton, Widnes, Dec. 12th.

A. E. MCKENZIE.

Malarial Ex-Servicé Patients.

G. N. M. writes: Would you be good enough to publish my protest against the prevailing method of the army and pensions authorities in placing the responsibility for treating discharged soldiers suffering from malaria upon the panel practitioner? At present I am treating several such men, each one of them taking more quinine in the year than could be covered by the amount I receive from the local Insurance Committee. In the little town in which I live there is no qualified chemist, nor is there another doctor receiving panel patients (my partner having turned over his panel to me), so I cannot refuse these men (if I would). These men do not come under the heading of "discharged disabled sailors and soldiers," though, in my opinion, they ought to do so. Ought not some special grant to be allowed for these cases? When a doctor accepts an insured person he gambles on the chance of that person requiring medical attention; but in these cases he has to take on an

invalid from the start, the whole idea of the scheme being banked, from the doctor's point of view. Are there not other panel practitioners feeling this injustice, and will not they come forward to help to put this matter on a proper footing?

INSURANCE REMUNERATION FOR 1920.

Up to the time of going to press no communication has been received from the Minister of Health announcing his decision as to the capitation fee under the Medical Benefit Regulations for 1920. It is understood that the matter is to go before the Cabinet, which, up to the present time, has been preoccupied with other business. Immediately a decision is given, notification will be sent to all Panel Committees by the Insurance Acts Committee.

LOCAL MEDICAL AND PANEL COMMITTEES.

LONDON.

THE Panel Committee for the County of London, in a circular to London insurance practitioners, calls attention to an accompanying form of authority to be signed by those willing to support the National Insurance Defence Trust. After very lengthy consideration, it says, the Panel Committee has decided to recommend practitioners to support the Trust Fund instituted by the Insurance Acts Committee (for the purposes of defence and to cover the necessarily heavy expenses of carrying on negotiations). The Panel Committee are induced to give this advice for the following reasons:

1. The Insurance Acts Committee are representative of Panel and Local Medical Committees, who in their turn represent the practitioners.
2. Membership of the Insurance Acts Committee is open to any nominee of a Panel Committee, irrespective of membership of any other body.
3. The policy of the Insurance Acts Committee is governed entirely by the decisions of the Conference of Panel Committees.
4. The qualification of representatives to the Conference is the same as for membership of the Insurance Acts Committee; all representatives to the Conference are elected by the Panel Committees.
5. The Ministry of Health has recognized the principle of collective bargaining, and is, and has been, negotiating terms and conditions of service with the Insurance Acts Committee.
6. It is obviously most desirable that the Insurance Acts Committee should be financed by insurance practitioners, and should not be dependent on the funds of any association or other body.
7. The Conference of Panel Committees will have undivided control over the purposes for which this fund may be used.

All practitioners on the London panel are asked to sign the form on the distinct understanding that they may withdraw this authority at any time by giving notice.

Meetings of Branches and Divisions.

ESSEX BRANCH: SOUTH ESSEX DIVISION.

THE second monthly meeting of the 1919-20 session was held at the Victoria Hospital, Southend-on-Sea, on November 14th, when an interesting address on blood pressure in general practice was given by Dr. LEWIS SMITH, physician to the London Hospital. There was an excellent attendance, and the members evinced great interest in the proceedings. Light refreshments were kindly supplied by Mrs. Harmon Morgan and Mrs. Victor Hodgson. On the motion of the Chairman, Dr. BLAKE, a hearty vote of thanks was accorded to Dr. Lewis Smith with acclamation.

METROPOLITAN COUNTIES BRANCH: MARYLEBONE DIVISION.

A MEETING of the Marylebone Division was held on December 5th, at 5 p.m., at the rooms of the Medical Society of London, Chandos Street. The Chairman of the Division, Dr. C. O. HAWTHORNE, presided.

Method of Election of Divisional Officers.—It was decided to adhere to the present custom of posting nominations to every member of the Division and determine the election at the divisional meeting.

Professional Fees.—It was resolved, in view of the altered value of money, to advise all practitioners of the borough to increase their professional fees by at least 50 per cent. over the rates prevailing before the war. Notice of the resolution was to be sent to the local and London press.

Ethical Rules.—The CHAIRMAN presented the model draft rules governing ethical procedure as received from the central office. He said that recent events had shown the need for strict and judicial action in such matters, and the Council could not be expected to be responsible for any proceedings other than those conducted in accordance with a scheme that had been formulated under the best legal advice. Hence, while the draft rules submitted could be either accepted or rejected, they could not be amended, as any amendment would conflict with the carefully framed decision of the Council. There were parts of the country where the support of these rules was regarded as an absolute necessity, and the Marylebone Division might reasonably be expected to give a practical and moral support to this claim.

Dr. JOSEPH POLLARD moved that the rules be adopted. Dr. DAVID ROXBURGH said he had come to the meeting with the express purpose of moving the rejection of the rules: (1) Because he did not see what use they could be to him, and (2) he did not think the responsibility for ethical procedure should be placed on colleagues. But, after hearing

the speech of the Chairman, he was prepared, not only to vote for the adoption of the rules, but to second the resolution for their adoption.

Dr. LANGDON-DOWN (Chairman of the Central Ethical Committee) said Marylebone should support less fortunately placed Divisions. The endorsement of these rules by the premier Division would be a great encouragement, just as the refusal to adopt them would be a source of weakness to the Association. They were told by the highest authority that all the objects of the Association were lawful; and that they had the right as British citizens and the duty as members of a great profession of expressing their views on the maintenance of professional dignity.

Dr. JAMES NEAL (Medical Defence Union) said that as a result of his experience he was convinced that it was eminently desirable for the profession in every area to be in a position to constitute an ethical tribunal to deal with professional differences which were outside the scope of the General Medical Council. To do this the business must be conducted in a proper manner under the guidance of rules drawn up by skilled persons.

The resolution for the adoption of the new rules was carried unanimously. The CHAIRMAN thanked Drs. Langdon-Down and Neal for their kindness in attending the meeting.

METROPOLITAN COUNTIES BRANCH: WILLESDEN DIVISION.

A MEETING of members and non-members was held in St. Andrew's Parish Hall, Willesden Green, on December 2nd, when Dr. WHITEHALL COOKE presided.

In response to an invitation from the Chairman of the Willesden Urban District Council to send three members of the profession to a meeting to consider the incorporation of Willesden as a municipal borough, Drs. Whitehall Cooke, Stocker, and T. Wilson were appointed to attend.

After full discussion it was resolved *unanimously* and *ad referendum*:

That this meeting of the medical practitioners in Willesden adopt the recommendation of the Council of the British Medical Association, that all fees should be increased by at least 50 per cent. over pre-war rates to meet the increased cost of living and expenses, and expects that every practitioner in the Division, while reserving his right to meet cases requiring special consideration, will agree to loyally carry out the recommendation of the Council, as is being done all over the country.

The honorary secretary was instructed to send a copy of the above resolution to each practitioner in the area, to the secretaries of the adjacent Divisions, and to the newspapers in the area. Several present intimated that they had already increased their fees with satisfactory results.

The meeting promised to support the Insurance Acts Committee in its endeavour to secure the capitation fee of 13s. 6d. under the National Insurance Acts, and expressed the opinion that this was a fair and reasonable fee and the least which would ensure a satisfactory service. It was agreed to urge panel practitioners to subscribe to the National Insurance Defence Fund.

The following resolution was passed:

While not in any way blaming the medical referees, but believing their work to be done in the best way possible in the present circumstances, the medical practitioners in Willesden, being far from satisfied with the arrangements for the treatment of disabled soldiers and sailors and the appointment of medical referees, are of opinion that referees should be appointed for the various districts of the area, so that the man may be seen at more convenient places and times; also that the practitioner should be informed as to the diagnosis and treatment recommended.

It was decided to hold the next meeting at St. Andrew's Parish Hall on Tuesday, February 10th, 1920, at 8.30 p.m., when Dr. Buchan, M.O.H. Willesden, will read a paper on municipal clinics, hospitals, etc.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.

A MEETING of the Division, reminiscent of the large meetings held at the time of the Insurance Act controversy, was held at the Public Medical Service board room, Leicester, on December 9th, when Dr. HOLMES was in the chair. A letter was read from Mrs. Tibbles acknowledging the sympathy of the Division in the death of her husband, a past chairman. A vote of sympathy was passed to the widow of Dr. Charles Crossley, for many years a member of the Division.

An address on "The British Medical Association: its work and its critics" was given by Dr. COX, O.B.E., Medical Secretary of the Association. This will shortly be published.

A vigorous discussion took place, in the course of which the actions and powers of the Association were challenged and defended. Drs. HOLMES, LOGAN, GARFITT, HARRIS, PIKE and FOSTER took part, and Dr. COX replied. A hearty vote of thanks to Dr. Cox was passed by acclamation on the proposition of the CHAIRMAN.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

NOTTINGHAM DIVISION.—The Nottingham Division cordially invites members of the Midland Branch of the Association to be present at a British Medical Association lecture to be given at 64, St. James's Street, Nottingham, on Wednesday, January 7th, 1920, at 4 p.m. Dr. Bernard Hart, Physician for Mental Diseases, University College Hospital, London, will lecture on modern methods of treatment in functional nervous disorders.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

The following announcements are notified by the Admiralty: Surgeon Commanders H. M. Braithwaite to the *Pembroke*, additional, for R.N. Hospital, Chatham; T. Creaser to the *Egypt*, additional, for Malta Hospital; W. P. Walker to the *Centurion*, vice Spicer for passage out, and to *Ajax* on recommissioning; H. Spicer and W. H. O. Garde to the *Victory*, additional, for disposal on relief; K. H. Jones to the *Pembroke*, additional, for R.N. Barracks, Chatham, as part complement and for medical transport duties; R. H. McGiffen to the *Galatea*, W. K. D. Berton to the *Excellent*, R. H. Mornement to the *Resolution*, J. P. H. Greenhalgh to be lent to R.N. Recruiting Head Quarters from December 20th to January 3rd, 1920; J. G. Peebles to the *Royalist*, C. J. O'Connell to the *Pembroke*, additional, for disposal on ship reducing, Surgeon Lieutenant C. N. Ratcliffe to the *Lapin*. Surgeon Lieutenants (temporary): H. M. Scott to the *Victory*, additional, for disposal on base closing down; E. C. W. Cooke to the *Montrose*, J. D. Milligan to the *Fivid*, additional, for disposal; E. A. Crook to the *Victory*, additional, for disposal on relief; J. R. Brenner to the *Fivid*, additional, for disposal on ship paying off.

ARMY MEDICAL SERVICE.

Colonels retire on retired pay: G. W. Tate, C.M.G., D.S.O., G. H. Barefoot, C.B., C.M.G., A. Kennedy.
Major-General Sir H. N. Thompson, K.C.M.G., C.B., D.S.O., and Colonels N. Faichnie and A. H. Waring, D.S.O., are placed on the half-pay list.

Temporary Colonel J. F. O'Carroll, C.B.E., relinquishes his commission and retains the rank of Colonel.

ROYAL ARMY MEDICAL CORPS.

Temporary Lieut.-Colonels: J. Hay (Captain R.A.M.C.T.F.) and Thomas W. Griffith, C.M.G. (Major and Brevet Lieut.-Colonel R.A.M.C.T.F.) relinquish their temporary commissions on reposting.

Lieutenant-Colonels relinquish the temporary rank of Colonel:—Brevet Colonel H. Ensor, C.M.G., D.S.O., S. de C. O'Grady, C.M.G., D.S.O., (Brevet Colonel) W. H. S. Nickerson, V.C., C.B., C.M.G.

Lieut.-Colonel H. Herrick, C.M.G., D.S.O., relinquishes the acting rank of Colonel.

Lieut.-Colonel and Brevet Colonel E. E. Powell, D.S.O., to be acting Colonel.

Lieut.-Colonel J. E. Brogden, half-pay list, retires on retired pay on account of ill health contracted on active service (November 11th, 1919, substituted for notification in the *London Gazette*, November 10th, 1919).

Lieut.-Colonel and Brevet Colonel L. W. Harrison, D.S.O., K.H.P., retires on retired pay, November 21st, 1919 (substituted for notification in the *London Gazette*, November 17th, 1919).

The following relinquish the acting rank of Lieut.-Colonel:—Majors: L. A. Andrews, J. C. G. Carmichael, O.B.E., B. H. V. Dunbar, D.S.O., G. B. Edwards, D.S.O., A. C. Elliott, W. H. Forsyth, D.S.O., F. A. McCammon, O.B.E., C. R. Millar, D.S.O., D. de C. O'Grady, D.S.O., E. M. O'Neill, D.S.O., W. B. Purdon, D.S.O., M.C., A. M. Rose, D.S.O., E. J. Kavanagh, D.S.O., M.C., T. E. Hart, D.S.O. Captains and Brevet Majors: H. H. Blake, O.B.E., G. H. Dive, D.S.O. Captains G. P. Taylor, D.S.O., M.C., P. Carney, M.C., T. S. Eves, D.S.O., O. W. McSheehy, D.S.O., E. Percival, D.S.O., M.C., H. C. D. Rankin, J. Rowe, M.C., R. G. Shaw, M.C., G. D. R. Carr, M.C., G. S. Parkinson, D.S.O. Temporary Captains: A. J. Blake, M.C., F. D. Johnson, G. L. Loggatt, H. C. Watson, M.C., R. Jamison (on ceasing to be specially employed), G. Jackson, M.C. On reposting: Major W. J. E. Bell, D.S.O. (March 3rd, 1919, substituted for notification in the *London Gazette*, August 25th, 1919). On ceasing to command medical units: Majors J. H. P. Langrishe, D.S.O., T. H. Gibbon, O.B.E., P. F. Roberts, D.S.O., R. K. White, D.S.O., J. A. Turnbull, D.S.O. (February 13th, 1919, substituted for notification in the *London Gazette*, April 23rd, 1919). A. B. Hinde, O.B.E. (ret. pay.) Temporary Captain L. G. Brown, M.C. (February 20th, 1919).

Major T. H. Gibbon, O.B.E., to be temporary Lieutenant-Colonel whilst specially employed.

To be acting Lieutenant-Colonels: Captain (acting Major) W. D. Anderson, M.C., Captain C. L. Franklin, M.C. (whilst commanding a medical unit from April 16th to June 25th, 1919), temporary Captain (acting Major) F. K. Kerr, M.C., temporary Captain W. G. T. Storey, whilst commanding a hospital ship from August 21st to October 13th, 1919 (substituted for notification in the *London Gazette*, November 5th, 1919). Major J. M. B. Rahilly, from May 29th to September 24th, 1919; Captain (acting Major) W. D. Anderson, M.C.; temporary Captain (acting Major) F. K. Kerr, M.C. Whilst commanding medical units: Major and Brevet Lieut.-Colonel M. G. Winder, D.S.O., Major R. C. Wilson, temporary Major W. H. G. Aspland, Captain J. J. D. Roche (March 28th to June 12th, 1918).

Major R. F. M. Fawcett, D.S.O., retires on retired pay.
Major R. C. Hollows, D.S.O., relinquishes the temporary rank of Lieutenant-Colonel.

The following relinquish the acting rank of Major: Captains and Brevet Majors R. Gale, D.S.O., H. F. Pantton, D.S.O., M.C., S. W. Kyle, Captains W. E. Tyndall, M.C. (February 15th, 1919), J. P. Quinn, M.C. (February 16th, 1919), C. de W. Gibb (February 21st, 1919), J. H. Pendered, M.C. (March 9th, 1919), W. Mathieson, O.B.E., C. E. L. Harding, J. Biggam, M.C., C. F. Burton, M.C., C. K. G. Dick, M.C., C. R. Judgeon, M.C., C. Kelly, M.C., G. P. Kidd, M.C. (March 20th, 1919, substituted for notification in the *London Gazette*, June 27th, 1919). W. S. Martin, M.C., M. Morris, C. H. Stringer, D.S.O., J. R. Yourell, J. J. Molyneux (on ceasing to be specially employed), F. H. Alexander, M.C. Temporary Captains W. F. Abbott (on ceasing to be specially employed), J. E. H. Roberts, O.B.E. (December 11th, 1918), G. T. Cregan, M.C., A. C. Renton, W. Martin, A. G. Howson, K. Black, W. S. S. Berry, O.B.E., E. Biddle, M.C., T. E. Coulson, J. G. Duncanson, H. H. Elliot, M.C., H. L. Ellison, A. R. Esler, A. Fletcher, A. T. W. Forrester, R. W. P. Jackson, M.C., James P. Jones, M.C., N. E. Kendall, A. C. Lambert, M.C., J. M. Macfie, M.C., R. Massie, O.B.E., C. E. Meryon, G. Muir, G. R. B. Purce, M.C., W. H. Sheffield, J. W. Simon, A. G. Southcombe, W. A. Todd, A. A. Wilson, G. Wilson, D. G. Wishart, R. E. Cree, M.C.

Major and Brevet Lieut.-Colonel R. A. Bryden, D.S.O., relinquishes the temporary rank of Lieutenant-Colonel on ceasing to command a medical unit.

Lieutenants (temporary Captains) to be Captains: D. H. Coats, G. T. Garraway, P. G. Russell, H. J. Davidson, M.C.

Captain L. C. Goumont from S.R. to be Lieutenant and to be temporary Captain, February 12th, 1918, but not to reckon for pay or allowances prior to November 1st, 1919, with precedence next below D. F. Pantton.

To be Captains, not to reckon for pay or allowances prior to November 1st, 1919:—Captains: C. E. Peley, M.C., from T.F. (precedence next below G. D. Harding), R. H. Hodges, M.C., from S.R. (April 7th, 1918, precedence next below S. D. Robertson), A. G. G. Thompson, from T.F. (February 23rd, 1918, precedence next below R. W. Galloway), O. J. O'Brien, from S.R. (March 20th, 1918, precedence next below C. Popham), A. R. F. Clarke, M.C., from S.R. (January 10th, 1919, precedence next below J. W. O'Brien), (acting Major) B. I. Davis, from T.F. (July 4th, 1919, precedence next below G. T. Gimlette and to retain his acting rank), J. B. Minch, from S.R. (March 30th, 1918, precedence next below J. P. Litt). Temporary Captains: R. S. Dickie (May 2nd, 1919, precedence next below W. H. A. P. Sutton), O. C. Link (March 15th, 1918, precedence next below A. C. Jebb), (acting Major) G. G. B. Holroyde, M.C. (March 20th, 1918, precedence next below G. D. Harding), and to retain his acting rank), J. Higgins (March 1st, 1919, precedence next below A. L. Robertson), (acting Major) F. C. Tibbs (January 15th, 1919, precedence next below F. R. Shaw and to retain his acting rank), W. F. Hawkins (February 11th, 1919, precedence next below G. B. Hogg). Not to reckon for pay or allowances prior to November 14th, 1919: Captain A. K. Forbes, M.C., late R.A.M.C. (December 26th, 1918, precedence next below W. McE. Snodgrass).

The following officers relinquish their commissions: Temporary Majors and retain the rank of Major: W. F. Jones (on ceasing to be employed at the Brook War Hospital), A. C. Stannberg, O.B.E. (Surgeon-Major, Medical Corps, Royal Jersey Militia, H. Robinson (on ceasing to be employed at the Horton County of London) War Hospital), temporary honorary Major L. F. Knuthsen, O.B.E., on ceasing to serve with No. 5 British Red Cross (Anglo-American) Hospital, and retains his honorary rank, temporary Captain (acting Lieut.-Colonel) A. G. Stewart, and is granted the rank of Lieut.-Colonel. Temporary Captains and are granted the rank of Major: (acting Major) A. C. Keep, M.C., A. J. Dunlop, M.C., C. H. B. Bootle, D. F. O'Kelly, (acting Major) A. Abrahams, O.B.E., Temporary Captains and retain the rank of Captain: E. E. Semmence, on account of ill health contracted on active service, W. J. Purdy, J. I. Graham-Jones, T. G. Brown, R. Nichol, J. W. Hewitt, D. J. Stokes, M.C., H. Q. O. Wheeler, R. V. Powell, J. D. Evans, R. H. Jones, E. A. Scott, W. F. Shanks, G. C. Linder, S. L. Haslett, S. V. Telfer, E. A. Scott, W. F. Shanks, M.C., A. E. Hodgkins, A. Wright, F. V. Cant, H. D. Willis-Bund, M.C., J. D. Watson, M.C., J. A. Leiper, J. N. Martin, M.B.E., StG. M. L. Homan, M.C., J. Hutchison, D. A. D. Kennedy, M.C., F. J. Verrall, W. E. Hopkins, M.C., J. R. Briscoe, A. D. Ropes, J. F. Wood, A. A. Martin, F. Ritchie, A. J. McNair, L. H. Taylor, L. C. G. Bacon, J. Black, T. A. Hawksworth, J. G. Ackland, J. B. Burgess, H. L. McCormick, C. G. T. Mosse, R. S. Ross, M.C., A. L. Badcock, S. G. Platts, E. Scott-White, H. A. Kisch, G. T. Loughborough, C. Rutherford, E. Baldwin, H. B. Binks, H. Fraser, D. McFarlane, D. J. Harris, K. J. Aveling, W. M. Oakden, C. D. Coyle, C. H. Seville, D. M. Smith, F. L. Nash-Worthing, C. C. Kerby, F. S. Collard, W. D. Nicholson, T. P. Herriot, J. Kirtan, M.C., G. J. Bowen, G. P. Jones, C. I. Milne, G. Rickman, M. B. Reichwald, R. D. Buchanan, W. Cullen, M. R. Lawrence, C. J. Scholtz, F. J. Kirkness, T. Fraser, H. P. Harpur, G. R. D. McGeagh, D. A. Laird, J. R. Turner, J. T. Mackenzie, M.C., F. Vause, J. F. E. Prideaux, D. B. Pascall, T. W. Melhuish, L. E. Funn. Temporary honorary Captain R. J. C. Douty, on ceasing to serve with No. 2 British Red Cross Hospital, and retains his honorary rank. Temporary Lieutenants and retain the rank of Lieutenant: J. Stewart, M. J. Gibson. Temporary Lieutenant R. Herley. Temporary honorary Lieutenant J. Lindsay, on ceasing to serve with No. 2 British Red Cross Hospital, and retains his honorary rank.

ROYAL AIR FORCE.

MEDICAL BRANCH.

Captain (Brevet Major) F. C. Cowan, R.A.M.C., is granted a temporary commission as Squadron Leader on seconding to the R.A.F. Flying Officers to be Flight Lieutenants: S. E. Duff, A. Parker, T. D. J. A. Fuller, E. T. McElligott, D. C. Farquharson, J. T. T. Forbes, J. W. Healy, M. J. Smyth.

Captains: C. T. Costello and H. A. Wright relinquish their commissions on account of ill health, and are permitted to retain their rank. Transferred to the unemployed list:—Captains: I. A. Walker, C. P. C. Sargent, E. D. Granger, M. J. Whelton, A. W. Weston, A. P. Woolright, V. T. Ellwood, B. H. Swift.

APPOINTMENTS.

LOCK, Norman F., M.A., M.B., B.Ch. Cantab., F.R.C.S. Eng., Assistant Surgeon to the Royal Devon and Exeter Hospital.

REYNOLDS, Austin E., M.R.C.S. Eng., Assistant Ophthalmic Surgeon to the Miller Hospital, Greenwich, S.E.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice: not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

MARRIAGE.

ISAAC—WILLIAMS.—On the 26th November, at All Souls', Langham Place, London, W., by the Rev. Prebendary Webster, M.A., Major C. Leonard Isaac, B.A., M.B. Cantab., F.R.C.S.E., to Dorothy Margaret, elder daughter of Mr. and Mrs. Fred Williams, Sunnyside, Gnoil Park Road, Neath.

DIARY FOR THE WEEK.

POST-GRADUATE COURSES AND LECTURES.

WEST LONDON POST-GRADUATE COLLEGE, Hammersmith, W.6.—Monday, 12 noon, Dr. Burnford: Pathological Demonstration. 5 p.m., Mr. MacDonald: Genito-urinary Surgery. Tuesday, 12 noon, Mr. Tyrrell Gray: Demonstration of Fractures.

DIARY OF THE ASSOCIATION.

Date. Meetings to be Held.

JANUARY.

7 Wed. Nottingham Division, 64, St. James's Street, Nottingham, 4 p.m. Lecture by Dr. Bernard Hart: Modern Methods of Treatment in Functional Nervous Disorders.

SUPPLEMENT

TO THE

BRITISH MEDICAL JOURNAL.

LONDON: SATURDAY, DECEMBER 27TH, 1919.

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FRIENDLY SOCIETIES AND MEDICAL INSTITUTES IN VICTORIA, AUSTRALIA.

THE following letter has been received by the Chairman of the Council of the British Medical Association from the officers of the Victorian Branch. It gives a consecutive account of the controversy forced upon the medical profession in Victoria by a combination of the friendly societies in the State.

BRITISH MEDICAL ASSOCIATION (VICTORIAN BRANCH).

Medical Society Hall, E. Melbourne.

Dear Sir,

I have been directed by my Council to forward to you an account of the dispute still existing between lodge medical officers and friendly societies in Victoria.

For many years the conditions under which lodge medical officers worked were very unsatisfactory, more particularly with regard to the rate of remuneration, which was as low as 6s. per member (including wife and children), while the average for the State was about 14s.; there was no income limit, and it was a well-known fact that some of the richest men in Victoria were mean enough to avail themselves of the medical benefits at this low rate; the mileage rate was inadequate; and the lodge medical officers were under the domination of the lodge secretary. In order to ameliorate these conditions the profession throughout Victoria were organized until over 90 per cent. of the legally qualified medical practitioners in Victoria were members of this Branch.

In December, 1913, a conference was held between the doctors and lodge representatives, at which the doctors set out their views and arguments for increased remuneration. In July of the following year a further conference was held, and a subcommittee of five chosen from the British Medical Association and the Friendly Societies Association met to consider the matter and report to a further conference. In the meantime war broke out, and the consideration of the matter was postponed to a future date.

In March, 1917, the matter was revived by the British Medical Association and various conferences were held, but no agreement was arrived at; the lodge medical officers therefore, (to the number of 93 per cent., tendered their resignations, to take effect as from January 31st, 1918.

During this year various efforts were made by the State Government to effect a settlement on behalf of the Friendly Societies Association by proposals of arbitration, but the Council of the British Medical Association contended rightly that the rate at which they agreed—namely, 20s. in the town, and 26s. in the country—was a concession made to the less remunerated classes of the community, and that the medical men themselves were the only persons who should say what that amount of concession should be and to whom that concession should be granted. Consequently the Council refused all proposals to arbitrate. Threats by State Parliament failed to deter the Council from its determination.

The Parliament therefore appointed a Royal Commissioner to investigate the matter in dispute, and in his finding he granted to the medical officers virtually all that they had asked from the beginning.

Both sides to the dispute thereupon offered to accept

the finding of the Royal Commission, but the Council of the British Medical Association insisted that the medical institutes which had been established since the resignations had been submitted in order to supply medical attendance of inferior quality and at sweating rates should be abolished, and that the staffs of pre-existing institutes should be reduced to their former strength. This the friendly societies refused to accede to, and they have persisted in their attitude to this date, partly, as they assert, as it would be an interference with their legal rights to establish institutes, and partly because their members have been bound by legal agreement to support the institutes for three years. Thus a deadlock was reached.

In order that such institutes may be able to pay their way out of contributions received from lodge members, as many as six thousand patients are placed on one doctor's list, and the rate of remuneration to the doctor in some instances is as low as 4d. per visit or consultation. The friendly societies who have met the British Medical Association in conferences have almost unanimously volunteered the information that the establishment of institutes has proved a dismal failure from the standpoint of medical treatment, but the President of the Friendly Societies Association has quite recently openly stated that it is their intention to persist with institutes as a measure for keeping the doctors' fees down to the lowest possible level.

Quite recently two of the nineteen friendly societies have agreed to turn down the institutes absolutely and to accept only British Medical Association medical practitioners for their medical officers.

At a recently held conference of institute officials and of friendly societies a motion to hold a further conference with the British Medical Association was rejected, and two resolutions were adopted—namely, to request Parliament to appoint whole-time State health officers, to whose duties should be added that of attendance upon friendly society members, particularly in the country districts; that a representative of the Associated Institutes should be sent immediately to England to secure one hundred doctors to act as medical officers, with a tempting offer of £1,000 per annum with extras for midwifery and surgery. Apart from our interests in this matter, it would be as well that medical practitioners in England for their own protection should be apprised of the duties entailed in the attendance upon an unlimited number of lodge patients, most of whom are chronic cases. Those that they have secured recently are daily resigning because they find themselves incapable of complying with the unfair terms of their agreements.

My Council would be glad if you could assist it in any way which might suggest itself to you to prevent any influx of medical practitioners from England to these institutes, which are solely for commercially exploiting the labours of the medical men.—Yours faithfully,

(Sgd.) C. STANTON CROUCH,
Secretary.

(Sgd.) J. RAMSAY WEBB,
President.

(Sgd.) J. W. DUNBAR HOOPER,
Hon. Secretary.

(Sgd.) W. R. BOYD,
Chairman of the Organization Committee.

September 17th, 1919.

Association Notices.

BRANCH AND DIVISION MEETINGS TO BE HELD.

KENT BRANCH: MAIDSTONE DIVISION.—Dr. A. C. Black, Honorary Secretary (Strettit Place, East Peckham, Paddock Wood, Kent), gives notice that a meeting of the Division will be held at the West Kent Hospital, Maidstone, on January 5th, at 3.15 p.m., when an address will be given by Mr. N. Bishop Harman, F.R.C.S., on some ocular conditions causing "pink eye."

NOTTINGHAM DIVISION.—The Nottingham Division cordially invites members of the Midland Branch of the Association to be present at a British Medical Association lecture to be given at 64, St. James's Street, Nottingham, on Wednesday, January 7th, 1920, at 4 p.m. Dr. Bernard Hart, Physician for Mental Diseases, University College Hospital, London, will lecture on modern methods of treatment in functional nervous disorders.

SURREY BRANCH.—The Honorary Secretary of the Surrey Branch (Dr. Cecil P. Lankester, 1, Rectory Place, Guildford) fears that some members of the Branch had to pay excess postage on a circular recently sent out; he much regrets the mistake.

INSURANCE.

CORRESPONDENCE.

The Conference with the Minister of Health.

SIR,—I am sure the profession must feel very appreciative and deeply gratified at the very able and complete way in which the deputation from the Insurance Acts Committee laid its views upon the matter of remuneration before the Minister of Health. Judging from the report in the SUPPLEMENT of December 13th, there was only one side to the controversy. The Minister's reply was a very feeble and disappointing exhibition. From his comments on Dr. D'Ewart's lucid figures for work done by insurance practitioners in Manchester in 1913 and 1918, it would appear that he was rather startled, and he naively remarks that the figures "seemed to show that the insured persons in Manchester, at any rate, had been led to expect a better service from the same doctors if treated as private patients rather than as insured ones, and if this were so, it was a matter of grave concern." Dr. Addison's deduction is not quite obvious, but what the figures have amply proved is, that the present capitation fee was even at the inception of the Act totally inadequate.

During the first year of the operation of the Act the Manchester doctors treated their insurance patients in the way they had hitherto treated their private patients. They were promised by the Panel Committee that as far as could be foreseen the remuneration would be 2s. per attendance and 2s. 6d. a visit. At the end of the year, after a drastic cutting down of the attendances and visits to an average for all practitioners and payment restricted to that average or less, the doctors were paid round about 60 per cent. The floating sixpence was entirely swallowed up, and, more than that, the chemists were short by many hundred pounds. The chemists strove to recover this sum from the doctors. After a long controversy the matter was settled, several doctors being heavily surcharged. This object lesson was not lost upon the medical men of Manchester. It was clearly demonstrated that the Government had never intended to pay for a service equal to a private practitioner service. The coat had to be cut according to the cloth, and the Government are now getting what they are paying for—a mere mockery of a service.

Some of Dr. Addison's arguments against the remuneration asked for by the deputation are puerile. We are reminded that old age pensions, unemployment benefits, and cash benefits under the Insurance Act may be increased, and we must be made to contribute towards these in a lessened remuneration, although we are compelled, with the rest of the community, to contribute as taxpayers. It is quite on a par with an employer, in considering an appeal from an employee for an increase in wages, to remind the employee that he has had to be at the expense of a luxurious Rolls-Royce for his wife and a thoroughbred hunter for his daughter, and to hope that his workman will contribute towards them.

Dr. Addison has it in his hands to make the service an efficient and contented general practitioners' service, but I fear he has not the courage. What prospects of success will he have with those large developments of public medical service which he speaks of setting up in the future unless he has a contented profession to work them?

No amount of coercive regulation will obtain anything but a travesty of a service, and a Ministry of Health blighted at its birth.—I am, etc.,

Manchester, Dec. 14th.

ALEX. FRASER.

The Minister's Arguments.

SIR,—Truly we live in strange times, and I suppose it is owing to this fact that we have had such a strange code of ethics thrust upon us as that enunciated by Dr. Addison in his reply to the Insurance Acts Committee on December 4th last.

I refer to the paragraph of the report where he says—

He felt that the members of the deputation ought to be informed of the proposals immediately before the Government in regard to old age pensions, unemployment benefit, and extension of cash benefits under the Health Insurance Acts which involve expenditure of very large sums of Exchequer money. He said that the present claim for an increase in doctors' remuneration must be considered in conjunction with these other large items of expenditure.

Is not this an amazing argument to bring forward for cutting down the proposed remuneration of panel doctors? Why must the doctor's claim for an increase be considered with other expenditure? Ought it not rather to be considered on its merits? Is there any equity or justice in looking at it from any other point of view? Why not put it the other way about? Has Dr. Addison or anybody else told these other applicants for increased remuneration or increased grants that their claims must be considered alongside of the doctors' claims? "I don't think."

Let us put it like this. If I am owed 13s. 6d. by the Government, why should I take 12s. or 12s. 6d. in settlement of my account because another man was owed 20s.? And, by the way, have the doctors ever yet received 100 per cent. of what was owing to them for the insured persons on their lists? The answer is in the negative. Every poor little village club in the old days could pay to the uttermost farthing what they agreed to pay, while a powerful Government department cannot do so because, forsooth, they cannot keep a proper list of those who are on the doctors' panels. What an indictment of Government methods!

Dr. Addison further on draws a distinction between the percentage increases in wages of the labouring classes and the case of men in the Civil Service with incomes comparable with the income of the average general practitioner. He makes the statement that the increase to the former (the working class) "must almost inevitably go in actual expenditure of food." I think he will find, if he makes inquiries in the proper quarters, that much of the increase in working men's wages has gone to increasing the comfort of the home, in better clothes, and in amusements. Do not think, Sir, that I am objecting to this; on the contrary, I am very glad to know that the working classes are able to enjoy more of the amenities of life than ever they did before.

But where does the doctor's increased remuneration go? Not all in food or in luxuries, but very largely in increased wages, increased cost of drugs and instruments, increased expenses of locomotion, and in everything connected with the carrying on of his profession. These are expenses which are not incurred by the civil servant with similar income.

We have been told that munition workers in many cases were paid more than they earned. The medical profession is not out for overpayment; they are anxious to earn what they are paid, and they consider a good case has been made out for a capitation fee of 13s. 6d.—I am, etc.,

Steeple Claydon S.O., Bucks,
Dec. 14th.

PHILIP L. BENSON.

Insurance Remuneration.

SIR,—Those of us who have followed the communications between the representatives of the medical profession and the Minister of Health, must be struck by the futility of a meek and empty-handed supplicant approaching a politician with the desire of obtaining just recognition from the Government. I use the word "meek" in view of the humble dignity with which our representatives have asked for a wage which the great majority of us consider to be quite inadequate, when we have to meet the continually soaring prices, wages, and educational fees; and I say "empty-handed" as we are an unarmed and unorganized body, and our representatives show no sign of firm and dignified determination to decline service for an inadequate fee.

The Minister, on the other hand, states that a capitation fee of 13s. 6d. would mean a heavy increase in expenditure, and asks from where it is to come. He proceeds to address the profession in a manner he would not dare to adopt to

the insured person, for the very good reason that the insured person is neither meek nor empty-handed. He is thoroughly organized and can command many votes. The demands of this organized class have already to be heavily subsidized and their just increase (100 to 150 per cent.) of wages to be paid, and they are to be paid by us, the unorganized class, and at the same time we are to be deprived of the means of paying for these achievements of organized labour. It is for us to trim our sails accordingly, and insist on a just balance. It cannot be said that the medical man has not the spirit and good faith to work both mentally and physically for his fees and that, after a long and expensive education. Moreover, he is on duty the whole twenty-four hours, and for seven days in the week; but how in the future will he be able to keep and educate his son into the same profession?

We are told plainly by Dr. Addison that we cannot have the sum we ask for, because there is no money to pay it! Not because it is not a fair, just, and well earned fee.

The suggestion made by Drs. Cox, Simons, and Evill, that the money should be raised by increased contribution from the insured person is a very just one, in that the insured and subsidized person is, in the first place, going to receive more and more medical benefit and skilled treatment for his subscription, and secondly, he is well able to afford it.

But apart from the source of the funds, the very low figure of the capitation fee put forward by our representatives should be very firmly demanded, and their statement that it is the lowest acceptable fee should be strongly supported by a firm refusal of service for anything less than this already inadequate fee. The fee would become even lower in view of the loss of capital which would be sustained if the new regulation with regard to the transfer of practices be agreed to by the profession.—I am, etc.,

Eastbourne, Dec. 7th.

A. DEANE.

DEVON INSURANCE COMMITTEE.

At a meeting, on December 1st, of the Devon Insurance Committee at Exeter, Dr. NOY SCOTT (Plympton) moved a resolution declaring that the time had arrived when doctors and chemists serving under the Act should receive a substantial addition to the fixed payments now made for their services. Mr. TAYLOR (Porquay) seconded the resolution. Mr. ROWSELL (Exmouth) stated that the panel doctors and chemists were negotiating with the Ministry of Health for revised terms in the coming year. Mr. SPRAGUE (Okehampton) thought the depreciation in the currency was a sufficient argument why the scale should be raised. He believed a national saving could be effected by the establishment of a State medical service. Mr. YOUNG (Teignmouth) was willing that doctors and chemists should be adequately paid, but objected to the phrase in the resolution, "substantial addition," without having more precise details than had been given. Dr. SCOTT, on appeal, consented to alter his resolution to "fair and adequate payment." He pointed out that during the war the doctors had the nation in their hands, and if they had "down tools" everything would have been given them that they asked for. But the doctors took the patriotic course and refrained. Mr. ROWSELL pointed out that in whatever form the resolution was carried the Ministry of Health would see to it that neither the doctors nor the chemists were overpaid. The resolution was agreed to.

EXEMPTION OF NON-MANUAL WORKERS.

THE Ministry of Health draws attention to the fact that any non-manual worker whose remuneration is at a rate between £160 and £250 a year and who desires to claim exemption under the National Insurance Act, 1919, should make his claim not later than December 31st, 1919. The appropriate form of application is obtainable at any post office. Until exemption has been granted the weekly contributions required to be paid in respect of the employed person are at the ordinary rate (7d. for men, 6d. for women), and if exemption is not claimed within the time allowed the person will thereafter remain subject to compulsory insurance under the normal conditions.

Naval and Military Appointments.

ROYAL NAVAL MEDICAL SERVICE.

THE following appointments are announced by the Admiralty: Surgeon Commanders J. C. F. D. Vaughan to the *Adamant*, J. A. Forrest to the *Courageous*. Surgeon Lieutenant Commanders H. W. Nicholls to Malta Hospital, A. H. Joy to the *Kinsha*. Surgeon Lieutenants W. P. Vicary to the *Europa*, additional, 3rd Royal Marine Battalion; A. G. McKee to the *Vernon*. Surgeon Lieutenant (temporary) C. L. I. Wilton to the *Victorious*.

ARMY MEDICAL SERVICE.

ROYAL ARMY MEDICAL CORPS.

Majors to be temporary Lieut.-Colonels whilst specially employed: J. L. Wood, O.B.E., A. S. Littlejohns, D.S.O. (substituted for notifications regarding these officers in the *London Gazette*, October 29th, 1919).

The notification in the *London Gazette* of August 14th, 1919, regarding Major C. R. Millar, D.S.O., is cancelled.

Brevet Lieut.-Colonel R. B. Ainsworth, D.S.O., to be temporary Lieutenant-Colonel whilst specially employed, October 31st, 1919 (substituted for notification in the *London Gazette*, November 14th, 1919).

Captain S. M. Hattersley, M.C., to be temporary Major whilst specially employed.

To be acting Majors: Captains A. P. O'Connor, M.C., temporary Captain S. W. Allworthy (from April 18th to August 4th, 1919), T. D. Inch, O.B.E., M.C. (February 25th, 1913, substituted for notification in the *London Gazette*, July 25th, 1913), C. Clark, D.S.O., P. H. Wells, M.C. (from March 20th to April 23th, 1919, and from May 11th to September 26th, 1919, temporary Captains W. Brown, A. W. Rattrie, M.C., R. S. Morshead, M.C., W. J. Oliver, J. R. Pate, J. G. M. Sloane, J. S. Lloyd (April 7th, 1919, substituted for notification in the *London Gazette*, September 3rd, 1919), R. S. Gibson, M.C., A. P. Saint, M.C.

Captain E. Jamieson resigns his commission.

Captain J. Biggam, M.C., is seconded for service with the Egyptian army.

Captain L. R. Shore, M.C., is placed on the half-pay list on account of ill health caused by wounds.

Temporary Captain E. R. Hunt relinquishes the acting rank of Lieut.-Colonel.

Temporary Captain R. T. Grant and Captain J. Y. Moore, O.B.E., relinquish the acting rank of Major.

H. W. Wookey, late Major C.A.M.C., to be temporary Major.

The name of temporary Captain C. H. B. Borth is as now described and not as in the *London Gazette*, December 4th, 1919.

Captain A. W. Raymond, M.C., resigns his commission (October 11th, 1919, substituted for notification in the *London Gazette*, October 3rd, 1919).

Captains from S.R. to be Captains: L. M. Routh, February 5th, 1913, but not to reckon for pay or allowances prior to November 1st, 1919, with precedence next below E. A. Sutton; C. H. G. Penny, November 23rd, 1918, but not to reckon for pay or allowances prior to November 25th, 1919, with precedence below L. B. Clarke.

The notifications regarding the following officers which appeared in the *London Gazette* of the dates indicated are cancelled: Captain and Brevet Major A. G. J. MacIlwaine, C.I.E. (July 1st, 1919), Captain G. P. Taylor, D.S.O., M.C. (July 11th, 1919).

Late temporary Captains to be temporary Captains: C. Sullivan, M.C. (seniority from November 2nd, 1915), J. Elliott (seniority from July 7th, 1915), R. C. Phelps (seniority from August 20th, 1915), D. R. C. Shepherd (seniority from December 9th, 1917), O. S. Kellett (seniority from June 13th, 1915), J. Monroe (seniority from November 5th, 1915), A. C. Greenwood (seniority from April 6th, 1915), E. C. A. Smith (seniority from August 2nd, 1915), M. J. Houghton (seniority from February 12th, 1917), D. Cowin (seniority from August 20th, 1915), D. J. Stokes, M.C. (seniority from November 25th, 1914).

To be temporary Captains: T. E. Dobbs, J. B. Morrison, late Captain C.A.M.C., H. T. O'Neill, H. C. Hopkinson, A. F. Wyatt, N. W. Furey, late Captain C.A.M.C., H. Morell, late Major C.A.M.C., I. N. Mitchell, late Captain C.A.M.C., L. H. Woods.

To be temporary Lieutenants: E. J. Hynes, D. M. O'Dwyer, W. C. McKee, F. Formosa, J. F. P. Gallagher, F. T. Allen, D. P. Fitzgerald, L. V. Coghlan.

The following relinquish their commissions on ceasing to serve with the British Red Cross Society in France, and retain their honorary rank: Temporary honorary Lieut.-Colonel L. N. Robinson, temporary honorary Majors C. G. Jarvis, C.M.G., and E. H. Hicks.

Captain V. J. Perez from S.R., and temporary Captain H. J. Bensted, M.C., to be Lieutenants and to be temporary Captains, but not to reckon for pay or allowances prior to November 1st, 1919, precedence next below J. D'A. Champney and H. J. Davison respectively.

The following officers relinquish their commissions: Temporary Lieut.-Colonel G. Moorhead. Temporary Majors and retain the rank of Major: S. W. Patterson, C. U. Laws (on ceasing to serve with the Northumberland War Hospital). Temporary Captains and are granted the rank of Major: A. R. Elliott, K. Black, R. H. Stevens (substituted for notification in the *London Gazette*, October 8th, 1919). Temporary Captains on transfer to the I.M.S.: A. C. Craighead, C. J. L. Patch, M.C. Captains and retain the rank of Captain: G. Collins, E. Ashby, J. F. Barr, H. F. Strickland, W. Raffle, R. C. Verley, A. B. Brook, W. R. Thomas, C. B. Taylor, O.B.E., S. A. Hall, T. T. Rankin, F. W. Chamberlain, H. Webb, H. Sheldon, W. Messer, A. W. Kendall, J. A. Powell, J. D. Yule, R. B. Eadie, W. H. Thomas, F. C. Ormerod, A. R. C. Dooley, D. J. Thomas, W. McG. Conley, G. S. Phillips, E. L. K. Sarzent, G. A. Varian, J. J. O'Neill, A. Binning, J. Warnock, O.B.E., W. C. S. Wood, A. McCawley, J. J. Reynolds, M.C., D. C. P. Taylor, H. Sheasby, B. E. Wall, G. A. Wyon, J. Simpson, D. D. Farquharson, J. B. Mitten, G. Hadfield, J. L. Torley, J. R. Wylie, J. B. P. McLaren, D. McVicker, E. G. Bunbury, H. J. W. Woodroffe, G. W. Bury, A. R. Jones, H. Thorp, J. J. Moriarty, C. W. C. Harvey. On account of ill health contracted on active service: H. A. Colwell, T. H. Wilkins, K. S. Melvin, J. H. Askins. Temporary honorary Captains: W. R. Thomas (May 16th, 1915), N. M. Keith (January 22nd, 1919). Temporary honorary Lieutenant T. S. Evans on ceasing to serve with British Red Cross Hospital, Netley, and retains the honorary rank of Lieutenant (April 7th, 1919).

ROYAL AIR FORCE.

MEDICAL BRANCH.

Flight Officer J. Prendergast to be Flight Lieutenant.

The following officers relinquish their temporary R.A.F. commissions. Wing Commander R. H. Mornement, O.B.E., on return to naval duties (October 5th, substituted for notification in the *London Gazette*, November 7th). Flight Lieutenant J. D. Bangay (Surgeon Lieutenant R.N.) on return to naval duties. Flying Officer H. J. Swan on expiration of contract.

Transferred to unemployed list: Captains F. C. Morgan, C. L. McDonagh, J. P. Doyle, T. M. Davies.

The notification in the *London Gazette* of November 21st concerning Captain L. A. Walker is cancelled.

OVERSEAS CONTINGENTS.

SOUTH AFRICAN CONTINGENT.

The following relinquish their commissions on ceasing to be employed: Temporary Major and Brevet Lieut.-Colonel M. G. Pearson, O.B.E., and retains the rank of Lieutenant-Colonel. Temporary Major C. M. Murray, D.S.O., and retains the rank of Major. Temporary Captain (acting Major) H. R. Mullins and is granted the rank of Major. Temporary Captains E. G. Lunney, M. B. Lawrie, M.C., and H. E. H. Oakley, and retain the rank of Captain.

INDIAN MEDICAL SERVICE.

Captain J. B. Hanafin, C.I.E., to be Major, August 1st, 1919.

The following officers have retired from the Service, with effect from the dates indicated: Colonel J. Crimmin, V.C., C.B., C.I.E., February 25th; Lieut.-Colonel Sir W. J. Buchanan, K.C.I.E., M.D., June 7th; Lieut.-Colonel W. Vost, M.B., August 25th; Lieut.-Colonel H. E. Drake-Brockman, F.R.C.S.E., September 8th.

The services of Major O. A. R. Berkeley-Hill, M.D., have been placed temporarily at the disposal of the Government of Bihar and Orissa. Major A. D. Stewart, M.B., appointed Health Officer, Imperial City, Delhi.

The services of Captain R. B. Lloyd, M.B., have been replaced temporarily at the disposal of the Government of Bengal.

Lieut.-Colonel G. Tate, M.B., Civil Surgeon, Simla East, has been granted privilege leave for six months, with effect from November 12th.

Captain E. S. Phipson, D.S.O., M.B., Health Officer, Simla, appointed to officiate as Civil Surgeon, Simla East, in addition to his own duties.

Colonel J. B. Smith, C.B., appointed to be an Honorary Physician to the King.

SPECIAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Major A. Edington relinquishes his temporary commission on ceasing to be employed with the Union Imperial Service, December 1st, 1917, and is granted the rank of Lieutenant-Colonel (substituted for the notification in the *London Gazette*, June 27th, 1918).

Captains relinquish the acting rank of Major: J. R. Crolins, J. A. Pridham, M.C., O. H. Mayor, H. R. Friedlander, T. C. Storey, M.C., R. F. Fagan, A. F. L. Shields, W. Wiley.

Captain to be acting Major: W. McM. Chesney, M.C. (June 21st, 1919, substituted for notification in the *London Gazette*, September 3rd, 1919).

Captains relinquish their commissions and retain the rank of Captain: M. J. Burns and D. Henigan (on account of ill health contracted on active service), R. D. Lawrence (on account of ill health).

Lieutenants to be Captains: E. S. Davies, P. G. Quinton, C. G. Coombs, W. Young, H. Wands, J. S. McL. Gray, R. P. Smith, F. Lyth, W. V. Robinson.

GENERAL RESERVE OF OFFICERS.

ROYAL ARMY MEDICAL CORPS.

Major J. E. Carter is granted the rank of Lieutenant-Colonel on ceasing to be re-employed.

TERRITORIAL FORCE.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Colonel S. M. Sloan relinquishes his commission on account of ill health contracted on active service, and retains the rank of Lieutenant-Colonel.

Major (acting Lieut.-Colonel) J. M. Duncan, T.D., relinquishes the acting rank of Lieutenant-Colonel on ceasing to be specially employed.

Captain (acting Colonel) L. D. B. Cogan, D.S.O., reverts to the acting rank of Lieutenant-Colonel, with precedence from January 1st, 1917, on vacating the appointment as A.D.M.S.

Captain (acting Major) H. H. B. Cunningham to be Major.

Captain Y. T. G. Moore to be Major.

Captains (acting Majors) relinquish the acting rank of Major on ceasing to be specially employed: J. H. Robinson (July 22nd, 1918, substituted for notification in the *London Gazette*, August 23rd, 1919), J. P. Milton, J. G. Morgan, M.C., G. Davidson, W. Goldie, M.C., A. M. Jones (July 15th, 1919, substituted for notification in the *London Gazette*, October 20th, 1919), N. Hodgson, L. Rawes, R. R. Powell, H. W. Spaight.

1st *London Sanitary Company*.—Lieutenant G. Whittaker to be Captain.

4th *London General Hospital*.—Captain A. J. Jex-Blake is restored to the establishment.

5th *London General Hospital*.—Captain J. M. Wyatt is restored to the establishment.

1st *Northern General Hospital*.—Captain (acting Major) N. Hodgson relinquishes the acting rank of Major on ceasing to be specially employed and remains seconded.

2nd *Northern General Hospital*.—Captain (acting Major) R. A. Veale relinquishes the acting rank of Major on ceasing to be specially employed.

Sanitary Service.—Major (Brevet Lieut.-Colonel) H. Stott relinquishes his commission on account of ill health, and retains his rank.

2nd *Scottish General Hospital*.—Major J. D. Comrie is restored to the establishment. Captain (acting Major) R. A. Fleming relinquishes the acting rank of Major on ceasing to be specially employed.

4th *Scottish General Hospital*.—Captain (acting Major) J. R. Riddell relinquishes the acting rank of Major on ceasing to be specially employed.

3rd *Southern General Hospital*.—Major E. Mallam and Captains G. R. Girdlestone and G. H. R. Holden are restored to the establishment.

5th *Southern General Hospital*.—Captain M. D. Wood is restored to the establishment.

1st *Western General Hospital*.—Captain (Brevet Major) K. W. Monsarrat is restored to the establishment.

TERRITORIAL FORCE RESERVE.

ARMY MEDICAL SERVICE.

Major H. A. Ballance, K.B.E., C.B., from 1st Eastern General Hospital, Captain W. H. Willcox, C.B., C.M.G., from 3rd London General Hospital, and Captain H. Burrows, C.B.E., from 5th Southern General Hospital, to be Colonels.

ROYAL ARMY MEDICAL CORPS.

Major Sir Berkeley G. A. Moynihan, K.C.M.G., C.B., from 2nd Northern General Hospital, to be Major, and is granted the honorary rank of Major-General.

The announcements regarding the following officers which appeared in the *London Gazette* of the dates indicated are cancelled:—Majors: C. B. Whitehead (January 9th, 1919), D. G. Campbell (December 31st, 1918), H. E. Corbin (January 16th, 1919).

VOLUNTEER FORCE.

County of Aberdeen R.A.M.C.(V.).—Temporary Captain J. O. Wilson and temporary Lieutenant R. A. Slessor relinquish their commissions and are granted the honorary rank of Captain and Lieutenant respectively.

Berkshire R.A.M.C.(V.).—Temporary Lieutenant J. T. R. Miller relinquishes his commission and is granted the honorary rank of Lieutenant.

City of Bristol R.A.M.C.(V.).—Temporary Captain F. E. Peake relinquishes his commission and is granted the honorary rank of Captain.

City of Edinburgh R.A.M.C.(V.).—Temporary Captains relinquish their commissions and are granted the honorary rank of Captain: H. Hay, M. McLarty, D. Halliday-Croom.

Cornwall R.A.M.C.(V.).—Temporary Captain A. J. Little relinquishes his commission and is granted the honorary rank of Captain.

Glamorganshire R.A.M.C.(V.).—Temporary Major E. A. Evans and temporary Lieutenant H. Davies-Jones relinquish their commissions and are granted the honorary rank of Major and Lieutenant respectively.

Lancashire R.A.M.C.(V.).—Temporary Captains J. J. M. Dowzer, J. E. Healey, W. O. Piper, and J. D. McVean and temporary Lieutenants J. Orr and F. J. Baildon relinquish their commissions, the four former being granted the honorary rank of Captain and the two latter the honorary rank of Lieutenant.

Montgomeryshire R.A.M.C.(V.).—Temporary Captain W. R. Williams relinquishes his commission and is granted the honorary rank of Captain.

Northamptonshire R.A.M.C.(V.).—Temporary Captains A. W. Cooke and C. A. Linnell relinquish their commissions and are granted the honorary rank of Captain.

North Riding R.A.M.C.(V.).—Temporary Captain R. Cuff relinquishes his commission and is granted the honorary rank of Captain.

Oxford R.A.M.C.(V.).—Temporary Lieutenant J. A. H. Mogg relinquishes his commission and is granted the honorary rank of Lieutenant.

Staffordshire R.A.M.C.(V.).—Temporary Captain G. M. Fox and temporary Lieutenant W. T. Shields relinquish their commissions and are granted the honorary rank of Captain and Lieutenant respectively.

Wiltshire R.A.M.C.(V.).—Temporary Lieutenant W. T. Briscoe relinquishes his commission and is granted the honorary rank of Lieutenant.

QUEEN MARY'S ARMY AUXILIARY CORPS.

Auxiliary Section, R.A.M.C. attached.—Recruiting Medical Controller J. V. Christie, M.B., and Medical Officer A. H. Chapman relinquish their appointments.

APPOINTMENTS.

BAILEY, Francis W., D.S.O., T.D., M.R.C.S.Eng., L.R.C.P.Lond., Lecturer in Anaesthetics to Dental Students in the University of Liverpool.

DAVIS, E. D. D., F.R.C.S., Surgeon, Nose, Throat, and Ear Department of Charing Cross Hospital.

BRISTOL EYE HOSPITAL.—Honorary Surgeon: E. H. E. Stack, B.A., M.B., B.C.Cantab., F.R.C.S.Eng. Honorary Assistant Surgeon: Arthur E. Iles, M.B., B.S.Lond., F.R.C.S.Eng., O.B.E.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.—Medical Officer in charge of Electro-therapeutic and Massage Department: J. Wilson, L.R.C.P.Edin. and L.S.M.A. Clinical Assistants, Surgical Out-Patients: S. C. Fitzpatrick, M.B., B.S.Melb., D. D. Pinnock, F.R.C.S., H. E. Gibson, M.D.Oxon. Clinical Assistant, Skin Department: Miss Gowers, M.R.C.S., L.R.C.P.

BIRTHS, MARRIAGES, AND DEATHS.

The charge for inserting announcements of Births, Marriages, and Deaths is 6s., which sum should be forwarded with the notice not later than the first post on Wednesday morning in order to ensure insertion in the current issue.

DEATHS.

RATTRAY.—At Bursah, Mesopotamia, on November 27th, suddenly, Lieutenant-Colonel Malcolm MacGregor Rattray, M.B., D.S.O., R.A.M.C., second son of the late Andrew M. T. Rattray, M.D., and Mrs. Rattray, Fortbello, Midlothian.

TAYLOR.—On December 21st, at 54, Glenloch Road, Hampstead, fortified with all the rites of the Church and after seven years of suffering most patiently borne, Charles Louis Taylor, for many years Assistant Editor of the *BRITISH MEDICAL JOURNAL*, only son of the late Dr. Charles Taylor of Peterhead, N.B., and very dearly-loved husband of Mary Taylor, in his 71st year. R.I.P. No flowers, by request. Friends, please accept this as the only intimation.

DIARY OF THE ASSOCIATION.

Date.	Meetings to be Held.
JANUARY.	
5 Mon.	Maidstone Division, West Kent Hospital, 3.15 p.m.
6 Tues.	London: Scrutiny Subcommittee, 2.30 p.m.
7 Wed.	Nottingham Division, 61, St. James's Street, Nottingham, 4 p.m. Lecture by Dr. Bernard Hart: Modern Methods of Treatment in Functional Nervous Disorders.

THE
British Medical Journal.

THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION.

EPITOME

OF

Current Medical Literature.

*11.29.19
11.1-5-2
11.1.16*

JULY TO DECEMBER, 1919.

London :

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INDEX TO THE EPITOME FOR VOLUME II. 1919.

READERS in search of a particular subject will find it useful to bear in mind that the references are in several cases distributed under two or more separate but nearly synonymous headings—such, for instance, as Brain and Cerebral; Heart and Cardiac; Liver and Hepatic; Renal and Kidney; Cancer and Carcinoma. Epithelioma, Malignant Disease, New Growth, Sarcoma, etc.; Child and Infant; Bronchocele, Goitre, and Thyroid; Diabetes, Glycosuria and Sugar; Eye, Ophthalmia, and Vision, etc.

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EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

1. Abnormal Forms of Aortic Insufficiency and Mitral Stenosis.

P. RIBIERRE (*Paris méd.*, 1919, ii, 157-162) states that the occurrence of aortic insufficiency without a murmur, which was first described by Gairdner in 1872, and later by Fürbringer in 1880, has since been the subject of numerous articles. Judging from the number of cases on record, cases of the kind are not exceptional, especially as many probably escape recognition as the result of incomplete examination. It does not appear that age, sex, or the causes of the aortic diseases is responsible for the absence or disappearance of the diastolic murmur; nor is a satisfactory anatomical explanation forthcoming, and it seems best to follow Bard, who classifies cases of aortic insufficiency without a murmur according to the clinical condition with which they are associated—namely (1) cardiac failure, (2) complete arrhythmia, (3) co-existence of multiple cardiac murmurs in which one lesion masks the others, (4) the period of formation of the aortic lesion—according to Bard the diastolic murmur is most frequently absent during the early stages of aortic insufficiency of arterial origin, in which the lesion is formed by the extension of chronic aortitis, (5) functional aortic insufficiency associated with hypertension. As a general rule, the absence of a murmur is only temporary, though sometimes the murmur may disappear for a long time. In mitral stenosis the murmur may be absent in progressive cardiac failure, in complete arrhythmia with auricular fibrillation, and in attacks of tachycardia.

2. Bacillus botulinus Poisoning.

MCCASKEY (*Amer. Journ. of Med. Sci.*, July, 1919) records 7 cases of *Bacillus botulinus* poisoning, 4 of which proved fatal. All of the patients, with three or four others who entirely escaped, partook of a meal consisting of beef and several vegetables, among which were mangoes and tinned beans. The first symptoms—nausea, vomiting, and general prostration—occurred in from six to thirty-six hours, it being generally noted that, with one exception, the more intense the intoxication the earlier their incidence. Then followed disturbances of deglutition and phonation, the former varying from mild dysphagia to aphagia. In some there was merely an inability to swallow, whilst in others fluids regurgitated through the nose, and in one case this was the first symptom which attracted the patient's attention while otherwise feeling perfectly well. Next in order came disturbances of the ocular apparatus—diplopia, amblyopia, ptosis, and mydriasis. In some of the cases the amblyopia progressed almost to complete blindness, although nothing pathological was revealed by the ophthalmoscope. The ptosis was most conspicuous, and was associated with motor weakness of the seventh nerve causing marked immobilization of all the facial muscles. Quite late in the fatal cases there were severe attacks of transient weakness, probably syncopal in character. A very striking symptom was paralysis, more or less complete, of the intestinal musculature causing severe constipation and a notable absence of any sign of active peristalsis, and for this reason it is most important to clear out the intestinal tract by active catharsis before such paralysis has supervened. Experimental work shows that fatty substances apparently combine with the toxin and materially attenuate its virulence, so that full doses of castor oil should be given early and repeatedly. Evidence points to the value of antitoxin treatment if administered early, and if a constant supply of serum were obtainable for use quite early in all cases suspicious of food poisoning, without waiting for confirmation of the diagnosis by animal experimentation or identification of the bacillus, it is possible that much of the fatality might be prevented.

3. Treatment of Erysipelas.

GUY (*Journ. of Cutan. Dis.*, June, 1919), as the result of a comparative test carried out in eighty cases of erysipelas in the dermatological department of Camp Travis, Texas, found that polyvalent streptococcal serum influenced 75 per cent. favourably. Various forms of local treatment, such as ichthyol, boric ointment, collodion, tincture of iodine, and an iced saturated solution of boric acid, were also employed. Local treatment, however,

appeared to exercise but little influence on the inflammatory process, although it afforded considerable relief to the patient, with the exception of the ichthyol preparations, which are condemned as actually causing much discomfort. Guy states that most relief was experienced from the boric solution; this should be applied on strips of gauze, renewed directly they become warm from a pail beside the bed filled with saturated boric solution in which lumps of ice are placed. The only disadvantage of the method lies in the constant attention demanded of the patient or nurse if the dressings are to be changed with sufficient regularity. An alternative plan consists in the use of boric ointment in which small quantities of phenol and menthol are incorporated. This is cleanly and soothing and much superior to the messy ointments and solutions of ichthyol.

4. Hypodermic Injections of Salicylic Acid.

INJECTIONS of salicylic acid or salicylates have proved so painful hitherto that the method has been abandoned, but SEJOURNET (*Il Morgagni*, July 25th, 1919) has practised a new method devised by him and used with success for the last two years. He prepares a very dilute solution of salicylic acid by pouring a litre of boiling water on a gram of salicylic acid. Of this solution he injects 1 c.cm. as near the painful spot as possible. No advantage is gained by injecting intramuscularly or intravenously. In this strength the injections are to all intents and purposes painless, at the most giving rise to a burning sensation. The results were most successful in acute rheumatism and in muscular rheumatism; in gout, rheumatoid arthritis, and chronic rheumatism not so good. In the acute cases it was rarely necessary to give four injections; as a rule, three sufficed. In 5 cases of sciatica the author reports a cure in eight to ten days, using daily injections at the point of emergence of the nerve.

5. Fixation Abscess in Influenzal Pneumonia.

DURING the epidemic of influenza in the autumn of 1918, L. HARBØE (*Tidsskrift for den Norske Lægeforening*, July 1st, 1919) treated 74 cases of pneumonia. Drugs appeared to be perfectly useless when given by the mouth. The nine worst cases of the 74 were selected for treatment with fixation abscess. This was induced by the injection of 2 c.cm. of turpentine injected into the pectoralis major muscle. When there was no reaction within two days another injection was given, this time in the thigh. The abscesses were left to themselves. Some assumed the proportions of a hen's egg and burst; others were spontaneously reabsorbed. The pain was severe, and the author found the complaints of his treatment so insistent and distressing that for a time he abandoned the injections. But he soon returned to them, finding that the results were often striking. He decided, however, not to apply this treatment to children on account of the pain. Most of the nine patients were delirious, their tongues were black and coated, and there was high, prolonged fever. All but one recovered, and the patient who died was a young man who was first seen on October 17th, when there were signs of influenza, but not of pneumonia. When he was next seen, on the 20th, he was very ill with pneumonia. Turpentine was now injected, but he died next day.

6. Infantile Paralysis.

IN a clinical and statistical paper on infantile paralysis in Naples and the surrounding district, S. CANNATA (*La Pediatria*, 1919, xxvii, 465-76) gives a short history of the disease in Italy, where it first made its appearance in 1883. It is noteworthy that infantile paralysis is not notifiable in Italy, where it has never assumed a very extensive epidemic form. From January, 1914, to June, 1919, 275 cases were brought to the Naples pediatric clinic. The majority of the patients were at the commencement of the paralytic period, and only a few at an advanced stage of the disease; 120 cases were in the first year of life, 129 between one and two years, 25 between two and three, and one was aged four. In the first year there were 7 children aged two months and 6 aged three months; 163 were males and 112 females. Morbid heredity (neuropathy, alcoholism, syphilis, and tuberculosis) was found in about 40 per cent. About 15 per cent. of the remainder had suffered from various acute infections shortly

before being attacked by infantile paralysis, and in some there was no hereditary or individual predisposition; 188, or 68.7 per cent., presented paralysis of the lower limbs, and 37, or 13.4 per cent., paralysis of the upper limbs. The right lower limb was less frequently affected (58 cases) than the left (63 cases), and a larger number still (67) showed paralysis of both lower limbs. In the upper limbs, on the other hand, the reverse occurred, the right upper limb being more frequently affected (19 cases) than the left (13 cases), and both upper limbs were involved in only a few instances (5 cases). No cerebral, bulbar, or purely meningeal forms of the diseases were observed.

7. Chromopercussion.

11. POLLITZER (*Med. Klinik*, Berlin, 1919, xv, 606) draws attention to the importance of the timbre (or clang-tint as Tyndall called it) of the sounds elicited by percussion, and summarizes this importance by describing as "chromopercussion" percussion in which the physician endeavours to assess the timbre. The lungs, as he says, give out a drum-like note on percussion and are resonant; the heart, on the other hand, like the muscles of the thigh, gives out a note like that of the xylophone, and is dull on percussion. Resonant organs give out tones of low pitch, dull organs notes of higher pitch on percussion; and it is to the mixture of the low and high tones, of resonance and dullness, that the percussing physician should attend, estimating the relative proportions of drum-like and xylophone-like resonance respectively at each point, when he is percussing out the superficial and deep cardiac dullness, for example, or pathological conditions in the lungs. In percussing out the margin of the lung the pleximeter finger should be laid softly and broadly on the chest wall, and be struck gently and with a lingering stroke by the plessor finger as by one playing the drum. In percussing out the deep cardiac dullness, on the other hand, the percussion must be as staccato as possible; only the tip of the pleximeter finger is laid against the chest wall, and that lightly, while the percussing finger gives a rapid darting and light stroke on its second phalanx suspended in the air and not in contact with the chest wall.

SURGERY.

8. A New Sign of Nerve Regeneration.

CORLAT (*Boston Med. and Surg. Journ.*, August 7th, 1919) considers that Tinel's sign of formication, or tingling produced by pressure, furnishes a simple and practically important test for the detection of nerve regeneration. When compression or percussion is lightly applied to the injured nerve trunk we often find in the cutaneous region of the nerve a creeping sensation usually compared by the patient to that caused by electricity. It indicates the presence of young actively regenerating axis cylinders, and appears at a very early stage in nerve regeneration, usually about the fourth or sixth week, whilst the return of electrical conductivity is a later development, occurring with the return of voluntary movement. The formication of regeneration is scarcely, if at all, perceived at the spot compressed, but almost entirely in the cutaneous region of the nerve, and it is quite distinct from the pain on pressure that exists in nerve irritations, for in the latter case the sensation is local, and coexists with the pain in the muscles. If the formication remains limited to one spot for several weeks or months it may be concluded that the young axis cylinders have encountered obstruction and have formed a pseudo-neuroma, but if we find a progressive migration of the formication by being able to elicit the sign from week to week by pressure at spots further removed from the lesion we are warranted in affirming that regeneration is proceeding satisfactorily. It extends progressively towards the periphery at the same time that it disappears at the level of the lesion, and it ceases only when the regenerated axis cylinders have almost regained their adult stage. Thus the sign of formication enables us to follow the progress of regeneration and also, through its intensity, rapidity of migration, and the region in which it appears; it even supplies exact information regarding the quality, extent, and limitation of regeneration.

9. Orthopaedic Treatments in Neurological Cases.

BOORSTEIN (*Amer. Journ. of Surgery*, xxxiii, 1919, 161) calls attention to the place of orthopaedic treatment in nervous diseases. His remarks on the deformities resulting from the ordinary adult hemiplegia are worthy of note. The contractures which follow an apoplectic seizure are too often regarded as natural and unavoidable. Boorstein and Elliot found not only that early contractures could be

cured but that the old and neglected cases could be vastly improved. A practically bedridden individual, with contracture of thigh on abdomen of twenty-one years' duration, was enabled to walk. Profiting by this experience they have systematically treated all apoplectics with plasters, splints, and braces, commencing very early, even on the third day. It is well known, of course, that the contractures of infantile paralysis ought never to be allowed to develop, but it is hardly sufficiently realized by the profession at large that this is no less true of other organic diseases of the brain and cord. Even when nothing can be done to relieve the actual nerve trouble, the crippling effects therefrom may be greatly ameliorated or avoided. Intelligent splinting will often reduce the disability to a minimum.

10. Secondary Haemorrhage.

SECONDARY haemorrhage from the gluteal arteries is well known as a particularly disagreeable thing with which to have to deal. It is generally agreed that extraperitoneal ligation of the internal iliac is the only reliable step to take. FINZI (*Clinica Chirurg.*, Milan, 1919, p. 669) records a further gluteal haemorrhage three weeks after such a ligation, evidently through the medium of an efficient collateral circulation. The patient had been wounded with shell fragment in the right buttock, and on removal of the missile severe haemorrhage from the superior gluteal artery occurred. Artery forceps were applied and left *in situ*. Eight days afterwards a furious haemorrhage from the wound called for ligation of the right internal iliac (performed under local anaesthesia). All went well until twenty-two days later, when a further violent haemorrhage occurred. Under cocaine Finzi now cut down on the superior gluteal artery, and was able to demonstrate a puncture. After freeing and dividing the artery he ligatured it. The patient made a good recovery. Finzi refers to a case of secondary haemorrhage five days after ligation of the superficial femoral in Scarpa's triangle. This was due to the efficiency of the collateral path by way of the profunda femoris. The author discusses in conclusion the anastomoses in the buttock and shows how a collateral circulation may be established by way of the ileo-lumbar, deep circumflex iliac, and external circumflex arteries. Such secondary haemorrhages through the restoration of arterial channels after ligation of main vessels are, fortunately, uncommon.

11. Acute Post-influenzal Dilatation of the Stomach.

BOHMANSSON (*Hygiea*, June 30th, 1919) records the case of a man, aged 22, who was admitted to hospital suffering from influenzal pneumonia. On the eighteenth day of the illness, and shortly after the temperature had begun to fall by lysis, he complained of a feeling of tension in the abdomen. Vomiting, accompanied by epigastric pain, soon followed. There was neither rigidity nor distension of the abdomen, and the slight abdominal tenderness detected could not be definitely located. Some relief was obtained by lavage of the stomach, which yielded about two litres of yellow fluid. As the pain and vomiting soon recurred, and were accompanied by nausea, intestinal obstruction at a high level was suspected, and he was transferred on the twentieth day to the surgical side of the hospital. His tongue was now dry and furred, his voice husky and whispering, and his face cyanosed. The temperature was 37.4°C., the pulse was 100. The action of the heart appeared to be normal, but râles were still audible over both lungs. The urine contained albumin, and a leucocyte count showed 1,800 mononuclear to 2,800 polymorphonuclear leucocytes. The left abdomen was distended by a fairly well defined swelling which extended from ribs to pubes. It was tender on palpation, dull on percussion. The flanks, too, were dull, and splashing was demonstrable. Laparotomy revealed an enormously dilated stomach occupying almost the whole of the abdominal cavity. After a stomach tube had been passed, and about two litres of green fluid had been withdrawn, the process being hastened by manual compression of the stomach, it was possible to explore the abdominal cavity further, and to note that, while the intestines were flabby and collapsed, the duodenum, as well as the stomach, was much dilated. Towards the termination of the gastric lavage the contents of the stomach began to pass into the small intestine. A Witzel fistula was made in the stomach and the abdomen was closed. During the following days about one litre of green watery fluid, containing no free hydrochloric acid, and giving only a faint acid reaction, escaped daily from the fistula. Death occurred on the sixth day after the operation, with signs of acute peritonitis. The necropsy showed bilateral bronchopneumonia, fibrino-purulent peritonitis, and a phlegmonous condition

of the operation wound. Discussing this case, the author admits that the records of operative treatment for acute dilatation of the stomach are most discouraging, Payer having found 17 out of 22 cases operated on terminate fatally. Postural treatment, combined with gastric lavage, is, on the other hand, often successful. So if the diagnosis is not in doubt surgical interference is to be deprecated. But it may not be possible, as in the author's case, to exclude the diagnosis of intestinal obstruction without recourse to laparotomy.

12. Oxaluria Simulating Neurasthenia and Renal Calculus.

COMMENTING on the rarity with which oxaluria gives rise to serious disturbances, K. MOTZFELDT (*Tidsskrift for den Norske Lægeforening*, May 15th, 1919) records the case of a nurse aged 28 who had suffered for several years from frequency of micturition, occasional bouts of pain in the lower abdomen, and incontinence. Indeed, since childhood she had been subject to incontinence with frequency of micturition. Her symptoms were worst when she was overworked, and were least troublesome when she felt rested during a holiday. There was no haematuria, but the passage of a stone led to the diagnosis of renal calculus, with which the history of occasional pain seemed to tally. Among the remedies tried and found wanting was irrigation of the bladder with silver nitrate. When first seen by the author, in the autumn of 1918, she was nervous and depressed. She was practically unable to work, having to micturate every hour by day, and being subject to attacks of vesical spasm, which were so sudden that she could not keep dry. On examination no objective signs of disease could at first be detected. The urine contained no pus or albumin, and its appearance was normal. Diuresis was also normal. But when, at a second examination, the urine was centrifugized and the sediment microscopied, numerous typical crystals of oxalate were found. They were present even in warm urine that had just been passed. Accordingly, an oxalate-free diet was prescribed, and alkalis were given by the mouth. Milk and eggs were also forbidden, on account of the calcium they contain. A week later she still felt tired, but she was otherwise much better, and the bladder symptoms had almost vanished. With the return, for a week, of a normal diet, the symptoms recurred; they vanished again within two days of the resumption of an oxalate-free diet. From her diet, tea, cocoa, vegetables, including potatoes, and fruit were excluded. She missed the tea and vegetables, but otherwise this diet implied little hardship. When last seen, in March, 1919, she was perfectly well, there were no bladder symptoms, and she could dispense with alkaline drugs. But she could not drink two glasses of milk without a recurrence of the symptoms. Discussing this case, the author notes that the symptoms provoked are commonly attributed to the mechanical action of the sharp crystals on the lining of the urinary passages; but it is not yet understood why oxalates crystallize out in the urine of some persons but not in that of others. The absorption of oxalic acid being favoured by hydrochloric acid, alkalis should be given by the mouth to neutralize the acidity of the gastric juice. Calcium should be withheld because it forms with oxalic acid the heavy calcium oxalate which is usually held in solution by the acid phosphates of the urine.

13. Empyema in Children.

ACCORDING to J. COMBY (*Journ. de méd. et chir. prat.*, 1919, xi, 609-613), empyema is more frequent in children than sero-fibrinous pleurisy, contrary to what occurs in the adult. Of 140 cases in children seen by him in hospital and private practice, 28 were not recognized during life and 2 died without treatment. Of the remaining 110, 4 were treated by exploratory puncture, which was followed by spontaneous absorption, 29 by aspiration without pleurotomy with fourteen deaths, 63 by pleurotomy without resection of a rib, and 14 by pleurotomy with resection. The 28 cases in which the empyema was not recognized during life were mostly very young children (between 2 months and 2 years of age) in whom the effusion was very slight, in most instances unilateral, and complicated by bronchopneumonia (15 cases), purulent pericarditis (2 cases), infective purpura (1 case), or phlegmasia alba dolens (1 case). Death in these cases was not due to the effusion, so that the error of diagnosis was not prejudicial to the patients. The mortality in the cases treated by pleurotomy with or without rib resection was 32 per cent., death being due to bronchopneumonia (6 cases), pulmonary tuberculosis (2 cases), encysted empyema (2 cases), suppurative psittosis (1 case), and special virulence of the

effusion (1 case). Comby has given up the practice of washing out the pleural cavity with perchloride, permanganate or hydrogen peroxide, but simply inserts a large drainage tube and applies sterilized gauze and wool after incision of the pleura. No obvious advantage was derived from resection of a rib in the 14 cases in which it was performed.

OBSTETRICS AND GYNAECOLOGY.

14. Excessive Loss of Blood after Labour.

WHITRIDGE WILLIAMS (*Amer. Journ. of Obstet.*, July, 1919) discusses the remarkable tolerance of freshly delivered women to excessive loss of blood. The normal blood loss at a confinement has been estimated by different observers with results varying from 80 or 100 c.cm. (Fabre) to 800 c.cm. (Abfeld). Williams observed 1,000 cases at the Johns Hopkins Hospital. A sterile douche pan was placed beneath the patient's buttocks immediately after the birth of the child and left until the birth of the placenta. The total blood was then measured. After the birth of the child the uterus was gently palpated and the level of the fundus noted. After five to thirty minutes the level was noticed to rise 4 to 6 cm., indicating the separation of the placenta and its extrusion into the lower uterine segment or the vagina. It was then expressed by gentle pressure. Williams believes that routine massage only prolongs the process of separation, and that premature attempts to expel by Credé's method frequently lead to retention of placental fragments and so increase the blood loss. In the 1,000 cases Credé's method was only required 18 times. The average loss of blood was found to be 343.7 c.cm., while 527 cases lost less than 300 c.cm. The observation of the pulse showed that the traditional slow pulse after labour is not a usual phenomenon. In only 121 cases was the pulse rate below 79, and in 662 it was between 79 and 99. Furthermore, it was found that loss of blood did not accelerate the pulse to the extent expected. In spontaneous labours, cases with haemorrhage above 600 c.cm. showed on an average an increase of only 5 beats per minute as compared with those without excessive blood loss. Williams is unable to explain the tolerance of freshly delivered women to the loss of a proportion of the total blood volume which would in ordinary circumstances produce marked symptoms. He is disposed to correlate it with the fact that the nitrogenous metabolism is reduced to a minimum during labour. He suggests that this fact may explain the absence of shock, and that in this way the patient may be tided along until, by the time the normal metabolism is restored, the reparative processes are sufficiently advanced to obviate danger. The observations are, of course, not intended to indicate that freshly delivered women are wholly immune to the ill effects of excessive bleeding.

15. Uterine Haemorrhage.

STURMDORF (*New York Med. Journ.*, July 19th, 1919), in discussing those cases of uterine haemorrhage in which the uterus presents no palpable evidence of any causative factor whatsoever—a type which he designates functional metrorrhagia—insists that though the general circulating blood during menstruation and in these haemorrhagic conditions has normal coagulative properties, yet the endometrium in both cases renders the blood which is to be shed non-coagulable. This function of the endometrium, normal in menstruation, is due to an inhibiting substance which is activated by a hormone periodically liberated from the Graafian follicle of the ovary. He considers that this inhibitive element, becoming augmented or protracted by contributory disturbances, presents the direct local causative factor in the production of uterine haemorrhage. Such cases are, according to the author, capable of cure by local and systemic medication. As general medicaments he uses aconite, nitroglycerin, and especially atropine as vaso-dilators in order to obtain a normal blood pressure. The topical applications recommended are pure acetone and 16 per cent. liquor formaldehyde, introduced into the uterine cavity by means of an intraterine syringe of a half to one ounce capacity. The uterine end of the cannula is wrapped in a thin layer of sterile gauze and introduced as far as the fundus, and the vagina being protected by lubrication, the fluid is slowly expelled and the syringe withdrawn, leaving the gauze in contact with the endometrium for twenty-four hours. A daily repetition of this procedure is essential. The bleeding does not cease at once but is steadily reduced until, after the lapse of several weeks perhaps, the normal condition is established.

16. Albuminuria of Pregnancy.

E. P. DAVIS (*Amer. Journ. of Obstet.*, July, 1919) discusses three groups of cases without seeking to establish a definite classification. The first and most common is the nephritic albuminuric toxæmia; secondly, the hepatic variety; thirdly, and least commonly, the variety which is due to the functional failure of the thyroid and other ductless glands. He maintains that neither the method of immediate emptying of the uterus nor the sedative treatment associated with the name of Stroganoff is correct, and that the best treatment is directed to the elimination of the toxins, delivery to be gently expedited only when labour has ensued. He recommends the routine withdrawal of 16 to 20 ounces of blood and the introduction of a like amount of saline solution, the irrigation of the stomach with warm solution of sodium bicarbonate, and the leaving in the stomach of $2\frac{1}{2}$ to 5 grains of calomel. The large intestine should be irrigated with warm water every few hours. The patient should be washed and placed between warm blankets, with hot bottles at the feet and an ice-cap on the head. No effort should be made to control the convulsions with narcotics or anaesthetics. If the cervix is soft the membranes may be ruptured to induce labour. If the cervix is long and rigid abdominal Caesarean section is indicated. After delivery the main complications are oedema of the lungs and insanity. The former is to be treated by dry cupping, strychnine, digitalis, atropine, and oxygen.

17. Detachment of Retina in Eclampsia.

CLAPP (*Amer. Journ. of Ophthalm.*, July, 1919) records 6 cases which he has observed during the past eighteen months; his article is profusely illustrated; the detachments were all of the globular variety and were situated in the periphery. No specimen of the flat detachment in the central region, described by Foster Moore in his admirable paper in the twentieth volume of the Royal London Ophthalmic Hospital Reports, on the retinal detachments of renal retinitis, is figured, and Clapp seems to have overlooked this important paper in his bibliography. Clapp thinks that the subretinal oedema which causes the detachment is of the same nature as the fluid exuded in the general anasarca. In his opinion the prognosis depends not so much on the amount of the detachment, but upon the accompanying neuro-retinitis, as well as upon the length of time that this has existed. Prognosis with respect to the detachment was uniformly good in his cases, but permanent impairment of function followed a markedly severe neuro-retinitis. In treatment the prime essential is to get rid of the fetus at the earliest possible moment after the fundus condition has been diagnosed; active local ocular treatment is not indicated.

18. Episiotomy.

CHILD (*Med. Record*, New York, July 26th, 1919) recommends the operation of episiotomy as a preventive of serious perineal lacerations. In 153 private cases he performed the operation 63 times—54 primiparae and 9 multiparae; in only 3 did the wound fail to heal by first intention. The operation is particularly useful in women who have had previous plastic operations for prolapse, etc., as it tends to prevent the destruction of the repair work.

PATHOLOGY.**19. The Schick Reaction in Diphtheria.**

PARK (*Bull. of Dep. of Health*, New York, March, 1919) records his experiences during the last five years of the Schick reaction. Clinical and laboratory experience have shown that in cases of diphtheria or in persons in contact with diphtheria only those individuals contract the disease who have no antitoxin or only a minute amount in their blood and tissues. The Schick reaction consists in the local effect produced by the intracutaneous injection of a small amount of diphtheria toxin. Park recommends the injection into the skin of the arm of one-fiftieth of the minimum lethal dose for a guinea-pig, diluted in 0.2 c.cm. of normal saline. A positive reaction is characterized by the appearance, in twenty-four to forty-eight hours, of a circumscribed area of redness and slight infiltration measuring 1 to 2 cm. in diameter, persisting for seven to fourteen days, and, on fading, showing a superficial scaling and a persistent brownish pigmentation. As a pseudo-reaction may sometimes be given owing to the foreign protein present, it is recommended that a similar injection be made into the other arm of heated toxin or of an over-neutralized toxin-antitoxin mixture, when the

true reaction will stand out by comparison. During the five years of trial Park has found that no cases giving a negative reaction developed diphtheria, although many showed the presence of virulent diphtheria bacilli in their throats. Schick had shown that the greatest susceptibility to diphtheria occurred between the ages of 1 and 4 years. In the records of thousands of observations Park found that with very few exceptions children who gave a negative reaction in the first place continued to show immunity during the whole five years. It would therefore appear that when once a child develops natural immunity this is a lifelong possession. Cases that have proved susceptible to the Schick test were treated with a vaccine of partially neutralized diphtheria toxin, and Park claims that it is as effective an immunizing agent as typhoid vaccine. Over 4,000 susceptibles have been so treated without the subsequent occurrence of a single case of diphtheria. The immunity so induced lasts for at least three years, and probably longer.

20. Carcinoma of Liver in a Child.

MARTHA WOLLSTEIN and MIXSELL (*Arch. Pediatrics*, May, 1919) report a case of carcinoma of the liver in a child 8½ months of age. The liver weighed 860 grams and contained several nodules, soft, haemorrhagic, and bile-stained, which on microscopic examination were seen to be composed of epithelial cells resembling the liver cells in shape, size, and character. These cells gave indications of a columnar arrangement, but no distinct lobular arrangement could be made out. There was an absence of fatty change in the cells. Slits between the cells, the bile capillaries, contained bile pigment. There was a metastatic nodule in the lung substance of similar histological characters to the primary growth. The tumour was probably congenital. Some 20 cases in all of primary liver carcinoma in children have now been reported.

21. Generalized Pyocyaneus Infection in Infancy.

MOST cases of *pyocyaneus* infection on record refer to the localization of the bacillus in special organs, such as the mouth, pharynx, trachea, intestine, skin, etc., where the presence of the organism may be physiological, and it is exceptional to meet with instances of generalized infection either in adults or children. A. F. CANELLI (*La Pediatria*, 1919, xxvii, 503-14) reports two rapidly fatal cases of this kind in a brother and sister, aged 2½ months and 14 months respectively. In the older child, who was the subject of chronic enteritis, the source of infection was probably a boil on the neck. Death was preceded by the development of petechiae and numerous blood-stained stools. Cultures of the blood and spleen showed the presence of *B. pyocyaneus*. In the younger child, who was most probably infected by his sister, the portal of entry of infection being either the intestine or bladder, death took place from acute meningitis, and the organism was cultivated from the meningeal exudate, heart blood, urine, and faeces.

22. Laboratory Diagnosis of Typhus Fever.

FAIRLEY (*Journ. of Hygiene*, August, 1919) tested the Weil-Felix agglutination reaction in 65 cases of definite typhus fever, with positive results in 94 per cent., and in 120 non-typhus cases with no agglutination in dilutions of 1 in 20. He finds that the reaction becomes definitely established during the first week of the disease, and reaches its maximum during the second week of fever and during the first week of convalescence. The organism used belongs to the *B. proteus* group, and though it seems not to be a constant secondary invader, much less the causative virus of the disease, yet the reaction is dependent on the presence in typhus fever serums of a secondary non-specific agglutinin which has the property of agglutinating this organism. The reaction was used largely by the Germans during the war.

23. Cerebro-spinal Fluid in Influenza.

DE LUCA (*New York Med. Journ.*, July 19th, 1919), by cultivating the spinal fluid of influenza patients in freshly prepared glucose broth and in glucose agar, claims to have succeeded in isolating from 22 cases out of 24 a characteristic Gram-negative non-motile bacillus, which produces acid and forms spores. All the cases from which the organism was recovered were fatal. He says that numerous experiments are being performed on animals and symptoms are being produced very similar to those of influenza in man; intratracheal insufflations of the organism show its presence in the blood with a terminal bronchopneumonia. The author promises to publish these experimental results later.

EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

24. Blood Pressure and Prognosis.

V. TOPP (*Hospitalstidende*, June 4th, 1919) has investigated the subsequent fate of patients admitted to hospital with heart disease and a high blood pressure in the period 1913-16 inclusive. Of the 164 cases with a permanently raised blood pressure—that is, over 180 mm.—there were 157 whose subsequent fate could be ascertained. Within two years 84 per cent. were dead. The mortality rate was directly proportional to the height of the blood pressure. The expectation of life was the same for the two sexes (there were 118 men to 39 women), and grouping the patients according to their ages brought out no difference in the prognosis for the various ages. Of the remaining 16 per cent. who survived the two-year period, most were leading the restricted life of the chronic invalid. In two-thirds of all the cases there was evidence of renal sclerosis, but the mortality was practically the same for the patients with or without renal disease. The author criticizes the observations on this subject published by Janeway in 1913, and suggests that some fallacy must underlie his comparatively favourable prognosis for high blood pressure.

25. Percussion and Palpation in Splenic Enlargement.

FINIZIA (*La Rif. Med.*, July 26th, 1919) has examined 122 men with regard to the relative values of percussion and palpation. The method of examination was (1) digital percussion, light or heavy, in the erect position; (2) bimanual palpation in the horizontal position; (3) percussion in the horizontal position and observation of the dullness with reference to a line joining the left sterno-clavicular articulation and the apex of the twelfth rib. The area of dullness is nearly always fictitious, sometimes more sometimes less than the reality, and it is often difficult to give the true reason for this; sometimes it is due to the condition of the digestive tube, sometimes to emphysema. In more than one of the cases the spleen was not palpable even when the major axis of splenic dullness reached well marked proportions. Meteorism, ascites, abdominal hyperaesthesia, obesity may cause difficulties in palpation. Apart from this, its palpability may depend on the volume and consistence and on the length of the phreno-splenic ligament. In 86 cases the dullness did not reach the above mentioned line, in 28 the spleen was felt 3 times, in 11 25 times. In 8 cases the dullness reached the line and the spleen was felt 4 times. In 50 cases the dullness surpassed the line and the spleen was felt 32 times. In judging the size of the spleen the pleximetric method cannot be compared to palpation, but must be looked upon as subsidiary. The relation of the dullness to the sterno-clavicular costal line does not vary in parallel with the results of palpation.

26 Treatment of Gonorrhoea by Detoxicated Vaccines

LEES (*Edin. Med. Journ.*, August, 1919) speaks highly of the use of Thomson's detoxicated vaccine in the treatment of gonorrhoea. As an adjunct to the ordinary local and general treatment he has found it valuable alike in early cases and in the acute complications of the disease, whilst in chronic lesions of the prostate and seminal vesicles and in joint lesions it is the most effective method he has yet tried. The vaccine stimulates the rapid production of antibodies in the early stages and causes an increased production in the later stages. His practice is to start with an initial dose of 2,500 million, which is gradually increased to 10,000 million, the injections being given subcutaneously every fourth day. Rarely are severe reactions produced, and these seldom last for more than twelve hours, rapidly disappearing with successive inoculations. The sooner the injections are commenced the more quickly are good results obtained; often the disease clears up as early as the fourth to the fourteenth day. The increase of antibody in the blood coincides in all cases with disappearance of the clinical symptoms. The author finds that by the complement-fixation test antibody can be detected in the blood for from four and a half to five and a half months afterwards, and he considers this test a guide to the effect of treatment. Any case which six months after the cessation of treatment gives a negative serum reaction may be considered cured and passed as fit to marry.

27. Large Chronic Empyema.

E. VOGT (*Med. Klinik*, 1919, xv, 517) describes the case of a Cossack aged 26 who came up for treatment with a very

large empyema on the left side; it was apparent from the history that this had been present for more than two years. The patient was very short of breath, but otherwise in good condition, and showed no signs of amyloid disease. The left chest was immobile, enlarged, with bulging intercostal spaces; the heart lay entirely to the right of the sternum, and a mewing or whirring murmur was audible over it. Paracentesis of the left chest was performed, and a litre of thin yellow-green pus evacuated; next day two more litres were withdrawn, and two days afterwards six and a half litres more were allowed to escape under pressure in the course of seven and a half hours. The patient made an uninterrupted recovery, and there was no re-accumulation of fluid; the heart had not returned fully to its normal position, and the breath sounds were still very weak over the left chest when the patient was discharged a week later. Cultures of the pus gave growths of streptococci and staphylococci, and no signs of tubercle bacilli could be found in it; the patient gave a negative reaction to injection with 10 mg. of Koch's old tuberculin. At the outset of the illness the patient had been treated in a military hospital for a month, by cupping and painting with iodine, and paracentesis of the chest had been performed with negative result. Empyemas containing 9½ litres of pus, over 16½ pints, are certainly rare.

28. Chaulmoogra Oil in the Treatment of Leprosy.

WHILE chaulmoogra oil has for many years proved superior to all other remedies in the treatment of leprosy, the results have been only relatively satisfactory. HOLLMANN and DEAN (*Journ. of Cutan. Dis.*, June, 1919) have further investigated its properties and have found that by fractional separation of the oil they can obtain distinct amelioration, if not cure, in many cases, with disappearance of the bacilli from the lesions, and absorption of the nodules. The first experiments were made with an intramuscular injection of the following composition: Iodine 1 gram, oil of eucalyptus 8 c.cm., camphor 2 grams, olive oil 147 c.cm., chaulmoogra oil 150 c.cm. These ingredients should be mixed in the above order, using heat. A maximum dose of 10 c.cm. is given intramuscularly once a week. It is apparently necessary to persevere with such injections for months, or even years. An attempt was next made to obtain the active principle or principles of the oil; four fatty acid fractions were isolated and were employed in a further series of cases. These experiments showed that the ethyl esters of the chaulmoogra fatty acids were liquids, and much more fluid than the original oil, and that they were peculiarly suitable for intramuscular injection. Full details of the method of preparation are given in the original paper. The results claimed by the authors are encouraging. Thus, in the leprosy nodules local reactions have occurred with subsequent improvement; in six months, in some cases, large nodules have disappeared, leaving deep crater-like scars. Of 26 cases treated, 8 have become bacteriologically negative in less than two years.

29. Pituitarism

LEREBOULLET and HUTINEL (*Bull. méd.*, August 2nd, 1919), at a meeting of the Société Médicale des Hôpitaux, showed two adults with the *syndrome adiposo-genital* of pituitary origin. The first case was a male 35 years old, whose illness commenced at the age of 27 with spasmodic headaches and rigors accompanied by polyuria; at 29 there was sexual impotence; at 30 ocular disturbances occurred, and progressed as the polyuria increased, and obesity developed. When seen for his ocular complaint the patient exhibited a typical bilateral hemianopsia associated with enlargement of the sella turcica and partial sinking of the floor. The adiposity, the genital impotence with atrophy of the testicles, the changes in the hair system, and the anaemia with slight mononuclear leucocytosis, completed the clinical picture. There was no history of acquired syphilis, but congenital syphilis could not certainly be excluded, even in spite of a negative Wassermann reaction. The existence of a pituitary tumour was very probable. The other case was a woman of 45 who also first sought medical advice for ocular troubles, with almost complete blindness of the right eye and incipient hemianopsia of the left eye. The menses had ceased at the age of 20, just as fairly pronounced adiposity appeared, accompanied by marked anaemia. Then changes in the hair system supervened, with manifest mental infantilism. Certain bone changes,

especially a considerable enlargement of the lower part of the face, which seemed to indicate the development of acromegaly, were noted. Radiographic examination revealed a profound modification of the sella turcica. Congenital syphilis was very probable.

30. An Epidemic of Encephalitis

E. SIEMERING (*Berl. klin. Woch.*, June 2nd, 1919) describes the symptoms observed in a small group of cases admitted between November, 1918, and April, 1919, to his hospital in Kiel. The patients were 9 men and 6 women. The outstanding feature of the epidemic was the preponderance of mental symptoms in the early stages. This led at first to the diagnosis of hysteria or other mental diseases; and it was not till the appearance of symptoms referable to definite lesions of the central nervous system that this impression was revised and encephalitis was diagnosed. A conspicuous feature was bilateral ptosis, with nystagmus and slow reaction of the pupils. Delirium, as well as drowsiness lasting several days, was a common feature. In one case a condition suggestive of severe chorea was observed. Several of the patients had recently suffered from influenza, but the symptoms were not characteristic of the psychic sequels of influenza with which the author became familiar during the recent epidemic by the observation of 24 cases. He also excludes syphilis, as Wassermann's reaction was invariably negative. He advanced little further towards diagnosis by lumbar puncture, which showed increased pressure (140-200) only in three of his cases. The examination of the cerebro-spinal fluid showed a moderate degree of lymphocytosis. Four of the patients died. In one of these cases the autopsy showed disseminated meningo-encephalitis. The author concludes that the disease was acute primary haemorrhagic encephalitis, and that it may belong to the type associated by v. Economo with a diplo-streptococcus. Lumbar puncture did not prove very effective in relieving the symptoms, and the most beneficial remedies were rest in bed, ice-bags, sudorific treatment, aspirin, and digalen.

SURGERY.

31. Chronic Septic Inflammation in Bone following Gunshot Wound.

In a closely reasoned paper GALLIE (*Journ. of Orthopaed. Surg.*, i, 1919, 470) gives his views on the treatment of sepsis in bone. Undoubtedly chronic bone fistulae have been the bugbears of the hospitals in England—bugbears because their pathology has not been fully understood and the treatment, therefore, on wrong and ineffective lines. To scrape bone sinuses which have no sequestra at the bottom of them is futile. The removal of sequestra alone will, of course, cure many discharging sinuses, but there are a large number of cases from which the last fragments of dead bone have been removed and yet the sinuses obstinately refuse to heal. Most of such fistulae are at the ends of the long bones or in the tarsus—that is to say, in cancellous tissue. There is nothing for it in such cases but to remove bone widely and allow the soft parts to fall in. The wounds resulting from this operation should not be closed, however much faith one has in bipp or other antiseptic. Gallie lucidly discusses the various measures which have been applied to the treatment of chronic bone sepsis. He passes in review the antiseptic method, from carbolic to Dakin, the sterile blood clot method, Moorhof's spermaceti, and Hamilton's sponge methods, Senn's bone dust and decalcified bone chip technique, the bipp method, and the muscle flap operation. He reviews some personal experiments confirming Macewen's observations on the growth of bone (that is, the failure of the periosteum to form bone) and showing that bone grows much more rapidly from the shaft when the compact tissue has been chiselled into until cancellous bone or the medulla is reached. He infers that the sclerosed bone surrounding the chronic bone fistulae should be freely removed, and the endosteum and medulla given a chance to fulfil its osteogenetic function. He points out, however, that large cavities in bone (and it may be added particularly those in the head of the tibia and in the os calcis) fill when they heal, not with bone but with dense white fibrous tissue. He believes that as the years go by the fibrous mass will be replaced by bone. In the meanwhile the important thing is to get them filled with living tissue at the earliest possible moment, and in the presence of infection this must be accompanied by perfect drainage, necessitating the opening up of all pockets. The walls of the cavities should be removed to allow of the falling in of soft parts, so diminishing the space to be

filled. Even when sequestra are present Gallie advocates the wide removal of bone and inspection of the cavity. He believes the reflection of periosteum to be a mistake, as the function of this membrane is to vascularize the cortex of the bone it covers; he therefore chisels through it. As to closing the operation wound, he is emphatic against it. His rule is that the size of the drainage opening at its narrowest point shall be equal to half the total depth of the wound. This is a minimum. If muscles and fasciae tend to fall together over the wound he incises them transversely. He is thus able to inspect the bottom of the wound daily, and the wound is of the same character as a healing ulcer.

32. Treatment of Intractable Sciatica by Massive Air Injections

LABORDE (*Gaz. heb. des Sciences Méd.*, August 24th, 1919) has obtained surprisingly successful results by the use of air injections in sciatica. He does not advise the method in slight cases or even too early in severe forms. His best results have been obtained in those extremely painful intractable cases in which no medicinal treatment has any effect and where only morphine gives a temporary relief. The method recommended is the last card to play. In the great majority of these cases the relief is decisive. Three injections may sometimes be required to produce complete cure, rarely a fourth, but if the first two are fruitless then it is useless to proceed. It is necessary to proceed *larga manu*, and to inject a large volume of air, which Laborde roughly estimates at 3 or 4 litres. The apparatus consists of a spray bellows, such as is used for a Paquelin cauter, the india-rubber tube of which is slipped over the barrel of a hypodermic syringe. In the barrel a piece of cotton-wool is placed to act as an air filter, and an ordinary hypodermic needle is mounted on the syringe. The needle is inserted at some point in the buttock and held in position by an assistant who pumps air under the skin until the part is much distended. The operator with strong massage disperses the air towards the iliac crest, the sacrum and the trochanter, until it is uniformly distributed over the whole region. On withdrawing the needle the puncture is closed with collodion to prevent the escape of air. A second injection is made somewhere in the upper and posterior part of the thigh and the air dispersed by massage upwards to the ischial region and downwards towards the popliteal region. The third injection is made somewhere about the external surface of the knee, with massage upwards and then downwards towards the ankle. Then the whole leg is massaged along the distribution of the sciatic nerve. Before commencing another séance it is advisable to allow the air retained from the last occasion to escape through a fairly wide needle inserted at the three places of injection.

33. Reunion of a Cancerous Fracture.

BERGERET (*Bull. de la Soc. Anat.*, June, 1919) gives notes of the case of a woman, aged 68, who had a spontaneous fracture of the femur at the site of a metastatic deposit from a primary cancer of the breast. After fifty days' immobilization of the limb with traction, consolidation took place—a remarkable and probably unique occurrence.

34. Paraffin Coating of Transfusion Tubes.

ALTON (*Journ. of Amer. Med. Assoc.*, August 16th, 1919) states the method he employed in the British casualty clearing stations in France for two years. The sterilized tubes are rinsed in a small amount of alcohol followed by ether. About one ounce of a paraffin-ether solution (hard paraffin 1 part, ether 80 parts) is poured in and shaken so as to bathe the entire surface, a small amount being allowed to pass through the cannula. The remainder is quickly emptied out through the top of the tube, and as the ether evaporates it leaves a thin, even coating of paraffin. The rubber stopper is similarly coated. The tubes may be used after a few hours.

35. How to Reduce the Mortality from Prostatectomy.

L. CASPER (*Berl. klin. Woch.*, June 2nd, 1919) reckons that the mortality from prostatectomy is variously estimated at 2 to 35 per cent., and that, even in practised hands, there is a mortality of 10 to 15 per cent. He maintains that, by paying attention to the following details, the mortality can be reduced. Death from shock can be practically eliminated by dispensing with spinal anaesthesia, under which he saw shock in several cases, one fatal. Pneumonia and heart failure can often be averted by dispensing with chloroform and ether anaesthesia and operating only under local anaesthesia (novocain-suprarenin, parasacral method). The risk of these complications can also be reduced by the exclusion of advanced

cases of myocarditis and arterio-sclerosis from the material selected for operation and by discouraging shallow breathing and lying on the back for long at a time, as both favour stasis in the lungs. No patient should be operated on who does not react satisfactorily to the phloridzin and indigo-carmin tests of renal function, even after this has been bettered by constant drainage of the bladder for a week, either by a suprapubic drain or a permanent catheter. The risk of haemorrhage, from which the author has lost one case, may be reduced to negligible proportions (1) by detaching the prostate from the comparatively non-vascular inner layer of its capsule, instead of from the more vascular outer layer (this entails incising the capsule more deeply and shelling out the gland in several bits instead of in one piece), and (2) by infiltrating the structures surrounding the prostate by novocain-suprarenin injected through a curved needle operating via the bladder. The risks of fatal sepsis, from which the author has lost 5 cases, may be much reduced by combining the suprapubic operation with perineal drainage. The gland having been shelled out, and the prostatic cavity plugged for a short time, its centre is pierced by curved forceps, the end of which can be felt under the skin a few centimetres above the anus. The skin is incised at this point, the forceps are passed through the opening thus made, and their blades are opened to seize a medium-sized drain, which is drawn up into the bladder, its upper end being secured by tampons in the cavity of the prostate, its lower end by sutures in the perineum. The wound in the bladder is now closed, except for a small opening of about 2 cm., and, most recently, the author closes it altogether. The perineal drain is left in place for eight to ten days, and is used for irrigation as well as for drainage. With all these technical improvements and more careful selection of cases, the author has reduced the mortality of his last series of 15 cases (not including two of cancer) to one, death in this case being due to heart failure.

OBSTETRICS AND GYNAECOLOGY.

36. Glycosuria in Pregnancy.

CAMERON (*Canadian Med. Assoc. Journ.*, August, 1919) records his experience of five cases of glycosuria which occurred in a series of 468 pregnancies, together with three cases in the practice of others. In his first case a small amount of a reducing sugar was found in the fifth month of gestation, but cleared up after the sixth month. This was regarded as a transient lactosuria without confirmatory qualitative examination. The confinement was tedious, and chloroform was used to the extent of nearly 2 oz. Recovery was uneventful, and the patient went to the country to recuperate. A week after this she developed an insatiable appetite, and died in diabetic coma three weeks later. In the other cases the fullest qualitative examination was performed, and glucose was beyond question the sugar present. In two of the cases true diabetes existed. Although the labour in the first case may have had more to do with the onset of the diabetes than the chloroform, the latter may have induced the acidosis which precipitated matters, and its administration during confinement in such cases would appear to be most unwise. The disappearance of the glycosuria during the later months of pregnancy may be explained on the assumption that a diabetes of pancreatic origin existed before pregnancy began, but that the fetal pancreas served for both maternal and fetal organisms until delivery occurred, when the strain of labour made a demand upon the metabolism of the mother which could not be met in the absence of the previously temporarily engrafted pancreas of her child, and such a theory may account for the fact that some cases of diabetes improve during pregnancy. The condition of pregnancy calls forth a condition of hyperplasia of the pituitary body in order to produce the autocatalyser of Robertson which is expended upon the growth of the fetus, and this hyperplasia as it affects the posterior lobe produces decreased carbohydrate tolerance, and may result in glycosuria. Although the reduction of copper hydroxide by the urine of a pregnant patient may merely indicate a lactosuria which is of no serious import, the fullest tests should be performed in order to make certain that glycosuria is absent, since, if it exists, true diabetes may be actually present or about to become manifest. Should the glycosuria be controllable by diet, frequent examination of the urine may be sufficient to protect the patient during gestation, but it will not decide whether or not her diabetes is under control because of fetal hormones, nor will it differentiate a glycosuria due to hyperalimentation or secretion of

inverted lactose, and the only means of arriving at definite conclusions is by an estimation of the sugar in the blood.

37. The Nature of Eclampsia.

OBATA (*Journ. of Immunology*, May, 1919), following the observation by Dold that salt extracts of various organs are toxic and that the toxin can be neutralized by blood serum, tested the effects of salt extract of the placenta on animals. The injection of such extracts brought about within a few seconds clonic convulsions, violent dyspnoea, and then death in a few minutes in the majority of cases; in some the effects were more prolonged, death occurring after hours or days, but in all cases dyspnoea and convulsions were marked features. *Post-mortem* examination showed haemorrhages and the formation of thrombosis in the lungs and in the liver. There was also decreased coagulability of the blood—a feature that does not accord with the findings in human cases. On the other hand, by the frequent injections of sublethal doses (three times a day for seven to twelve days), terminating with a lethal dose, more typical results were obtained. There was increase in the coagulability of the blood; almost all showed pulmonary haemorrhages and thrombosis, fatty degeneration and sometimes partial necrosis of the liver, with cloudy swelling, fatty degeneration, and haemorrhage of the kidney. These findings correspond fairly closely with the appearances in the human being. Obata is quite alive to the facts that such changes are not confined to eclampsia, and that they may be experimentally produced by extracts of other organs. He found that normal serum had the property of neutralizing the toxic powers of the placental extract, whilst serum from eclamptic patients, especially during the attack, had this property considerably diminished. He concludes that the true nature of eclampsia is nothing other than an intoxication by the placental poison, which is made possible by a weakening in its normal capacity of neutralization on the part of the maternal blood.

38. The Nourishment of the Pregnant Woman.

E. P. DAVIS (*Canadian Med. Assoc. Journ.*, July, 1919) adverts to the fact that the pregnant woman requires protein food, although excess must be avoided on account of the risk of toxæmic symptoms. The assimilation of protein may be watched by observation of the patient at frequent intervals and by the examination of the urine. A patient accustomed to considerable quantities of protein should have it with, however, strict moderation in regard to red meats. Carbohydrates are the next most important element of the diet. Excess in this direction is shown by acetone in the urine. Vegetables and fruit supply substances needed for the development of the skeleton, and are useful as laxatives. Water is an important item and at least one quart should be imbibed daily. The pregnant woman is better without alcohol and tobacco. Plenty of fresh air should be secured, and the patient should rest after meals.

39. The Diagnosis of Early Ectopic Gestation.

HEANEY (*American Journal of Obstetrics*, July, 1919) claims that the history supplies the diagnosis in 95 per cent. of these cases. He believes that the textbooks are misleading in some respects. To emphasize the pain in these cases is like dwelling upon the emaciation in cancer of the uterus. Many patients have not the least pain prior to rupture. Amenorrhoea likewise is too prominently mentioned in the books. Irregular intermittent bleeding over a considerable period is very suspicious, and every woman with symptoms suggesting a threatened, imminent, or incomplete abortion should be regarded as possibly having an ectopic pregnancy. The passage of a decidual cast is another feature over-emphasized in some textbooks, as also are the enlargement of the uterus and the presence of breast signs or nausea. The writer advocates exploratory posterior colpotomy in doubtful cases.

40. Pregnancy in a Prolapsed Uterus.

ANDRÉODIAS (*Journ. de Méd. de Bordeaux*, August 25th, 1919) reports an unusual case of pregnancy in a uterus so prolapsed that the cervical portion protruded from the vulva. The patient was a multipara in her third pregnancy. At the end of her first pregnancy the uterus prolapsed and remained so. Three years afterwards she conceived again and went to full term. In spite of a hysteropexy performed three years later, the uterus could not be restored to its normal position. Again, at the age of 31, she became pregnant, and at the time of examination the pregnancy had reached the eighth month.

Andr  odias considers that such rare cases usually go to full term, and that, if proper precautions be taken, infection of the uterus will not occur after childbirth.

41. Formation of Uniovular Twins.

STREETER (*Bull. of Johns Hopkins Hosp.*, August, 1919) discusses the development of uniovular twins in the light of Mateer's specimens. He suggests that the condition is due to the fission of the embryonic node prior to the opening up of the amniotic cavity. If both buds are of approximately equal size their subsequent development may proceed in an orderly manner. If the one—as in Mateer's ovum—is much smaller than the other, it will probably cease to develop. Careful scrutiny of the region of the insertion of the umbilical cord into the placenta might occasionally reveal the presence of two minute epithelial vesicles, indicating the existence of such a twin.

42. The Radical Cure of Pelvic Deformity.

JELLETT (*Surg., Gyn., and Obstet.*, August, 1919) holds that pelvic deformity in women should be treated by surgical interference with a view to cure, and not merely with a view to delivery during labour. Pubiotomy when not followed by bony union provides the desired result. Bony union may be avoided by allowing early movement after operation and dispensing with a pubiotomy belt after the fourth or fifth day. With the above aim in view the operation should not be delayed until the patient has reached the second stage of labour, from the existence of which most of the dangers of the operation arise, but should be done as long before labour as possible. The ideal time is before the patient has become pregnant at all, provided there is reason to expect that its effects will be required. The fact that the operation is not suited for general practice should not deter obstetrical specialists from considering the whole subject from the point of view of orthopaedic surgery. The author's claims are supported by tables of the results of pubiotomies performed at the Rotunda Hospital by himself and his predecessors.

PATHOLOGY.

43. Experimental Production of Paratyphoid Fever.

BESREDKA (*Ann. de l'Inst. Pasteur*, August, 1919) points out that hitherto attempts have failed to produce anything like the typical conditions of typhoid or paratyphoid fever in the usual laboratory animals. Rabbits, guinea-pigs, and mice are certainly sensitive to the inoculation of the virus of paratyphoid B when it is injected subcutaneously, intraperitoneally, or intravenously, but even a feeble dose is apt to cause death quite quickly. They are practically invulnerable to feeding experiments even with large doses of living bacilli, and no change is apparent. The organisms pass through the pylorus but find in the small intestine a barrier to their dissemination in the body. Besredka has succeeded in breaking down that barrier. He finds that the previous ingestion of ox bile lessens the natural resistance, though the bile itself is quite inoffensive. If, then, paratyphoid bacilli are mixed with the food, the rabbit, after an incubation period of one to four days, begins to lose weight; its temperature falls, and a profuse diarrhoea sets in, and death usually occurs in about a fortnight. *Post mortem*, one finds marked congestion of the small intestine with desquamation of the epithelium and swelling of Peyer's patches. The distension of the gall bladder with clear or colourless bile in which the organism appears in pure culture is a striking occurrence. Generally also the organism can be recovered from the blood. On the other hand, if paratyphoid bacilli are injected into the ear vein of a rabbit, it may be impossible to isolate them afterwards from the blood, and even if they can be isolated, one is not justified in concluding that septicaemia was responsible for the death; but the organisms can be recovered from the gall bladder, the duodenum, and jejunum, though they are absent from the viscera. If the animal be previously prepared by the ingestion of bile, intravenous inoculation of a very feeble dose of virus brings about rapidly fatal intestinal lesions. Besredka thinks that the ease with which the rabbit can be sensitized by means of bile, whether the infection be introduced by the mouth or through the veins, shows that the natural immunity to typhoid or paratyphoid virus is, to a great extent, a function of the intestine.

44. Estimation of Sugar in the Blood.

MACLEAN (*Biochemical Journal*, July, 1919) gives details of a method for the estimation of sugar in blood which is simple in application and can easily be utilized for clinical

purposes. It is claimed that the results are very reliable and more exact than in the recent picric acid method of Benedict. The blood is heated in an acid sodium sulphate solution to separate the greater part of the proteins by coagulation, any remaining traces being removed by the addition of a little dialyzed iron. When this is filtered a clear protein-free fluid is obtained. A measured portion of this filtrate is boiled, according to precise instructions, with an alkaline copper solution containing potassium iodate and iodide. On cooling, the solution containing the reduced cuprous oxide in suspension is treated with a slight excess of hydrochloric acid, which, interacting with the iodate and iodide, liberates iodine equivalent to the amount of iodate in the solution; at the same time the cuprous oxide is dissolved and cuprous chloride is formed. The amount of sugar present is calculated by ascertaining the amount of iodine used up, sodium thiosulphate and starch solution being employed in the titration. Tables are given in the paper for the glucose equivalents. The heating of the sample has to be done very carefully, but otherwise the technique is quite easy. The method enables one to obtain accurate estimations of sugar in 0.2 c.cm. of blood. The blood should be tested on removal, for glycolysis takes place very quickly and in about two hours its original sugar content is halved.

45. Prevention of Anaphylactic Shock.

KOPACHEVSKI and VAHRAM (*C. R. de l'Acad. des Sciences*, August 4th, 1919) found that if, ten minutes before the "assaulting" injection of serum into guinea-pigs, 2 to 3 c.cm. of a 1 per cent. solution of sodium oleate were injected into the jugular vein, the grave anaphylactic accidents were suppressed. The same results were obtained with 0.5 per cent. solution of saponin, and with 1 c.cm. of 1 per cent. solutions of taurocholate and glycocholate of soda. The only character these substances seem to have in common is their property of lowering the surface tension. The authors hold that the shock is due to the interaction of colloids.

46. Dengue and Sand-fly Fever.

MEGAW (*Indian Med. Gaz.*, July, 1919) holds that though at first sight dengue and sand-fly fever seem to be quite distinct from each other, yet the evidence is by no means convincing, and none of the points of distinction hitherto put forward serves definitely to separate them as two diseases. He would have them all called dengue, merely adding the terms three-day fever or seven-day fever to denote the particular type. Those who consider sand-fly fever as being different from dengue lay stress on the absence of a rash and the absence of a secondary rise of temperature, but it must be admitted that in many outbreaks of undoubted dengue numbers of the cases show neither rash nor secondary fever. If it be invariably true that the *Culex* and *Stegomyia* mosquitos are the insect carriers of dengue, and the *Phlebotomus* the sole carrier of sand-fly fever, then the diseases must be considered distinct, but he thinks that much more experimental work on the mode of conveyance of the diseases by insects must be done before this can be definitely accepted.

47. The Intracutaneous Tuberculin Test.

At the Berlin University polyclinic for diseases of the lungs, F. KLOPSTOCK (*Berl. klin. Woch.*, August 4th, 1919) has applied the intracutaneous tuberculin test to fifty cases suspected of tuberculosis. He gave four simultaneous injections in the carefully cleaned skin of the forearm, the strengths of the solutions being $\frac{1}{100}$, $\frac{1}{100}$, $\frac{1}{100}$, and $\frac{1}{100}$ mg. of tuberculin and $\frac{1}{10}$ mg. of glycerin-bouillon in 0.1 c.cm. of fluid. This fourth injection was given as a control. A comparison of the intracutaneous with the subcutaneous test (the subcutaneous injection being given after the intracutaneous injections) showed that the reactions did not run parallel. In some cases reacting violently to the intracutaneous test a positive reaction to the subcutaneous test was obtained only when 5 mg. and 10 mg. were given. In other cases a subcutaneous injection of only 0.5 mg. was sufficient to give a positive reaction, whereas a positive reaction to the intracutaneous test was obtained only with the maximum dose, $\frac{1}{100}$ mg. But the intracutaneous test was undoubtedly the more sensitive, and in no case of a positive reaction to other tuberculin tests did the intracutaneous test fail to be positive also. On the other hand, there were three of the fifty cases in which the subcutaneous injection of 10 mg. of tuberculin failed to raise the temperature, whereas the intracutaneous test was definitely positive. The author found the intracutaneous test of no value in distinguishing between latent and active tuberculosis, but he considers it superior to the cutaneous test in many respects.

EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

48. Empyema in Children.

F. S. CHURCHILL (*Boston Med. and Surg. Journ.*, 1919, clxxxix, 87-90) states that empyema is relatively infrequent in children. It occurred in 5 per cent. of 824 cases of lobar pneumonia and in 1½ per cent. of 557 cases of bronchopneumonia treated in the Children's Hospital, Boston, during the last ten years. During the same period only 180 cases were found in the out-patient department, practically all undetected before their visit to the hospital. The onset is insidious. The disease is hardly ever primary, but almost invariably secondary. The primary disease is usually pneumonia, but occasionally empyema may complicate measles, scarlet fever, tonsillitis, appendicitis, and acute arthritis. In all cases of pneumonia the possibility of empyema should be borne in mind, the danger signals indicating its development being both general and local. In cases ending by crisis they may be noticed in from one to ten days after the crisis, while in cases ending by lysis they may develop imperceptibly. The diagnosis of empyema in infants and children is more difficult than in adults, and careful examination of the chest daily is often necessary to detect the condition. A displaced apex beat is an important diagnostic sign; it is not, however, diminished in vigour as in pleuritic or pericardial effusions. The x-ray picture, though of help, is not conclusive, as practically the same degree and shape of shadow may be produced by a pneumonic consolidation as a pleuritic effusion, and a final decision can only be made by puncture of the chest, repeated if necessary.

49. Intravenous Injections of Digitalin.

GILBERT and KHOURY (*Paris méd.*, 1919, ii, 205-7) have found that digitalin is effective when given intravenously in cases where its administration by the mouth produces no result. The intravenous method does not appear to have a uniform action on the blood pressure; in most of the cases observed the tension was not affected, in a few it was raised 1 to 2 cm., and in others it showed a fall of the same degree. The doses employed by the writers were at first small, and did not exceed 10 to 15 drops a day, or 35 drops in three or four days, but they were soon raised to 25 drops daily, and to a total of 62 drops in three days, or 75 drops in four days, without any sign of intolerance being observed.

50. Congenital Subaortic Stenosis.

N. JAGIC' and F. SCHLAGENHAUFER (*Med. Klinik*, Berlin, 1919, xv, 530) describe an instance of this rare anomaly. The patient, a man of 43, had suffered from heart disease since the age of 11. He was admitted to hospital with a hypertrophied heart, a loud precordial systolic murmur (loudest; and later accompanied by a thrill, in the second right intercostal space), a pure aortic second sound, fever, rigors, a leucocytosis, and splenic enlargement. The diagnosis of old mitral disease and recent aortic endocarditis was made. At the *post-mortem* examination the mitral valve was normal, the aortic valves showed recent vegetations, and there were infarcts in the left kidney. The aorta also exhibited a considerable constriction at its origin from the left ventricle, about 2 cm. below the aortic valves: its ostium was oblong, measuring about 1.5 by 0.5 cm. This constriction was produced by a tough thickening of the endocardium 2 to 3 mm. in height, thinner and lower in the neighbourhood of the aortic cusp of the mitral valve. A microbe having the morphological characters of *B. influenzae* was cultivated from the aortic vegetations, which when examined microscopically appeared to consist almost entirely of bacteria. Sections of the stenosing ring showed a thick plexus of elastic fibres and streaks of tough connective tissue with few nuclei. The aorta showed no sign of atheroma. The authors conclude that the subaortic stenosis was congenital, and remark that in 6 out of 8 similar cases recorded by French writers the mitral valve was also diseased. It may be added that the occurrence of a terminal acute endocarditis is very common in patients with subaortic stenosis, who for the most part reach adult life.

51. Total Transverse Section of the Spinal Cord.

M. LHERMITTE (*La section totale de la moelle dorsale*) discusses the symptomatology of the total transverse section of the spinal cord based on the observation of

twelve cases, of which eight were subsequently subjected to histological study. Three periods in the clinical history may be distinguished. First, the immediate phase of shock, accompanied by great muscular atony, but generally with conservation of the pilomotor, vasomotor, and scrotal reactions, and sometimes even of some of the cutaneous reflexes. The second phase is one of medullary automatism, during which a whole series of reflexes may reappear, and the muscular atony may give place to a veritable condition of spasticity. Lastly, the terminal or cachectic phase comes on, during which lesions of septicaemic or trophic origin may suppress the spinal automatism by affecting the nerve cells. The study of the second or automatic phase is of great interest. The muscular spasm is of a flexor type, which is in contradistinction to the postural or extensor spasm met with in lesions of the upper motor neurons. Clonus of the patella and ankle joint may be obtained, and occasionally there are spasmodic movements of a myoclonic type. A complete restoration of reflex micturition and defaecation is also common. No regeneration, either above or below the lesion, was ever observed in the medullary elements, but a regeneration of the posterior root fibres was observed, the regenerated fibres ending blindly in the cicatricial tissue of the cord lesion.

52.

The Tongue in Stupor.

CHAVIGNY (*Paris méd.*, 1919, ii, 217-218) draws attention to the marks made upon the tongue by the teeth in stuporous conditions. These dental impressions are shown by a special deformity of the antero-lateral borders of the tongue, which, as the result of long-continued forcible pressure against the inner surface of the teeth, become, as it were, moulded upon them. The sign is of value in showing the reality of a condition which might be mistaken for malingering, and also in serving as a guide to prognosis, improvement in the case taking place as the dental impressions disappear.

53.

Endemic Osteomalacia.

FROMME (*Berl. klin. Woch.*, July 14th, 1919) gives an account of an outbreak of osteomalacia observed towards the close of the winter of 1918-19 in Göttingen. The patients were almost exclusively young males between the ages of 11 and 18. Their work had been heavy, and they complained of pain in knees and hips, tiredness on slight exertion, and inability to do heavy work. X-ray examination of the femur and tibia showed rarefaction of the bone, which in places had disappeared altogether. There was also a striking widening of the epiphyseal line, and in eight cases there was a spontaneous fracture somewhat above the epiphyseal line, with impaction of the thin diaphysis into the comparatively wide epiphysis. In the case of the one female patient the bones of the pelvis showed the above changes, and her gait was characteristic of osteomalacia. Other manifestations of bone softening, seen in some cases, were coxa vara and flat-foot. The author traces this condition to a variety of causes, including under-nutrition, lack of phosphoric acid as found in cheese, rice, fish, yolk of egg, meat and butter. Lack of calcium may also have been a contributory factor. The occurrence of the outbreak towards the end of the winter, when a shortage of vegetables made itself felt, suggests lack of vitamins as another factor. Overaction of the glands of internal secretion may also have played a part, as well as infectious diseases, notably influenza. The remedies prescribed were sunlight and fresh air, less work, more nourishing and varied food, calcium and phosphorus, as well as vitamins.

54.

Raynaud's Disease due to Malaria.

N. SAMAJA (*Gazz. degli Osp. e delle Cliniche*, Milan, 1919, N. 16) describes the case of a soldier who developed the signs and symptoms of Raynaud's disease, with symmetrical asphyxia of the fingers and toes, in the month of August, a most unusual time of onset, immediately after ten months' duty in a malarial area (Monfalcone). The patient was anaemic and thin, and had never had malaria; but his spleen was enlarged and the blood showed 29 per cent. of mononuclear leucocytes. The attacks of arterial spasm came on every morning, and lasted a couple of hours regularly: the condition was cured in a few days by the exhibition of 6 grains of quinine hydrochloride thrice daily, in November. The author quotes many references

to the literature of Raynaud's disease and to that of its connexion with malarial infection; he lays particular stress on the rarity of Raynaud's disease in the heat of summer, and argues that it may be one of the malarial equivalents.

55. Tuberculosis in the Negro.

ACCORDING to ROUBIER (*Paris méd.*, 1919, ii, 207-211) tuberculosis in the black soldier assumes a somewhat different clinical form from that usually met with in Europeans. The presence of the tubercle bacillus in the sputum is unusual. Ordinary ulcero caseous tuberculosis is rare, torpid and stationary forms with cavities are somewhat more frequent, and involvement of the serous membranes, especially pleurisy, is fairly common. But the principal form of tuberculosis seen in the negro is glandular tuberculosis, the cervical and mediastinal glands being chiefly affected. Enlargement of the latter may remain latent for a considerable time, and may only be revealed by x rays. These glands, when they become caseous, occasionally discharge tubercle bacilli into the blood stream, giving rise to a protracted form of septicaemia, which may last for months. This special form of tuberculosis may be partly due to the fact that the patients are all more or less malarial subjects, in whom tuberculosis tends to assume a chronic course.

56. Dermatoses of the War.

MACCORMAC (*Med. Record*, August 16th, 1919) points out the importance of the part played by skin diseases in the war. Scabies and pediculosis being by far the most common offenders, it is important to realize that the former can only be acquired by prolonged and intimate contact with an infected person or material, while in the latter infection is favoured by contact. The ova of pediculi are present in garments, etc., and require more elaborate methods for disinfection than is the case with scabies, where the ova lie beneath the patient's skin and are destroyed during treatment. Scabies is communicated through three sources—blankets and underclothing, infected women, and "mangy" horses, and early detection is all-important, since it can be cured in three days if treated before pyoderma and dermatitis have arisen. An effective procedure in the army was as follows: The patient, completely stripped, is rubbed with soft soap for twenty minutes, particularly as to the hands, feet, penis, and axillae. He is then immersed below the neck in a warm bath for twenty minutes, during the last five of which the parts affected should be gently scrubbed with a soft brush. This soaping and soaking process merely aims at opening up all the haunts of the acarus in order to afford better access to the parasiticide. After leaving the bath and drying, the patient has sulphur ointment rubbed into the whole body below the neck, especially into the hands, feet, axillae, and penis. Clothing is then put on and, where possible, cotton gloves worn, as they retain the ointment better. On the second and third day theunction is repeated but the bath omitted, and on the fourth day a second bath is given to remove any remaining ointment, and a complete change of clothing and bedding issued. Any existing pyoderma or dermatitis can then be treated, as the original scabies will be cured. In pediculosis, on account of the wandering habits of the louse and the presence of ova on the clothing, prevention must be aimed at by the use of chemical deterrents, and cure obtained by bathing the infected man and disinfecting his garments and blankets. N.C.I. powder—naphthalene 96 per cent., creosote 2 per cent., iodoform 2 per cent.—proved the most efficient, for, dusted on the socks, shirts, and seams of the clothing, it kills and keeps away. Since it is powerful and capable of damaging the skin, especially about the scrotum, an ointment in this region is preferable though less potent. Mercurial preparations are dangerous and sulphur useless. Bathing is usually sufficient to cleanse the individual, provided that the pubic and axillary hairs are disinfected. Among other dermatoses, ecthyma is a very real cause of disability, being a deep impetigo affecting the dermis, and requiring fomentations, followed by lotions, and finally ointments, for its cure. Where impetigo follows scabies, the latter must be treated before attempting to cure the former. An impetiginized or infected seborrhoeic eczema should be treated as an eczema with calamine and zinc oxide lotion after crusts have been removed in the usual way. In the dermatitis from mustard gas simple boric ointment acted well unless infection was present.

57. Influenza Mortality.

BAHRDT, physician to the Leipzig Life Insurance Society, brings forward the following reasons (*Bl. f. Vertrauensärzte der Lebensversicherung*, 1919, x, 49-54) to show that the

mortality from influenza in Germany was not affected by the scarcity of food caused by the blockade: (1) It was not so much the old people who succumbed, although they suffered most from the food restrictions, as the young who were better able to digest war diet. (2) Among the 108,922 persons insured by the Leipzig Insurance Society, 10,542 were living in Switzerland, among whom the influenza mortality was 6.73 per 1,000, although the food and other conditions were not nearly so bad as in Germany and Austria, whereas among the remaining 98,379 who were not living in Switzerland the mortality was only 1.45 per 1,000. (3) The mortality from influenza among the persons insured by the Leipzig Insurance Society in 1889-90, when there was no food scarcity, was 1.5 per 1,000, or almost the same as among those insured in 1918 who were not living in Switzerland.

SURGERY.

58. Dupuytren's Contracture.

GILL (*Annals of Surgery*, August, 1919) describes a method of operation for Dupuytren's contracture successfully employed by him, and based on his experience of the value of the free fat transplant in the prevention of post-operative adhesions, and the advantage of incisions being along the line of natural creases, in order to avoid the risk of subsequent keloid growth, contracture, and adhesion of the scar to underlying structures. Under general anaesthesia, without using a tourniquet, a transverse incision is made along the distal palmar crease, through which incision alone careful dissection is made of the entire palmar fascia up to or beyond the crease at the base of the thenar eminence, as far towards the base of the palm as is necessary, and to the web of the fingers. The skin being adherent to the fascia, the dissection must be carefully made to avoid buttonholing, and by this means the entire fascia can be exposed and freed. The contracted fascia is then excised without injuring the underlying tendons, vessels, and nerves. Any contracted fascia on the palmar aspects of the proximal phalanges can be excised through transverse incisions along the crease at the base of each finger implicated. As the tendons do not participate in the contracture, no steps have to be taken for their lengthening. If the proximal intraphalangeal joint cannot be extended, or only extended and flexed again with a snap, it will be necessary to excise the head of the first phalanx through a transverse dorsal incision over the joint. A small free fat transplant from the thigh is inserted smoothly beneath the palmar skin, where it will remain *in situ* without sutures, and the skin incision is closed with a few interrupted sutures, and the hand dressed on a splint for a week. Slight serous discharge, probably due to some dissolution of the fat transplant, may occur for a short time. In a case recorded the scar can with difficulty be seen, the palm is plump and soft, and the movements of the fingers normal as the result of the operation described.

59. Torsion of the Spermatic Cord.

CLUTE (*Boston Med. and Surg. Journ.*, 181, 1919, 231) considers that although torsion of the spermatic is not of common occurrence, the results on the testis are so severe that early diagnosis of the condition is imperative. There are only 57 cases in the literature, but this must be but a fraction of the actual cases. In about 53 per cent. of cases the affected testis is imperfectly descended, and in 4 cases the testis was actually intra-abdominal. The chief predisposing cause for torsion is an abnormality in the attachment of the cord to the epididymis and testis. Normally the testicle is sessile, the tunica vaginalis being reflected over practically the whole length of the posterior aspect. In some cases, however, the reflection affects only the upper part of this surface, leaving the testicle dependent as a semipendulous viscus, "like fruit upon a stalk." Clinically, torsion shows itself by a tense and oedematous scrotum, with great pain and often vomiting. In the case of an imperfectly descended testis the condition is very likely to be mistaken for a strangulated hernia. It is noteworthy that the torsion is always intra-tunical. The torsion may be incomplete, and it may unwrap itself spontaneously, recurring from time to time. The importance of the condition is that unless seen early the veins of the testis thrombose and there is no option but castration. When detected early the testis may be untwisted at operation and conserved. Dowden has reported a case where he reduced the torsion manually without recourse to incision. The twist is usually from within out. This must be borne in mind if reduction is attempted, but a

good working rule is to note the pain. If it is increased by twisting in one direction, try the other. In each of the three cases reported by Clute orchidectomy had to be performed. They presented two half-twists and one two and a half twists; the torsion had occurred ten, five, and four days respectively before they came to operation.

60. The Vesical Sphincter after Prostatectomy.

THE results of prostatectomy are in the main excellent. But from time to time cases are met with in which the post-operative function of the bladder is not all that could be desired. WATSON (*Surg., Gyn., and Obstet.*, 28, 1919, 569) ascribes this to one of two chief causes: (1) incomplete removal of the adenoma causing the obstruction, (2) too extensive trauma at operation to the sphincteric fibres at the neck of the bladder. Of the former nothing need be said, but the latter is very important. It has been suggested that the chief agent in controlling the urinary flow is the muscle surrounding the membranous portion of the urethra (compressor urethrae) and that the smooth muscle sphincter at the bladder neck plays no important part. This belief has been shattered by Rehfish's catheter experiments, and by radiographs of the collargol-filled bladder. No urine escapes under normal conditions into the posterior urethra, however distended the bladder may be, until the internal sphincter is relaxed. It is evident, then, that the integrity of this muscle must be respected at operation or a grade of incontinence may result. In doing the popular suprapubic prostatectomy, it is difficult and in some cases impossible to avoid injury, for the tumour must be delivered through the sphincter from the capsule of the prostatic gland below. Watson quotes Hymen's collargol cystograms on a series of thirty-eight prostatectomies. He found that twenty-eight showed two distinct cavities after operation—the bladder cavity, and continuous with it the one from which the adenoma had been removed. In these cases sphincteric control had been taken over by the external sphincter (compressor urethrae). Of the remainder a few showed a slight funnel formation, the rest no change from the normal. In Watson's own study of twenty-five cases from Hugh Hampton Young's clinic at Baltimore all cases showed perfect internal sphincter control; only one had at any time experienced periods of incontinence, and it is noteworthy that in this case the vesical sphincter had been grasped with forceps at operation and pulled down into the wound. The cases were examined at periods ranging from three weeks to thirteen years after enucleation of the prostate by Young's perineal technique. Watson filled the bladder with 10 per cent. thorium solution and then x-rayed the viscus. The "cystograms" so obtained showed a perfectly spherical shadow with no escape of the fluid into the posterior urethra. The excellent functional results following perineal prostatectomy is a decided argument for an operation which has found little favour here in England.

61. Animal Charcoal Irrigations in Gonorrhoea.

M. OPPENHEIM and E. LEKISCH (*Wien. med. Woch.*, July 19th, 1919) preface their communication by a reference to an earlier publication by Oppenheim on the treatment of gonorrhoea with animal charcoal irrigations. Though they soon cleared the urine, were non-irritating, cheap and easily given, and though they effected a cure sooner than other forms of irrigation, their antiseptic action was found to be much impaired by the rapid precipitation of the charcoal. This drawback has now been disposed of by suspending the charcoal in a solution containing an organic compound of silver (argenticum proteinicum). Investigations showed that this solution could hold the charcoal in suspension for several hours, and that the antiseptic action of the silver was unimpaired by the charcoal. The strength of the charcoal was about 1 per cent.—that is, 5 grams of charcoal to 500 grams of the solution. The strength of the argenticum proteinicum was gradually increased from 0.25 to 3 per cent. About 100 c.cm. were injected daily into the urethra. In very sensitive cases the injections were given only every other day. The charcoal could still be found in the urine even a week after the irrigations in some cases, but was never permanently retained. The authors give, in tabular form, an analysis of the 56 cases they have treated in this manner between January, 1918, and the following July. They found that the urine became clear much sooner than with simple charcoal irrigation or other forms of irrigation. In uncomplicated cases it took, on the average, only six days for the urine to clear. In two cases (bacteriuria) the irrigations failed to clear the urine, and this was effected only after the intravenous injection of neo-salvarsan. Though the irrigations are not irritating, it is advisable,

when the inflammation is very acute, to forestall the charcoal-silver injections by a course of permanganate injections.

62. Fracture of Neck of Femur in the Feeble.

WISE (*Surg., Gyn., and Obstet.*, August, 1919) records a method of treatment of impacted fractures of the femoral neck in the aged and feeble by placing the patient on a Gatch bed in a modified Fowler position, while supporting the thigh with sandbags in a position of abduction and rotation, together with extension by means of adhesive plaster to the flexed thigh, with traction in the line of the thigh, and leaving the flexed leg free. Abduction is maintained as far as the width of the bed will allow or the patient will bear, a pad being placed under the heel and the back rest raised or lowered as desired. The advantages claimed are: (1) Immediate application after injury, thus minimizing shortening; (2) the patient can sit in a comfortable position, and as there are no casts or splints the condition of the skin can be the more easily looked after to prevent bedsores; (3) it provides continuous extension whatever position the patient assumes; (4) immobilization is not sufficiently complete to cause entire disuse of muscles, so that they keep in a fair state without too great loss of power; (5) it is easy to manipulate the bed-patient; (6) it can be applied without assistance, and can be easily used in private houses; (7) it keeps the patient in a sitting position and guards against hypostatic congestion of the lungs and pneumonia.

63. Ambulatory Treatment of Fracture of Neck of Femur.

BRADFORD (*Journ. of Orthopaedic Surgery*, August, 1919) quotes a case of spiral fracture of the neck of the femur in a working woman of over 65 years of age successfully treated on an abduction traction splint. X rays showed that there was no fissure into the joint, but there was an erect upward riding of the femur with eversion of the foot, and crepitus was present. During the two days necessary for getting the abduction splint ready weight and pulley traction was applied, but after the splint was adjusted the patient was able to be moved about in bed, and two weeks after the fracture she sat up in a chair. Three months from the date of fracture the splint was removed altogether, and there was complete restoration and no shortening, the patient eventually resuming her former work. By such apparatus absolute joint fixation is possible, and the patient is able to sit up in bed, even in the acute and more painful stages, and as the acute symptoms subside the degree of fixation can be lessened to allow limited and increasing joint motion, thus overcoming the usual crippling tendency from the result of joint stiffness which always follows immobility of a joint.

64. A Rare Case of Hydronephrosis in a Child.

N. IAVARONE (*La Pediatria*, 1919, xxvii, 590-4) records a case of hydronephrosis in a boy, aged 4 years, secondary to cicatricial stenosis of the ureter caused by a calculus. The enlargement of the abdomen and the removal of a clear, colourless, and non-albuminous fluid by paracentesis at first gave rise to the diagnosis of echinococcus cyst of the spleen. Nephrectomy was followed by recovery.

OBSTETRICS AND GYNAECOLOGY.

65. Removal of the Placenta.

THE device introduced by Gabaston for hastening the expulsion of the placenta by the injection of sterile saline solution into the umbilical vein so as to distend the placenta with fluid is discussed by BORGBERG, HAUCH, FJELDBORG, and MÖLLER (*Ugeskrift for Læger*, June 5th and 12th). Borgberg advocates this method warmly, having tried it with complete success in five cases, and with partial success in a sixth case, in which one cotyledon of the placenta was not expelled by this procedure. He aims at inducing a retroplacental hydroma by the injection of 150 to 3,000 c.cm. of normal saline solution, the average amount required being about 500 c.cm. He has convinced himself that the procedure is perfectly safe if carried out *lego artis*; that the injection of air with the saline solution can be avoided; that anaesthesia can be dispensed with, as the method is quite painless; and that as all the manipulation necessary is extragenital the method is ideally aseptic. Professor Hauch tested the method in a case of abortion in the fourth month, but after he had injected about 200 c.cm. of fluid the vein gave way, and manual extraction

had to be resorted to. Fjeldborg records a case where two hours after delivery an attempt to expel the placenta by Credé's method failed, even when repeated under chloroform anaesthesia. An intravenous injection of hypophysin, though it stimulated the uterus to tetanus-like contractions, failed of its object. As blood continued to ooze from the vagina, Gabaston's method was tried, but after 400 to 500 c.cm. had been introduced, the fluid began to escape through the vagina. The attempts to express the placenta failed, and further injection of fluid proving futile, as it ran out again through the vagina, manual extraction was considered necessary. Before it could be carried out the patient collapsed suddenly. Vomiting, cyanosis, restlessness, dilatation of the pupils, and embarrassed respiration were observed, and she speedily became unconscious. She rallied under stimulants and oxygen inhalation, and as she was still bleeding two hours later, ether was administered and the uterus emptied by hand. Soon afterwards she collapsed again, this time fatally. The necropsy showed no sign of air embolism, and death was attributed to persistence of the thymus (status lymphaticus). The presence of a fibroid tumour in the wall of the uterus may partly account for the failure of Gabaston's method in this case. Möller records a case in which Gabaston's method was instantly and perfectly successful after Credé's method had failed. Only 150 c.cm. of fluid were injected, and the nozzle of the syringe was thrust directly into the vein without the interposition of a cannula or rubber tubing. This simplification of technique should minimize the risk of air embolism.

66. Inversion of the Uterus.

O. KELLER (*Ugeskrift for Læger*, July 3rd, 1919) records the case of a woman, aged 55, who had previously been well, whose confinements had been normal, and whose last child was born twenty-three years earlier. At the age of 53 she began to suffer from pain in the loins and iliac fossae, and a slight yellow vaginal discharge was accompanied by a sense of dragging in the lower abdomen. Menstruation, previously regular, now occurred at irregular intervals of a fortnight to two months, and was excessive. A sudden attack of violent pain in the lower abdomen, accompanied by vomiting and collapse, led to her admission to hospital. This soon passed off, and the diagnosis of inoperable cancer of the uterus and vagina being made, she was discharged a month later. The haemorrhages increased in violence, requiring tampons. On the patient's admission to the author's hospital she was found to be emaciated, dazed, and anaemic. In the vagina was a swelling, of the size of a large pear, the surface of which was vascular and bleeding. The circumference of the swelling diminished as it was traced upwards. Still further up the swelling was gripped by an annular constriction, evidently the collum uteri. When the swelling was dragged downwards, this constriction moved down, forming part of the inverted uterus, only a small part of which was thus left uninverted. As no uterus could be felt above the symphysis, the diagnosis of inversion was made, and vaginal panhysterectomy was performed. The operation was successful, and a year later the patient was perfectly well. The excised uterus contained a sessile fibromyoma of the fundus, showing no signs of malignant disease.

67. Corpus Luteum Extract in the Vomiting of Pregnancy.

QUIGLEY (*Amer. Journ. of Obstet.*, August, 1919) reports on seventeen cases of hyperemesis gravidarum treated by the administration of corpus luteum extract either by the mouth in 5-grain doses or hypodermically, using ampoules containing 0.2 grams. Twelve of the cases were permanently benefited, and four temporarily. Quigley believes that if the treatment had been pushed in the latter they also would have benefited permanently.

68. Physiology and Pathology of the Endometrium.

STRONG (*Amer. Journ. of Obstet.*, August, 1919), in discussing the pathology of the endometrium, points out that true endometritis shows only the same exudative, destructive, or reparative changes as are characteristic of inflammation in general, and that all the glandular and stromal changes formerly described as endometritis are now recognized as cyclic changes. It follows that endometritis is practically always bacterial in origin, mainly puerperal and gonorrhoeal. Except in the most severe puerperal cases it is focal rather than diffuse, and in the common form associated with adnexal disease large areas occur without any inflammatory reaction. In general he considers that the

uterine mucosa is very resistant to pathological change. In thirty cases of uncomplicated endometritis the effects upon the menstrual cycle were apparently conflicting, and he regards the condition as being not a common cause of menstrual disorders. Adnexal disease is a much commoner cause of such irregularities, but there is no characteristic local anatomical basis for uterine haemorrhage, and atypical menstruations are to be referred to changes in the endocrine system rather than the endometrium.

PATHOLOGY.

69. The Pollens in Hay Fever.

SCHPEPEGRELL (*New York Med. Journ.*, August 30th, 1919), who has published several papers on the etiology of hay fever, strongly supports the contention that the disease is caused by the pollen of certain plants, a theory which has not been universally accepted. He states that the principal cause of autumn hay fever in the north-eastern and southern States of America is the pollen of the common ragweed (*Ambrosia elatior*). The pollen grains measure about fifteen microns in diameter, and are easily borne by the wind to a very considerable distance. Not all wind-borne pollens are capable of producing the disease, though all disease producers are wind-borne. The extent to which the pollen is carried depends on the size of the pollen grains, the strength of the wind, and the presence or absence of rain. There are various forms of hay fever due to the reactions of different pollens. Many persons, for instance, who are sensitive to the grass pollens and have hay fever in spring and summer are not affected by the ragweed, and therefore do not suffer from autumn hay fever, and vice versa. The most conclusive proof of the relation of pollens to hay fever lies in the inhalation test; if a person subject to autumn hay fever is allowed to inhale the ragweed pollens, an attack of hay fever is invariably produced, the intensity and duration of which is directly allied with the number of pollens inhaled; and this reaction may be produced at any time of the year. Effects on susceptible subjects may also be induced by applying the pollen to the conjunctiva, or even to the scarified skin. By exposing glycerin coated glass slides in the open air the pollen grains carried by the wind are caught, and their number to the square yard is recorded. These records and the clinical reports of hay fever synchronize at all seasons.

70. An Unusual Case of Tuberculous Meningitis.

CASES of tuberculous meningitis in which polymorphonuclear leucocytes predominate in the cerebro-spinal fluid are not very common. C. MASSIAS (*Gazz. hebd. d. sci. méd. de Bordeaux*, 1919, xl, 255-8), who has collected a number of examples from French and Italian literature, records a case, in a woman aged 33, which was characterized by its rapid course simulating cerebro-spinal meningitis, the almost exclusive presence of polymorphonuclear leucocytes, and the great abundance of tubercle bacilli in the spinal fluid. Death took place after four days' illness. In addition to miliary tuberculosis of the cerebral and spinal meninges the necropsy showed fibro-caseous tuberculosis of the left apex and caseous hilar glands. There was no thoracic or abdominal miliary tuberculosis.

71. The Etiology of Chorea.

ACCORDING to FOTI (*La Pediatria*, 1919, xxvii, 579-589), Milian in 1913, as the result of numerous careful observations, maintained that syphilis played an important part in the causation of chorea. This thesis met with violent opposition, especially from Fiore in Italy and Comby in France, who declared that syphilis in chorea patients was a mere coincidence and that at most it might act as a predisposing cause like all other infectious diseases, but without having any specific influence. Foti examined 17 cases of chorea at the Naples Paediatric Clinic and found that in 13 the Wassermann reaction was positive, in 3 suspicion of syphilis was justified by the family history and clinical examination, and in only one case could syphilis be excluded with certainty. Foti concludes that the almost constant existence of hereditary syphilis and chorea in his cases cannot be a mere coincidence. On the other hand, he does not feel justified in asserting that syphilis is the direct and exclusive cause of chorea, owing to the existence of cases in which syphilis can be excluded. He thinks, however, that a preponderating influence can be assigned to syphilis in the pathogeny of chorea, not as a determining cause but as the principal predisposing

EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

72. Benzyl Benzoate.

MAGHT (*Journ. Amer. Med. Assoc.*, August 23rd, 1919), after a lengthy investigation into the properties of benzyl benzoate as an antispasmodic and of its therapeutic value in excessive peristalsis or excessive spasm of smooth muscle, records several clinical conditions treated with benefit. Remarkable results were obtained: (1) In cases of excessive peristalsis of the intestine—for example, diarrhoea and dysentery; (2) in intestinal colic and enterospasm, post-operative and otherwise; (3) in pylorospasm, either functional or reflex from ulcers and neoplasms, the effects of the drug being studied by x-ray methods; (4) in spastic constipation; (5) in biliary and gall-stone colic; (6) in ureteral and renal colic; (7) in spasm of the urinary bladder; (8) in spasmodic pains resulting from contractions of the seminal vesicles; (9) in uterine colic, complete relief following one or two doses in spasmodic dysmenorrhoea; (10) in arterial spasm and angina, both systolic and diastolic blood pressure being reduced considerably; and (11) in bronchial spasm and true asthma. Though the indications for its use seem to be manifold, the *rationale* of the treatment is the same in all and is due to the inhibitory and spasm-relaxing action of the drug on unstriated muscle. The benzoate was given by the mouth, either in the form of an alcoholic solution, or dissolved in oil, or in capsules, and occasionally intramuscular injections of both the benzoate and the acetate were given in oil.

73. Encephalitis Lethargica.

ROSSITER (*New Zealand Med. Journ.*, June, 1919) records ten cases of encephalitis lethargica, with three deaths. Relative acuteness in onset, apathy, lethargy or stupor, pathological sleepiness, and absence of spontaneity are prominent general symptoms. There may be restless delirium with automatic purposeless reproduction of familiar movements, while pseudo-hysterical manifestations alternating with profound hebétude were present in some of the cases. Katatonia was seen in one case, while in nearly all it was noticed that often during most profound lethargy the patient's response to request would, in act and word, be surprisingly accurate and rational, with almost immediate relapse into stupor. Though headache, giddiness and vomiting, Kernig's sign, and pain and stiffness in the neck may be present, they are often not well marked, and the picture is never one typical of an acute meningitis. Among ocular symptoms blurred vision shortly followed by diplopia is generally the first to be noticed, and any degree of ophthalmoplegia, with ptosis, may occur. The pupils may be contracted, dilated, or fixed, or normal, and the patient may have the appearance of ptosis or drowsiness where there is no paralysis, and inability to sustain ocular movements may be the only defect. Involvement of the lower cranial nerves is common, resulting in facial paralysis, with both motor and sensory paralysis of the palate, tongue, larynx, and pharynx. Lumbar puncture may prove beneficial if there are marked indications or increased cerebro-spinal pressure, but in the absence of severe headache, choked disc, or very extensive ophthalmoplegia its value is doubtful except as a diagnostic measure. Beyond meningeal congestion, and possibly minute patches of localized meningitis, or limited areas of subpial haemorrhagic effusion, there is little to be noted microscopically. On section of the grey and white matter the appearance may be one of general congestion. Beyond careful nursing, and in the absence of increased cerebro-spinal pressure, there are no known curative measures, but venesection and free purgation are suggested on the assumption that the condition is one of hyperaemia of the bulb.

THISTLE (*Canadian Practitioner and Review*, August, 1919) sees a connexion between encephalitis lethargica and influenza, and thinks it probable that the symptoms may be simply unusual manifestations of the latter disease. He reports five cases of recovery in which unequivocal cerebral symptoms—for example, ptosis and squint—occurred in what appeared at the outset to be attacks of influenza during an epidemic of that disease. In these the spinal fluid was sterile, with an increase of the cell count in which lymphocytes were in excess, pointing to an inflammatory condition of the cerebral nervous system and eliminating a meningitis from the meningococcus or

streptococcus. In some cases, as in one of the series, the resemblance to tuberculous meningitis may be very close, the great point of distinction being the recovery of the patient in encephalitis lethargica. The symptoms described were typical, and the author's main thesis is to prove an etiological connexion between this condition and influenza.

74. Delirium of Influenza.

POROT and HESNARD (*Paris méd.*, August 23rd, 1919) point out that influenza may begin with an attack of acute delirium. Such cases are often mistaken for acute mania, and if placed under mechanical restraint rapidly succumb. Delirium may supervene when the fever is at its height, and is then analogous to that occurring in other febrile intoxications. It may be of a quiet muttering type, or the patient may become acutely maniacal. The most common form of delirium is, however, that which comes on after defervescence. It may be ephemeral or prolonged and systematized, becoming a true psychosis. The psychoses of influenza may last from a few weeks to several months. The commonest form is that of a confusional psychosis or else mental stupor. On recovery from the confusional state the patient occasionally retains a certain delusional residuum that becomes systematized, or katatonic symptoms may supervene. When the possibility that the psychosis is due to an accentuation of pre-influenza mental disturbance can be excluded the prognosis is as a rule favourable.

75. Paralysis of Cranial Nerves.

SPILLER (*Journ. of Nerv. and Ment. Dis.*, June, 1919) reports a case which showed paralysis of the ninth, tenth, and eleventh (pneumogastric portion) cranial nerves, together with cerebellar symptoms. The patient had been under observation for three years. The case is brought forward to give evidence of a distinct nuclear representation of the motor supply to the soft palate and larynx, for while the former was paralysed the vocal cords were healthy. The cause of the man's condition is discussed briefly, but a definite diagnosis is not arrived at. There is no note of the condition of the plantar responses or of the cytological findings and globulin content of the cerebro-spinal fluid. The Wassermann reaction was reported to be positive in the serum, negative in the cerebro-spinal fluid.

76. Favus in an Adult.

WOLF (*New York Med. Journ.*, August 30th, 1919) reports a rare instance of favus in a native-born American, aged 28. The disease had affected his scalp for many years, as long as the patient could remember, and no treatment seemed to have done any good. Strong antiseptics were employed without producing any effect. After the application of one epilating dose of x-rays the areas cleared up completely in a little over two months.

77. Benign Epidemic Jaundice.

T. BRUGSCH and J. SCHÜRER (*Berl. klin. Woch.*, June 30th, 1919) describe an epidemic of jaundice they observed in Rumania during the autumn campaign of 1917. The epidemic began late in August and lasted throughout September and October. It coincided with very hot weather, much sunshine, little rain, and a plague of flies. Thousands of cases occurred, and in one battalion 10 per cent. of the men were affected. The first symptoms were lassitude, headache, a sense of oppression in the epigastric region, and a coated tongue. Tenderness in the epigastric region and enlargement of the liver were early demonstrable, as was great discoloration of the urine. The spleen was invariably enlarged. The temperature was often normal all the time, and it seldom exceeded 38° C. In a few days it was again normal. The jaundice appeared early, was never very intense, and lasted in many cases only a few days. As it began to fade an attack of diarrhoea often set in, the stools being watery, grey, offensive, and as many as four to ten in the twenty-four hours. This diarrhoea seldom lasted more than two days. Many of the patients were not incapacitated for work, but in some cases the sense of epigastric oppression became a sense of pain, which was proportional to the intensity of the jaundice and the enlargement and tenderness of the liver. The disease invariably ran a mild course, and was

never followed by serious complications, nor by such sequels as acute yellow atrophy of the liver. Its character was too uniformly benign for it to be classed as Weil's disease; and though its phases of rise, culmination, and decline corresponded closely with the curve of a synchronous epidemic of paratyphoid fever, the epidemics were probably not due to the same micro-organisms. For in 100 specimens of urine from cases of jaundice no paratyphoid bacilli could be found, and they were not agglutinated by the blood of the few cases of jaundice examined. But the two epidemics were probably favoured by certain common factors, and the authors conclude that the jaundice was an infectious, but not very contagious, disease, the origin of which must be traced to some food, possibly to a Rumanian flour with which certain patients associated the development of their symptoms.

78. Polycythaemia Hypertonica.

G. SINGER (*Wien. med. Woch.*, July 12th, 1919) records the case of a married woman, aged 47, who was admitted to hospital in a state of profound anaemia. Ten days earlier a severe intestinal haemorrhage had weakened her so effectively that her transport to hospital had seemed unfeasible. On examination the tension of the pulse was found to be high, and the second aortic sound was accentuated. The blood pressure (Riva-Rocci) was 165 mm. of mercury. The fundus oculi showed numerous punctiform haemorrhages on both sides. The urine contained traces of blood pigment, and the x rays showed hypertrophy of the left ventricle. No further intestinal haemorrhage occurred in hospital, but the blood pressure rose steadily, and had reached 240 mm. on her discharge. Throughout her stay in hospital she complained of pain in the head and left arm, and, later, in the epigastrium. A blood count showed 8 million erythrocytes. Myelocytes and eosinophilia were also demonstrable. The author points out that conclusive evidence of granular disease of the kidneys was lacking, but he suspects that renal disease was largely responsible for the symptoms, and notes that Galsböck and Morawitz have correlated renal disease with their cases which presented symptoms similar to those he has described.

SURGERY.

79. Surgical Treatment of Typhoid Carriers.

NICHOLS, SIMMONS, and STIMMEL (*Journ. Amer. Med. Assoc.*, August 30th, 1919) think that the records of apparent cures of the carrier condition by cholecystectomy, x rays, vaccines, lactic acid bacilli, and various drugs are open to objection, seeing that the conclusions are based on the results of cultures of the faeces. They judge their own results by the cultures of the duodenal contents. They have treated surgically seven chronic typhoid carriers—six "intestinal" carriers by cholecystectomy, and one "urinary" carrier by nephrectomy—with the result that five were cured, whilst two of the cholecystectomy cases failed of cure. They conclude that so-called "urinary" typhoid carriers are really kidney carriers, and can be cured by nephrectomy. An additional argument for operation is present if the infected kidney is functionless. One such case is recorded. The "intestinal" carriers are really bile-passage carriers, and are of two kinds: (1) Cases in which the gall bladder alone is infected, and which are curable by cholecystectomy, and (2) cases in which the bile passages, as well as the gall bladder, are infected, and which are not benefited by the operation. The standard of cure was three successive negative cultures of duodenal contents.

80. Antiseptic Military Uniform.

HEIM, FERNBACH, and RULLIER (*Ann. de l'Inst. Pasteur*, August, 1919) record experiments performed during the last year of war to see if it were possible to render military uniform antiseptic, seeing that it was the introduction of portions of soiled clothing carried by the projectiles which produced those formidable complications of wounds, tetanus and gas gangrene. After much investigation they found that the best method for rendering clothing antiseptic, taking into account the question of cost, was to impregnate it first of all with a 7.5 per cent. solution of hydrofluosilicic acid, and then, after drying at room temperature, treating it with 5 per cent. coal oil (distilled between 210° and 270°) with mercury bichloride in a strength of 1 in 4,000. Clothing so treated can be worn without any inconvenience. They tested its antiseptic properties by saturating such cloth, as well as

untreated cloth, with the organisms productive of gas gangrene, *B. perfringens*, *B. oedematiens*, and *Vibrio septique*, and inserting pieces deep in the thigh muscles of rabbits. The result was that, in the case of untreated cloth, half of the number of the animals died with evident lesions of gas gangrene, whilst the animals which had the antiseptic cloth showed few or no symptoms, and all recovered. The authors had not the opportunity of trying the application of these results to soldiers' clothing on a large scale.

81. Peripheral Nerve Injuries of the War.

In a study of 350 cases of nerve injury observed in Genoa, RICCA (*Il Policlinico*, vol. xxv-M.) discusses in detail the various clinical syndromes, the problems of recovery, of diagnosis and prognosis, and the principles of operative treatment. In the main his conclusions are in harmony with the well-known work of the French school and present no outstanding differences. His observations on the occurrence of spontaneous recovery in a series of nerve injuries in which the syndrome of complete interruption was present are of particular interest. Out of a total of 49 "complete" lesions, 25 showed spontaneous recovery, manifested by the appearance of motor return. The tendency to recovery was marked in the case of brachial plexus lesions, but was conspicuously absent in ulnar nerve injuries. The importance of direct faradic stimulation of nerve trunks during operative exploration is emphasized judiciously, especially in connexion with the recognition of partial lesions and the feasibility of conservative resection of such.

82. Experimental Production of Pancreatitis.

ARCHIBALD (*Surg., Gyn., and Obstet.*, 28, 1919, 529), in reviewing the literature concerning the etiology of pancreatitis, insists that the primary pathological lesion is necrosis, and that haemorrhage, inflammation and infection are secondary. He recalls Opie's experiments in introducing bile into the pancreatic duct and his celebrated autopsy, where a small stone had blocked the bile papilla, diverting the bile flow into the pancreas, and setting up a fatal haemorrhagic pancreatitis. By no means all cases of acute pancreatitis are found to have gall stones, hence some physiological means by which bile would be liable to pass into the pancreas was sought for. Archibald believes that the sphincter of the bile papilla, the circular muscle of Oddi, furnishes the explanation of these cases. He finds experimentally that a pressure can be used for the injection of bile into the common duct of animals such that the sphincter does not open, and thus the bile passes into the pancreas. If a high injection pressure is used, the bile forces the muscle of Oddi and pours into the duodenum without entering the pancreas. Oddi himself made several observations on this muscle, noting that it could be thrown into a state of spasm by mechanical irritation of the duodenum or by the application of diluted hydrochloric acid. Stimulation of the vagus provoked a prompt and intense contraction. By the injection of infected ox bile, of filtered and sterile human bile, and of bile salts, Archibald was able to produce pancreatitis in cats. All were brought about through the action of the common duct sphincter, and this by a pressure little over that of the normal bile pressure. He thinks that the added stimulus of duodenal hyperacidity with the spasm of the papilla consequent upon it need hardly be called upon to explain the occurrence of pancreatitis, so easily can the latter viscus be injected. As to the treatment of pancreatitis, he inclines to Judd's view that cholecystectomy with a drain left in the common duct is better than simple drainage of the gall bladder. The rationale of the choice lies in the fact that the musculature of the gall bladder is entirely cut out by the former operation, and that this is the only muscular force of any strength in the biliary system. He believes that division of the sphincter of Oddi would be the most reasonable treatment theoretically. He has not yet performed this operation.

83. Congenital Megacolon.

THE museum of the Pathological Institute of Parma University contains a specimen of congenital megacolon with a description by the founder of the Institute, Giovanni Inzani, which A. DELLA VALLE (*La Pediatria*, 1919, xxvii, 515-526) now reproduces. The account was written in 1882, that is, six years before Hirschsprung described the disease which now bears his name. The patient was a boy aged 5 years, who had suffered from obstinate constipation since birth, defaecation occurring at intervals of fifteen to twenty days. On admission to hospital the abdomen was enormously distended, measuring 82 cm. in circumference. Death was due to toxæmia. The length of the colon in

the dry state was 182 cm., the measurements of the various sections being as follows: from the caecum to the hepatic flexure 37 cm., from the hepatic flexure to the splenic flexure 33 cm., and from the splenic flexure to the sigmoid 29 cm. The sigmoid flexure alone was 83 cm. The circumference of the ascending and transverse colon was 37 cm., and of the upper part of the sigmoid 35 cm. The wall of the colon was normal in size, up to the junction of the descending colon with the sigmoid, where it became enormously thickened. The mucous membrane of both the large and small intestine did not present any naked-eye changes. Apart from dilatation of the right ureter and bladder the other organs showed nothing abnormal.

84. A Rare Form of Brain Abscess.

AT a meeting of the Berliner Gesellschaft für Psychiatrie und Nervenkrankheiten, HENNEBERG (*Berl. klin. Woch.*, July 14th, 1919) recorded the case of a man, aged 20, who had suffered from eczema of arms and head since childhood. In May, 1918, he was treated for vomiting in a military hospital, the diagnosis being first gastritis, then neurosis. He was admitted to the author's hospital in July, 1918, when the following symptoms were observed: Pain in the back of the head, occasional cervical rigidity, occasional slight giddiness, bouts of vomiting, slight dementia, occasional apathy, inequality of the pupils, diminished reaction to light, optic neuritis, paresis of the abductens (first the left, later the right) muscles, nystagmus, loss of corneal reflexes. The pulse was 60 to 70, on one occasion 48. Wassermann's reaction was negative, and lumbar puncture showed neither lymphocytosis nor an increase of albumin. The head was not tender on percussion, and there were no disturbances of speech. But there was paresis of the buccal branch of the right facial nerve, the sense of smell was reduced, and there was slight weakness of the right arm and leg. His movements were a little uncertain when he turned. There was no fever till a short time before death, which occurred in December, 1918. A tumour of the base of the brain was diagnosed, but the necropsy showed extensive multiple abscess formation of the left frontal lobe, starting presumably from the eczematous scalp. Under the scalp covering the right parietal bone there was an old circumscribed abscess. The left frontal bone was much swollen, and in the frontal lobe there were twelve abscesses of various ages and sizes. They formed a conglomeration extending backwards as far as to the central convolution. Some were larger than a walnut, others were as small as a bean. Most of these abscesses were enclosed in thin but firm capsules, to which numerous minute abscesses were adherent. The pus contained numerous staphylococci and diplococci resembling meningococci. There was great oedema of the left hemisphere, and a moderate degree of hydrocephalus on the right side. No other foci of supuration could be found. The author correlates the indefiniteness of the local symptoms with the absence of brain softening, and he notes with emphasis the absence of motor aphasia, although the third frontal convolution was involved. Other curious features of the case were the early development of distant symptoms (multiple paresis of the cranial nerves), the absence of aphasic disturbances, the reference of the pain to the back of the head, and the absence of tenderness on percussion over the affected area. None but very early operation could have been of any benefit.

OBSTETRICS AND GYNAECOLOGY.

85. Benzyl Benzoate in Dysmenorrhoea.

LITZENBERG (*Journ. Amer. Med. Assoc.*, August 23rd, 1919), acting upon the recommendation of Macht for the use of benzyl benzoate in all painful spasms of smooth muscle organs (see page 13) studied its effect in dysmenorrhoea. The investigations were made among female students and nurses in order to obtain intelligent co-operation in following directions and answering questions. Block classifies the complaint under three heads: (1) Obstructive, and usually requiring operative treatment; (2) ovarian, due to increased ovarian secretion, and treated by inhibiting the hyperactivity of the ovary by cocaineizing or cauterizing the "genital spots" on the nasal septum, or by neutralizing the excessive secretion with epinephrin; and (3) vagotonic, due to irritability of the autonomic nervous system. This last type—spasmodic or essential dysmenorrhoea—was the one considered, the accepted treatment being by an antispasmodic (for example, atropin), which relieves the pain by diminishing the irritability of the

autonomic nerves, and thereby relaxing the uterine musculature. The uterus is supplied by the pelvic division of the autonomic system and some fibres from the antagonistic sympathetic system. In patients with vagotonia the uterus is spastic, the control of the sympathetics having been overbalanced, resulting in spasmodic or essential dysmenorrhoea. Atropin ($\frac{1}{2}$ gr. to $\frac{1}{4}$ gr.), by paralyzing the autonomic group, gives satisfactory results, but it generally has to be pushed to the point of tolerance to obtain the desired relief, and is too dangerous a remedy to place in the hands of a patient for use fourteen times a year. While atropin produces its effect by paralyzing the autonomic nerves supplying unstriated muscle, benzyl benzoate acts only on the muscle cell itself, and both experimentally and clinically Macht has shown that it produces no dangerous or toxic symptoms. Owing to the unpleasant taste, the best means of administration is by means of a 20 per cent. emulsion with acacia in aromatic elixir of eriodictyon, one to two teaspoonfuls, as required, being given every two hours. Of 43 patients, 35 were relieved of pain, 27 entirely, and 8 very considerably. In two cases relief was slight, and in six there was no benefit. While only relieving a symptom, the drug should be tried before dilatation or other pelvic operation is advised, since good results have been obtained in all the three classes of dysmenorrhoea, and good reports have been received from its use in cases due to some pathological pelvic condition, and even in the inflammatory type. The best results, however, followed its administration in the spasmodic type, or essential dysmenorrhoea, and it has obvious advantages over atropin on account of its very low toxicity. Though these cases are too few to dogmatize upon, they are published in the hope that, by further investigation by others, sufficient data may be collected to determine the real value and the limitations of benzyl benzoate as an antispasmodic in painful menstruation.

86. Recurrence of a Benign Ovarian Tumour.

HARTMANN (*Ugeskrift for Læger*, July 10th, 1919) records the case of a woman, aged 46, who had been admitted to hospital a year earlier for a tumour of the left ovary. With the development of this tumour total genital prolapse occurred. She was very emaciated and debilitated, and the tumour caused great distension of the abdomen. At operation the tumour was found to be adherent in almost every direction. As the right ovary was enlarged both were removed. Ventrofixation of the uterus was performed and the operation completed. The tumour was semisolid in places, but the microscope showed it to be a benign psoudo-mucinous cystoma. A year later she was readmitted to hospital with an abdominal swelling of the size of a man's head. It was situated mainly in the right abdomen; it extended up to the costal arch, and had no apparent connexion with the uterus. Laparotomy showed it to be growing from the under surface of the transverse mesocolon, to which it was attached by a broad base. Macroscopically it resembled a typical ovarian tumour. Microscopically its structure was identical with that of the original ovarian tumour, a fragment of which had evidently been left at the first operation attached to the mesocolon. Prophylactic x-ray treatment was prescribed.

87. Analysis of Human Milk.

TALBOT (*Journ. Amer. Med. Assoc.*, August 30th, 1919) points out that the results of milk analysis are open to considerable error, and that the composition of human milk varies within wider limits than were formerly supposed. As the percentage of fat is much lower at the beginning of nursing than at the end, the difference occasionally being as much as 10 per cent., and as the lactose is greater in proportion at the beginning than at the end, an analysis, to be trustworthy, should be made from the whole milk, and Talbot suggests that the mixture of 1 oz. of milk before nursing and 1 oz. after nursing will give the desired sample. The time of day at which the milk is drawn has an important bearing on the composition, the highest percentage of fat being found at midday or in the afternoon, and an analysis which did not take this into account might lead to the supposition that the sample was abnormal. It is recommended that the milk should be drawn at 9 or 10 o'clock in the morning, as such a sample gives the most characteristic figures. The present methods of analysis are faulty mainly because the sugar content is an assumed value and the protein content an indirect calculation. Talbot recommends that the fat should be determined by the Babcock method as at present, the protein by Kjeldahl, and the lactose by the recent titration method of Folin and Denis. Only by the verdict of such accurate methods can one be justified in depriving an infant of its mother's milk.

88. Case of Hermaphroditism.

COUVELAIRE and DUCLAUX (*Ann. de Gyn. et d'Obstét.*, vol. xiii, No. 8, September, 1919) describe an interesting and unique case. During an operation for the radical cure of hernia in a man of 31 there was found in the scrotal hernial sac a well developed uterus with two normal uterine tubes flanked by two testicles. One of the testes was examined and found to contain living spermatozoa, as also did the ejaculated semen. The patient was a soldier in the recent war, and presented a normal masculine appearance with no feminine secondary sexual characteristics. He was married, and his wife was already the mother of two children. The anomaly consists in the heterologous development of the Müllerian ducts in a male, instead of their remaining in a rudimentary condition as they normally do.

89. Distribution of Adenomyomata.

CULLEN (*Amer. Journ. of Obstetrics*, August, 1919) gives, in addition to a short account of the morbid anatomy and symptomatology of adenomyomata of the body of the uterus, brief notes of the unusual situations in which this interesting tumour has been found. Such tumours, consisting of a matrix of unstriped muscle and fibrous tissue with included uterine mucosa, have been found in the round ligament, utero-ovarian ligament, utero-sacral ligament, at the umbilicus, and in the recto-vaginal septum. Wherever these aberrant tumours are found they give rise to troubles during menstruation. They are then painful or tender, and their endometrial elements take part in the process. Cullen reports the finding by Russell and Norris of islets of uterine mucosa in the ovaries and a striking case by Casler in which hysterectomy was performed for a diffuse myomatous thickening of the uterus in which there were islets of uterine mucosa without glands. In spite of the hysterectomy the patient still continued to menstruate regularly through the vaginal vault. Four years afterwards a large ovarian tumour was removed, and on histological examination it was found to contain great quantities of typical uterine mucosa scattered throughout.

PATHOLOGY.

90. Cause of Cyanosis.

LUNDGAARD, STADIE, and HARROP (*Journ. of Exper. Med.*, September, 1919) are the authors of papers dealing with the experimental investigation of cyanosis. Lundsgaard's experiments were done on blood removed direct from the vein without stasis, whilst Stadie in addition used arterial blood, for the obtaining of which he describes his technique. The oxygen content of the blood was determined easily by the recent method of Van Slyke, and the total oxygen capacity having been ascertained, the difference between them was called by Lundsgaard the "oxygen unsaturation," which may be expressed as cubic centimetres of oxygen per 100 c.cm. of blood. It was found that the upper limit of venous oxygen unsaturation was about eight volumes per cent., whereas values of fifteen volumes per cent. were always associated with cyanosis. There was a definite relationship between the degree of cyanosis and the extent of venous or arterial unsaturation. The primary cause of cyanosis is an increase in the reduced haemoglobin, or oxygen unsaturation, of the blood in the peripheral capillaries. When the mean capillary oxygen unsaturation—which is calculated as the mean between venous and arterial unsaturation, and is normally about two to three volumes per cent.—is increased to about six to seven volumes per cent., cyanosis appears. The increase of capillary oxygen unsaturation is brought about either by an abnormally great reduction during passage through the capillaries, as occurs during exercise or when the blood flow is retarded, as in decompensated heart condition, or by a partial reduction in the arterial blood entering the capillaries, as occurs in certain lung and heart diseases and when the alveolar oxygen tension is greatly decreased. If the blood is completely saturated with oxygen in the lungs, the oxygen unsaturation of the venous blood may increase to 13 to 14 volumes per cent. before cyanosis appears, but, if cyanosis occurs with a venous oxygen unsaturation of less than that, one may assume some arterial unsaturation. If neither râles nor dullness can be detected in the lungs, conditions may exist which prevent complete oxidation of the arterial haemoglobin, and this is especially frequent in patients with mitral lesions. In individual cases with marked cyanosis associated with high arterial unsatura-

tion, the clinical improvement of the patient and the diminution of the cyanosis are accompanied by a corresponding diminution in the arterial and venous unsaturation, whilst, conversely, an increase of cyanosis is accompanied by an increase of oxygen unsaturation. No relation exists between the carbon dioxide content of the venous blood and cyanosis.

91. Bacillary Dysentery in Children.

F. B. BORRELLO, assistant at the Palermo Paediatric Clinic (*La Pediatria*, 1919, xxvii, 550-566), states that bacillary dysentery in sporadic or epidemic form is relatively frequent in children, who may be attacked at any age. The smaller the child the graver the prognosis, especially if dysentery follows another infection, such as influenza, measles, or leishmaniasis. The organisms isolated at Palermo belonged to the Shiga and Flexner type. In epidemics the Shiga bacillus was most frequent. Examination of the blood showed a certain degree of leucocytosis both in primary cases and in those following another infection. No remarkable changes were found in the percentage of haemoglobin, number of red cells, or character of the leucocytes. The highest mortality occurred in the Shiga group, three forms of which were observed—namely, adynamic, hyperpyrexial, and meningeal. The haemorrhagic form mentioned by other writers was only rarely seen by Borrello. Treatment mainly consisted in specific vaccination, which was most successful in the Shiga type.

92. The Weil-Felix Reaction in the Diagnosis of Typhus.

At a recent meeting of the Royal Academy of Medicine of Madrid MARAÑÓN (*Rev. de med. y chir. pract.*, 1919, xliii, 376-377) stated that the Weil-Felix reaction was based on the property possessed by a variety of *proteus*, X 19, of being agglutinated in specific dilutions by the serum of typhus patients. From experiments which he had carried out in twenty-three cases he concluded that this agglutinability existed even in dilutions of 1 in 20,000. According to some authorities, it was present in dilutions up to 1 in 100,000. The reaction was of interest both from the clinical and biological standpoint. Its clinical importance lay in the fact that there had hitherto been no certain method of diagnosing typhus, sporadic forms of which might be mistaken for typhoid fever or measles. Biologically the reaction was of interest because X 19 was not the pathogenic agent of typhus, and was nevertheless agglutinated by the serum of typhus patients. The most probable hypothesis was that of Bramm, according to whom typhus increased the agglutinins which existed in the organism, and which even in a normal condition agglutinated X 19. In the subsequent discussion Salazar stated that in a recent study of thirty-three cases Blanco found that the reaction might be negative during the first five days, but became positive after the sixth, and reached its height towards the eleventh or twelfth.

93. The Kidney in Nephritis.

AMEUILLE (*Bull. méd.*, August 2nd, 1919), compares the very intense renal lesions found in patients dying of uraemia at the end of a nephritis of long duration, with the almost complete absence of renal lesions found in patients who died during the first few days of an acute nephritis with chloride and nitrogenous retention often much more profound than in the former. He propounds the question if it really is the kidney which is responsible for the retention, or if, on the other hand, there is not some sudden humoral change which renders more difficult the extraction of the substances that should be excreted.

94. Congenital Syphilis and Rickets.

ACCORDING TO S. CANNATA (*La Pediatria*, 1919, xxvii, 545-549), from January, 1914, to June, 1919, out of nearly 10,000 infants examined at the Naples University Paediatric Clinic 1,285 were suffering from rickets, and of these, 478, or 37.27 per cent., had congenital syphilis, the presence of which was established by the history, clinical symptoms, and Wassermann and luetin reactions. Cannata does not agree with Marfan, who regards craniotabes, well developed anaemia, and splenomegaly as peculiar to syphilitic rickets, as he has met with this syndrome in rickety infants in whom syphilis could be excluded. The only justifiable conclusion, in his opinion, is that congenital syphilis, either alone or in association with other factors, is the chronic infection which by its dystrophic action most frequently favours the development of rickets.

EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

95. Subcutaneous Emphysema in Influenza.

A REMARKABLE clinical feature of the pandemic of influenza a year ago was the occurrence in a certain number of cases of subcutaneous emphysema, which, usually beginning in the neck, sometimes spread over the whole of the body. The explanation of these cases has not been entirely satisfactory; it does not appear to be due to a gas-producing organism, and in some instances at least cough, which would cause vesicular and interstitial emphysema, has not been a prominent feature. It has been suggested that an abscess of the lung has allowed air to escape into the tissues of the chest wall, or that the air passes from the visceral pleura to the chest wall through pleuritic adhesions. Some recently published observations from the Department of Pathology and Bacteriology, University of Iowa, by Miss SARAH R. KELMAN (*Arch. Int. Med.*, Chicago, 1919, xxiv, 332-346), throw light on the etiology of this lesion. Her observations were partly on twenty fatal cases of influenza and partly experiments on animals to show the path by which the air escaped from the lungs into the interstitial tissues. One of the most prominent morbid appearances in the cases of fatal influenza was vesicular emphysema of the lungs and interstitial emphysema, due to rupture of distended air vesicles, in the mediastinum, the layers of the pericardium and pericardial fat, the retroperitoneum and especially the perirenal tissues. The absence of inflammation and of micro-organisms in stained sections of these tissues proved that the emphysema was not due to a gas bacillus infection. From the experiments on rabbits it appeared that air escaping from ruptured air vesicles passes along the root of the lung, following the reflexion of the pleurae and pericardium along the great vessels to the retroperitoneum and perirenal tissues, thence to the folds of the omentum and downwards into the thighs. When mechanical factors causing emphysema are removed, the animal recovers rapidly, the air being completely absorbed in six to eight days, but an injection of *B. influenzae* or its toxin produces emphysema, both vesicular and interstitial, in animals, and a vicious circle is established. Acute vesicular emphysema in fatal post-influenzal pneumonia is probably due to a combination of causes, each intensifying the other; these are (1) a toxic action of the germ on the lung tissue causing weakening of the alveoli; (2) toxic action of the virus on the respiratory centre producing dyspnoea and cyanosis which are sufficient to induce emphysema; (3) the emphysema thus brought about increases the dyspnoea and cyanosis.

96. Hypertension in Tuberculosis.

ALTHOUGH hypotension is the rule in pulmonary tuberculosis, a small group of cases present a remarkable hypertension. COLBERT (*Journ. de méd. et de chir. prat.*, September 25th, 1919), in a series of cases of tuberculosis found 15 patients, or 5 per cent., with a rise of blood pressure exceeding 18 with Pachon's oscillogometer. In some the maximum blood pressure was as high as 25 to 26. The minimum, as a rule, was slightly increased, but hardly ever exceeded 11. The difference between the maximum and minimum blood pressure might therefore be considerable. The hypertension was independent of any other cause, such as obesity, atheroma, or renal disease, and was attributed by Colbert to disturbance of the function of the organs regulating blood pressure by a specific microbial secretion. A constant symptom in these cases of hypertension was a tendency to haemoptysis of varying degree. The prognosis of this form of tuberculosis is favourable. Contrary to what is seen in cases with hypotension, an appreciable fall of the maximum tension is regularly observed, the minimum tension falling much less as the patient improves. This fall of pressure is a favourable sign, unless the tuberculosis is associated with a hypertensive disease such as diabetes.

97. Congenital Syphilis in the Second Generation.

BRUSGAARD (*Norsk Mag. for Lægevidenskaben*, April, 1919) contributes a case in which the history of syphilis in three generations is unusually illuminating. The patient in the third generation was a boy, aged 8 years, who, though mentally and physically well developed, presented the following definite signs of congenital syphilis:

Numerous linear radiating scars on both lips and on the chin; several large and small scarred patches scattered over the abdomen, particularly numerous in the epigastric region; numerous punched-out scars in the same area of the size of a pea. Further, Wassermann's reaction was positive, and the mother stated that a rash on abdomen and limbs, appearing a month after birth, had been diagnosed by a physician as syphilitic and had been treated with sublimate baths and calomel. The boy had remained perfectly healthy ever since. The mother, who was 28 years old, presented the following signs of syphilis: A positive Wassermann reaction; osteitis and periostitis of the lower third of both tibiae; scarring of the skin over the right tibia, the scars being sharply punched out; a history of ulcers of the right leg nine years earlier; further, she had been treated for a month with mercury and potassium iodide for parenchymatous keratitis shortly before the birth of her son. When only six weeks old she had suffered from a universal rash. This was treated by a medical man with sublimate of mercury, congenital syphilis having been diagnosed. The grandmother, aged 58, gave the following history: She contracted syphilis from her husband at the age of 31. She had undergone nine pregnancies, including two abortions. Three children died of congenital syphilis a few months after birth, one died at the age of 8 years of marasmus, having exhibited a rash soon after birth, and three survived, of whom the mother, already discussed, was the eldest. Of the other two, one had suffered from some unknown disease of the eyes and was deaf; the other, aged 17, was physically and mentally deficient. The author emphasizes the fact that the mother (in the second generation) suffered from periostitis and parenchymatous keratitis just before and during her pregnancy; for this, he argues, invalidates the objection that hers was a case of reinfection.

98. Paroxysmal Nasal Hydrorrhoea based on Dyspituitarism.

S. G. STRAUSS (*Med. Record*, September 13th, 1919) records the case of a woman, aged 34, who for the last two years used to have an enormously copious nasal discharge of thick, sticky, colourless mucus every three months, each attack lasting for about three weeks. Dyspituitarism was shown by obesity, the absence of a desire for sweets, and the consumption of very little fluid. Applications of adrenalin always aggravated her symptoms; on the other hand, treatment by small amounts of whole pituitary gland preparations had a favourable effect on the hydrorrhoea in a few days, and continuance of the treatment checked the nasal discharge in two weeks. At the time of writing she had remained free from attacks for six months.

99. Whispered Voice Sound in Pneumonia.

LISSNER (*Med. Record*, September 6th, 1919) calls attention to the value of the whispered voice sound in the diagnosis of early pneumonic consolidation. After an examination of several hundred cases of frank pneumonia at a base hospital during the influenza epidemic it was noticed that bronchophony was a constant accompaniment of every case, and this sign was considered to be merely an expression or transmission of sound through the bronchi to the chest wall owing to increased lung infiltration. This led to the idea that the whispered voice sound would be as evident, and it was found that small areas of patchy consolidation, which were not demonstrable by percussion and over which bronchial breathing was not determinable, could be sharply defined by this method. The method eliminates a great deal of the handling and inconvenience to the patient, and obviates those violent fits of coughing to which they are liable when asked to take a deep breath. The type of pneumonia may be determined by the extent of the whispered voice transmission, and the line of demarcation between bronchopneumonia and lobar pneumonia is easily made. However, it is not satisfactory in cases of confluent bronchopneumonia.

100. Salvarsan in Gangrene of the Lung.

O. GROSS (*Muench. med. Woch.*, August 1st, 1919), who has already published six cases of gangrene of the lung treated with salvarsan (three recoveries, great improvement in two other cases), records a further case to show how dramatically effective salvarsan can be in an otherwise

apparently hopeless case. The patient was a soldier, aged 32, who late in March developed rigors, pain in the chest and loins, cough and profuse expectoration. The sputum was mucous at first; after some days it became very fetid. On April 7th the whole of the left lung presented signs of catarrh; it was dull from the base to a point above the middle of the scapula, and over the whole of its râles and other adventitious sounds were audible. The sputum contained numerous elastic fibres, fatty acid crystals and spirochaetes. Succussio Hippocratis was demonstrable when the patient was shaken. The x-rays showed a large cavity in the left lung, containing fluid, the level of which varied with changes of position. The morning temperature was 37.5° C., the evening temperature 39°. On April 8th an intravenous injection of 0.45 gram of neo-salvarsan was given. The same dose was repeated next day. The evening temperature rose to 40°, and the chest signs showed little change. But by April 11th the elastic fibres had disappeared from the sputum, and by April 14th the evening temperature did not exceed 38°. The patient felt much better, but the expectoration was still profuse. On April 18th a third injection of 0.45 gram of neo-salvarsan was given. By May 28th the sputum (which had amounted to several hundred cubic centimetres a day) had dwindled to 15 c.cm., he felt perfectly well, and the x-rays failed to show any disease of the lung. The facts that the injections of neo-salvarsan were followed in a few days by the disappearance of spirochaetes, elastic fibres and fetor from the sputum, by a steady fall of the temperature to normal, and by a shrinking of the cavity till it could no longer be demonstrable on x-ray examination, were convincing evidence of the efficiency of this treatment in a very severe case of gangrene of the lung.

SURGERY.

101

Panniculitis.

CUMMINGS (*Boston Med. and Surg. Journ.*, August 21st, 1919), from a personal observation of 78 cases of panniculitis, regards the usual definition of the disease as "an inflammation of the superficial layer of fat in the abdomen" as incomplete, since any part of the body may be affected with involvement of the connective tissue of the skin and with myositis. The female is more frequently affected than the male, and larger areas are involved in the obese. The course is slowly progressive without acute subjective symptoms. Fatigue, loss of vitality, and migraine are usual signs, the patient is often nervous and depressed, and complains of aching or soreness in various parts of the body, while there may be definite pain in advanced cases. The latter is important diagnostically in abdominal cases, where the disease may easily be confused with deep-seated mischief. The three most prominent diagnostic signs are: (1) Pain on light palpation and out of all proportion to the lightness of the pressure, and best detected by grasping the superficial tissue as in pinching; (2) swelling, boggy in character, and frequently presenting nodules; and (3) localized oedema. A typical case was that of a fat woman who gave a history of headache, nausea, constipation, and pain after slight exertion in the upper right quadrant of the abdomen extending round to the right shoulder blade. Marked tenderness was found in the gall bladder region; x-ray examination was negative, and, on a diagnosis of probable gall bladder disease, an exploratory incision revealed nothing abnormal. Two years after operation, and following a few months' treatment, all symptoms disappeared. Treatment consists of well-trained Swedish massage by one who understands major and minor pétrissage, and this should be limited to frequent short periods to avoid exhaustion, thirty minutes three times a week being usually sufficient. Constipation must be relieved, preferably by high rectal injections of warm olive oil every other night, and by regulation in diet. Obese patients should be reduced, high percentage carbohydrates in the diet being brought to a minimum, while low percentage carbohydrates, fruit and vegetables, should be increased.

102.

Pseudo-ascites.

JOHANNESEN (*Norsk Mag. for Laegevidenskaben*, September, 1919) records a case conforming to the type defined in 1904 by Tobler. The patient was a girl, aged 7 years, who had suffered for the past three years from progressive abdominal distension, attacks of gastric pain and borborygmi, bulky, loose, and frequent motions, emaciation, and anaemia. She had been treated else-

where for peritonitis. On her admission to the author's hospital, with the diagnosis of megacolon congenitum, she presented at first sight the characteristic picture of peritonitis with effusion. The skin over the much distended abdomen was tense and shining, the umbilical depression was obliterated, the superficial veins were clearly outlined, fluctuation was easily demonstrable; splashing sounds, loudest over the right iliac fossa, could be heard, and dullness could be demonstrated in the flanks and above the symphysis, shifting with changes of position. But when the percussed finger was gently and steadily pushed into the dull area, the percussion note became tympanitic owing to the displacement of fluid-containing intestine. The motions were fermenting and offensive, and the patient, who had been a bright child, was apathetic and sallow. Suspecting that all the symptoms might be traced to a chronic fermentative process in the intestine, the author prescribed an antifermentative diet and kept the patient much in bed. The fact that, when the intestines were emptied by oil and enemata, the circumference of the abdomen at the level of the umbilicus shrank from 61 to 49 cm., while the area of dullness became smaller, confirmed his suspicions as to the existence of free fluid in the peritoneal cavity. The absence of fever, except when oil and enemata were given, and a negative reaction to diagnostic injections of tuberculin further invalidated the diagnosis of tuberculous peritonitis. She improved rapidly under treatment, and after she had been eight months in hospital the general condition was completely altered. She had gained 10 lb., ate voraciously, was lively, her hair and skin had lost their lustreless appearance, and the motions were practically normal. Fluctuation was no longer demonstrable, but the abdomen remained boggy, and dullness, shifting daily in outline and area, could still be demonstrated; she was also markedly pot-bellied when she stood up. The similarity of this case to the four reported by Tobler, in which the absence of ascites was demonstrated by laparotomy, also points to the correctness of the diagnosis—pseudo-ascites. The series of events leading to this condition are: unsuitable feeding, chronic catarrh of the digestive tract, atony of the gut which excretes too much and absorbs too little, fermentation of the food, distension and sagging of the gut with elongation of its mesentery—a vicious circle best combated by careful dieting and much rest in bed.

103. Diverticulitis and Intestinal Obstruction.

ROCHER (*Journ. de Méd. de Bordeaux*, 1919, xc, 355-356) reports a case in a boy, aged 13, in whom the extremity of Meckel's diverticulum became adherent to the mesentery, causing strangulation of two intestinal coils. The symptoms at first were those of peritoneal infection such as might be caused by a slight attack of appendicitis, but subsequently the characteristic signs of intestinal obstruction developed. Operation was performed on the ninth day, and recovery took place after resection of the diverticulum.

104. Radiography of the Shoulder.

THE usual antero-posterior plates of shoulders do not give unexceptionable evidence as to the condition of this region, and a negative result is open to severe criticism. This is especially true of the subdeltoid bursa; the recognition of pathological changes in this serous sac is behind the times in this country. An extended trial of George's method by BOARDMAN and DONOVAN (*Surg., Gyn., and Obstet.*, 28, 1919, 615) has fully convinced them of its excellence. The position is this: the patient is recumbent, the affected shoulder flush to the plate, the upper arm abducted to a right angle, forearm flexed at the elbow, and the whole arm fully rotated outwards. With this technique the greater tuberosity of the humerus is in profile and injuries are readily detected, whilst opacities in the subacromial area also are made out with comparative ease.

105. Pulmonary Suppuration.

ACCORDING to C. A. HEDBLÖM, of the Section of Thoracic Surgery of the Mayo Clinic (*Med. Record*, September 13th, 1919), pulmonary suppuration is more frequent than is generally recognized. Suppuration is the result of a preceding inflammatory condition, or the infection is carried to the lung through the bronchus, the blood stream, or by direct extension. A persistent productive cough is the most lasting symptom. The sputum is usually purulent and often foul. Other clinical signs of suppuration are present in varying frequency and degree. Localized dullness to percussion and a circumscribed x-ray shadow are the most constant physical findings. Pulmonary suppuration is probably frequently mistaken for phthisis.

In 33 per cent. of the cases reported by Hedblom symptoms were suggestive of tuberculosis. On the other hand, suppuration and a tuberculous infection may coexist without any anatomical or etiological relationship. Treatment of localized suppuration is early free drainage. Prolonged expectant treatment or inefficient drainage greatly increases post-operative morbidity and mortality. Local and regional anaesthesia is safe, and in most cases very satisfactory. The abscess should be drained only through the adherent pleura or after the pleural cavity has been walled off by suture of the lung to the parietal pleura. A two-stage operation, allowing a few days for adhesions to form against the suture line, is probably the best safeguard against empyema, which is a frequent and most dangerous complication.

106. Intracardial Injections.

EARLY in the present year von den Herten published an account of the technique and indications for cardiac puncture and the injection of drugs into the cavity of the heart. Recently two further papers have appeared (*Bluench. med. Woch.*, May 23rd, 1919), one by HESSE of Halle, the other by ZUNTZ of Hamburg. The latter records an interesting example of intracardial injection as a life-saving measure. A woman of 56, feeble and emaciated, had had a resection of the caecum and ascending colon for carcinoma. When the intestines were returned to the abdominal cavity the patient collapsed and no trace of a pulse could be felt. Artificial respiration and subcutaneous injection of camphor were of no avail. After four or five minutes, during which heart massage was tried (by what method is not stated), intracardial injection was performed as a last resource, a puncture with a long needle was made three fingerbreadths to the left of the sternal edge in the fourth intercostal space, the point of the needle being directed towards the mid line. One cubic centimetre of adrenalin was now injected. Zuntz remarks: "Whether I had made the injection into the musculature of the right ventricle, or whether into the ventricular cavity, I do not know." In half a minute the carotids could be seen beating again and spontaneous respiration was resumed. Surprise may be felt that the needle entered the right ventricle and not the left, but the obliquity of the heart is such that but little of the left ventricle presents, and it is not easy to inject unless dilated. Hesse dwells on the technique of puncture from the therapeutic aspect and gives the details of puncture sites. He pretends to withdraw a little blood into the syringe to make certain that the needle is in the ventricular cavity before he makes his injection. The drugs employed include strophanthin, digipurin, caffeine, camphorol, etc. Szubinski has apparently tried this form of therapy on the severely wounded in battle, but only one man lived as long as ten hours after. The method seems to be perfectly safe. Hesse has himself done it on twelve patients.

107. The Technique of Paracentesis Abdominis.

O. WIESE (*Med. Klinik*, August 3rd, 1919) points out that the ordinary method of paracentesis abdominis by trocar and cannula is faulty, because the sharp point of the trocar is apt to wound the intestine, and the opening of the cannula being situated at its end, not at the side, the escape of fluid is sometimes checked by a coil of intestine obstructing the passage. These faults can be corrected by the following procedure: Local anaesthesia having been induced, trocar and cannula are slowly thrust through the skin, fascia, and muscle. Before the deepest layer of fascia is reached the trocar is withdrawn and a blunt-pointed hollow needle with a side opening near its point is passed into the cannula, and the last layer of fascia and the peritoneal lining are now pierced. The point of the needle (Salomon's) being blunt, there is no risk of the intestine being pierced even if a coil happens to be touched, and the opening of the needle being at the side there is little chance of its being blocked by the intestine. The author uses Salomon's needle for injecting nitrogen into, as well as for drawing fluid out of, the peritoneal cavity, and he has found this combined treatment very effective in exudative tuberculous peritonitis.

108. Fatal. Purely Spastic, Pyloric Stenosis.

H. FINKELSTEIN (*Deut. med. Woch.*, August 7th, 1919) admits that he has hitherto been sceptical as to the existence of purely spastic stenosis of the pylorus. In common with many other authorities he has maintained that the pyloric stenosis of infancy is due to a hypertrophic condition of the pylorus, and in the score of cases he has investigated by section, before or after death, he has invariably found hypertrophy of the muscles of the

pylorus. The case which induced him to abandon his agnostic attitude towards purely spastic stenosis of the pylorus was that of a male infant, 32 days old, admitted to hospital. Artificially fed, the infant had for some time been suffering from persistent vomiting. Combined with great emaciation there were the typical signs of congenital pyloric stenosis, marked peristalsis of the stomach, ischochymia, and a palpable pylorus. This could be felt in the angle between the twelfth rib and the spine as a small and soft but quite definite swelling. The infant died 49 days old. At the necropsy the stomach was found to be normal. The pylorus was marked off externally from the duodenum and the stomach by a slight furrow, but it did not present that cartilaginous condition associated with hypertrophic stenosis, and neither on macroscopic nor microscopic examination of sections of the pylorus could any evidence of muscular hypertrophy be found. On applying Pfaudler's test (filling the suspended stomach with water and gauging the pressure at which the water escapes through the pylorus) the author found the pylorus allow the passage of water at a pressure of only 22 cm. of water. A pressure several times greater is required in the case of hypertrophic stenosis.

OBSTETRICS AND GYNAECOLOGY.

109. The Nutrition of the Fetus.

AN important contribution to this subject and to our knowledge of the functions of the placenta is made by MORRIS SLEMONS (*Amer. Journ. of Obstet.*, August, 1919). The mother's gradual gain in weight during pregnancy, amounting to about 30 lb. on an average, is partly due to the growth of the fetus, placenta, uterus and breasts, but partly also to growth in her other tissues. Except where the mother's food is inadequate, the period of pregnancy is therefore not one of sacrifice but rather of gain for her. It has now been abundantly proved that there is no direct communication through the placenta between the mother's blood and that of the fetus, the chorionic epithelium always intervening between the two circulations. The disappearance in the later months of pregnancy of the second layer of chorionic epithelium is probably associated with the increasingly complex needs of the fetus. There are two main theories as to the passage of substances through the placenta. According to the vitalistic theory the placenta actually digests the food of the fetus. On the mechanistic theory the placenta acts a passive rôle as a semi-permeable membrane. In making his observations Slemons obtained simultaneously samples of fetal blood from the severed end of the umbilical cord at birth and of maternal blood from a vein in the arm, and subjected the two bloods to analysis. The non-protein nitrogen, belonging in part to the food class and in part to the class of waste products, was uniformly equal in both bloods. This indicates that this class of substance passes freely through the placenta by diffusion, and suggests that there is also a regulatory mechanism maintaining an equal concentration of non-protein nitrogen in both circulations. In regard to amino acids, the fetal plasma showed a uniform excess of 2 mg., indicating an addition of some process to mere diffusion, and suggesting that the placenta absorbs these substances and prevents their departure from the fetal circulation. As was to be expected, the observations showed that in regard to nitrogenous waste products—urea, ammonia, creatinin, etc.—the quantities were equal in both bloods, the placenta apparently acting as a semi-permeable membrane. Glucose was found in a slight excess in the maternal blood in most cases, in others in equal quantities. This indicates that it passes by diffusion through the placenta, the slightly higher maternal value promoting a steady flow toward the fetus. This in turn suggests the important rôle played in fetal nutrition by glucose. In regard to fats and lipoids, the maternal blood always showed a higher value, but the relationships were so inconsistent that it is impossible to suppose that they pass through the placenta in any way comparable with other substances. Either the fats cross the placenta with the aid of an enzyme or they do not cross at all; or, what is more likely, the fats are manufactured in the fetal body from carbohydrates. This last view harmonizes with the arrangements just mentioned for the free passage of glucose towards the fetus. The practical outcome of the observations is to indicate that there is no diet specifically adapted to pregnancy. The prospective mother should exercise ordinary selection in her food, choosing what experience has shown to agree with her. The popular

notion that she "should eat for two" is wholly erroneous. On the other hand, there is no justification for dietetic measures designed to restrict the growth of the fetus, for when rigidly carried out they tend to weaken the mother.

110. Treatment of Uterine Cancer by Radium.

JANEWAY (*Surg., Gyn., and Obstet.*, September, 1919) gives a full and encouraging review of this subject. He summarizes the results of the extended operation of panhysterectomy by Wertheim's method in the hands of a considerable number of gynaecologists of repute, discusses the many unsatisfactory features of the position in regard to this operation, the comparatively discouraging results that have been achieved with it, and quotes several operators whose experience with it has tended to lead them to discard it. He then reviews the results of treatment by radium in the last few years, and gives in some detail his own experience. His results appear to be most encouraging, and it is particularly interesting to note that he recommends a considerably lighter dosage than that usually recommended. He divides his radium into six tubes of platinum, 1 mm. thick, which filters out the alpha, beta, and gamma rays, and thus permits the use of a much larger percentage of deeply penetrating radiations. Radiations so filtered must be used for a longer period, and so used will exert a far more distant effect and a much better defined selective action. One treatment of 6,000 millicurie hours appears to suffice for most cases. In cervical cancer it is important to cross-fire from within the cervical canal and from the surface of the ulcer. Janeway makes a strong appeal for the wider availability of radium. Three hundred milligrams are sufficient for one treatment every twenty-four hours. After only a few years' experience of its use, radium has produced cures of two to four years' standing in cases too far advanced for operation; and cures of three years' standing and over in a larger percentage of early cases than is claimed by any author for operative measures. At the same time it subjects the patient's life to no extra risk, and scarcely interferes with the ordinary routine of her existence.

PATHOLOGY.

111. A New Element in the Pathogenesis of Duodenal Ulcer.

IL MORGAGNI (August 25th, 1919) draws attention to some recent experimental work of Jona of Melbourne, throwing some light on the course of duodenal ulcer. He found that when the pancreatic duct was ligatured in dogs, ulcers quickly developed in the duodenum and jejunum. For example, the pancreatic duct of a dog was severed on September 22nd; on September 29th the faeces were bloodstained, soft, formed and brown; on October 11th the faeces were hard and white; on October 13th the dog became snappish and attacked other dogs. On November 28th it could not walk, and its coat was coming off. It was chloroformed until dead. *Post mortem*, the stomach was healthy, there were numerous ulcers in the duodenum and jejunum, up to 1 cm. in diameter. The rest of the small intestine was normal. Jona attributes the ulceration to the absence of the neutralizing effect of the pancreatic juice on the gastric juice. Acting on these lines, he found that by giving injections of secretin, or Burroughs, Wellcome and Co.'s liq. extr. duodeni acidum, to patients suffering from symptoms of duodenal ulcer, he got quite good results.

112. Meningococci in Influenza.

KINNICUTT and BINGER (*Amer. Journ. of Med. Sciences*, September, 1919) record their observations on the prevalence of secondarily invading organisms in fatal cases of influenzal bronchopneumonia. Gram-negative cocci were isolated from many of these cases, which were agglutinated by the Rockefeller Institute polyvalent antiserum for the meningococcus, but not with normal horse serum. In some cases the type of organism was ascertained by the use of the Pasteur Institute serums. In a first series of 65 fatal cases, meningococci were isolated on one occasion from the blood before death, and in four other cases from the lungs after death. The organism was isolated in another case from an otitis media. In a second series, in 25 nasopharyngeal cultures meningococci were isolated in 9 cases, twice in four cultures from sputum, in 3 out of 15 blood cultures, in 2 cases out of 24 cultures of heart's blood *post mortem*, and in 11 out of 22 lung

cultures. A third series of 15 autopsies furnished three positive results from lung cultures; whilst in a fourth epidemic of 40 cases cultures from throat swabs yielded 14 positive growths of meningococci. The types varied from case to case, being practically all type B or type C of Nicolle's classification. The former corresponds to Type II of Gordon, but the latter has no representative in Gordon's classification. The authors state that epidemic cerebro-spinal meningitis was not infrequent in the American Expeditionary Force during the influenzal epidemics, and therefore meningococcal carriers were relatively common. They do not attempt to assign any important part to the meningococcus in these influenzal pneumonias, but regard it as a secondary invader or concomitant, and not one of the primary microbic causes of influenza. The presence of meningococci in influenzal pneumonias is noted by other observers in the same journal.

113. Blood Count in Exophthalmic Goitre.

PLUMMER (*Minnesota Medicine*, September, 1919), from a study of the blood counts of 578 cases of exophthalmic goitre, finds that the idea that anaemia of the chlorotic type is characteristic of the disease is not borne out by his findings. When anaemia is present it is neither the result of, nor necessarily coincident with, hyperthyroidism, but is due to secondary changes. Kocher has emphasized the presence of a leucopenia from a study of 106 cases, but Plummer finds that there is a wider variation, probably dependent on the neutrophiles, than among normal counts, and while there are many counts showing a decrease in leucocytes there is an equally large number showing a slight increase. He has not been able to demonstrate that a leucopenia is more frequently present in the early stages of the disease. He agrees with Kocher and others that in the majority of cases there is a relative and absolute mononucleosis, and that when a leucopenia is present the decrease is at the expense of the neutrophils. The differential count is of limited value in diagnosis. He has been unable to determine any factor which influences the characteristic blood picture.

114. Non-Gonorrhoeal Prostatitis.

SMITH and KLEIN (*Boston Med. and Surg. Journ.*, September 4th, 1919), have investigated in stained films the secretion expressed by massage of the prostate and seminal vesicles in 125 cases with negative venereal history. The films were spread and stained, and the average number of pus cells in a microscopic field were counted, a fairly rough method for obtaining an indication of inflammation. In 16 cases out of the 125, or 13 per cent., more than two pus cells per field were encountered, and these cases might therefore be said to have prostatitis or vesiculitis. In practically all of the cases there were no symptoms referable to the prostatic condition.

115. Tumours of the Carotid Body.

IN a recent number of the *Nordisk Archiv f. Inre Medicin* (Bd. 51, H. 3, 1919, p. 215), REENSTIERNA of Upsala records two cases of tumour of the carotid body. It will be remembered that this gland consists of a small collection of polyhedral cells lying on the deep surface of the bifurcation of the common carotid artery. The cells of this gland can be fixed with only one fixative—chrome salt solutions; formalin, alcohol, and sublimate dissolve particles in the cell protoplasm leading to an artificial foamy appearance. Owing to its peculiar reactions Kohn, some years ago, called these cells "chromaffin tissue." Small islets of such cells are to be found in the sympathetic ganglia of the neck, and indeed stretch in one long but interrupted system from the base of the skull to the coccygeal body. The medulla of the adrenal bodies is composed of similar material. Carotid body tumours are rare. Reenstierna states that 66 fully authenticated cases are now recorded in the literature. His personal examples were removed from the necks of a man of 43 and a woman of 36, where they had been growing for three and eleven years respectively. Difficulty was experienced in removing the tumours in both cases; in the former both internal and external carotid arteries, in the latter the external carotid artery alone, had to be doubly divided between ligatures. Unfortunately the internal carotid ligation was followed by hemiplegia, and death ensued four days later. Autopsy revealed an inadequate "circle of Willis," and cerebral softening in the distribution of the middle cerebral artery. Both of these tumours were clinically benign, and neither patient presented symptoms of constitutional upset—that is, there were no evidences of internal secretion disturbance.

EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

116. Medical Forms of Diaphragmatic Hernia.

By the term "medical forms of diaphragmatic hernia." A. CADE and R. MONTAY (*Ann. de Méd.*, September, 1919) understand an insidious form of gradual onset and chronic course, in contrast with the surgical form in which immediate operation is required. The origin of diaphragmatic hernia may be (1) congenital; (2) accidental, such as a sudden increase of intra-abdominal pressure; (3) the consequence of a wound of the diaphragm. According to the predominance of the symptoms observed three groups may be described—a dyspeptic form which is the most frequent, a cardiac, and a pulmonary form. In acquired hernia the symptoms are chiefly gastro-intestinal, whereas in congenital hernia the heart and lungs are most affected. The diagnosis is established by radioscopy. Although *a priori* the treatment is essentially surgical, operation should not be advised in the case of congenital hernia, especially if it is large or does not cause much discomfort. Treatment in such cases should consist in avoidance of violent exercise and attention to the digestive system, in association with occasional symptomatic medication.

117. Treatment of Influenzal Pneumonia with Serum of Convalescents.

HOLST (*Norsk Mag. for Lægevidenskab*, May, 1919) has treated cases of influenzal pneumonia with the serum of convalescents from influenzal empyema. These convalescents were young, otherwise vigorous, persons whose temperature had fallen to normal and who gave a negative Wassermann reaction. From 200 to 300 c.cm. of blood were drawn from a large vein in the arm, kept on ice for twenty-four hours or more, and treated with carbolic acid (0.5 per cent.) whenever contamination of the blood on withdrawal was suspected or the serum had to be kept for some time. The serum was injected into the gluteal muscles in quantities of 10 to 30 c.cm. Two injections were given within twelve to twenty-four hours, and in some cases several injections. The results at first were very promising; later, several failures were recorded. Altogether 20 cases were thus treated. A decidedly beneficial effect was observed in 10; in 10 other cases there was no evident effect; and 7 of these patients died, 2 of them only a few hours after an injection had been given. The author gives full details of his cases, and concludes that in several this treatment was of striking value.

118. Tuberculin Therapy in Children.

R. C. NEWTON (*Med. Record*, September 13th, 1919) records seven cases of tuberculosis in children and young persons aged from 6 to 19 years, nearly all of which showed very perceptible improvement with small or very small doses of tuberculin. Of four cases of peritoneal tuberculosis, three were brought under treatment within a few weeks of the appearance of ascites, and prompt improvement occurred, while the fourth case took longer to recover. Excellent results were achieved in the tuberculin treatment of three cases of pulmonary tuberculosis that came under treatment within a few months of the beginning of active pulmonary lesions, while cases of older standing, although improving for a time under tuberculin, failed to show a permanent arrest.

119. Gonorrhoeal Phlebitis.

In a review of the literature of this subject, BOAS (*Ugeskrift for Læger*, August 21st, 1919) shows that there are only about a score of cases in which the diagnosis was practically certain. The number of cases in which the diagnosis was confirmed by the demonstration of gonococci in an inflamed vein is still smaller. For phlebitis to be labelled gonorrhoeal with certainty, rheumatism, syphilis, and other infectious diseases must be excluded, the patient must be young, vigorous, and possessed of an otherwise healthy vascular system, and he must be suffering from gonorrhoea. These conditions were fulfilled in the case reported. A man of 22, who had previously suffered from appendicitis and the ordinary children's diseases, but who otherwise had been healthy, contracted gonorrhoea. Posterior urethritis supervened, followed by prostatitis and inflammation of the right vas deferens and epididymis. A week after the epididymitis had subsided, and three months after the development of the gonor-

rhoea, the left leg became painful, the pain beginning in the leg below the knee, and extending upwards. He felt very unwell, and the temperature rose to 39°. Gonococci were found in the urethral pus. The urine was very cloudy, and the right epididymis contained a hard nodule. The whole of the right vas was slightly thickened. The left leg was tender and swollen, and there was considerable infiltration of the tissues about the large and small saphena veins. Rapid improvement followed the application of compresses and keeping the limb raised; but three weeks after the development of the phlebitis the temperature rose again, blood-stained sputum was expectorated, and fine moist râles were audible over the front of the left lung. These signs of embolism cleared up in a fortnight, and in about four months the patient was discharged cured. As Wassermann's reaction was negative, and there was no other disease than the gonorrhoea to account for the phlebitis, the author maintains that there can be little doubt as to the correctness of his diagnosis. In his discussion of the material hitherto published he notes that four-fifths of the patients were males, that the usual age was 20 to 30, that the phlebitis started, as a rule, three to six weeks after infection, and that the gonorrhoea was usually complicated, the most frequent complication being arthritis. The clinical picture is identical with that of other forms of phlebitis, the prognosis is good, and embolism is rare.

120. Sudden Death from Typhoid Fever in an Infant.

J. CRESPIN and Mme. ATHIAS (*Bull. Soc. de Péd. de Paris*, February 18th, 1919) report the case of an infant, aged 3 months, which was being suckled by its mother, who was suffering from typhoid fever. Owing to the gravity of the attack the child was weaned, and though in the course of ten days it lost nearly a kilo in weight, its general condition appeared to be good, when one morning it was found dead in bed. The necropsy showed enlargement of Peyer's patches and the mesenteric glands, slight enlargement of the spleen, and a haematoma in the left suprarenal. The case illustrates the latent course of typhoid fever in the infant, and is a further proof of the close association between suprarenal haemorrhage and sudden death.

121. The Syphilitic Origin of Gastric and Duodenal Ulcer.

MARINO R. CASTEX and A. MATHIS (*La Prensa Méd.*, Argentina, May 10th, 1918) consider that the real cause of gastric and duodenal ulcer is syphilitic infection, inherited or acquired. Before 30 years of age 90 per cent. of these ulcers are due to inherited syphilis. With very rare exceptions gastric and duodenal ulcer is a late manifestation of inherited syphilis. The period of life at which the symptoms most frequently occur is between 17 and 25, although they may develop before 13 or much later than 30. The early adoption of antisyphilitic treatment may effect a complete cure, whereas if the diagnosis is not made till late the patient is exposed to serious complications and lesions appear which cannot be cured by antisyphilitic treatment. It is very frequent for gastric and duodenal ulcer to be associated with other abdominal processes due to the same cause, such as pericolicitis, perisigmoiditis, perihepatitis, and perisplenitis. The coexistence of other manifestations of hereditary syphilis are also frequent, such as aortitis and thyroiditis. The writers conclude by saying that gastric and duodenal ulcer should be ranked with general paralysis, tabes, aortitis, and aortic aneurysm, as evidence of syphilitic infection.

122. Ocular Complications of Dengue Fever.

BARKAN (*Amer. Journ. of Ophthalmology*, September, 1919) calls attention to cases of ocular paresis in dengue fever. He has recently seen two cases, each occurring in men who were resident in Honolulu, where dengue is endemic. The paresis occurred on the ninth and fourteenth day respectively of the febrile attack. In his first case the abducens was at fault, in the second the ciliary muscle. No other cause could be demonstrated despite a searching clinical examination, and each case quickly improved without any special local treatment. The rest of Barkan's paper consists in a summary of the known facts relative to dengue fever.

123. Intravenous Injections of Urotropine in Spirochaetosis Ictero-haemorrhagica.

A. DE MATTA (*Rev. de méd. y chir. prat.*, September 28th, 1919) has found that intravenous injection of urotropine in doses of 1-3 grams to 20-30 c.cm. of distilled water has the following results in the treatment of spirochaetosis ictero-haemorrhagica: (1) It sterilizes the bile and promotes its excretion; (2) it disinfects the gastro-intestinal canal, liver, kidneys, and urinary tract; (3) it increases the quantity of urine and substances excreted in it; (4) as an antiseptic and bactericide it destroys the pathogenic organisms.

124. Cerebro-spinal Syphilis and the Optic Nerves.

M. J. SCHOENBORN (*New York Med. Journ.*, September 15th, 1919) urges that every patient with a primary lesion should, in addition to a careful general and neurological examination, be subjected to routine ophthalmological examination, repeated at regular intervals during the secondary and tertiary stages. During the last few years he has seen a number of patients with optic atrophies of various kinds and types. In some of them, whom he would have regarded before as doomed to complete blindness, the process has been arrested by general and spinal treatment with mercury, iodide, and salvarsan, and others have improved. In those who continued to get worse in spite of this treatment, intracranial injections of salvarsanized serum were given.

125. Pulmonary Cavity in an Infant aged Twenty Days.

J. CRESPIN and ATHIAS (*Bull. Soc. de Péd. de Paris*, February 18th, 1919) report a case in an infant suckled by its mother, the subject of pulmonary tuberculosis. Death, which was preceded by digestive disturbances, dyspepsia, and vague signs in the lungs, occurred on the twentieth day. The necropsy showed an area of caseous pneumonia at the right base with a cavity the size of a hazel nut, full of pus and containing tubercle bacilli in the region of the hilum. The tracheo-bronchial glands were not affected.

126. Vaccine Treatment of Suppurative Arthritis.

R. KHARINA-MARINUCCI (*La Pediatria*, October, 1919) records two cases of suppurative arthritis cured by auto-vaccines. The first one occurred in an infant aged 4 months with polyarthritis following small-pox, who was given eight injections of a streptococcal vaccine. The second was one of post-influenzal suppurative arthritis of the right shoulder-joint which was cured by six injections of a pyocyanus vaccine.

127. Saccharose in Pulmonary Tuberculosis.

A. WINKLER (*Wien. klin. Woch.*, October 2nd, 1919) has injected solutions of saccharose in a series of cases in which the diagnosis of pulmonary tuberculosis was beyond doubt. The disease was in every case more or less active. The solution was injected every other day into the muscles of the gluteal region, and in one series of cases the dosage was 5 c.cm. of a 5 per cent. solution, the quantity and strength of the solution being gradually raised to 10 c.cm. of a 20 per cent. solution. In another series of cases the initial dose was 5 c.cm. of a 10 per cent. solution, and this was gradually increased to 10 c.cm. of a 50 per cent. solution. In a few cases each injection was followed by a rise of temperature to 38.3° C. Some patients felt better and less tired; others felt no better. Only in one case was the amount of the sputum reduced, and in this case the injections had been particularly painful. The author expresses general dissatisfaction with this treatment. E. LADEK (*ibid.*) has treated sixteen cases of pulmonary tuberculosis with saccharose. The disease was in every case advanced and bilateral, but though there was much cough and sputum there was no fever. In every case the injections were followed in a few hours by more or less severe pain. In nine cases there was a febrile reaction, the temperature rising to 38° C. or more in the evening of the day of an injection. But this rise never lasted more than a few hours. General or focal reactions, as observed after an injection of tuberculin, were never seen. Most of the patients found their cough growing less troublesome, and their sputum became less profuse and more fluid. Only in one case was decided improvement in the physical signs noticed (after forty injections), and as this was a post-influenzal case, the diminution of the chest signs would probably have occurred without any saccharose

treatment. One case of pleurisy and another of haemoptysis were observed while the injections were being given. The author concludes that the benefits of decreased cough and sputum—and these were the only benefits obtained—were outweighed by the pain provoked by the injections.

SURGERY.

128. Spinal Decompression.

SHARPE (*Amer. Journ. Med. Sciences*, September, 1919) holds that laminectomy for spinal decompression is as valuable as, if not more valuable than, cranial decompression. In the past it has been rarely employed, and then usually at the wrong time, or as a last resort when all other measures have failed and the nerve tissue is irreparably damaged. It is beyond doubt that in some patients with obscure lesions of the cord, an exploratory laparotomy frequently terminating as a simple decompression has been followed by remarkable improvement of the condition. The author discusses the value of exploratory laminectomy in cases of doubtful diagnosis or lesions of obscure origin which can be localized, and the value of decompression in certain selected cases of well recognized forms of cord disease which were formerly not considered amenable to surgical interference. In recent fractures with involvement of the cord laminectomy is urgently indicated, as soon as shock is recovered from, in order not only to allow of the removal of clot but also to obviate the effects of oedema in or about the cord, on which the author lays great stress. In old fractures, too, exploratory or decompressive laminectomy will often give astonishing and brilliant results. Increased intraspinal pressure is the one lesion above all others that can be most successfully and safely treated by surgical means. In typical cases of multiple sclerosis with pallor of the optic disc, nystagmus, tremor, and other characteristic symptoms of widespread lesions, no benefit, of course, is to be expected; but in a certain class of cases, with signs pointing to a localization of the process in the lower part of the cord, shown by greatly exaggerated knee-jerks, marked spasticity of the legs, definite increase of fluid at lumbar puncture, and comparatively little involvement of the upper part of the brain stem, as disclosed by the absence of tremor, nystagmus, and disc pallor, simple laminectomy has been followed by remarkable improvement. The improvement may prove to be temporary, but it has been so definite, and the relief has been so marked in Sharpe's cases, that he considers it a very useful procedure. The improvement may be due to increased nutrition of the cord due to alterations in the blood supply. The author concludes a valuable paper by a description of the technique employed.

129. Vaccine Treatment of Osteomyelitis.

GRÉGOIRE (*Paris Médical*, October 11th, 1919) publishes some very gratifying results of vaccine therapy in acute staphylococcal osteomyelitis in children. The treatment is commenced as soon as the condition is diagnosed, a dose of 200 million of a stock polyvalent staphylococcus vaccine being given. By puncture of the abscess or otherwise, material is obtained for an autogenous vaccine, which is subsequently used for preference. The minimum number of injections in the author's cases was two, the maximum seven. The reactions, both local and general, were very mild or practically absent. Local phenomena were exceptional: rarely local redness was noticed, and swelling was never seen. The general phenomena were little pronounced; apart from an occasional trifling rise of temperature, there was sometimes an acceleration of the pulse in the evening after the injection, a condition that might last for two or three days. The presence of staphylococcal septicaemia, evidenced clinically by the so-called typhoid state, would seem to be a contraindication for vaccines. The first signs of amelioration are seen after twenty-four, or more often in forty-eight, hours after the first injection, by the improvement in the general condition. The patient feels better, even though the temperature remains high; the appetite returns, even hunger may be present. The face loses its drawn and anxious expression, and the child sleeps. The fall of temperature is irregular in appearance; as a rule, there is a very slight fall on the second evening and then in the morning, and for some days an oscillation around 38° before the final fall to 37°; in other cases there is a rapid and regular fall, reaching the normal in five or six days, in spite of the local collection of pus. The local changes are slower in being manifested. The

first striking effect is diminution of pain, though tenderness usually exists for a longer time. Grégoire says that under vaccine therapy the evolution of the disease is quite altered, the general phenomena often disappearing with extraordinary rapidity.

130. Intestinal Drainage in Diffuse Peritonitis.

COONEY (*Minnesota Medicine*, September, 1919) for over two years has been accustomed to treat severe cases of septic peritonitis, from whatever cause originating, by passing a soft rubber catheter, either through the stump of the appendix, or, if this is not practicable, through a small stab wound in the caecum, invaginating the aperture by a circular catgut suture, and tacking the caecum to the parietal peritoneum by one suture. The end of the omentum is attached round the catheter to the caecum, and the patient is put in the high Fowler position. Through the catheter half a pint of saline solution or tepid water is put into the intestine; the catheter is clamped for two and a half hours, and then allowed to drain into a bottle for half an hour. This treatment is kept up rigorously for four or five days. Should there be much abdominal distension, after twenty-four hours he injects four to six ounces of Pluto water through the catheter, and repeats it, if necessary, every twelve hours till the bowels act. Of 22 cases, all in a critical condition, treated by this method all recovered except two, who died a few hours after operation. A double drainage tube is placed in Douglas's pouch through a suprapubic opening, all intestinal adhesions being quickly freed to allow of pus and septic fluid falling into the pelvis. The patients are only given water and tea by the mouth. In children, 5 per cent. solution of glucose is injected through the catheter from the beginning. The catheter is usually removed on the sixth or seventh day.

131. Juvenile Post-influenzal Gangrene.

BORCHGREVINK (*Norsk Mag. for Lægevidenskab*, July, 1919) records the case of a lad, aged 17, who, two months before admission to hospital, had contracted influenza, having to stay eight days in bed. After he had been up for two days the extremity of his right foot began to feel cold, and a week later he noticed that the great toe was blue. Shortly afterwards the same discoloration appeared on the tips of the second, third, and fifth toes. He had never noticed they were white, and he was sure they had not been frost-bitten. The weather had been comparatively mild and he had been warmly dressed. After a week the whole of the foot and the lower third of the leg below the knee became swollen, and the swelling, having lasted four or five days, diminished. There was severe pain, particularly at the junction of the healthy with the diseased tissues, and sleep was much disturbed thereby. In hospital the terminal phalanx of the right toe was seen to be black, a 3 to 4 mm. zone of demarcation between healthy and diseased tissues being situated $\frac{1}{2}$ cm. above the interphalangeal joint. The tips of the second, third, and fifth toes were also discoloured. After eight days in hospital the zone of demarcation had become sharply defined and the terminal phalanx had fallen off. The nails of the second and third toes had also fallen off, leaving a granulating matrix. Discussing this case, the writer notes the absence of diabetes and of a positive Wassermann reaction. He also excludes Charcot's intermittent dysbasia angiosclerotica as well as Raynaud's disease, and he classifies this as a case of spontaneous post-infection gangrene. Barraud has collected 103 cases of post-infection gangrene in persons under 30, two of these being post-influenzal.

132. Suppurative Arthritis due to Paratyphoid B Infection.

NETTER, MOZER, and SALANIER (*Bull. Soc. de Péd. de Paris*, May 20th, 1919) report 4 cases of suppurative arthritis in infants, in which the paratyphoid B bacillus was found in the pus. No other symptoms of paratyphoid were present. The writers' conclusions are as follows: (1) The paratyphoid B bacillus may occur in pure culture in suppurative arthritis; (2) this form of arthritis appears to be most frequent in infants, in whom it may attack one or several joints; (3) it may clear up without leaving any organic or functional disturbance and without requiring any surgical intervention; (4) as a rule suppurative arthritis due to the paratyphoid bacillus occurs in the course of an infection accompanied by digestive and respiratory symptoms; (5) in some cases the joint manifestation of paratyphoid B may be of a milder character and not end in suppuration. The condition is then liable to be mistaken for acute rheumatism.

133. Traction Fracture of the Lesser Trochanter.

AN interesting example of this rare type of injury is reported from the Frankfurt University Surgical Clinic. M. SCHÜLLIN (*Muench. med. Woch.*, July 18th, 1919) emphasizes the value of radiographic examination in injuries which give transient and inconspicuous symptoms as in the case described. The patient, a youth of 17, whilst standing on the platform of a tramcar was thrown backwards by the sudden starting of the car. His left foot remained firmly on the floor of the car, his body alone being thrust backwards. He felt an immediate pain in the left hip, and reported at the hospital shortly afterwards. On physical examination one sign only was elicited—"Ludloff's sign"—which is said to be diagnostic of a separation of the lesser trochanter. This sign consists of an inability to elevate the affected thigh when the patient is seated—that is, an absence of the normal psoas action. A radiogram of the hip showed a separation of the small trochanter, the fragment being displaced upwards and inwards. Two days after the accident "Ludloff's sign" was absent. The author notes with surprise the absence of such signs as external rotation of the limb, local tenderness, and swelling in Scarpa's triangle. The treatment adopted was to keep the patient recumbent for two weeks, with the hip maintained in moderate flexion. At the end of this period there was a complete restoration of function, and a radiogram showed that the separated fragment was still displaced in an upward direction, but was now close to the shaft of the femur. In discussing the mechanism of the production of this type of fracture the author distinguishes between a direct active pull of the ilio-psoas during flexion of the body and passive traction of the muscle when stretched by a backward thrust of the body. Both types of violence may tear off the small trochanter. In the case under consideration the author adopts the latter explanation.

OBSTETRICS AND GYNAECOLOGY.

134. Secondary Syphilis of the Uterus.

GELLHORN (*Surg., Gyn., and Obstet.*, October, 1919) reports a very unusual case of recent syphilis in which several ulcerated patches within the cervical canal constituted the first and only manifestations of secondary syphilis. The patient, who was a prostitute, presented a small whitish subcutaneous indurated nodule in the left labium minus, the remnant of the primary lesion. The Wassermann reaction was positive. The retroverted uterus showed a laceration of the cervix with eversion of the lips, which was accentuated on the introduction of a bivalve speculum, displaying the lower third of the cervical canal. In the mucous membrane were three small raised and reddened patches from which spirochaetes were obtained in abundance. No other secondaries were present. Gellhorn suggests that where the uterine discharges are found to contain the *Spirochaeta pallida* one may assume that a syphilitic lesion exists within the uterus, which in this case, by the fortunate coincidence of a cervical tear, he has been able to demonstrate. Secondary lesions of the cervix are quite rare, and when they have been observed they have always been on the outside of the cervical portion. This is probably the first case in which they have been found within the cervical canal.

135. Severe Haemorrhage from Rupture of a Corpus Luteum

AFTER discussing the theory, advanced by Forssner and others, that every case of severe haemorrhage from the ovary, attributed to rupture of a corpus luteum, is really due to ovarian pregnancy, BARTELS (*Ugeskrift for Læger*, June 5th, 1919) records the case of a married woman, aged 30, who had a sudden attack of pain in the right lower abdomen, accompanied by nausea and vomiting. Appendicitis was diagnosed, and when she was admitted to hospital next day what appeared to be normal menstruation set in. She was very anaemic, and there was diffuse tenderness in the right iliac fossa, with dullness in the lower and tympanicity in the upper part of the abdomen. Owing to rigidity of the abdominal wall, palpation revealed nothing. As she was becoming more anaemic, as the tenderness, rigidity, and dullness in the lower abdomen were increasing, and as a recto-vaginal examination revealed great tenderness to the right of the uterus and a large swelling behind it, laparotomy was performed in spite of the temperature and pulse being normal. The peritoneal cavity contained much fluid and clot. On the surface of the right ovary, which was hardly as large as a walnut, there was a nodule, as large as a pea,

from a small opening in which blood was oozing. This ovary was somewhat fibrotic, and the pea-sized swelling on its surface proved to be a typical corpus luteum, the walls of which were yellow and fairly thick. No chorionic villi could be detected in spite of close scrutiny of every one of about 400 serial sections. The author records another case in which the patient suddenly fell ill three weeks after her last menstruation. Operation revealed a large quantity of blood in the pelvis, and a right ovary as large as a hen's egg, from which blood was oozing. A cavity, as large as the kernel of a nut, was found in the ovary, filled with blood, lined with lutein cells, and communicating with the exterior by a small opening. Microscopic examination failed to reveal any embryonic elements. In his review of these cases, the author admits the possibility of a fertilized ovum having entirely escaped from the ovary, leaving no embryonic elements behind, but as there was nothing in the history of either case to support the diagnosis of pregnancy, he inclines to the diagnosis of a ruptured corpus luteum.

PATHOLOGY.

136. Separation of Diphtheria and Diphtheroid Bacilli.

COSTA, TROISIER, and DAUVERGNE (*Rev. d'Hygiène*, September, 1919) contribute the first part of an important study on diphtheria bacilli and their differential characters. For the ordinary tubes of inspissated serum they substitute Petri dishes containing a specially selective medium, easy of preparation and certain in its results. The throat swabs are not smeared over this, but a platinum wire bent into a triangle of 1 cm. sides is drawn across the swab and stroked over the surface of the medium so as to obtain isolated colonies. They use a medium composed of:

Horse serum	...	...	100 c.cm.
Glucose (30 per cent.)	...	...	10 c.cm.
Concentrated litmus solution	...	...	30 drops
Sulphuric acid solution (1 per cent.)	...	...	3 c.cm.

Of this mixture, 10-12 c.cm. serves for each Petri dish, and the temperature of the inspissator is very slowly raised to 75° and kept in the vicinity of 80° for an hour and a quarter. The original fluid medium may be preserved in sealed tubes and prepared about the time of use. The coagulated medium is of a sky blue or slightly greenish colour. The inoculated plates are examined at the end of twenty-four or thirty-six hours, though often in positive cases recognizable colonies are found in twenty hours. True diphtheria bacilli appear as small colonies, faintly reddish at the centre and pink at the edge, fairly transparent and slightly globular, whilst pseudo-diphtheria bacilli appear as whitish or grey colonies, more opaque and more irregular. Later the differences are much more evident, the colonies of diphtheria bacilli being deep red, perfectly circular and umbilicated, and the false diphtheria bacilli being irregular, with a central summit, and uncoloured. By substituting other sugars for glucose in the medium the authors have determined that all true diphtheria bacilli, without exception, ferment glucose, levulose, and maltose, but are without action on saccharose, lactose, and mannite. All those that have been tested ferment galactose but not dulcitol. All the false diphtheria bacilli isolated have no action on glucose, levulose, maltose, galactose, saccharose, lactose, mannite, and dulcitol. This clear differentiation is an advance on the frequently conflicting observations of the past. The staining reactions are not sufficient to enable one to differentiate between true and false diphtheria bacilli. The authors have also clearly shown that all diphtheria bacilli are haemolytic whilst the false diphtheria organisms are non-haemolytic. For the demonstration of the haemolytic effect they find the best medium to be one composed of Liebig's extract 10 grains, peptone 20 grains, sodium chloride 5 grains, in 1,000 c.cm. of water. When about to be employed one or two drops of citrated human blood are added (sodium citrate 1.2 per cent. and glucose 3.8 per cent.). Diphtheria antitoxin prevents the haemolytic action of the bacteria. It is possible that the anaemia of diphtheria is due to the diffusion of the bacterial haemolysin in the system.

137. Etiology of Common Warts.

WILE and KINGERY (*Journ. Amer. Med. Assoc.*, September 27th, 1919) consider that the clinical evidence in favour of an infective agent in the causation of warts is extremely suggestive. The appearance of so-called daughter warts

following the initial appearance of a large wart, the appearance of warts on contiguous and apposing surfaces, and the occasional occurrence in small groups of individual warts in close association lend colour to this view. Several observers have spoken of the possibility of one individual contracting warts from another. Jadassohn in 1894, by transplanting beneath the epidermis small fragments of warts, succeeded in 31 cases out of 74 in producing typical warts which disappeared spontaneously. With the exception of Kuhneman nobody seems to have implicated any bacterial organism. Wile and Kingery having obtained wart material by curettage, ground it up in a mortar with a very small amount of physiological saline, and passed the material through a small Berkefeld filter, the filtering surface of which was reduced by sealing all but the upper surface with paraffin. The filtrate obtained under negative pressure was tested on agar slopes and found to be sterile. It was injected by means of a fine needle intracutaneously into the skin of the hands of the authors themselves. After periods of four, five, and seven weeks, small flat shining wartlike lesions appeared at the sites of inoculation. These increased in size, and developed the characteristics of flat warts. Though a tendency to spontaneous resolution was noted in some, for the most part they have existed during the last nine months. In one case the wart produced was of a large size. Microscopic examinations of the lesions made at repeated intervals showed in the first stages the typical localized acanthosis described by Unna and others as the initial change in warts, and in the later stages, hypertrophy, elongation, and dipping down of the interpapillary tufts. The examination of portions of the large wart produced showed not only marked hyperkeratosis with proliferation and elongation of the interpapillary tufts, but also a mild inflammatory reaction deeper in the corium. Control experiments with normal skin instead of wart tissue were uniformly negative. Filtrates from glycerin preserved material were also negative. The authors consider that they definitely demonstrated that the changes can be caused by a filtrable virus.

138. Oriental Sore or Baghdad Boil.

HARRIES (*Indian Med. Gaz.*, September, 1919) gives a good account of this condition, the exact method of contracting which is not definitely known, though various parasites, such as the bed-bug and the mosquito, have been implicated. Leishman-Donovan bodies are present in the endothelial cells in every case, but cultural methods are sometimes required to demonstrate them. The exact relation between kala-azar and oriental sore is still undecided; the Leishman-Donovan bodies and the flagellate forms found in culture in both cases are identical. It is usually believed that the one condition immunizes against the other. In discussing the clinical appearances and histology Harries draws attention to the fact that there is a type which is almost identical with an epitheliomatous ulcer, and which can only be differentiated from the latter by the finding of the typical organisms. He considers the conversion of an oriental sore into an epithelioma as a possibility. Again, the resemblance to a syphilitic lesion has to be borne in mind, especially as pigmentation may represent a healed sore, and more particularly since about one-third of the cases may give a positive Wassermann reaction.

139. Aspiration of Bile in the Living.

VINCENT LYON (*Journ. Amer. Med. Assoc.*, September 27th, 1919), acting on a suggestion by Meltzer, has made numerous observations on the condition of the bile in normal and diseased individuals. A sterile duodenal tube is passed, and when it is definitely ascertained to be in the duodenum, which takes from fifteen to forty-five minutes, about an ounce of air is injected to distend the duodenal walls. Gentle aspiration is then performed. Normally, in the fasting condition, the duodenal contents should be bile-free. Then 50 to 100 c.cm. of sterile 25 per cent. saturated solution of magnesium sulphate are injected and aspiration is again started. In from two to ten minutes bile begins to be recovered in an intermittent fashion. By the changes in appearance and consistence of the bile, Vincent Lyon thinks he can differentiate between duct bile, gall bladder bile, and liver bile, and the bacteriological and cytological examination of the various specimens is capable of giving great help in the exact diagnosis of conditions. In cholecystitis, for example, he has succeeded in recovering streptococci of various strains, staphylococci, *B. pyocyaneus*, *B. typhosus*, and others. The method would seem to open up great possibilities in the study and treatment of biliary diseases.

EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

140. Post-influenzal Vagus Neurosis

COMMENTING on the present tendency to refer a host of symptoms to disorders of the vegetative system, and to diagnose vagotony on most slender evidence, E. GUNDERSEN (*Norsk Magazin for Laegevidenskaben*, June, 1919) submits that in the following case the diagnosis of a vagus neurosis rests on a comparatively sure base. A medical student, aged 20, contracted influenza in October, 1918. In spite of fever, headache, sore throat, and general malaise, he remained up and about for a week. He went to bed when he felt pain in the left side of the chest. The pulse was now 88 and regular, the temperature was not raised, but he perspired freely and felt hot. The heart and lungs appeared to be healthy. He had got to bed again, after being up for a short spell, when he suddenly felt stabbing pain in the region of the heart, whence it radiated to the left scapula. At first the heart seemed to stop beating; then it beat very slowly and feebly. Arms and legs shook violently, and he felt very anxious. He also felt unable to breathe deeply. This, the first attack of a series, was the most severe. A phenomenon that recurred with considerable regularity during these attacks was the development of a tumour in the left epigastric region. Its development coincided with colicky pains, and it was palpable as long as the attack lasted. With the cessation of the attack the tumour vanished at the same time as borborygmi were heard and wind was passed, at first by the mouth, later by the rectum. The first medical attendant diagnosed hysteria, and informed the patient accordingly. During subsequent attacks the pulse, which was otherwise about 70, fell to 55; there was tremor of the eyes when the lids were closed, vision was imperfect, and he could not swallow owing to a sensation of constriction in the throat. After an attack he passed much urine. The blood pressure was 105 to 110. After these attacks had lasted a fortnight he was reduced to a state of considerable nervousness, and their onset, which had originally been spontaneous and instantaneous, became dependent on certain exciting causes, such as a thrilling cinema show. A few days after the prescription of bromide and atropine the attacks ceased altogether. The author notes the similarity of this case to the clinical picture of tympanismus vagotonicus drawn by R. Bálint (see BRITISH MEDICAL JOURNAL, 1917, vol. ii, p. 771).

141. Hypertrophic Neuritis.

ACCORDING to G. ROUSSY and L. CORNIL (*Ann. de Méd.*, September, 1919), two forms of hypertrophic neuritis have hitherto been described: (1) The Dejerine-Sottas type, characterized by generalized muscular atrophy, with hypertrophy of the peripheral nerve trunks, lightning pains, ataxia, Romberg's sign, nystagmus, myosis, and the Argyll Robertson pupil. The anatomical lesion consists in a neuritis chiefly involving the interstitial tissue. (2) Pierre Marie-Boveri type. In this type the muscular atrophy is more marked in the lower than the upper limbs, and the other features are kypho-scoliosis, exophthalmos, intention tremors, and scanning speech. Romberg's sign, ataxia, and lightning pains, are absent. The anatomical lesion in this type involves the nerve fibre as well as the interstitial tissue. A third type is now described by Roussy and Cornil, which differs from the Dejerine-Sottas type by its late onset, absence of Argyll Robertson pupil, myosis, nystagmus, and generalized muscular atrophy, and by the presence of an intention tremor, and from the Pierre Marie-Boveri type by the absence of a familial character, scanning speech, and exophthalmos, and by the predominance of a systematized muscular atrophy in the upper limb of the Aran-Duchenne type.

142. Sciatic Paralysis from Quinine Injections

G. TANFANI (*Riforma Medica*, September 20th, 1919) reports three cases of paralysis of the sciatic or its branches following unskilful intragluteal injection of quinine for malaria. In the first case the external popliteal nerve was severely damaged, but there was only a slight irritation of the fibres of the internal popliteal manifested by the presence of pain on palpation of the nerve trunk, and absence of the tendo Achillis jerk. In the second case the external popliteal nerve was chiefly affected, but involvement of the internal popliteal was shown by pain and diminution of electrical excitability.

In the third case there was complete paralysis of all the muscles of the leg and foot, indicating a damage to the whole of the sciatic nerve. W. Murray, in the discussion on malaria at the Clinical Meeting of the British Medical Association last April, said he had seen two cases each of musculo-spiral and sciatic paralysis following hurried intramuscular injections of quinine.

143. A Sign of late Hereditary Syphilis.

THIS sign, which is described by MARIANO R. CASTEX (*La Prensa Médica*, Argentina, January 20th, 1919), consists in a bifid condition of the spine of the first lumbar vertebra. The bifurcation may be slight or very marked and involve two or three lumbar spines. In one case it was found in the spine of the twelfth dorsal vertebra. The sign is not very frequent, being found roughly in 30 to 35 per cent. of cases of late inherited syphilis. Castex, however, attributes considerable diagnostic value to its presence, as it may exist alone or be associated with only a very small number of other stigmata of inherited syphilis.

144. Addison's Disease without Bronzing.

K. MOTZFELDT (*Norsk Magazin for Laegevidenskaben*, April, 1919) calls attention to the fact that Addison, in his classical description of the disease associated with his name, put discoloration of the skin at the end of the list of distinctive symptoms. Yet this discoloration has come to be regarded as the most essential characteristic of Addison's disease. The following case shows how slight the discoloration of the skin may be even in a case terminating fatally, and it is also instructive as showing that, contrary to the generally accepted view, the carbohydrate tolerance may be very slight. A woman, aged 43, came of tuberculous stock, and had been treated for a year in hospital for spinal caries when she was 20 years old. Since the age of 33 she had suffered from bouts of abdominal pain, which had sometimes been so severe as to confine her to bed. At the age of 43 she suddenly developed headache, vomiting, and diarrhoea, for which she was admitted to hospital. She was pale and flabby, and the pulse was very small, otherwise the examination was negative. The diarrhoea soon ceased, but the headache, nausea, and vomiting persisted. After she had been a short time in hospital it was noticed that the backs of her hands were a trifle more brown than normal, otherwise there was no abnormal pigmentation of the skin and mucous membranes, and this slightly dark tint of the hands did not deepen in the further course of the case. Asthenia and debility increased, her eyes were sunken, and the radial pulse was rapid and small, often barely palpable. The blood pressure (Riva-Rocci) varied from 60 to 90 mm. of mercury. The temperature was uniformly subfebrile. She vomited a large proportion of the 100 grams of grape sugar given in 250 c.cm. of tea, yet the urine two to five hours after contained 0.5 per cent. of sugar. Adrenalin given by the mouth proved inert; injected hypodermically three times a day for several days, the dose being 0.5 c.cm. of a 1 in 1,000 solution, it appreciably reduced her lassitude and nausea; her pulse also became stronger. Control injections of saline solution were perfectly negative. With the cessation of the injections she quickly relapsed, and she died a few weeks after admission to hospital with signs of progressive marasmus. The diagnosis of Addison's disease was confirmed by the necropsy, which showed bilateral caseous tuberculosis of the suprarenal bodies, not a trace of the normal suprarenal tissue being demonstrable, even on microscopic examination. The tuberculosis was strictly confined to the suprarenals, and there appeared to be nothing amiss with the other endocrine glands. Gall stones were found, as well as considerable pigmentation of the mesentery and the mucosa of the intestine. The author suggests that this case bears out Neusser's contention that melanoderma is a manifestation referable to the sympathetic system, and conspicuous by its absence when the disease is strictly limited to the suprarenal bodies.

145. Vaccine Treatment of Typhoid Fever.

B. STEIN (*Wien. klin. Woch.*, September 4th, 1919) is very favourably impressed by the results he has obtained with a typhoid vaccine prepared according to Besredka's method in cases of typhoid fever. The vaccine was polyvalent, and the number of bacilli to the centimetre was 250 to

500 million. Daily injections were given on four successive days. The dosage was gradually increased, and the initial dose of 0.5 c.cm. was raised to 1 or 2 c.cm. at the fourth injection, so that the total dosage of a series of four injections was 2 to 4 c.cm. The intravenous route could not be taken, owing to the difficulties under which the hospital staff worked, and at first the injections were given subcutaneously and with little discrimination, save that only early cases were selected for treatment. Later, when the beneficial action of the vaccine was established, every case of typhoid fever was thus treated however advanced and severe the disease might be. In a later series of cases the vaccine was administered by intramuscular injection and the results were still better. Altogether about 1,500 cases were under the author's care, and of these about 500 were inoculated. Analysing 200 of these cases in which the diagnosis was beyond doubt, and the temperature had been over 38° for several days before inoculation, the author shows that 6 per cent. died. Of the remainder 14 per cent. became afebrile by crisis, 67 per cent. by rapid lysis, 4 per cent. by lysis, and the remaining 9 per cent. by irregular subsidence. In 24 per cent. the temperature had fallen to normal within two weeks, and in 44 per cent. within three weeks. The interval between the beginning of the injections and the fall of temperature was under one week in 39 per cent. and over one week in 55 per cent. Only in 5 per cent. did relapses occur.

146. Scleroderma in Infancy.

L. F. MAYER (*Deut. med. Woch.*, July 31st, 1919) notes that scleroderma is so rare in infancy that Mayerhofer in 1918 could find records of only seven cases. He recorded two cases, Kraus subsequently recorded another case, and the author brings the total up to ten with the following case: A male infant, aged 18 days, was admitted to hospital. In the left cheek there was an infiltrated area, of the size of a thaler (3-mark piece). The skin at this point could not be separated from the infiltration or lifted in folds; it was red and slightly raised above the level of the neighbouring skin. The junction between the diseased and healthy skin was sharply defined, and the infiltrated area was evidently tender. The absence of fever and of general disturbances rendered the diagnosis of a septic condition improbable. The redness of the skin and its inclusion in the swelling put the diagnosis of a lipoma out of court. In a few days this infiltration extended to various other parts of the body, without the patient's general condition being appreciably affected. Both v. Pirquet's and Wassermann's reactions were negative, and a blood examination revealed no micro-organisms. After about six weeks the trunk and limbs were partially covered by these infiltrated areas, and the skin of the back felt as if it had been padded with rubber plates. The middle toe of the left foot became cyanosed, and gangrene seemed imminent. The infiltration disappeared as rapidly as it had come; after ten weeks it had begun to disappear, and after three months not a trace of it was left.

147. Neo-salvarsan in Vincent's Angina.

W. ZEMANN (*Wien. klin. Woch.*, October 2nd, 1919) points out that considerable time is required for the cure of ulcer of the throat by painting it with a solution of neo-salvarsan in glycerin and water, or by dusting it with dry neo-salvarsan, procedures which, he notes, have been generally adopted of late in the treatment of angina ulcerosa. He has appreciably shortened the period of treatment in a series of such cases by injecting the drug into the inflamed area. A 3 per cent. solution of neo-salvarsan in sterile distilled water is injected superficially in such a way that the floor of the ulcerating area is completely infiltrated. As early as the second or third day after this injection the ulcers have become clean, and only when they are very deep do some islands of ulcerating tissue persist, requiring a second injection. No local or general disturbances followed this procedure, which causes a sense of tension in the parts injected lasting an hour or two. The author does not mention the use of anaesthetics in connexion with this treatment.

SURGERY.

148. Pneumoperitoneum.

DANDY (*Annals of Surgery*, September, 1919) records a method of detecting intestinal perforation from the x-ray picture resulting when free air or gas is present in the peritoneal cavity. Notes are given of a case of intestinal perforation in which the diagnosis was long in doubt until a radiogram, originally undertaken on account of

a suggested pulmonary complication, showed the liver separated from the diaphragm by a collection of gas. Pneumoperitoneum induced experimentally in dogs by injecting air into the peritoneal cavity proved the diagnostic value of x rays in such conditions. The position of the patient is important, the liver, spleen, and diaphragm being best outlined when the head is raised, and the pelvic organs by elevating the pelvis, because the air rises to the highest level. The more air there is surrounding the organ, the sharper the definition. Escaping intestinal gases accumulate under the diaphragm if the head is elevated, x ray showing the diaphragm and liver sharply outlined and separated. Localized collections of gas in the abdominal walls, buttocks, etc., may betray a colon infection and an abscess resulting from a perforated bowel. Nearly all the abdominal organs can be sharply defined by x rays after the introduction of air into the peritoneum, even the intestinal walls being sharply defined, and by determining the size, shape, and position of the abdominal organs induced pneumoperitoneum should prove to be of great value in the localization and diagnosis of intra-abdominal lesions. Air is better than other gases for injection because its sterilization is unnecessary, it is easily obtained, it has no apparent ill effect upon the animal's well-being, and it is slowly absorbed.

149. Ocular Conditions affecting Aviators.

W. H. WILMER (*Arch. of Ophthalmology*, September, 1919) details the results of his experiments on lowered oxygen tension. These experiments were made at the medical research laboratory, and the condition of lowered oxygen tension was produced artificially by two different forms of apparatus: (1) Henderson's rebreathing apparatus, (2) a large low pressure chamber from which the air is removed by an electrically driven pump. Tests with these two forms of apparatus correlated so closely that Wilmer is forced to believe that the physiological changes noticed are due to want of oxygen and not to lessened atmospheric pressure. It is well known that the visual requirements for the aviator are much stricter in the U.S.A. service than in any other. No marked diminution in the acuity of vision was found in these tests other than such as was due to the falling off in the power of adjustment—namely, a hypermetrope was worse off for seeing his instruments in the fuselage than the myope, owing to reduction of power in the ciliary muscle and thereby loss of accommodation power. The visual field must be large for aviators, and up to 15,000 ft. no marked changes were noted, but at 20,000 ft. there was found a marked contraction for form and colour. There is in many cases a falling off in convergence, accommodation, and in the field of binocular fixation. Wilmer's paper certainly makes out a strong case for the rejection of marked cases of hypermetropia, and of those with muscular imbalance, and is a strong piece of evidence in favour of the proper initial classification of the cadet—for example, a cadet who is found to be possessed of low retinal sensibility is not fitted for night bombing; a candidate who fails to read his instruments correctly and who sees double at 10,000 feet or over could not be a pursuit or combat pilot. The unceasing care of the aviator is the culminating duty of the flight surgeon; a slack wire on a control is not so dangerous as a poor convergence. After the strain of service a weak muscle becomes a manifest error, a weak convergence a manifest dynamic divergent squint. By the aid of laboratory tests and the constant watchful care of the surgeon incipient staleness can be detected and steps taken to prevent it. Thus much economic waste can be prevented for the Government, while valuable young lives will be saved.

150. Swelling and Fistulae of the Penis due to Gonorrhoea.

BRÖNNUM (*Hospitalstidende*, July 23rd, 1919) records the case of a man, aged 38, who had suffered for four years from chronic gonorrhoea, for which he had been treated with injections of silver nitrate. During the previous six months numerous peri-urethral infiltrations developed, followed by the formation of small abscesses, the largest being of the size of a pea. Soon afterwards they burst, discharging pus, urine escaped in the track of the pus, and phimosis developed. Subsequently some of the fistulae closed spontaneously. The length of the penis was 21 cm., the circumference 16 cm. Its colour was faintly cyanosed, and a nodular infiltration was demonstrable on palpation. About twenty open fistulae could be counted on the sides and under surface of the penis, their openings being about 1 cm. wide, and resembling small incisions. Some fistulae had closed, and were dry; others yielded much pus, which

did not, however, contain gonococci. On micturition, urine escaped by two of the fistulae, as well as by the external meatus, but only in a very small stream. At the end of micturition some pus and urine could be expelled by pressure on the middle of the penis. The patient had been treated for syphilis a year earlier, but he presented no signs of it on examination, and Wassermann's reaction was negative.

151. X-Ray Diagnosis of Renal Tuberculosis.

COLSTON and WATERS (*Johns Hopkins Hosp. Bulletin*, September, 1919), consider that an x-ray examination of the urinary system should precede cystoscopy and urethral catheterization in all suspected cases of renal tuberculosis. In long-standing cases it often happens that complete destruction of the kidney, with caseation and deposition of calcium salts, has taken place, and in these the deposition will cast an x-ray shadow varying in density in proportion to the extent of the process. If the calcification is limited to a single area it may be difficult to differentiate it from calculus except by critical observation of the density, shape, and position of the shadow, and where the kidney has been completely destroyed a characteristic lobular appearance of the shadows occurs, presenting a very definite picture never seen in any other kidney lesion. Calcification of the ureter is rare, but, when present, a dense shadow is seen over its upper or lower portion, or in its entire course. When the normal kidney substance has become largely replaced by calcified caseation the x-rays enable a definite diagnosis to be made without demonstrating the tubercle bacilli, and without recourse to urethral catheterization, except to determine the integrity of the opposite kidney, which latter should always be investigated for that purpose. Pyelography and cystography may occasionally be necessary when sufficient information is not forthcoming by other means, but these procedures should not be carried out if a diagnosis can be made by other and simpler methods.

152. Resection of Oesophagus for Carcinoma.

BENGOLEA (*Surg., Gyn., and Obstet.*, October, 1919) reports a case of a woman, aged 37, with a carcinomatous stricture of the oesophagus near the cardiac end through which even fluids had been unable to pass for twenty days before the operation. A Torek's incision was made from the seventh intercostal space upward over four ribs, which were divided between their angles and the spine. The vessels having been exposed and ligated, the pleural cavity was opened and some thin pleural adhesions were separated. A hard fixed tumour 6 cm. in length, the lower border of which reached to 2 cm. from the diaphragmatic opening, was found. Through this opening the scissors were introduced and the fibres divided, and the stomach was pulled towards the thorax. The vagus, azygos vein, and the aorta having been gently pushed aside, the oesophagus was resected at the cardia and the stomach stump closed. When the tumour was excised a wooden bobbin was inserted in the end of the oesophagus and the opening fixed by a purse-string suture. An opening was made into the stomach at the point of least traction and the other end of the bobbin was similarly fixed. The oesophageal end was invaginated into the stomach, and a continuous suture was taken round the invagination. The diaphragm was repaired and the thoracic wound closed after making free drainage of the pleural cavity through an opening in the tenth space. Liquid foods were given on the fifth day. Unfortunately, owing to the collection of pus in the pleural cavity, the patient died thirty-seven days later.

153. Open Amputation through the Knee-joint.

SMITH (*Annals of Surgery*, September, 1919) considers open amputation through the knee-joint as preferable to amputation through the lower end of the thigh because it gives (1) less opportunity for bone infection, (2) improvement in the ultimate stump, and (3) less shock. It was performed in six cases, three being suppurative arthritis, and three gangrene of the leg. The danger and loss of time from bone infection in a stump is minimized, and, although all such amputations require reamputation, it is held that the maximum amount of material is conserved for creating a long serviceable stump when the time for reamputation comes. In a certain proportion of cases the reamputation may be in the form of an osteoplastic between the patella and femur. The operation can be performed more quickly and produces less shock than thigh amputations, there being no bone to cut, and the total of soft parts incised is reduced to a minimum. The technique varies according to local conditions, the flaps, especially the anterior, being made as long as possible. At the primary operation the patella should

be spared on account of the possibility of doing a later osteoplastic reamputation, which method was adopted with complete success in two of the reamputations recorded. Of the six cases in which open amputation through the knee-joint was performed five did well and one died soon afterwards, but this latter was one of advanced gas gangrene and was in a very poor condition at the time of operation.

154. Jacksonian Epilepsy.

EARL (*Minnesota Medicine*, September, 1919) urges that, as a prophylaxis against the development of Jacksonian epilepsy, all head injuries, whether received at birth or subsequently, should receive prompt and adequate surgical treatment. Seeing that all lesions lying over the motor area do not cause Jacksonian epilepsy, he believes that there is a susceptibility of soil in some patients and not in others. Before undertaking operation, medical, dietetic, and hygienic treatment should be given a thorough trial. Although the operative results hitherto have not been brilliant, the outlook without surgery is practically hopeless. In those cases in which a definite lesion is found and removed a complete cure is to be expected; when no lesion is found the epileptogenic area should be located by electrification and removed. When surgery does not effect a complete cure the attacks are usually lessened in frequency and severity. Operation should be undertaken early to prevent the establishment of the "epileptic habit."

OBSTETRICS AND GYNAECOLOGY.

155. Ectopic Gestation.

LEWIS (*Minnesota Medicine*, September, 1919) summarizes his findings in 33 cases of ectopic gestation with which he has dealt during the past ten years. Of 31 operated on, 2 died (6 per cent.). The other two cases were moribund when admitted. Amenorrhoea was present to some degree in all cases, varying from one week to two months, but all gave the usual history of an irregular bleeding coming on after the regular menstrual period had been missed. The patients stated that although they thought this irregular bleeding was a delayed menstruation, yet the blood was not like a regular menstrual flow, but rather like a real bleeding. This important point was brought out on questioning them. Abdominal pain occurred in all cases, from the typical shock from haemorrhage to a more or less continual abdominal distress. The former condition is easily diagnosed, but the slow process with its distress from tubal distension or slight rupture is very confusing. The other signs that are usually associated with pregnancy are so frequently absent as to be of little value in assisting one to a conclusion regarding the real condition. The author discusses a local symptom first pointed out by Brickner of New York—namely, a small rise of temperature, from 99.3° to 102°. The range is usually less than is found in suspected inflammatory disease, and does not correspond with the local findings. The elevation is due to free blood in the peritoneal cavity after rupture, and to slow blood absorption with a localized peritonitis. He relates a case where this symptom led to a diagnosis of appendicitis, and, on operation, ectopic gestation was found. Since then he has always looked for this elevation of temperature and found it present. The author takes a middle course between those who urge immediate operation in cases suffering from shock and those who advise against operation. He himself operates at once on cases seen soon after rupture, but advises that in later cases time should be given for recovery from shock before operation. In only one of his cases was a diagnosis made and operation instituted before rupture of the sac. Four of the cases have been operated upon a second time for tubal pregnancy. The question of ectopic gestation must be constantly borne in mind, and the frequently atypical presentation of symptoms carefully grouped and differentiated in order to arrive at a correct diagnosis.

156 Sterilization of Women with Pulmonary and Laryngeal Tuberculosis.

G. WINTER (*Med. Klinik*, July 27th, 1919) discusses the respective merits of sterilization and induced abortion in cases of tuberculosis of the lungs and larynx, with special reference to the experience gained at his hospital in Königsberg. In 17 cases sterilization was performed within the first four months of pregnancy, and the results, noted a year later, were worse than for cases of induced abortion without sterilization. The figures were: First stage cases, 88.8 per cent. improvement after abortion

alone, 75 per cent. improvement after sterilization; second stage cases, 80 per cent. improvement after abortion alone, 66 per cent. improvement after sterilization; third stage cases, 100 per cent. improvement after abortion alone, 50 per cent. improvement after sterilization. This comparison was not, however, altogether fair, for on the whole the patients sterilized were suffering from more severe disease than those in whom only abortion was induced. The author's study of the literature of the subject leads him to the conclusion that sterilization should not be adopted as a matter of routine for this disease, but should be reserved for cases of progressive tuberculosis in which recurrent conceptions may be anticipated, and the chances of permanent arrest of the disease are negligible. As for the special procedure to adopt when sterilization is indicated, he suggests that the x rays are the most conservative means, and they are to be recommended, always provided that their sterilizing action can be depended on in young women. X-ray sterilization should be undertaken a few weeks after the completion of induced abortion.

157. Results of Cosmetic Paraffin Injections.

F. KACH (*Muench. med. Woch.*, August 22nd, 1919) records the case of a married woman, aged 36, who submitted in 1910 to injections of paraffin into both breasts. The first injection was given in the spring, the second in the autumn. On both occasions a general anaesthetic was given, and the resulting pain and high fever lasted several days. Both breasts became cyanosed and tender, and some time later suppuration set in, pus and particles of paraffin being discharged. By the autumn of 1913 the wrists and finger-joints of both hands had become so stiff and painful that she could no longer work. Gradually almost all the other joints became involved, and she could not open her mouth fully. Meanwhile the discharge from the breasts increased, and she was subject to rigors. On her admission to hospital in the autumn of 1916 she suffered from advanced mental and physical debility. The breasts were amputated at successive operations, and a few weeks later the wounds were covered by skin grafts taken from the thighs. Remarkably rapid improvement in her general condition ensued, and the rheumatic manifestations disappeared altogether. Half a year after the removal of the breasts she looked perfectly well.

PATHOLOGY.

158. Filarial Periodicity.

LYNCH (*Journ. Amer. Med. Assoc.*, September 6th, 1919), by using the acetic acid method of Smith and Rivas, has been able to make exact estimations of the number of microfilariae in the peripheral blood at different times of the day. Smith and Rivas had shown that at all times of the day and night filaria embryos could be found in the blood, no matter whether the parasite was *Filaria bancrofti*, which was said formerly to appear only at night, or *Filaria loa*, which was said to appear only in the day time. These observers showed that *F. bancrofti* appeared in greatest numbers between midnight and 8 a.m., the maximum being about 2 a.m., and that *F. loa* was most prevalent from 8 a.m. till 4 p.m., the maximum being about noon. In both there was a paucity in the blood from 4 p.m. till midnight. They accounted for the parasites being in the smallest numbers at the last-mentioned hours by the fact that this was the time of greatest capillary relaxation, and consequently both kinds of filariae could slip through easily; the period of cutaneous prevalence of *F. bancrofti* was accounted for by the gradual resumption of capillary tone (from midnight to 8 a.m.) delaying them at the periphery until they finally get through and are held up again in the pulmonary capillaries. The *F. loa*, because of their greater motility, manage to pass this moderate obstruction, but when the capillaries are markedly diminished from tonic contraction and muscular compression (8 a.m. to 4 p.m.) the parasites no longer progress easily and therefore accumulate. This mechanical theory, which was opposed to the chemotropic theory of Manson, is supported by the experiments of Lynch. Using nitroglycerin as a dilator and epinephrin and pituitary extract as constrictors of the capillaries, he found that the former was followed by a decrease in the number of filariae during both periods of prevalence and paucity, and that the latter two drugs had the opposite effect. The author confirms Manson's post-mortem observation on the prodigious number of *F. bancrofti* in the lungs in a case which died during the night, but he failed to find very large numbers in the heart and large vessels as Manson

did. In the case of a dog infected with *F. immitis*, the lung was artificially collapsed on one side, and five minutes afterwards the dog was killed. The uncollapsed lung showed less than 9,000 filariae per c.cm. of capillary blood, whilst the collapsed lung showed 350,000—a very striking experiment. When the parasites are few in the cutaneous blood they accumulate in large numbers in the pulmonary capillaries.

159. Syphilis of the Stomach.

THE rarity of syphilis of the stomach is shown by the following figures given by W. F. SUERMONDT (*Nederl. Tijdschr. v. Geneesk.*, October 11th, 1919), who reports a case in a woman, aged 47, in whom the symptoms had lasted seven years. Among 243 autopsies made by Chiari on cases of syphilis, lesions in the stomach were found in only three cases, or in 1.2 per cent. Barbier, in 1904, was able to collect 116 cases from literature, in 56 of which the diagnosis was confirmed by autopsy, and in the rest by clinical signs only. In many years' work as a gastric specialist Hayem met with only 4 cases. The condition is chiefly found in men and in association with tertiary manifestations in other organs, especially the liver and small intestines. The chief clinical symptoms are pain in the stomach, which is worse at night, loss of appetite, vomiting, and blood in the stools. The last sign is relatively rare, and only occurs when the gummatous infiltration has reached the superficial layers of the stomach. The chemical composition of the gastric juice is about the same as in cancer of the stomach, except that there is no lactic acid present (Hayem). As syphilis often attacks the pylorus, symptoms of pyloric stenosis are frequent. In x-ray examination the stomach appears small and contracted, and areas of gummatous infiltration are often seen, though nothing of the kind can be found clinically. The prognosis depends upon the duration of the disease and the degree of pathological change. Rapid improvement occurs with specific treatment, as in the case reported by Suermondt, but little can be expected from it when cicatricial stenosis has once formed.

160. De Silvestri's Urochromogen Reaction in Children's Diseases.

ACCORDING to O. COZZOLINO (*La Pediatria*, October, 1919) this reaction consists in pouring 2 c.cm. of liquor ferri perchlor. into a test tube, adding four or five drops of pure sulphuric acid, and then 3 c.cm. of the urine to be examined drop by drop along the side of the test tube, as it is essential that the fluids should remain separate. If the reaction is positive, at the point of contact between the urine and the perchloride a yellowish-brown, or, in more marked cases, a mahogany or chocolate coloured ring forms, accompanied by a whitish-grey precipitate in the urine, which disappears on shaking the tube, or spontaneously in the course of twenty-four hours, leaving the urine of a more or less dark-brown colour. A comparison of De Silvestri's test with Weiss's urochromogen test and Ehrlich's diazo reaction showed that it was the most sensitive of the three, and the most useful for the diagnosis of typhoid and paratyphoid fevers in children, especially as it might serve for retrospective diagnosis, and was also of value in heralding a relapse. In advanced tuberculous infections it had the same prognostic value as the diazo reaction. In most of the other diseases of children, except measles, and well marked cases of bronchopneumonia, in which it was positive, the urochromogen reaction yielded negative results.

161. Experimental Endothelial Leucocytosis.

MCJUNKIN and CHARLTON (*Arch. Int. Med.*, vol. 24, No. 3) have endeavoured to produce experimentally in guinea-pigs an increase in the number of endothelial leucocytes. In these animals it is difficult to identify endothelial leucocytes by a polychrome blood stain since in size and shape so many of them resemble lymphocytes, but by using the alpha-naphthol stain the former show very distinct blue granules. The mononuclear cells thus brought out are regarded as having an endothelial origin. Normally in the guinea-pig's blood they are present to 1.58 per cent. on the average. By the injection of large doses of Sudan III the authors have succeeded quite regularly in producing an increase to over 3 per cent. They bring out the striking fact that, although the injection of the dye in no case induced an endothelial leucocytosis of as much as 10 per cent. in the case of normal guinea-pigs, yet when injected into animals in the later stages of experimentally produced tuberculosis this percentage was regularly exceeded, reaching as high as 16.3 per cent. in one case. This high count does not appear to have been observed in the human subject.

EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

162. Exophthalmic Goitre.

SAJOU'S (*Med. Record*, September 27th, 1919, urges the curative treatment of exophthalmic goitre as against the symptomatic treatment which leaves untouched the primary cause of the disease and compromises the chances of the patient's recovery. Primarily due to some toxin arising from some pathological process in one or more organs, either tonsils, sinuses, nose, nasopharynx, teeth, or gums, or in the alimentary, genito-urinary, or nervous systems, the disease could often be cured by medical treatment aimed at the removal of such primary cause and its morbid effects, and the remote results of surgical treatment would be greatly improved if the removal of the primary cause and its effects were first ensured. Those cases due to emotional stress are ascribed to the toxic waste products formed in the cerebro-spinal neurons subjected to stress, namely, cholin, phosphoric acid, and particularly neurin, a highly poisonous substance. These poisons excite the thyroid apparatus to supra-normal activity, causing it to secrete excessively and thus producing an additional toxicosis. The thyroid hormone, when produced in excess, breaks down fats, including the fatty bodies in nerve and brain cells, thus accounting for the nervous phenomena of the disease. Thus, in the causation of exophthalmic goitre three toxins take part—namely, the primary poison which excites the thyroid; secondly, the excess of thyroid hormone; and thirdly, the excess of catabolic wastes due to the hormone. Cure follows the removal of the disorder producing the primary causative poison by arresting the excessive thyroid activity and preventing the triple toxicosis. After-treatment must also aim at removing the effects of the poisons.

163. Subcutaneous Injections of Milk in Infantile Dyspepsia.

PROFESSOR E. WEILL (*Bull. Soc. de Pédiat. de Paris*, January 21st) recently had under his care three infants, aged from 1 to 4 months, who had absolute intolerance of their mothers' milk, profuse vomiting occurring immediately or soon after it had been swallowed. The vomiting was not accompanied by any circulatory or nervous symptoms, such as pallor, collapse, meningeal reaction, or eruption. The mothers themselves were in good health, and their milk was satisfactory in quality and quantity. Two of the children could take cow's milk without vomiting. One child was given to another nurse who was successfully suckling her own child, but her milk was no better tolerated than that of the mother. On the assumption that the intolerance might be due to anaphylaxis, Weill undertook an anaphylactic vaccination by injecting the children with their mothers' milk; 5 to 10 c.cm. of milk which had been sterilized for twenty minutes at 110° C. were injected; in two cases the vomiting stopped immediately, and in the third there was a considerable diminution in the vomiting, which ceased entirely after a second injection. In a fourth case subcutaneous injection of the mother's milk rapidly stopped diarrhoea with green stools and in forty-eight hours the stools became normal. It is noteworthy that one child who could previously take cow's milk showed an absolute intolerance for it, after subcutaneous injection of mother's milk.

164. The Treatment of Pleurisy in Convalescence.

PIACQUE (*Il Policlinico*, August 17th, 1919) takes the view that most pleuritis (with a few obvious exceptions—for example, traumatic, syphilitic, pneumococic) are tuberculous; hence the great importance of thorough treatment not only during the attack but in convalescence. Our aim should be to reduce pleuritic adhesions and secondary pulmonary fibrosis, to remove the danger of pulmonary tuberculosis, and prevent the awakening of a primary tuberculosis as yet latent. No matter what caused the pleurisy, after an attack six months should be given up to treatment, preferably in the country and in a suitable climate; a moderate altitude, 400 to 600 metres, is often beneficial, but it should be reached by stages and not suddenly. Plenty of sunshine, but used with discretion, is advisable; the state of the patient's temperature is the best guide to how much exposure to direct sun he can bear. Ample rest, diversified by suitable exercise, is important, and amongst the exercises nothing is more useful

than a course of respiratory gymnastics. Good food, slowly eaten and well digested—quality being more important than quantity—is essential, and plenty of milk should be given. Externally, counter-irritation by iodine is better than vesicants, and ionization is often very useful. Warm compresses, soaked in mild saline solutions, by starting osmotic action, are often beneficial. For drugs the author relies on arsenic, quinine, and tannate of iodine. He speaks doubtfully of injections of thiosinamin or fibrolysin.

165. Rheumatoid Arthritis and Congenital Syphilis.

MÉRY and GENIN (*Bull. Soc. de Pédiat. de Paris*, January 21st, 1919) record a case of rheumatoid arthritis in a female infant aged 1 year, in whom the symptoms first appeared at the age of 6 months. On admission to hospital the child presented multiple deformities of the joints, the lesions involving both elbows and wrists, the interphalangeal joints of both hands, both ankles, and the metatarso-phalangeal joints. Both the liver and spleen were enlarged. Ophthalmoscopic examination showed nystagmus, absence of the light reflex, and choroiditis in both eyes. Von Pirquet's reaction was negative and the Wassermann reaction strongly positive. The cerebro-spinal fluid was chemically and cytologically normal. After ten injections of mercury biniodide considerable improvement took place, the fluid in the joints disappeared, and the movements became more free. In the subsequent discussion M. Leone reported the case of a child aged 13 months with rheumatoid arthritis of the knees, elbows, and fingers. The child showed no signs of congenital syphilis and von Pirquet's reaction was definitely positive. Death took place at the age of 3 years from tuberculous meningitis. The child's parents were both suffering from pulmonary tuberculosis.

166. Treatment of Muco-membranous Enterocolitis by Arsenobenzol.

J. HASSON (*Presse méd. d'Égypte*, October 1st) treated 12 cases of muco-membranous enterocolitis by administration of neo-arsenobenzol by mouth in cachets containing 10 cg. three times a day. In 6 complete recovery took place, 3 showed marked improvement, 2 slight improvement, and in one case, which subsequently proved to be one of intestinal tuberculosis, the treatment had no effect. Some of the patients subsequently suffered from obstinate constipation, but this was remedied by a tablespoonful of liquid paraffin every night. To prevent any anaphylactic symptoms, 20 drops of solution of adrenalin (1 in 1,000) were given on the day before the administration of the arsenobenzol.

167. Influenza: Incubation Period and Immunity.

H. B. HOLST (*Norsk Tidsskrift for Militærmedicin*, Bd. 23, Hft. 2, 1919) has found, by a study of influenza in different units of the Norwegian army, that the incubation period was very short, not exceeding forty-eight hours, and that barely three days elapsed between the first and the last case to contract influenza in one and the same room. Soldiers living in an adjoining room failed to develop influenza for some time, but as soon as it spread to this room all the susceptible soldiers developed influenza within a couple of days. Soldiers who had suffered from influenza in July were immune during the following October, when a violent epidemic was raging in their neighbourhood.

168. The Prophylaxis of Scarlet Fever.

SPOLVERINI (*Il Policlinico*, September 14th, 1919) has carried out some experiments with a vaccine prepared according to the method of Cristina from the scales of desquamating scarlet fever patients. He first gave the vaccine to eight children suffering from scarlet fever, and found that with one exception all gave a well marked deviation reaction. He then chose ten children (2½ to 4 years old) in good health, and injected 3 c.cm. (in the course of six days) into each of them, obtained a well marked deviation reaction, and let them mix freely with scarlatinal patients (mostly of severe type). In spite of this free mixing—in some cases as long as two months—not a single child contracted scarlet fever, whilst in their blood there still persisted the specific antibody. Cristina's original paper appeared in *La Pediatria*, June 7th, 1916.

169. Pulmonary Complications in Late Hereditary Syphilis.

ACCORDING to MARIANO R. CASTEX and JUAN QUEIREL (*La Prensa Médica*, Argentina, July 30 h, 1918), late pulmonary involvement in hereditary syphilis is less rare than is usually supposed. The age of predilection is between 15 and 20 years. The condition does not possess any pathognomonic symptoms or physical signs, nor show any predilection for any special site, but any area of one or both lungs may be involved. There is a close resemblance to pulmonary tuberculosis, which must be excluded by repeated examination of the sputum and inoculation of guinea-pigs.

170. Congenital Rickets.

At a meeting of the Société de Pédiatrie in October, 1908, MERY and PARTURIER showed a case of congenital rickets in a child aged 6 weeks. The child presented a rickety rosary, Harrison's grooves, bowing of the tibiae, with certain secondary symptoms suggestive of achondroplasia. At a meeting this year (*Bull. Soc. de Pédi. de Paris*, February 18th) they reported on the naked-eye and microscopical examination of the case. There was nothing abnormal in the lungs, heart, or alimentary canal. There was slight cirrhosis of the liver of the peri-portal type. The kidneys and suprarenals were normal. One of the testes showed interstitial sclerosis and peri-arteritis. The thyroid showed very definite interstitial sclerosis. On opening the cranium an extensive extradural haemorrhage was found. Microscopical examination of the right humerus showed the characteristic lesions of rickets.

171. Boric Acid as a Preservative.

LINDET (*Il Policlinico*, August 17th, 1919) says that boric acid provokes a loss of weight in men and animals, especially a loss of fat, hinders nitrogenous metabolism, and interferes with the good utilization of foods, by inducing excessive peristalsis and even diarrhoea. Only about 85 per cent. of the acid is expelled, and chiefly through the kidneys, and as 15 per cent. is left behind there is danger of cumulative action, especially in persons whose kidneys are not sound. He considers that boric acid should be absolutely forbidden as a preservative in foods.

172 Chronic Tuberculous Endocarditis in the Child.

P. NOBÉCOURT (*Paris Méd.*, October 18th) records a case of mitral incompetence and dilatation of the right heart in a boy, aged 15, who had had none of the diseases which usually give rise to this condition, such as acute articular rheumatism, chorea, or scarlet fever. On the other hand, he had local tuberculosis in the form of spina ventosa, Pott's disease, and tuberculous abscesses in the thigh, and presented signs of tracheo-bronchial adenopathy and mediastinitis. Nobécourt thinks it probable that the disease started in the tracheo-bronchial glands, and that subsequently a mild form of septicaemia occurred, giving rise to tuberculous foci in the bones and finally in the endocardium. The gravity of tuberculous endocarditis is due to the fact that, as a rule, it gives rise to a progressive failure of compensation.

173. Syphilitic Oculo-motor Paralysis and Chronic Nephritis.

C. MADENNA (*La Medicina Practica*, September 30th, 1919) reports a case of complete right oculo-motor paralysis and chronic nephritis in a man aged 46, due to unrecognized syphilis. The patient was cured within forty days by five intravenous injections of neo-arsenobenzol, the doses of which were gradually increased from 0.30 to 0.75 gram. No history of specific contagion could be obtained, but the diagnosis of syphilis was established by the general glandular enlargement, periostitis of the sternum and tibiae, a positive Wassermann reaction, and the result of treatment.

174. Vaccine Treatment of Typhoid Fever.

A. GRAPIOLO (*Rev. Sud-Americana di Endocrinol.*, September 15th, 1919) treated 234 cases of typhoid fever with Dessy's antityphoid vaccine, with a mortality of 7 per cent. In none of the cases did the vaccine give rise to any serious symptoms, but it almost always had a pronounced effect on the general condition, which showed more or less improvement after the first injection, and especially on the temperature, which in many cases fell by crisis. In some cases vaccine did not produce a beneficial effect, but these were exceptional. Intravenous injection was found to be more efficacious than subcutaneous, but it was advisable always to give a subcutaneous injection first.

In debilitated persons and complicated cases intravenous injections should not be given owing to the severe general reaction which they provoke. The doses were 0.25 to 1 c.cm. for subcutaneous injections and 0.1 to 0.2 c.cm. diluted in 5 c.cm. of saline solution for intravenous injections.

175. Optic Neuritis in Typhus Fever.

V. ARNOLD (*Wien. klin. Woch.*, September 4th, 1919) has come to the conclusion that optic neuritis is such a common complication of typhus—being found in 59 per cent. of his 244 cases—that it is a most valuable aid to diagnosis. He excludes cases in which the ocular changes were limited to slight blurring of the margins of the optic disc, and accepts only definite changes in the disc as evidence of typhus optic neuritis. This is not demonstrable till the eighth or ninth day of the typhus, and its appearance is usually to be noticed on the tenth to the twelfth day. As at this stage the rash has often vanished, leaving the physician little guide to diagnosis, the optic neuritis is a much needed aid to the differential diagnosis of typhus and typhoid fever. The author has examined the eyes of over 100 cases of typhoid fever without once finding definite signs of optic neuritis. In typhus this sign seldom lasts long; in many cases a fall of the temperature to normal is quickly followed by the complete disappearance of the optic neuritis. But it may last longer than any other complication of typhus, and be demonstrable weeks and even months after the onset of the disease. Children and adults under 50 are most liable to develop optic neuritis; it is comparatively rare after 50. The author concludes that optic neuritis is as common a sequel to typhus as it is to meningitis.

SURGERY.**176. Fracture of the Acetabulum.**

PEET (*Annals of Surgery*, September, 1919) records a case of fracture of the right acetabulum, with irreducible intra-pelvic displacement of the femoral head, in a man aged 48, caused by an eight feet fall on to his hip. There was pain and limitation of movement in the right hip, with slight abduction and half an inch of shortening of the limb, swelling over the great trochanter, and suprapubic tenderness, with bleeding from the meatus and complete urinary suppression. The x rays showed a badly shattered pelvis, with the head of the femur driven directly through the acetabulum. The leg was held in extension and abduction at 45 degrees, with a second lateral extension round the thigh close to the groin. These apparatus had to be removed on the sixteenth day because of bedsores, and the patient's condition prohibited any manipulative measures, and x rays showed no improvement. Forty days after the accident the hip was manipulated under ether, and, after breaking down adhesions, the femur could be moved freely in all directions, but it was impossible to extract the head from the pelvis. A week later the man was discharged on crutches with free passive motion in all directions, limited active motion, and with a normally functioning urethra; he reported six months later that he was walking without trouble. The condition is rare and has a high mortality, and depression of the trochanter and rectal palpation of the femoral head are important diagnostic signs in the absence of x rays. Complications are frequent and severe. Reduction by manipulation under a general anaesthetic is recommended as giving excellent results in freedom of motion and capacity to use the leg. Open operation is necessary only in exceptional cases or for the treatment of complications, and resection of the head is unnecessary.

177. Eau de Cologne in Chloroform Anaesthesia.

JEANNEUEY (*Journ. de méd. de Bordeaux*, October 10th, 1919) has endeavoured to prevent the vomiting following chloroform anaesthesia by making the patient inhale eau de Cologne throughout the period of anaesthesia, as advocated by Barker (*BRITISH MEDICAL JOURNAL*, 1914). The results were satisfactory. Eau de Cologne was found to prevent the vomiting due to the nauseous odour of the anaesthetic, but to have no effect on psychical vomiting or vomiting symptomatic of chloroform poisoning.

178. Autogenous Bone Grafting in Long Bone Fractures.

MARTIN (*Annals of Surgery*, September, 1919) records twenty cases of fracture of long bones treated by grafting, eighteen of which were universally satisfactory, while in two the graft did not retain its viability. Most of the

cases presented solution of continuity of the shaft with loss of substance. Others showed comminution with widespread separation of the fragments; contact fractures with large fragments of the missile causing it arrested by the shaft and often embedded at the site of fracture; perforation of the shaft with splintering, a fair alignment being maintained; gutters or grooves with no apparent deformity or angulation of the limb, and splintering fractures into joints involving and ankylosing adjacent joints. The explosive effect of projectiles was well shown in perforation of the shaft cases, large pieces having been blown out, with loss of 3 or 4 cm. of substance. Apart from accompanying nerve lesions and soft part damage osteomyelitis is the most important complication, the latent sepsis often lighting up many weeks after the wound has healed, jeopardizing the viability of the graft. Consequently a sufficient interval of time must elapse after the wound is healed before bone grafting is undertaken, every effort being made while the wound is healing to prevent the occurrence of deformities, muscular contractions, and ankylosis in faulty positions, the chief aim being to preserve as complete function of the adjacent joints as possible.

179. Marking of Varicose Veins.

COPPERNAIL (*Surg., Gyn., and Obstet.*, October, 1919) recommends for the identification of the position of varicose veins at operation that they should be marked out the previous day with an aqueous solution of brilliant green when the patient is in the standing position. Before the operation the skin can be painted over with iodine without interfering with the green lines; in fact, the coats of iodine over the green make the lines even more intense.

180. Compression of the Portal Vein with Ascites in Ulcer of the Duodenum.

FINSTERER (*Wien. klin. Woch.*, September 11th, 1919) records the case of a patient, sex and age not mentioned, whose symptoms, including hyperacidity of the gastric juice, had begun fifteen years earlier. During the war these symptoms increased, much weight was lost, and melæna was frequent. The x-rays showed dilatation of the stomach and increased peristalsis. Laparotomy revealed a large ulcer of the duodenum, penetrating to the pancreas. The ulcerated area extended from the duodenal papilla to the pylorus and along the ligamentum hepatoduodenale to the porta of the liver. The gall bladder was also involved. The cause of the fluid found in the peritoneal cavity proved to be compression of the portal vein by scar tissue. Extensive resection of the stomach was performed, its distal end was closed, and an end-to-side anastomosis was established between the stomach and the upper portion of the jejunum. The wound healed by first intention, and the patient's symptoms disappeared. In ten weeks there was a gain of 16 kilos. The author suggests that the recovery was largely due to the extensiveness of the resection of the stomach, which left no opportunity for the subsequent development of a peptic ulcer of the duodenum.

181. Intrascrotal Saline Injections in Gonorrhoeal Epididymitis.

THE re-injection of a patient's serum into the tissues near a focus of inflammation has been found by R. MÜLLER to promote absorption of inflammatory products and to relieve pain. SAUDEK has applied this principle to cases of gonorrhoeal epididymitis, and G. FISER (*Muench. med. Woch.*, August 15th) has modified this procedure by substituting physiological saline solution for the patient's serum. After painting the scrotum with iodine he injected 10 to 15 c.cm. of saline solution into the scrotum, between it and the tunica vaginalis. The immediate cessation of pain and tension was, in his opinion, mainly due to the mechanical action of the solution, which formed a water bed protecting the testicle, isolating it from contact with neighbouring structures when the patient stirred. Altogether thirty cases were thus treated, and when the epididymitis was quite recent—that is, only of one to two days' standing—the injections not only relieved pain but also hastened recovery, every symptom vanishing in three to five days. The solution was absorbed in a day or two. When the inflammation had lasted eight to ten days before the institution of treatment it still relieved pain, but it failed to hasten the reabsorption of inflammatory products. The patients at first dreaded this treatment, and were apt to conceal their symptoms, so that they were in many cases treated comparatively late. But when the anaesthetic properties of the injections became common knowledge complaints were made of the slightest pain, and every case was treated early. The

earlier an injection was given the better were the results; but it appeared to be immaterial whether a large or small quantity of the solution was injected.

OBSTETRICS AND GYNAECOLOGY.

182. Pituitrin for Inducing Labour.

STEIN (*Amer. Journ. Obstet.*, October, 1919) considers that the administration of pituitrin in very small doses, employed in combination with nitrous oxide anaesthesia, represents an ideal method of conducting labour at term. His method is as follows: At 7 a.m. the woman is given one ounce of castor oil, and two hours later an intramuscular injection of two minims of pituitrin, followed at 11 a.m. by a repetition of this dose. If labour pains are elicited, the pituitrin is resumed at intervals of half an hour, but if no pains result, the treatment is stopped and another attempt is made on the third following day, again administering the same small dosage. As soon as labour pains are actually started a trained anaesthetist is in readiness to administer nitrous oxide at the beginning of each uterine contraction, grading the amount of gas used according to the severity of the pain and progressively increasing the anaesthetic with the advance of labour. During the expulsive stage, which is materially shortened by the action of the pituitrin, averaging slightly over an hour, enough nitrous oxide may be given to produce a brief surgical anaesthesia. The patients do well under this method and the infants are invariably born in excellent condition. The author holds that on account of its reliability and safety, the combination of pituitrin in physiological dosage with nitrous oxide anaesthesia represents an important advance in obstetrics.

183. The Frequency of Cystitis at the Close of Pregnancy.

A ROUTINE examination of all the smelly and cloudy urines at his maternity hospital at Upsala has convinced C. D. JOSEPHSON (*Hygæa*, May 31st, 1919) that cystitis often exists before the onset of labour. The urine was centrifugized and the sediment stained with methylene blue. The organism most often found was the *B. coli*. Occasionally cocci were found, and in some cases there was pure bacteriuria, no leucocytes being found with the bacteria. Classifying as cases of "resorption fever" those in which the rectal temperature was over 38° on at least two occasions, the author finds that in 1917 among about 800 cases there were 49 of "resorption fever." Cystitis was present in 23 of these cases, absent in 26. Among 740 perfectly afebrile cases cystitis was found in 65. Thus the incidence of cystitis in cases of "absorption fever" was 47 per cent., and in afebrile cases it was 9 per cent. Of the 88 uncomplicated cases of cystitis, only 23 were febrile. The author concludes that (1) cystitis is common at the end of pregnancy, being found in 12 per cent. of all his cases; (2) it is a common cause of fever—"resorption fever"—in the puerperium; (3) it is afebrile during pregnancy in as high a proportion as 76 per cent.; (4) it is often unaccompanied by any symptoms, and is therefore overlooked in a considerable number of cases.

184. The Thyroid Gland and Vomiting during Pregnancy.

ALBECK (*Ugeskrift for Læger*, June 19th and 26th, 1919) has examined the thyroid glands of 1,581 women a day after confinement, and has correlated his findings with the histories he obtained of vomiting during the last or earlier pregnancies. He found that vomiting during pregnancy was far more common among women with small and hard thyroids than among women with large and soft thyroids. Among 48 multiparae with visibly and palpably enlarged thyroids there was not one with a history of vomiting during pregnancy. Of 193 multiparae with palpably enlarged thyroids, there were 148 without a history of vomiting during pregnancy. Of 79 multiparae whose thyroids were palpable but not abnormally large, there were 50 who had not suffered from vomiting during pregnancy. But of the 151 multiparae whose thyroids were small and barely palpable, all had suffered from vomiting during every pregnancy.

185. Injections of Proteins in Diseases of the Uterine Appendages.

DISCUSSING the present tendency of the sponsors of vaccine therapy to treat specific ailments with non-specific vaccines, F. KAUFERT (*Muench. med. Woch.*, September 5th, 1919) briefly reviews the theories advanced on behalf of

"proteinkörpertherapie," and then gives an account of his experiences in 32 cases of inflammation of the uterine appendages. They were not encouraging. He first gave parenteral injections of sterilized milk from which the fat had been abstracted. Sixteen cases of acute or chronic pyosalpinx were given injections, the average number of injections in each case being six, administered at intervals of two to six days. The injections were well tolerated, and only one case reacted with fever. On two occasions a definite focal reaction was provoked. Leucocyte counts showed no remarkable deviations as a result of the injections, which did little or nothing to hasten recovery. Then the author selected 16 cases of acute or chronic disease of the uterine appendages and injected fresh milk sterilized by boiling in a water bath for ten minutes. The injections were intraglutal, and the dose was 10 c.cm. A violent general reaction was provoked in many cases, and the fever often lasted several days. The site of the injection was often very painful, but no abscesses developed. In the cases that did not react with fever there was no great change in the number of leucocytes; the febrile reactions were usually associated with a leucocytosis. The results of this treatment were disappointing.

PATHOLOGY.

186. Diphtheria Carriers.

COSTA, TROISIER, and DAUVERGNE (*Rev. d'Hygiène*, October, 1919) point out the great divergence in the various estimates that have been made of the numbers of presumably healthy people who harbour diphtheria bacilli in their throats. It has been accepted by many that one case in three in the general population are such carriers. It is certain that the usual method of detection of diphtheria bacilli—namely, staining reactions and characters of massed (and impure) growth on coagulated serum—cannot be relied upon to differentiate true from false diphtheria bacilli. Hence statistics on the point hitherto have been without much value. The authors claim that by the routine use of their differential medium (see EPITOME, November 8th, 1919, paragraph 136), followed by cultivation on various sugars, they can always clearly separate diphtheria from diphtheroid organisms. The number of carriers found depends on the classes of population chosen. In regiments and schools they have found about 2 per cent. of true diphtheria bacilli carriers and about 14 per cent. with diphtheroids; in families about 17 per cent. and 11 per cent. respectively; and in hospitals practically no carriers amongst doctors, nurses, and attendants, whilst on the other hand as high as 50 per cent. in cases of scarlet fever. But taking the figures generally, they have found 3.16 per cent. of the community carrying true diphtheria organisms and 14.55 per cent. carrying diphtheroids. By their method they considerably reduce the number of dangerous subjects. In their examination of convalescents they find that in more than a third of the cases the organisms disappear in a fortnight, and very nearly two-thirds are free by the end of a month. About 13.5 per cent. of cases will have to be kept in hospital for over a month, perhaps even three months. Several cases showed diphtheria bacilli after two negative examinations, and they suggest that cases should give at least three negative tests before being discharged. The authors lay stress on the fact that it is not nearly so important to examine throat swabs from contacts with a case of diphtheria as it is to search for the dangerous carrier who has conveyed the organism to the particular case. Diligent inquiry and bacteriological examination of persons who may have had a tonsillitis will often succeed in tracing the source of infection.

187. Malignant Angioma of Liver in Infants.

FOOTE (*Journ. Amer. Med. Assoc.*, October 4th, 1919) briefly reports a case of this rare condition and summarizes the literature on the point. Haemangio-endotheliosarcoma, as he prefers to call it, is a congenital disease manifesting itself by an enlargement of the liver and some digestive disturbances within three months after birth. It is due to rapid and unrestrained proliferation of the endothelium of the liver capillaries, causing the formation of nodules on the surface of and within the substance of the liver, and a rapid and progressive increase in the size of the organ, with a fatal termination, usually before the sixth month, as a result of pressure on and obliteration of liver tissue. Jaundice and ascites are generally absent. Metastases are not found. The liver is studded with nodules of all sizes, dark red in

the centre and lighter at the periphery. Histologically the liver shows an infiltration of the more normal areas with small round cells. At parts the hepatic cells are distorted, vacuolated, and atrophied. The interlobular connective tissue is increased. The smaller blood vessels are choked with large endothelial cells, some of which show mitotic figures. The nodules are surrounded by compressed liver tissue.

188. The Filtrable Virus.

CIAURI (*Il Policlinico*, August 3rd, 1919), discussing the problem of the filtrable virus from the etiological point of view, points out how contradictory are the results of various observers. Practically the case has been made especially prominent of late in the discussions as to the exact cause of influenza. From the polymorphic character of their symptoms, clinically there is much to suggest that swine fever, plague, equine and human influenza, are more or less closely allied. One school discards obvious bacilli like Pfeiffer's bacillus and others as the fundamental cause, and Ciauri compares them to Plato's cave dwellers, who never saw anything but the shadow—the shadow in this case being the filtrable virus. Either bacteria are merely an etiological epiphenomenon or, on the other hand, the root cause of infection, and the invisible virus is something which mobilizes the latent pathogenicity of the invading germs, or it may be that certain pathogenic micro-organisms take on a filtrable stage, in which they spread contagion. This seems more probable than the wholesale relegation of bacteria to a comparatively unimportant position. It might explain the difference between endemic and pandemic influenza, and in any case saves us from a wholesale repudiation of bacteria as etiological factors in disease. The whole study of infections has an important reflex bearing on our general ideas as to prophylaxis and therapy.

189. Albuminuria among Recruits.

E. PLATOU (*Norsk Magazin for Lægevidenskaben*, March, 1919) has examined the urine of 310 recruits for albumin with Heller's test before and after exercise. It was found that as training progressed the proportion of positive tests after exercise sank rapidly and appreciably. Thus, among 149 recruits examined from the fifth to the eighth day of training there were 26, or 17.4 per cent., whose urine contained albumin. But from the ninth to the fifteenth day of training albuminuria was found only in 8.1 per cent. of the 161 men examined. It was also noted that the proportion of cases of albuminuria was far higher after morning than after exercise later in the day, the proportion being 15.1 per cent. after exercise in the morning and only 2.5 per cent. after exercise in the afternoon. Of the 39 men whose urine contained albumin after exercise at the beginning of training, 31 were examined after the fifteenth day of training, and of these 14 showed no albuminuria after exercise, morning or afternoon. The author concludes that early in the training of recruits exercise of three hours' duration provokes albuminuria in more than 10 per cent. The albumin is present only in small quantities, but casts are almost invariably to be found in these urines. The albuminuria disappears, as a rule, after a night's rest in bed.

190. A Case of Laboratory Typhus.

F. PEPEU (*Riforma Medica*, October 4th) reports the following case: Professor Müller was preparing an emulsion of faeces from infected lice to inject into guinea-pigs, when the syringe containing the emulsion was spilt over the table and Müller's hand and arm, on which there were some scratches. Müller did not disinfect his hand until finishing the experiment. After sixteen days' incubation he developed a typical attack of typhus. All other sources of infection but the laboratory could be excluded, as he had not been in contact with any typhus patient nor had he been bitten by lice.

191. Tubercle of the Myocardium.

R. SIMONINI (*Il Policlinico*, August 17th, 1919) reports the case of a child aged 18 months who died suddenly, and at the autopsy the lungs were found to be tuberculous, also the bronchial glands, and on the right auricle there was a tuberculous mass the size of a big filbert. The mass was covered by thickened adherent pericardium; it did not project into the auricular cavity. On section it was a pale yellow, and made up of caseous tubercle surrounded by fibrillary tissue. Giant cells were fairly common at the periphery, but absent in the centre. Koch's bacilli were found centrally, but very rare in the periphery. The endocardium and valvular apparatus were normal. The case is unique in the author's experience.

EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

192. Bacillary Dysentery.

FROM July to October, 1918, G. ROSENTHAL (*Paris méd.*, October 25th) treated 980 cases of Shiga bacillus dysentery in a French military hospital, with 6 deaths, a mortality of barely 0.6 per cent. This low figure was not due to the mildness of the outbreak, as in other units the mortality was as high as 10 to 15 per cent., but was attributed by Rosenthal to the large doses of specific serum employed, the systematic use of morphine, regular feeding of the patients as soon as the acute stage was past, and careful nursing. In every severe case 60 c.cm. of serum was given the first day, and 40 or 60 c.cm. on the two following days according to the severity of the case. In forty-eight hours the stools ceased to contain blood, and in four days the number fell from sixty to fifteen or ten. A severe case was transformed into a mild one, and the cure was completed by symptomatic treatment. If no improvement took place the injections of serum were continued in doses of 40 c.cm. a day. In some cases a total of over 400 c.cm. was given. Rosenthal found that arthritis was extremely frequent, especially among the mild cases. As a rule, only one joint was attacked, in some cases more than one, but the arthritis was never generalized. A few examples of cervical arthritis and involvement of the joints of the hands were seen, but the knee-joint on one or both sides was most frequently affected. The condition was often one of arthralgia with tender points on the inner side of the knee, as if the tissues round the joint were more affected than the joint itself. There was also a form characterized by hydrarthrosis without any obvious inflammation. In rare instances a form was seen closely resembling suppurative arthritis, although nothing was found on exploratory puncture. Complete recovery was the rule and suppuration was unknown. Muscular atrophy did not occur or was only slight.

193. Inoculation against Influenza.

A. SALVAT, Professor of Hygiene in the Faculty of Barcelona (*Rev. de Med. y Chir. Pratique*, October, 1919), uses a prophylactic vaccine similar to that of the British War Office, but containing in addition recently isolated parameningococci. The vaccine was used in about 5,000 cases, four doses being given of 50, 100, 150, and 200 million respectively. In a group consisting of about 4,900 Spaniards there was no fatal case of influenza, or even of severe bronchopneumonia; whereas in a group of about fifty persons of British nationality there were five complicated cases and two deaths. Salvat attributes this occurrence to the fact that the attack took place after the patients had left the country, which suggests that the vaccine should be prepared in the patient's own country. He also attaches a certain importance to the ethnic factor, certain races being more vulnerable than others.

194. Benzene Poisoning in Children.

G. BERGMARK (*Hygien*, September 31st, 1919) finds that the toxicity of benzene is much underrated, and that though it is in common household use, parents do not know it is very poisonous, being satisfied that the only danger lies in its inflammable properties. Its smell is enough to discourage most children with a taste for sampling the contents of stray bottles; but this does not apply to infants, as the writer's three cases show. The first case was that of a boy, aged 16 months, who helped himself to benzene out of a bottle which, according to the mother, contained hardly enough to be visible. Soon afterwards he became both pale and cyanosed, and râles could be heard over the whole of the right lung. There was no vomiting, and the pulse was fairly slow and strong. About half an hour after the benzene had been swallowed the boy was comatose. The skin was pale grey, the pulse was not palpable. Mustard plasters were applied to the skin, and camphor and caffeine were injected subcutaneously. Lavage of the stomach yielded a cupful of blood-stained fluid smelling strongly of benzene. The stomach was irrigated with salt solution till it no longer smelled of benzene. The amount of benzene thus obtained was found on analysis to be 0.8 c.cm. The poison was taken at 12.30; the boy was dead at 3 o'clock. The necropsy showed congestion of the brain and meninges, extensive hæmorrhages into the lower lobes of both lungs, and

great injection of the bronchial mucosa. The age of the second patient was also 16 months; the amount of the benzene withdrawn from the stomach was only 0.2 c.cm., and the period between the swallowing of the drug and death was three weeks. In the third case—that of a boy aged 22 months—the benzene obtained by gastric lavage amounted to 1 c.cm., but the child recovered. Probably this recovery was to a great extent due to the child having taken a large meal shortly before he swallowed the benzene. The author accordingly suggests that as long as valuable time is not wasted it is a wise practice to feed the patient with fats, milk, and cream, so as to neutralize the action of the benzene on the stomach.

195. Spontaneous Rupture of the Aorta.

A. AGUILAR FEILU (*Revista Espanola de Med. y Chir.*, October, 1919) records a case of spontaneous rupture of the aorta in a man aged 40. The patient had no history of venereal infection, but was suffering from chronic nephritis and myocarditis. There were generalized oedema, albuminuria 4 per 1,000, maximum blood pressure 17 and minimum 11 with Pachon's oscilometer. The patient suddenly complained of pain in the left side, became cyanotic, and died in half an hour. At the autopsy, in addition to the renal lesions and signs of chronic pulmonary tuberculosis, a transverse rent was found in the aorta immediately above the insertion of the sigmoid valves. No atheromatous or other lesions apart from the rupture were seen in the aorta. The heart, and especially the left ventricle, was hypertrophied, and the inner cusp of the mitral valve was thickened. Microscopical examination of the aorta merely showed a degeneration of the intima and part of the media in the neighbourhood of the rupture.

196. Generalized Infections treated by Auto-vaccines.

MDLLES. DE PFEFFEL and HOCHBERG (*Bull. Soc. de Pédiat. de Paris*, March 17th, 1919) report three cases in children of acute or subacute infection of the skin or subcutaneous tissue, which were treated with vaccines prepared according to Wright's method. The first case was an example of multiple streptococcal abscesses of all four limbs in a girl aged 13½ years. Subcutaneous injections of anti-streptococcal serum and collargol and electrargol intravenously had no effect, but rapid improvement took place after two injections of an autovaccine containing 250 million organisms. The second case occurred in an infant aged one year suffering from generalized staphylococcal pyoderma. Two injections of an autovaccine were given, each containing 250 million organisms, without any effect on the general or local condition. After a third injection of 750 million organisms a generalized vaccinal reaction occurred in the form of an eruption of folliculitis. When seen twelve days later the skin was much clearer. Two more injections, each consisting of 500 million organisms, was given, with an interval of six days between each injection, which was followed by considerable improvement. Five days after the last injection the child developed enlargement of the retro-sterno-mastoid glands, with eczema of the scalp, and died two days later, probably from acute renal insufficiency. An autopsy was refused. The third case, which occurred in an infant aged 7 months, was also an example of generalized staphylococcal pyoderma, which was cured within a week by a single injection of an autovaccine containing 250 million organisms.

197. The Pleurisy of Late Hereditary Syphilis.

ACCORDING to M. R. CASTEX and J. B. FONT (*La Prensa Méd.*, Argentina, February 28th, 1919), late hereditary syphilis may be manifested by the development of various forms of pleurisy, the clinical types of which vary according as the pleurisy is an isolated phenomenon or associated with other symptoms of syphilis. In the former case the pleurisy may be dry, accompanied by an effusion which is usually sero-fibrinous, or assume the form of pleural sclerosis. Though not absolutely constant, a syphilitic lesion of the lung is frequent in pleurisy, and appears to be the initial site of the syphilitic process when it is situated in the respiratory system. Pleurisy associated with other manifestations of syphilis may appear in the form of a double pleurisy or polyserositis, usually in association with other visceral localizations of syphilitic infections—for example, in the heart, aorta, liver, spleen,

kidneys, etc. The etiological diagnosis in these cases between syphilis and tuberculosis is very difficult. An absolute affirmative diagnosis is impossible, and it is only possible to make a relative one by the exclusion of tuberculosis through the negative reports of examination of the sputum and animal inoculation. The obvious proof of the syphilitic nature of the pleurisy is the rapid and favourable effect of specific treatment. If the action of the treatment is slow and its success only relative, one may conclude with great probability that there is an association of tuberculosis and syphilis.

198. Haemophilia with Haemarthrosis and Separation of the Femoral Epiphysis.

J. GÉNÉVRIER reports (*Bull. Soc. de Pédiat. de Paris*, May 20th) a case of haemophilia in a boy, aged 10 years, whose grandfather and brother were also "bleeders," while his mother and sister showed no symptoms of the disease. The anaemia was very marked, especially after the haemorrhages, when the red cells were reduced to 2,000,000 and the haemoglobin to 45 per cent. After an injury to the knee a considerable swelling of the joint took place, but, as the pain was not worse than on previous occasions, medical advice was not sought until three weeks after the accident. A considerable effusion into the joint was then present, and there was an unusual thickening of the femoral epiphysis, which on x-ray examination was found to be separated. Such an occurrence, though common in Barlow's disease, has not hitherto been described in haemophilia. After continuous extension for three months, during which time no further haemorrhages took place, and the red cells increased to 4,600,000, the movements of flexion of the joint became complete, while those of extension were limited, and there was a bayonet-shaped deformity of the limb. A silicate apparatus was applied to enable the child to walk. The future functional capacity of the joint appeared uncertain.

199. Tuberculosis Contracted in a Hospital Crèche.

NOBÉCOURT and PARAF (*Bull. Soc. de Pédiat. de Paris*, April 15th, 1919) record two cases of infants who contracted tuberculosis in a hospital crèche. One, aged 12 months, developed adenitis of the tracheo-bronchial glands, which showed a tendency to recovery, while the other, aged 6 months, in addition to infection of the tracheo-bronchial glands, had tuberculous bronchopneumonia, which proved rapidly fatal. The tuberculosis could not have been congenital, as the mothers who suckled the infants did not show any signs of that disease, but was obviously acquired, and as the infants had never lived anywhere but in the crèche, they must have acquired it there. All the staff were healthy, but, on the other hand, several infants admitted in previous years had shown tuberculous lesions *post mortem*. The two patients therefore had developed the infection from living in a contaminated environment. In the crèche in question numerous factors appeared likely to favour infection—namely, lack of isolation, difficulty of ventilation, deficient cubic space, and overcrowding.

200. The Influence of Bombardment on Glands.

ETIENNE and RICHARD (*Rev. méd. de l'Est*, October, 1919) state that the frequency and violence of the bombardments of Nancy, either by long-distance gunfire or by aircraft, gave them an opportunity for studying the action of war emotions on the various glands, especially those of internal secretion. In the first place they were impressed by the frequency of amenorrhoea in Nancy and district as the result of the bombardments. Several cases of the kind had also occurred in Paris under similar circumstances. On many occasions the close association between the function of the mammary glands with that of the ovary was shown by a considerable diminution, and sometimes by a complete suppression, of the secretion of milk following bombardments. Two cases of transient glycosuria of sudden onset are next described. The writers attribute its occurrence to an excessive secretion of adrenalin, caused by emotion acting on the glycogenic function of the liver by means of the abdominal sympathetic. Numerous cases of Graves's disease were observed, which were due either to a sudden violent emotion or to a succession of frequently repeated emotions.

201. Subcutaneous Injections of Milk in Diseases of the Eye.

BERNEAUD (*Muench. med. Woch.*, September 5th, 1919) has given about 2,000 injections of milk in some 500 cases at an eye hospital in Kiel during a period of two years. He injected subcutaneously and with antiseptic precautions 5 c.cm. of milk that had been boiled for twenty minutes. Though rigors were never observed fever was provoked,

remaining high for a few hours. No articular pains or urticarial eruptions occurred, and no signs of anaphylaxis followed a second injection of milk. The action of these injections on parenchymatous keratitis was slight, but in eczematous keratitis they were strikingly beneficial, pain and photophobia being almost invariably banished. The effect of a first injection was particularly satisfactory in some cases, being sufficient to relieve the patient of all his symptoms. The results were promising in iritis, a good or very good effect being observed in 70 cases, no effect in 10. The author considers this treatment a great advance in the case of iritis, the tension of the secondary glaucoma of iritis being also benefited thereby. In 8 out of 24 cases of choroiditis the disease was refractory to treatment, in 10 cases some improvement, and in 6 great improvement, was observed. The action of the injections was beneficial in slight post-operative inflammation, in iritis, and traumatic hypopyon. No definite verdict could be given as to the effect of this treatment on sympathetic ophthalmia, and trachoma was not appreciably affected; but ulcers of the cornea responded satisfactorily. In 11 cases of gonorrhoeal conjunctivitis the results were excellent, save in 2 cases. The injections seemed to have no effect on gonorrhoeal vulvitis. The results were good in herpes of the cornea, indifferent in primary glaucoma, amaurotic retinae, and neuro-retinitis.

SURGERY.

202.

Partial Tetanus.

ACCORDING to A. RODRIGUEZ CASTRO (*Rev. méd. del Uruguay*, September, 1919), cases of partial tetanus are occasionally observed in children, although no example of partial tetanus of the limbs has yet been published at this age. Splanchnic tetanus is very exceptional, and only a few instances of cephalic tetanus have been recorded. Pelfort, who analysed all the cases of tetanus which occurred in Morquio's pediatric clinic at Montevideo from 1908-14, could find only two examples of partial tetanus, one being a case of cephalic tetanus, the other case was in a child suffering from ulcerative stomatitis whose gum the father touched with his dirty fingers. A few days later contracture of the neck and face developed, but never became generalized. Recovery took place after injection of antitetanic serum, so that it was doubtful whether it was a case of Escherich's pseudotetanus or real tetanus. In March, 1918, Ugón reported to the Sociedad de Pediatría another case of Rose's cephalic tetanus, making a total of three cases of cephalic tetanus studied at Montevideo between 1908 and 1918. Castro now relates a case of fatal cephalic tetanus in a child aged 30 months, which developed eight days after injury to the soft palate by a piece of wood which the child had picked off the floor. The first symptoms observed were trismus and painful contractures of the neck and face muscles, and it was not till three days later that the contractures involved the extremities. Death took place the following day. The case differed from the cephalic tetanus of Rose in the absence of facial asymmetry or paralysis.

203. Abscess of the Lung following Tonsillectomy.

PROFESSOR H. BURGEN of Amsterdam (*Nederl. Tijdschr. v. Geneesk.*, November 1st, 1919), in a review of the literature of this subject, states that about forty cases have been recorded, all of them in America; thirty-two have occurred in adults and only six in children. In all but one case, in which local anaesthesia was used, ether was given as a general anaesthetic. Burgen comes to the conclusion that the fear of abscess of the lung need not act as a deterrent when tonsillectomy is indicated, provided that it is performed by a skilful operator and with all the necessary precautions, which include (1) treatment and rest in bed for a few days after the operation, (2) local anaesthesia in older children and adults, (3) special care in the administration of a general anaesthetic in the case of young children. Under these conditions the danger of pulmonary abscess is extremely slight.

204. Local Treatment of Anthrax with Corrosive Sublimate.

C. M. PERTUSIO (*Il Policlinico*, Sez. Prat., October 12th, 1919) describes the method which has been employed by Professor Savini of New York for many years in the treatment of malignant pustule without the use of any serum. The method consists in the direct application of corrosive sublimate powder to the lesion without having recourse to any incision, excision, or Paquelin's cautery. A square

piece of adhesive plaster with a circular hole corresponding to the area of the pustule is applied, the powder is freely dusted over the pustule, the healthy skin being covered by the plaster. Another piece of plaster of the same size is placed over the first and a simple dressing is applied. After twenty-four hours the two pieces of plaster are removed and the remains of the powder washed off the pustule. It will be found that the surface of the pustule has been converted into a black slough and that the surrounding oedema has entirely disappeared, while the general condition has much improved. According to the author, the only drawback to the method is the pain, but that does not last more than twenty-four hours. The scar which results is not disfiguring, and no case of intoxication has ever resulted. Apparently the sublimate produces coagulation of the protoplasm of the tissue cells and thereby prevents absorption of the poison.

205. Relation of Gastropotosis to Gastric Ulcer.

IN the course of a review of standard teachings with regard to the causation of the round gastric ulcer, v. KREMPPELHUBER (*Deut. med. Woch.*, October 2nd, 1919) draws attention to the frequency with which gastric ulcer is combined with gastropotosis. At the Würzburg University Polyclinic, gastropotosis was found in 88.6 per cent. of the cases of gastric ulcer diagnosed as such with the help of the x rays. Among women with gastric ulcer, the long, ptotic stomach was found in as high a proportion as 95 per cent. The ptosis was considerable in 80 per cent. of these cases. The predilection of ulcers for the small curvature of the stomach and the upper wall of the pylorus—that is, the parts by which the stomach is suspended—offers a clue to the relation of gastric ulcer to gastropotosis. The latter, by inducing an abnormal tension on the mucosa of the stomach at these points restricts the circulation, and thus reduces the vitality of tissues already, perhaps, abnormally exposed to erosion by hyperacidity of the gastric juice. The author supports this argument by reference to the success commonly achieved in gastric ulcer by rest cures. The patient being on his back, the stomach rests on a broad base, tension of a limited part of its walls is relieved, and kinking or compression of the blood vessels in the lining of the stomach is prevented.

206. Gonorrhoeal Otitis in Infancy.

H. PUTZIG (*Deut. med. Woch.*, October 16th, 1919) records the following case to point his argument that the common tendency to treat suppurative conditions of the ear without a bacteriological diagnosis is deplorable. An infant, born in November, 1918, was treated for the first time a fortnight later for typical gonorrhoeal conjunctivitis. Complete recovery was effected in two to three weeks by specific treatment. In February, 1919, the infant developed a purulent discharge from the right ear. The tympanum was red and perforated. Only slight improvement followed irrigation with hydrogen peroxide; the discharge became thicker and more profuse, as well as fetid. Tampons soaked in alcohol, boric acid irrigations as well as powdered boric acid, failed to check the discharge. Then gonorrhoeal otitis was suspected, and typical Gram-negative cocci were found. Accordingly irrigation with protargol was prescribed, with the result that in a few days marked improvement was effected. By the middle of March the discharge had ceased and the perforation had closed. No relapse occurred. As the otitis did not develop till almost two months after the arrest of the conjunctivitis, the author suggests that it was probably not the source of the otitis. This, he suspects, was the result of direct infection from the mother.

OBSTETRICS AND GYNAECOLOGY.

207. Welander's Sore.

A. L. FÖRNS (*Ugeskrift for Læger*, September 4th, 1919) records the following case of superficial non-venereal ano-genital sore, first described by Welander in 1903. The patient was a girl, aged 63 years, who had suffered for a fortnight from ano-genital sores when she was admitted to hospital. Here two sores, of the size of a threepenny bit, were found close to the anus. They were slightly depressed, circular, non-indurated. They exhibited a greyish tinge, and their margins were not undermined. Similar ulcers, with slightly bowed outlines, were situated on the labia majora. There were no herpetic or other vesicles in the neighbourhood of these ulcers, which caused considerable pain, particularly on micturition. The inguinal glands were not enlarged, and a search for

the *Spirochæta pallida*, Dacrey's bacillus, the gonococcus, and the diphtheria bacillus was negative. Wassermann's reaction also was negative, and the only micro-organism to be found was a large Gram-positive, straight bacillus, with sharply cut ends. The sore quickly healed under treatment with fomentations and the painting of a few granulations with silver nitrate. A fortnight after her admission to hospital the ulcers had become slightly depressed scars, with soft but quite sharply defined margins. The author, who has observed two similar cases, suggests that this condition is probably not very rare. The recognition of its non-venereal origin is of the greatest importance. There are many synonyms for this disease, none of them satisfactory. Lipschütz, in 1913, gave it the name *ulcus vulvae acutum*, a title which fails to differentiate between this and other varieties of acute sores of the genitals. Welander's original title—superficial, innocent ano-genital sores in women—is too cumbersome, and Finger's designation, pseudo-tuberculosis, is misleading. The author, who has collected twenty-nine cases from the literature, discusses in detail the differential diagnosis, the most important tests being indicated in the record of his case.

208. Large Lipoma of the Right Labium Majus.

GAMMELTOFT (*Ugeskrift for Læger*, June 5th, 1919) records the case of a woman, aged 40, who had previously been well, apart from the development of a nodule removed from the left breast when she was 20. At the age of 38 she noticed a swelling in the right inguinal region. As the swelling grew it became increasingly troublesome, especially when she sat down. On examination the swelling was found to be almost as large as an infant's head; it hung between the thighs, suspended from the right labium majus. It was soft but not fluctuating, and the overlying skin was brown and showed a few distended veins. Operation under chloroform proved the swelling to consist of a lipoma, the uppermost limit of which extended into the ischio-rectal fossa for a little way. Under the microscope the tumour showed oedematous changes.

PATHOLOGY.

209. Primary Enchondroma of the Lung.

ENCHONDROMA is a form of tumour which is very rarely found in the lung. As a rule it does not give rise to any definite symptoms during life, and is only discovered at the autopsy. E. REBOUL (*Journ. de méd. et de chir. prat.*, October 25th, 1919) devotes his Lyons thesis to a description of one of these cartilaginous tumours, which, owing to their local malignancy, differ from the benign growths of rachitic or rheumatic origin called enchondroses, which develop from pre-existing cartilage. Unlike the cases of enchondromata hitherto described, which were usually multiple and small, the tumour described by Rebul was a large single growth measuring 15.5 cm. by 11.5 cm., and weighing 780 grams. On clinical and radioscopic examination it presented the appearances of a hydatid cyst. On exploratory puncture a solid mass was encountered suggestive of cancer. The tumour was enucleated with considerable difficulty from a sac which was formed below by the diaphragm, externally and anteriorly by the pleura, and behind and above by the lower surface of the lung. On section the tumour showed a yellowish surface with islands of cartilage in a chalky matrix. Microscopical examination showed an osteo-cartilaginous tumour with bone marrow of fatty type interposed between the bony and cartilaginous framework.

210. Resolution in Pneumonia.

LORD (*Journ. Exper. Med.*, October 1st, 1919) brings forward evidence of the existence, in the cellular material obtained from pneumonic lungs, of a proteolytic enzyme capable of digesting coagulated serum at hydrogen-ion concentrations of 7.3 to 6.7, but becoming inactive with more acid concentrations. He also finds an enzyme, capable of splitting peptone to amino-acid nitrogen, which is operative at hydrogen-ion concentrations of 8.0 to 4.8, but most active at 6.5 or 5.2. These observations may be regarded as having a bearing on resolution in pneumonia. It is probable that during the course of the disease there is a gradual increase in the hydrogen-ion concentration of the exudate, and as the cellular material breaks down it liberates a ferment that digests the fibrin in weakly alkaline or weakly acid media. It loses its activity as the hydrogen-ion concentration of the exudate increases, but

meanwhile the peptone-splitting ferment increases in activity, and gradually replaces it entirely. By these means it is imagined that the exudate becomes dissolved and resolution takes place.

211. Pathology of Tuberculous Peritonitis.

L. MELCHIOR (*Ugeskrift for Læger*, October 23rd and 30th, 1919) has investigated 36 cases of tuberculous peritonitis—7 in children, 14 in women, and 15 in men. These 36 cases were found among 4,572 necropsies, and the incidence of tuberculous peritonitis in the mortuary might accordingly be put at 0.8 per cent. Among the children the most common primary lesion was tuberculosis of the mesenteric glands—an observation which the author suggests might indicate infection of the peritoneum through the gut and mesenteric glands. A striking feature of tuberculous peritonitis among the women was the frequency with which tuberculosis of the internal reproductive organs was found (in 12 out of 14 cases). In many cases in this class no other source of infection could be found, and in at least half of the cases tuberculosis of the gut could be definitely excluded. Haematogenous infection being improbable, the author concludes that in women the most common source of tuberculous peritonitis is the tuberculous internal generative organ. Among the men tuberculosis of the reproductive organs was conspicuous by its absence—a phenomenon the more striking because tuberculosis of the male reproductive organs is comparatively common. There was also no tuberculosis of the urinary tract (except for one case of milary tubercles in the kidneys), nor was there tuberculous meningitis or acute milary tuberculosis. On the other hand, in as many as 8 out of the 15 cases there was extensive chronic pulmonary tuberculosis. These findings suggest that in the case of children and men the sources of infection are uncontrollable by operation and, broadly speaking, the prospects of successful operative treatment are poor. In women, however, the origin of the peritonitis being traceable to tuberculosis of an ovary, the uterus, or its appendages, the prospect of combating the peritonitis by removing the primary focus of disease is comparatively good.

212 Morbid Anatomy of Cephalhaematoma.

G. VARIOT and J. BOUQUIER (*Bull. Soc. de Pédiat. de Paris*, April 15th, 1919) describe the *post-mortem* appearances of two cases of cephalhaematoma. In the first case, which showed a typical haematoma of the right parietal region, the pericranium was still slightly raised by the collection of blood. The diploë in the central part of the parietal bone was much thinned. On the other hand, the bony radiations starting from the centre of ossification in the healthy parietal bone were distinctly visible, and the bone was thicker. But the most striking feature in the specimen was not so much the thinning of the bone as the presence in it of numerous holes like those made by a needle, especially at the anterior superior part in an area of about a square centimetre. In the second case the right parietal bone showed very similar small holes. None of the fissures and cracks which have been described by some writers were seen in the outer table. The speakers considered that a direct relation existed between the presence of the holes, which were most marked in the region of the haemorrhage, and the effusion of blood. The holes probably represented medullary spaces containing the blood vessels which gave rise to the haemorrhage. Delay in ossification, which appeared to be the primary factor, would be more likely to produce a tearing of the blood vessels when the pericranium was being separated during labour. The mechanism of haematoma appears therefore to vary in different cases. In some there are cracks or fissures and in others a special dysostosis which appears to be a predisposing cause of the haemorrhage.

213. The Pathology and Bacteriology of the Influenza of 1918.

FROM a consideration of the findings in 212 *post-mortem* examinations on influenza cases, CORONINI and PRIESEL (*Muench. med. Woch.*, No. 35, 1919) comment on the relative infrequency of tuberculosis as a serious complication. In only 5 of the cases was there a progressive pulmonary phthisis. In 1 case there was acute milary tuberculosis and in 1 tuberculous pleurisy. Old cardiac valvular lesions were present in 17 cases, and in 7 of these an acute endocarditis was superadded. In 1 case only was there a primary endocarditis of simple, verrucose type. In all the cases the cause of death was severe lesions in the respiratory system. All cases dying in less than a week showed more or less inflammation of pharynx, larynx, or trachea. In 20 cases these lesions were very severe and of

diphtheritic type. In the first week the pulmonary lesion seen was a haemorrhagic bronchopneumonia, usually accompanied by sero-sanguineous exudate in the pleurae. In deaths during the second week the bronchopneumonias were purulent, while at later dates abscesses in the lungs were frequently found. Pleural effusions in these later cases were generally purulent. Rupture of degenerated muscles, due to severe coughing, was occasionally observed. Minute haemorrhages were seen in the pleurae and pericardium in suffocative cases. In four instances there were petechiae in the skin, in 14 multiple small bleeding points in the mucosae of stomach and intestines, in 7 small bleedings in the renal pelvis. In 8 cases, which occurred early in the epidemic, there were multiple minute haemorrhages in the white matter of the brain. These were of the spherical type frequently observed after poisoning by phosgene. The writers hold that the cerebral haemorrhages were due to toxic action causing damage of capillary walls; they found no evidence of bacteria in relation to them. One hundred and ninety-eight cases examined bacteriologically gave very diverse results. Pneumococci, streptococci, and *Staphylococcus aureus* were the organisms found most commonly. Undoubted influenza bacilli of the Pfeiffer type were cultivated successfully only nine times. In 16 cases the writers obtained a minute Gram-negative coccus in short chains, which gave a light growth on ordinary agar. In animals it caused only purulent peritonitis. In sections of lungs from many cases they saw organisms which they believed to be this coccus, but these were possibly Pfeiffer's bacillus.

214. Laceration of the Tissues and Gas Gangrene.

S. WEIL (*Muench. med. Woch.*, No. 37, 1919) experimented with strains of the bacillus of malignant oedema and of Fraenkel's bacillus, and employed Hochst's multivalent serum and Wassermann's antitoxic serum for malignant oedema. It was found that doses of the organisms which could easily be overcome by the undamaged tissues of rabbits and guinea-pigs gave rise to fatal gangrene if injected into muscles which had previously been lacerated by clamping the limb. Even small fractions of the minimum lethal dose for a healthy animal would prove fatal if inoculated into crushed muscle. It was further observed that doses of appropriate antisera which would give complete protection from a lethal dose of organisms in an animal with undamaged tissues were valueless for the same dose of organisms injected into lacerated muscle. Weil reiterates the necessity for surgical removal of damaged and infected muscle in human cases even when suitable antisera are employed.

215. Pathological Anatomy of Gout.

FRITZ MUNK (*Deut. med. Woch.*, No. 34, 1919) has combined extensive x-ray examinations of gouty lesions with histological investigations of morbid material. He finds that tophi are formed primarily only in the soft tissues around joints and not in the cartilages or bones. In the latter the urates are deposited only after some damage of the tissues. The reactive phenomena called forth by gouty deposits are partly of a general nature common to all tissues, and partly special to individual tissues. There is always an accumulation around the urate crystals of various cells, especially giant cells, some of which (the *uropages* of Littens) are loaded with urate. A species of granulation tissue is formed. Tophi which occur in the bone marrow are surrounded in addition by a zone of fibrosing osteomyelitis, and the bony trabeculae retrogress to non-calcified osteoid tissue. New bone formation, however, may occur as a late development. Tophi in this situation may cause a considerable excavation of the medulla and progress towards the articular cartilage. Sooner or later the cartilage, attacked from below, breaks down over the surface of the tophus and the urate is discharged into the joint cavity. This occurrence is seen especially in the joints of fingers and toes. Tophi in the periosteum cause absorption and indentation of the bone on which they press, and the periosteum itself becomes greatly thickened. The joint surfaces of articular cartilage are resistant to the action of urates and the cartilaginous substance shows no special predilection for uratic deposit. Accordingly, ankyloses are rare in gout. In gouty subjects the cartilages appear to receive a general stimulus from substances in the circulation, so that they exhibit a return towards more embryonic conditions. The zone of calcified cartilage at the osteo-chondral junction broadens and becomes more cellular than is the rule in normal adult tissues. This alteration proceeds uniformly and in an orderly fashion, so that it cannot be explained by the presence of tophi which are distributed irregularly in the vicinity.

EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

216. Treatment of Influenza by Injections of Quinine.

F. FABIER (*Journ. de méd. et de chir. prat.*, October 25th, 1919) devotes his Bordeaux thesis to the treatment of influenzal bronchitis and bronchopneumonia by intragluteal injections of quinine. In moderate cases a single injection of 15 to 18 grains is required; in severe cases three injections in the twenty-four hours are needed; and in cases with threatening asphyxia intramuscular injections (15 grains in the twenty-four hours) should be combined with intravenous injections (7½ grains in the twenty-four hours). There are, he adds, no contraindications to this method, which was employed by the writer in cases complicated by albuminuria, a bad state of the heart, and even in pregnancy. The doses, however, were reduced in these cases. The fall of the temperature will serve as a guide as to when to diminish or stop the injections. If necessary the drug may be given in cachets by mouth after the injections have been discontinued. Fabier's results were very satisfactory. The only death among 33 cases occurred in a pregnant woman admitted to hospital late in the disease with double bronchopneumonia. As a rule recovery was more or less rapid, the fall of temperature and general improvement taking place on the third or fourth day. There were no drawbacks to the treatment, apart from nodules at the injection site or tinnitus aurium, which occurred in a few patients.

217. Malingering.

WHITE (*Journ. of Nerv. and Ment. Dis.*, September, 1919) notes that malingering is regarded in different lights by the laity and lawyers on the one hand, and psychologists and criminologists on the other, in that the lay mind is not able to appreciate the unconscious motive present in many cases of simulation. He cites instances in which "faked" symptoms could not be regarded as true malingering, but were the result of defective mentality, and evidences of an abnormal mental reaction to a set of disagreeable realities. The writer discusses malingering in relation to punishment. The layman, having detected simulation, demands punishment as a natural consequence. There is something of hate in this attitude, and the situation illustrates the retributive reaction of the herd, or society, to an unsatisfactory member. The writer argues with considerable skill that to punish a convicted malingerer, whose symptoms may be the product of a psychosis or defective mentality, is further to distort and crush the already diseased mind, and can produce no possible benefit to society. Punishment is necessary, but it should not have the motive of hate behind it; the proper diagnosis must be made, and suitable methods of enforced re-education should be adopted for the chronic simulator, who may be turned into a useful member of society.

218. The Prognosis of Scarlatinal Nephritis.

IN a paper emanating from the department for infectious diseases of the Wilhelmina Hospital at Amsterdam, M. A. DUYVIS (*Nederl. Tijdschr. v. Geneesk.*, November 1st, 1919) reports the result of an inquiry into the subsequent history of fifty patients who had developed nephritis while under treatment for scarlet fever in the hospital in 1906. Of the 50 cases 30 could be examined, with the following results: 21 were found to be healthy; 4 had a raised blood pressure with little or no albuminuria and a satisfactory general condition; 2 had intermittent albuminuria with normal blood pressure and a good general condition; 1 had intermittent albuminuria with normal blood pressure and a suggestion of tuberculosis; and 2 had albumin in the urine with normal blood pressure and a good general condition.

219. The Therapeutical Value of Mesothorium.

P. CARNOT and G. GUILLAUME (*Paris méd.*, November 1st, 1919) report a number of diseases, which have been treated successfully by subcutaneous injections of mesothorium, a metal belonging to the group of radio-active substances of which radium is the best known. Its analgesic effect was undoubted both in cancer and in rheumatic pains. In gonococcal arthritis it proved very valuable, and had a definite though incomplete action on the local infective process. In a case of obstinate erythema multiforme the effect was remarkable. The eruption gradually faded, the

temperature fell by lysis, a progressive increase in diuresis coinciding with a disappearance of joint pains and an improvement in the general condition. In a case of hypertrophic biliary cirrhosis in which all other treatment had failed, after a series of injections of 30 micrograms of mesothorium the liver diminished 5 cm. in size, the pain which had lasted for months disappeared, the patient's general condition improved, and the intense jaundice almost entirely faded.

220. Tuberculosis and Wounds of the Chest.

As the result of his observations on soldiers of the allied armies interned in Switzerland, TECON of Lausanne (*Rev. méd. de la Suisse rom.*, August and September, 1919) came to the following conclusions: Pleuropulmonary tuberculosis as the consequence of wounds does exist, but is exceptional, since out of 42 cases of penetrating wounds and other injuries to the chest he found only 14 with tuberculosis, in only 8 of which a causal relation between the thoracic injury and the development of tuberculosis could be established. Contusions of the chest were more liable to give rise to tuberculosis than penetrating wounds. The time during which an injury may be regarded as responsible for the development of pleuropulmonary tuberculosis varies in different cases. It may be of considerable length, and it is impossible to fix a maximum period applicable to all cases.

221. Desertion and General Paralysis.

ACCORDING to BENON (*Ann. d'hyg. publ. et de méd. lég.*, September, 1919) failure to recognize general paralysis was frequent during the war, especially during the years 1914-15, before neuropsychiatric centres had been established at the front. The disease may run its course insidiously for months, especially on active service or in barracks, and its only manifestations may be slight impairment of memory and judgement, which is not incompatible with life in the army. The patient is often accused of simulation, but the specialist will have no difficulty in furnishing proofs of the reality of the disease. Benon records a case of desertion on the eve of an attack in a man who was generally regarded as a malingerer but was found to be suffering from general paralysis.

222. Mercury in the Treatment of Malaria.

L. FACCIOLÀ (*Il Morgagni*, October 31st, 1919) alludes to Cremonese's recent advocacy of mercury as a preventive and cure of malaria, and states that Baillon in 1640 and Willis in 1695 recommended calomel, either alone or in association with quinine, in the treatment of intermittent fever. L. Frank in obstinate cases preferred it to quinine in doses of 5 to 10 grains daily. In 1742 Schultze published his thesis at Halle on the treatment of quartan fever by mercury. BAILLIE (*The London Med. and Phys. Journ.*, 1820) observed that all regular intermittents yielded to quinine if they were given a grain of calomel every evening for eight to ten days. EBERLE (*A Treatise of the Materia Medica and Therap.*) obtained good results with mercury in cases in which intermittent fever did not yield to quinine, arsenic, etc. In 1914 Facciola himself (*Tommasi*, May 15th) stated that patients treated with mercury or who had been given mercury recently were immune to malaria either on account of the presence of the drug or by reason of the changes which it caused in the body fluids.

223. A Case of Priapism.

AT a recent meeting of the Société de Médecine et de Chirurgie de Bordeaux (*Journ. de méd. de Bordeaux*, November 10th, 1919) DE TEYSSEIEU reported the case of a sailor, aged 23, who, without obvious cause, developed a state of persistent priapism, which was not affected by coitus, chloroform, or drugs of various kinds. Nothing abnormal was found on examination of the genital system, and there was no mental disorder. The tendon reflexes were exaggerated, and the cerebro-spinal fluid showed considerable hypertension, but its composition was normal. The condition lasted twenty-eight days, and then slowly subsided a week after the application of continuous galvanic currents. In the subsequent discussion Anglade stated that he had never seen a similar case, but that he had occasionally met with priapism in epileptics.

224. Futility of Closing Schools in an Epidemic of Influenza.

DURING the epidemic of influenza in the autumn of 1918 E. ZANDER (*Hygiea*, May 16th, 1919) investigated the incidence of the disease in a school attended by 711 children distributed in twenty-four classes. The teachers of each class undertook to investigate in the children's homes the symptoms responsible for their absence from school, with special reference to the existence of fever. The diagnosis of influenza thus depended on laymen's evidence, but the author does not think this appreciably affects the validity of his conclusions. Altogether 419 scholars contracted influenza. With the exception of three classes the influenza morbidity of the school corresponded with the influenza morbidity of the population outside the school. In the three classes referred to the influenza curve did not conform to that of the general population, a wholesale outbreak suggesting infection of one scholar by another. But even in these exceptional cases the proportion of children contracting influenza was not ultimately much greater than in the other classes. The fact that influenza is seldom propagated by school contacts suggests that Ehrenfeld's hypothesis (non-infectiousness of influenza during the first day of the symptoms) is correct. On this assumption there is no need for the closing of schools during an epidemic of influenza provided every scholar is kept at home as soon as he develops symptoms. This was apparently the practice in the author's school, and he supposes that the fulminating outbreak of the disease in the three classes was due to infection by scholars whose symptoms on the first day had not been severe enough to keep them from school.

225. Influenzal Myositis.

WITH reference to the observation recently made by Hildebrandt, that the chief manifestation of the influenzal relapse is myositis, F. VORPAHL (*Med. Klinik*, September 28th, 1919) records the case of a man, aged 55, who contracted a light form of influenza in January, 1919. About eight days after it had passed off pain in the back of the head and the nape of the neck gradually became so severe as to be almost unbearable. When he was admitted to hospital, three to four weeks after the onset of the pain, he could hardly open his mouth or turn his head because of the pain which had extended to his face. The back of his neck was much swollen, but the skin was not involved. Light pressure was painless; deep pressure provoked great pain. The left masseter muscle was also tender. The leucocytes, which numbered 20,000, consisted chiefly of polynuclear neutrophils, eosinophils being present in the proportion of 2 per cent. The temperature was 38° C., the pulse 80. The application of hot substances increased the pain; cold substances relieved it. By the middle of March the pain had almost disappeared and the leucocytes had fallen to 15,000. Later, the extensors of the thighs became painful and the temperature again rose to 38° C. Convalescence was protracted, and the patient was not discharged as cured till early in May, when his leucocytes had fallen to 10,000. Reviewing the literature of influenzal myositis, the author notes that the prognosis is good, the action of the muscles involved not being ultimately impaired. But convalescence is apt to be protracted, and the pain is refractory to salicylic derivatives, quinine, baths, and hot air treatment. The drug found most effective by the author was collargol, of which he injected 6 c.cm. of a 2 per cent. solution into a vein. The leucocytosis in his case seemed to indicate that the symptoms were due to a genuine inflammatory condition of the muscles.

226. Hysteria in an Infant.

O. KLAUS (*Wien. klin. Woch.*, October 23rd, 1919) records the case of a 3-year-old boy who returned home one day from picking fruit to find that his mother had given birth to a child a few hours earlier. At first the boy was well and cheerful; half an hour later he collapsed on the floor, with limbs and head flaccid, and eyes closed except at short intervals. Now and then spasmodic contractions of certain muscles were observed. The author arrived to find nine women wailing over him. For thirty-six hours the child had not eaten or spoken, but he had occasionally screamed. There were inco-ordinated movements of the limbs, and he did not respond in any way when spoken to. It transpired that two years earlier a child had died in the family on the same day that another had been born, and that a year earlier the birth of yet another child had occurred on the day that the 1-year-old child had developed cerebro-spinal meningitis, of which it died a few days later. These two extraordinary coincidences had been discussed in the hearing of the patient,

whose temperature was subnormal, and who presented no signs of organic disease. The room being cleared of friends and relations, the author propped the child up, shouting loudly, "Stand up." The child obeyed, and ran crying to his father. Uneventful recovery followed.

SURGERY.

227. Excision of Joints for Tuberculous Arthritis.

KIRMISSON (*Revue d'Orthopédie*, September, 1919), who has been consulting surgeon to a "surgical aid bureau" in Paris during the past twenty years, has had an opportunity of examining during this time some 200 patients who have undergone excisions of joints. The joints investigated include the knee (118 cases), hip (42 cases), elbow (19 cases), ankle and tarsus (20 cases), and the wrist (2 cases). The results are grouped according to the age at which the resection was performed. In all excisions performed before the age of 15 years the results were either very bad or poor. This applied particularly to operations on children under 5 years of age. In the knee ankylosis in malposition and gross shortening were the rule; in the hip, in addition to deformity and shortening, persistent sinuses were frequently seen. The results in operations performed on adults (excepting in old people) were on the whole satisfactory, but in twenty knee-joint excisions abnormal mobility was present, necessitating the wearing of apparatus. All the elbow and wrist-joint excisions produced stiff joints, but as Kirmisson points out, patients with good results are unlikely to report at the bureau. He emphasizes the well known principle that where resection of a joint is performed with the idea of retaining or reproducing mobility it is essential that there should be a sufficiency of muscular power.—In apparent contradistinction to these conclusions ROCHER (*Journ. de méd. de Bordeaux*, September 25th, 1919) publishes notes on two cases of tuberculous arthritis of the shoulder-joint in children, where, after excision of the upper end of the humerus, complete removal of the synovial membrane and cauterization of the joint interior, excellent functional results were obtained. In both cases, seen one year and eighteen months after the operations respectively, fibrous ankylosis of the joint was present. Rocher pleads for the more frequent adoption of this operation in tuberculous arthritis of the shoulder in children where for social reasons conservative treatment involving careful and constant supervision is not feasible. Fixation of the shoulder in the position of future maximum utility was adopted for some months after the operation in each case. In these instances the joint excisions were deliberately planned, and correct after-treatment was carried out.

228. Finochietto's Sign.

A NEW sign for the diagnosis of faecal impaction is believed to be pathognomonic by its discoverer, FINOCHIETTO (*Surg., Gyn., and Obstet.*, September, 1919). The older signs were two: the fact that the palpating finger leaves a depression if the faecal mass is a soft one, the other is the so-called Gersuny or Klebs's sign. The latter is elicited by pressing on the tumour and suddenly releasing the pressure. When the sign is positive, there is a feeling as if two wet surfaces were separated at the moment when the pressure is released. Finochietto's sign is the auditory counterpart of Gersuny's sign, a rigid wooden stethoscope taking the place of the examining finger. When the pressure made with the stethoscope is released a large moist rale is heard. It is sometimes necessary to change frequently the site of the stethoscope in searching for the sign. The author holds that it is particularly valuable where the tumour is small, hard, and slightly movable, and there is no history of constipation.

229. Rib Compression of Brachial Plexus.

THAT the lowest cord of the brachial plexus may be compressed by a cervical (accessory) rib has long been known, and a large number of cases have now been recorded in the medical literatures of most countries. The discovery that the plexus may be compressed by the first rib itself in the absence of a cervical rib is comparatively new. STOPFORD (*Brit. Journ. Surg.*, October, 1919) gives an account of ten cases of this kind, the largest number so far recorded. It is noteworthy that all of these cases have been seen by him within the short period of two years. The symptoms are similar to those experienced by cervical rib sufferers: there is the same loss of power on exertion, the same neuralgic pain along the ulnar border of the forearm intensified by the carrying of weights which drag the

shoulder down and pull the plexus on to the rib more severely, the same relief when the elbows are supported as by the arms of a chair. The trouble is eminently amenable to surgical treatment, the portion of first rib on which the plexus lies being excised. The results of this manoeuvre are excellent. Stopford recounts two very interesting cases in which gunshot wounds resulted in a lowering of the pectoral girdle and consequent strangulation of the lowest cord of the plexus on the first rib. In one case, in addition to this compression, there was a neuralgia in the distribution of the upper (fifth) nerve root by traction. This last case was cured by nutritional treatment of the trapezius directed to increase the power of that muscle sufficient to support the shoulder.

220. Syphilis of the Stomach.

G. O. E. LIGNAC (*Nederland. Tijdschr. v. Geneesk.*, November 8th, 1919) records a case in a man, aged 52, in whom the symptoms were anorexia, constant pain and tenderness in the epigastrium, without special localization, and occasional haematemesis. No tumour could be felt on gentle palpation. There were no changes in the other organs, the liver in particular showing no enlargement or nodules. Traces of blood were found in the stools and gastric analysis showed hyperacidity. Venereal infection was denied. Nothing could be learnt from x-ray examination. A diagnosis of carcinoma of the stomach was made and laparotomy was performed. The middle third of the stomach, which was found to be diseased, was resected, and on examination showed three varieties of lesions—namely, chronic gastritis, gummatous, and syphilitic ulceration. Spirochaetes were found in the mucous membrane between the plasma cells. The patient made a good recovery, and when seen nine months after the operation was in excellent health. The writer alludes to similar cases of syphilis of the stomach simulating carcinoma reported by Dubac and Fenwick. In the former's case treatment by mercury and potassium iodide was instituted and recovery took place without operation. Lignac concludes by saying that cancer may supervene on a chronic syphilitic process.

221. Early Vaccine Treatment of Gonorrhoea.

H. BOAS and O. THOMSEN (*Hospitaltidende*, October 22nd, 1919) have departed from the usual course in the vaccine treatment of gonorrhoea by confining the injections to early cases. Thus, instead of treating the complications of gonorrhoea, they attempted to abort them. Every recent case of gonorrhoea was given three intragluteal injections, the interval between each injection being five to seven days. After giving details of the preparation and dosage of their vaccine they compare the results obtained in 126 inoculated cases with the results of non-specific treatment in a consecutive series of 202 cases. Among the inoculated patients the incidence of complications was 19 per cent. Among the uninoculated it was 45 per cent. Of the 23 complicated cases observed among the inoculated, there were 7 in which the complications occurred synchronously, at a time when a new supply of the vaccine was used. This supply was probably inert, and as soon as it was replaced by another supply, the bulk of the inoculated remained free from complications. Of the 23 complications among the inoculated, one was lymphangitis of the penis and 2 were periurethral infiltrations. There were 15 cases of posterior urethritis, 3 of prostatitis, and only one of epididymitis. As a rule the complications were not severe. Of the 90 cases showing complications among the uninoculated, about half were cases of prostatitis and a bare quarter were cases of epididymitis. The inoculation seemed to have no effect on the course of anterior urethritis, gonococci being found in the discharge for as long as among the uninoculated. Inoculation did not, therefore, hasten recovery, except in so far as it prevented the development of complications in a large proportion of cases.

222. Intravenous Injection of Mercury and Salvarsan in the same Solution.

LINSER of Tübingen (*Med. Klinik*, October 12th, 1919) has for the past fifteen months given intravenous injections of a mixture of sublimate of mercury and salvarsan in about 1,000 cases. Intravenous injections of sublimate alone are apt to provoke thrombosis; and though this may be avoided by diluting the solution with blood, aspirated into the syringe before injection, the device implies an undesirable complication of technique. But dilution of the sublimate with a solution of salvarsan serves the same purpose, and is in other respects an advance in the combined treatment of syphilis with mercury and salvarsan. The author has given about 8,000 of these combined

injections, and has seen no ill effects. No enteritis, dermatitis, or signs of renal irritation were noted, and stomatitis occurred only when very large doses of mercury were given. The effect of this procedure on the manifestations of syphilis was rapid and thorough. Wassermann's reaction became negative during or soon after it, and remained negative. Among the cases observed for more than a year, there were only a couple in which the reaction failed to remain negative. Examination of the mixture by Professor Bülow showed that the mercury enters into a new combination, so that it is no longer demonstrable by the ordinary tests. It is possible, even probable, that the composition of the salvarsan is also affected. The system appears to tolerate larger doses of the sublimate in conjunction with salvarsan than by itself. As much as 0.1 gram of sublimate was given in one dose by the combined method, but this did provoke stomatitis. This showed that the mercury was not converted into a biologically insoluble compound, as was feared. The excretion of mercury and salvarsan by the kidneys showed no differences from the excretion of these drugs when given separately. The following technique is recommended: Into a 10 c.c.m. syringe 6 to 8 c.c.m. of warm water containing the desired amount of neo salvarsan or sodium-salvarsan are aspirated, and then 2 c.c.m. of a 1 per cent. solution of sublimate. A dark-green deposit forms, but this passes even a fine needle. To ensure proper mixture and thus prevent thrombosis, the syringe should be well shaken, preferably with a bubble of air inside it.

OBSTETRICS AND GYNAECOLOGY.

223. Modification of Porro's Operation.

LECOQ (*Ann. de Gyn. et d'Obst.*, October, 1919) recalls an operation by his former chief, Reymond, in 1911. Reymond removed a gravid uterus at term containing a living infant without doing the preliminary hysterotomy, just as one would remove a large fibroid, thus realizing haemostasis surgically and saving the mother and the child. Lecoq has performed the operation himself on four occasions, saving the child in each case, but losing one mother from diffuse peritonitis. The five cases, including Reymond's, are reported in full. The indications for the operation are the same as those for hysterectomy or for Porro's operation. By the method one can obviate haemorrhage and avoid the risks of infection. The indications are summed up as follows: (1) Probable infection of the uterus when parturition by the natural passage cannot take place without danger, (2) when the uterus is the seat of fibroids or cancer, (3) when rapid delivery is necessary owing to the imminence of uterine rupture, (4) when complete uterine inertia occurs at the time Caesarean section is proposed, (5) in the case of placenta praevia with grave haemorrhage or with haemorrhage into the uterine muscle, and (6) to obviate the danger of osteomalacia. Briefly, the operator proceeds as in hysterectomy, clamping the broad and round ligaments, incising the peritoneum anteriorly and stripping off the bladder. Then, the uterine arteries having been identified, they are clamped and the vagina or cervix cut across, this being done very rapidly. The clamping of the second uterine artery interrupts the maternal circulation and threatens asphyxia of the fetus. The author therefore advises that one of the uterine arteries be cut between two clamps, and that the vagina or cervix be sectioned right up to near the second artery; then, everything being ready, the latter is clamped and cut and the uterus removed. The assistant then deals with the uterus, cutting up its anterior wall, tying the cord, and, if necessary, resuscitating the infant. The operator finishes the operation as in ordinary hysterectomy.

224. Detention Home for Women.

FINLEY (*Amer. Journ. of Obst.*, October, 1919), in a short report of the work of a detention home for women in Omaha, states that more than half of the cases were addicted to the drug habit and that all were social derelicts. As a moral problem the work was most difficult because, as these women had a certain economic value in the underworld, repeated efforts were made to obtain their release, and many who were released attacked the home in a most scandalous manner. The police and the politicians were not too enthusiastic in their support of the institution. In a total of 275 cases admitted all but 8 had gonorrhoea. It was found that a single negative smear had no significance, as in only 30 per cent. of the cases which ultimately revealed the gonococcus was the organism found at the first examination, in some cases the gonococcus was not found until the eighth,

tenth, and, in one instance, the fifteenth successive daily examination. The complement deviation test for gonorrhoea did not prove to be of any practical value. In addition, 70 per cent. were also syphilitic, though only one in ten showed clinical evidence of syphilis. The number of cases of tubal infection was surprisingly low; clinical evidence of involvement was given in only 2 per cent. of cases. Dilatation of the cervix under gas anaesthesia, with swabbing of the endometrium with formalin and iodine solutions, shortened the period of detention by half.

235. Sugar and Fats during Pregnancy.

SCHILLER (*Surg., Gyn., and Obstet.*, November, 1919) states that although glycosuria of a small degree is by no means rare, and a susceptibility to alimentary glycosuria or a decreased sugar tolerance is very common during pregnancy, yet the amount of sugar found in the blood in these conditions is not above the normal level. This glycosuria and decreased sugar tolerance is to be explained by the activity of the glands of internal secretion and the lowering of ovarian activity during pregnancy. The increase of fats in the blood from the fourth month onwards is not to be explained either by increased amounts consumed nor by increased mobilization of fats from the fat deposits of the body. No satisfactory explanation of the hyperlipidaemia has yet been presented. There is no parallelism between the amounts of glucose and cholesterol in the blood of the pregnant. Schiller thinks that the endocrine glands play an important part in this phenomenon also.

PATHOLOGY.

236. Paget's Disease of the Nipple.

PAGET's disease of the nipple, an eczematous condition in which malignancy sooner or later supervenes, has long awaited a rational explanation. It has been tacitly accepted that the eczematous condition is a pre-cancerous stage, and that the eczema, according to Virchow's theory that cancer is caused by prolonged irritation, leads eventually to the development of carcinoma of the breast. If this were really so one would expect the type of growth to be an epithelioma. This objection can be met by assuming that the cells of the nipple and areola mammae undergo a metaplasia and so produce whatever type of cell predominates in the sections of the carcinoma discovered later. This is a comfortable theory, and with it some pathologists have lulled themselves to sleep in the past. But it is a purely hypothetical consideration. This long accepted theory, according to which the eczema precedes, and is at first entirely independent of, the carcinoma, has been traversed by SAMPSON HANDLEY (*Brit. Journ. Surg.*, October, 1919). Handley holds that an undiscovered cancer is the first step and that the change in the nipple is secondary and purely nutritional, due, in fact, to the cutting off of normal lymph drainage of the nipple by permeation or secondary fibrosis of the subareolar lymphatic plexus. This would bring the induration and loss of epithelium of the nipple into line with the lymphatic oedema, which may occur in the skin covering the mamma. He adduces as evidence two cases which were carefully and systematically examined microscopically. Several plates are reproduced, which should be examined by the interested. In brief, the changes shown are permeation of the subareolar plexus, and also of the short, finger-like lymph vessels which drain the skin of the nipple. Most of these are seen blocked with cancer cells, and, as Handley says, they are as perfectly injected with cells as with methylene blue in an experiment. It must be admitted that Handley offers a very reasonable explanation of this disease. The amount of material is small, but cases are rare, and no doubt the collection of further material will place the issue beyond doubt.

237. Complete Inversion of the Viscera.

E. MARAIGNEZ (*Gaz. hebdomadaire des sci. méd. de Bordeaux*, November 16th, 1919) records a case of this kind in an Annamite rifleman who died of pneumonia. No history was available as to any signs or symptoms during life. The liver was in the left hypochondrium and the spleen in the right. The caecum with the appendix lay in the left iliac fossa, while the sigmoid flexure was situated in the right. On raising the intestines a similar inversion of the vessels was found. The abdominal aorta was on the right and the inferior vena cava on the left; the right

spermatic vein opened into the renal vein on the same side, while the left spermatic vein opened directly into the inferior vena cava. The same inversion of the viscera was found in the thorax. The heart was lying on the right side; the right lung had only two lobes and the left three. Below the concavity of the arch of the aorta, which was directed from left to right, was the left bronchus, and from the concavity of the arch arose the right subclavian and carotid, and the innominate artery on the left. Contrary to the normal arrangement, the left innominate vein was short and almost vertical, and the right long and almost horizontal. The position of the pneumogastrics was also inverted, the right crossing the anterior surface of the aorta, while the left passed in front of the subclavian artery.

238. Bacteriology of Mumps.

HADEN (*Amer. Journ. Med. Sciences*, November, 1919) recalls that several observers have from time to time isolated from the blood, parotid secretion, or testes, in cases of mumps, Gram-negative diplococci which grow slowly in cultures, usually not appearing for forty-eight hours; but on injection into animals they failed to reproduce the disease. Last year, however, Herb, who isolated such a coccus from the heart's blood and tissues of a fatal case, succeeded in producing parotitis in a dog after local injections of cultures, and also orchitis after intraperitoneal injection. Haden thinks that Wollstein's results with filtered parotid secretion and patient's blood are not by any means conclusive evidence of a filtrable virus. Presumably the same would apply to Nicolle's results. During an epidemic of mumps at a base hospital at Camp Lee, Haden found Gram-negative diplococci in the cerebro-spinal fluid in one of nine cases of mumps with signs of cerebral complication. All these specimens of fluid showed a pleocytosis of the mononuclear type. Though no growths were obtained on culture from any of these fluids, yet Haden succeeded in isolating the organisms in pure culture from the blood of four cases of mumps and from an inguinal gland in another case. The growth on broth was very slow; transferred to agar the colonies appeared as very small dewdrops in forty-eight hours, but on repeated subculture ready growth was obtained in all media. The injection of the organism into the testicle of a rabbit produced, first of all, a primary inflammation which quickly subsided, and then, on the eighth day, a considerable swelling of the organ, which continued for four days.

239. Origin of Lingual Ranula.

SKILLERN (*Surg., Gyn., and Obstet.*, November, 1919) who has had the opportunity of operating on a ranula in a case in which the submaxillary and sublingual salivary glands had previously been removed, argues against the theory that the cyst arises from the ducts of the salivary glands. The fluid contents of ranula, as Gmelin pointed out, have no similarity with saliva, for the former are rich in albumin and the latter is free from it. Paget long ago suggested that the condition was a hydrops of the sublingual bursa, as had already been adumbrated by Fleischmann, the discoverer of the bursa. With these opinions Skillern agrees. This sublingual bursa is found close to the frenum, resting on the genioglossus, behind the ducts of Wharton and Rivini, and consists of a cavity split up by partitions lined with a distinct epithelium. The contents of a ranula resemble the white of an egg.

240. Blood Changes in Influenza.

HILDEBRANDT (*Med. Klinik*, October 26th, 1919) examined the blood of several cases of influenza (diagnosis confirmed by bacteriological examination) in a military hospital in Flanders. There was no appreciable change in the haemoglobin content of the blood; it was 90 per cent. or less. Early in the disease there was leucopenia, but as the disease progressed there was a slow but not uniform increase in the number of leucocytes. A differential leucocyte count showed a decrease chiefly of the lymphocytes; the decrease in the number of the polynuclear leucocytes was less marked. Later there was an abrupt rise in the number of leucocytes. In severe cases eosinophilia was conspicuously absent; at a late stage in the disease it was much in evidence. Bronchopneumonia without mixed infection did not affect the blood picture, but a mixed infection led to extreme leucocytosis. The blood picture was the same in cases of relapse as in the original disease. The blood changes were of importance in the differential diagnosis of five-day fever, rubella, and early phthisis, but not of typhus. The lymphocytosis found in influenza was apt to persist, and to be demonstrable even a year after its development.

EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

241. Influenzal Encephalitis.

G. NEVE (*Hospitalstidende*, November 12th, 1919) has observed six cases of encephalitis in conjunction with, or soon after, an attack of influenza. One of his patients was a butcher, aged 46, whose family suffered from influenza. He was also "out of sorts" and lost appetite, but did not at once go to bed. After a few days he felt very ill, tired, and restless, with a sense of pressure in the head. On his admission to hospital a week after the development of symptoms he seemed very debilitated, and his movements were very sluggish. He could hardly move his head, but his neck was not painful. The pupils were contracted; their reaction to light was slow, and to accommodation almost absent. He collapsed, sometimes to the right, sometimes to the left, when Romberg's test was made. He was rather drowsy, and complained of feeling heavy and giddy. He could read only for a short spell, and for some days he complained of pain in the back of his head. When he was discharged from hospital, about six weeks after admission, his symptoms had vanished and his pupils reacted to light. The author, who gives details of all his cases, found the clinical picture strikingly uniform, the differences noted being a matter of degree only. Every patient treated in hospital was given hexamethylenetetramine, and the recovery of all the patients was probably the result, in part, of this treatment. The most prominent symptoms were drowsiness, spasm or rigidity of certain muscles, nystagmus, diplopia, and paresis or paralysis of the iris. Only in one case was the interval between the influenza and the encephalitis as long as two months; this case, which was particularly severe, was thought to be one of reinfection with influenza.

242. The Ocular Complications of Influenza.

ACCORDING to KERBRAT (*Journ. de méd. et de chir. prat.*, October 25th, 1919) irido-choroiditis was fairly frequent in the course of the influenza epidemic of 1918-19. It was not always associated with a suppurative process of the adjacent tissues, such as sinusitis or adenitis, but appeared to be due to general septicaemia. It usually developed as the attack of influenza was subsiding, when the system offered less resistance to pyogenic organisms. Moreover, Kerbrat's patients had been in a state of mental and physical depression even before their influenzal attack. Involvement of the uveal tract was much more serious than simple serous iritis, which sometimes occurred, and was accompanied by little pain or exudation. The uveal inflammation was manifested by severe pain, hypertension, mydriasis, and discoloration of the iris. Opacity of the cornea and hypopyon frequently supervened. The other eye might become involved, but, as a rule, sympathetic ophthalmia was rare. When the process was confined to a single eye panophthalmitis might occur, or, even apart from a general inflammation of the eyeball, gradual atrophy of the eye and blindness might result.

243. Treatment of Lupus Erythematosus.

SMALL (*Brit. Journ. of Dermat. and Syph.*, September, 1919) recommends for localized lupus erythematosus of the face, scalp, ears, or hands a simple method of treatment, which he says gives satisfactory results and good cosmetic effects. The part is first gently washed with ether and allowed to dry. It is then vigorously rubbed with a mixture of acid. carbol. liq., 1 part, acid. lactic. fort., 4 parts, by means of a glass rod, a few drops being applied at a time, and the rubbing continued for two or three minutes. If slight irritation develops vaseline may be applied. Immediately following the treatment there is often a slight inflammatory reaction. In a few days some desquamation occurs leaving underneath a pinkish, relatively healthy, area. On the completion of exfoliation the applications are renewed with at least weekly intervals, to allow of the disappearance of the inflammatory reactions. Too frequent applications might lead to ulceration. Improvement is marked after one or two treatments, and when these are continued the end results are very satisfactory. Lupus erythematosus of the hands, generally so intractable, is rapidly improved by this method. The remedy seems to act not only by producing exfoliation, but also in some more specific way upon the morbid process.

244. Treatment of Diabetes Insipidus by Pituitary Extract.

P. LEREBoullet (*Paris méd.*, November 1st, 1919) alludes to a case of diabetes insipidus, reported by him five years ago, in which the symptoms were temporarily relieved by subcutaneous injection of the posterior lobe of the hypophysis. Since then many other similar cases have been published showing that diabetes insipidus is often the direct or indirect manifestation of a change in the hypophysis, which can be favourably influenced by subcutaneous injections of the posterior lobe of that gland. Its action, however, is only temporary, and rarely lasts more than twenty-four hours. The treatment, therefore, does not modify to any extent the prognosis of diabetes insipidus. It cannot cause a disappearance of the causal lesion, nor render an etiological treatment unnecessary—for example, when the condition is due to inherited or acquired syphilis. It does not prevent a subsequent operation, which is always serious and often fatal. But its value lies in causing a temporary relief of the patient's symptoms. It dispels the intense thirst for a few hours, calms the nervous system, and restores sleep. The treatment is quite harmless, so that daily injections of 1 to 2 c.cm. of the extract of the posterior lobe may be continued for a long period, and will be found to have a favourable action, not only on the diuresis and thirst, but also on the obesity, general condition, development of the genital system, and even on growth.

245. Are Hospitals Responsible for Spread of Influenzal Pneumonia?

C. LUNDGAARD (*Hospitalstidende*, October 8th, 1919) has found it a prevalent opinion among Danish practitioners that patients admitted to hospital with uncomplicated influenza often contract pneumonia as a result of hospital infection. To elucidate this matter he has investigated the records of a hospital where 272 cases of influenza were admitted. In 44 cases the influenza was uncomplicated by pulmonary manifestations. In 56 cases it was complicated by bronchitis, and in 172 by pneumonia. In all but one of these 172 cases the pneumonia existed at the time of admission to hospital. The one exception was a girl, aged 18, admitted to hospital after she had been ill for two days. On admission her temperature was just over 38° C. In the course of a few days it fell practically to normal. She seemed to be definitely on the road to recovery when, on the fourteenth day in hospital, the temperature rose suddenly and rigors set in. After three days the temperature was 40°. A few days later signs of croupous pneumonia on the right side developed, and death occurred three days later. The records of this hospital, which in the matter of organization, distance of one bed from another, etc., conformed to conventional standards, gave no support to the assumption that pneumonia is propagated by hospital inmates. The fact that only one patient (of 100 patients admitted to hospital without pneumonia) contracted pneumonia in hospital was in itself a refutation of this view. Of the 172 cases of pneumonia 64 proved fatal, the death rate being 37 per cent. of the cases of pneumonia and 24 per cent. of all the cases of influenza.

SURGERY.

246. Brain Injury in Simple Scalp Wounds.

SCALP wounds have usually been regarded as trivial things, and though it has long been known that the inner table of the skull may be broken whilst the outer remains intact, it has not been sufficiently appreciated that the brain may receive a severe injury and the calvarium suffer no hurt. JEFFERSON gives the results of a systematic neurological investigation of a series of scalp wounds (*Brain*, September, 1919) caused by firearms and shell fragments. He finds that over 90 per cent. show evidence of some sort of intracranial disturbance. In about 50 per cent. the signs are of a concussion character, but in a further 43 per cent. there are signs of a local cerebral contusion as well. The contusions have involved all areas, mainly the motor and visual cortex, and have been of all grades of severity. Usually the brain injury clears up rapidly, and unless the examination is made soon after the receipt of the injury all signs may have disappeared of what was at first

a definite clinical entity. The force producing these scalp wounds of war is admittedly great, and probably cerebral trouble will be found to be much rarer in civil life than it was in the field. It is, however, important that attention should be drawn to this subject, as pensioners who complain of head trouble after a simple scalp wound without fracture are apt to be suspected of neurosis. Three of the cases had Jacksonian fits, whilst the palsies were varied in character and degree. Not the least interesting are the injuries of the visual cortex and the post-central sensory area.

247. Appendicitis in the Epigastrium.

J. BRAU-TARIE (*Gaz. hebdomadaire des sciences médicales de Bordeaux*, November 16th, 1919) records a case in a boy, aged 14, where, in spite of the presence of a definite McBurney's point, the caecum and appendix were not found in the right iliac fossa but in the epigastrium. Although the operation was performed only twenty-three hours after the onset, the appendix was already gangrenous. Appendicectomy was performed and complete recovery took place. The author attributes the ectopia of the appendix to the abnormal shortness of the ascending colon.

218. Non-union after Osteotomy.

FORTUNATELY corrective osteotomies are followed in the vast majority of cases by solid bony union. GEIST has been unfortunate enough to meet with two cases in which operations on deformed tibiae resulted in non-union (*Journ. Orthopaed. Surg.*, September, 1919). In the first case he did an osteoclast on a congenital unilateral deformity. When the plaster was removed, two months later, "delayed union" was found. A fresh cast was applied and worn for a further two months, at the end of which time the bone formative processes were found to be still in abeyance. Similarly after a third cast, so a brace was tried, but nothing happened during nine months save absorption of the bone ends. Fifteen months after the primary operation a bone graft was inserted. Primary wound healing resulted, but the end result was non-union. The Wassermann test was negative, and the child in all other ways was perfectly healthy. A second bone graft nine or ten months later also failed, and the non-union persists to this day. A second case, in a man of 30, was apparently cured by bone grafting. Geist was under the impression that non-union was very rare after surgical fracture, but at the meeting at which his paper was read a discussion ensued, and eight further cases came to light in the practices of the speakers. It is evident that this untoward happening may from time to time occur, and that the technique employed has nothing to do with it. It is, however, so uncommon that it need not be considered a definite risk, and should deter no one. It seems to be commoner below the knee than above it, possibly because of the relatively poorer blood supply of the lower third of the tibia.

219. The Futility of Nerve Flaps as Bridges.

MOST standard textbooks on surgery contain descriptions and diagrams of the method of bridging gaps between the widely separated ends of divided nerves by the cutting of flaps. These can be made from the central or from the peripheral end, or, as has commonly been done, from both. STOOKEY (*Surg., Gyn., and Obstet.*, September, 1919) has made a careful analysis of the recorded cases, with a commentary upon each. There appears to be not a tittle of evidence that this operation has ever been of value, and he denies that the operation has a place in modern nerve surgery. Experimentally it has been shown that flaps do not serve as conducting paths for the down-growing neuraxons. By the formation of flaps from the central stump a portion of the nerve from which the neuraxons must grow is grossly interfered with. Any flap becomes a degenerated segment, and will not become neurotized. This operation, futile as it is, is still superior to one other manoeuvre—namely, the cutting of flaps from a previously healthy neighbouring nerve to eke out the deficiencies of an injured one. This *tour de force* lives, happily, only in the pages of books.

250. Successful Removal of Foreign Bodies from the Heart.

DUVERGEY (*Gaz. hebdomadaire des sciences médicales de Bordeaux*, November 23rd, 1919) reports three cases in soldiers in which a bullet (two cases) and a shell fragment (one case) were successfully removed from the heart substance. In the first case the bullet was in the anterior wall of the left ventricle, and in the second in the posterior wall of the right ventricle. The symptoms in each case were the same—namely, a sense of oppression, precordial pain, and dyspnoea on exertion. In the case of the patient with the shell

fragment swelling of the left breast was observed on several occasions, and was probably associated with pericarditis. Duvergey is of the opinion that the anterior route should always be employed, even in the case of projectiles situated in the posterior surface of the heart. Resection of two or three costal cartilages and resection of part of the left border of the sternum allow a free access to the heart, the posterior aspect of which can be inspected by raising it with the valve of a vaginal speculum. All the projectiles were removed by the aid of radioscopy and intermittent use of red light, their exact situation being determined by the use of fine needles. Drainage of the pericardium for two or three days after the operation is indispensable. Rapid improvement followed operation in all the three cases, and recovery was uneventful and complete. One patient was able to return to the front and the other patients resumed their former occupations.

251. Partial Paralysis of Abdominal Wall.

ROGER (*Paris méd.*, September, 1919) calls attention to what must be a fairly common sequel of gunshot wounds of the chest, namely, paralysis of a muscular segment of the abdominal wall. This palsy is, of course, the result of division, more or less complete, of an intercostal nerve. Since the abdominal musculature is innervated by the last six intercostal nerves of each side, it follows that paralysis will be seen only after an injury of the lower chest wall. Roger points out that a great deal has been written on the innervation of the limbs, but practically nothing on that of the trunk. (This is perhaps largely due to the fact that wounds in this region frequently cause death or such serious complications as to make the intercostal nerve lesion of decidedly secondary importance and consequent neglect. Roger has found no case similar to his in the war literature of the past five years, though he admits they must have occurred. He mentions the fact that Walther in 1916 recorded 5 cases of low abdominal palsy following on lumbar wounds. Such cases are similar to those occasionally seen after kidney operations, where the first lumbar nerve has not been respected. Roger gives the case-history and clinical signs of one patient who had his left seventh, eighth, and ninth ribs broken behind by a rifle bullet. He recovered from a consequent emphysema, but a supra-umbilical hernia of large size developed, involving the left hypochondriac musculature as far as the middle line. There was a corresponding area of anaesthesia, absence of the upper left abdominal reflex, and inexcitability of the musculature involved to the electric current.

252. Hour-glass Stomach.

WALTON (*Surg., Gyn., and Obstet.*, September, 1919) reviews the operative steps which have been utilized for the treatment of hour-glass stomach. Of the commonly employed methods—single and double gastro-enterostomy, gastrogastrostomy, Kaumler's gastropasty, and partial gastrectomy—he has little good to say. The chief fault to be found with these steps is that all save the last leave the ulcer untouched, a potential source of pain, and the possible origin of a malignant growth. Excision of the ulcer alone he finds to be insufficient, the patients not always obtaining the relief which is theoretically their due. He therefore advocates excision of a strip of the lesser curvature bearing the ulcer, the stomach contents being controlled by clamps thrust through from greater to lesser curvature above and below, and then reconstructs the stomach by approximation of the cut edges of the shallow V thus removed. He follows this up with an immediate horizontal posterior gastro-enterostomy. Walton believes that this operation is less severe than partial gastrectomy, a belief with which all will not concur. Nor are its advantages over the Balfour cautery and gastro-enterostomy method obvious. A large number of hour-glass stomachs are spasmodic, that is, a presumably reflex spasm resulting from an ulcer on the lesser curvature, the remainder consisting of those in which there is a definite cicatricial fibrosis. The two forms might well be considered separately, although the treatment suitable for each may sometimes coincide. Walton promises a further paper on the subject, when he will no doubt give more data from which more definite conclusions can be drawn.

253. Omental Grafts.

FINTON and PEET (*Surg., Gyn., and Obstet.*, September, 1919) publish an account of their experimental researches on the subject of omental grafts. The points that they set out particularly to investigate were several in number—whether a thick or a thin graft should be used; whether it should be cut free from the great omentum or left attached; whether it was necessary to scarify the intestine before applying the graft, and what was the fate and what

the scope of the graft in the face of infection. To all of these queries they give satisfactory answers. Detached omentum survived in practically normal condition when applied under sterile conditions to any abdominal organ. The thinnest grafts survived best; those containing much fat were frequently the source of large adhesions, and showed round-celled infiltration when sectioned. Mechanical irritation of the peritoneal layer on which the graft is placed is not necessary, and haemorrhage beneath it seriously interfered with its chances of survival. Finton and Ellis found that the best suture material was plain fine silk; iodine and chromic catgut were irritating and caused dense adhesions. No more sutures need be placed than are sufficient to prevent rolling; the graft need not be sewn down with more than four interrupted suture points. Detached omental grafts survived in every instance when used to reinforce Lambert suture lines, if infection was kept at its minimum; even when applied over small punctures the graft acted as a mechanical patch and prevented the spread of infection to the general peritoneal cavity. No method was found certain in preventing adhesions forming; vaseline and paraffin increased their number. The authors are in favour of cutting the grafts from the free edge of the great omentum and separating them entirely from it. An omentum whose border is fixed to any given point in the abdominal cavity invites the gut to strangle itself over or under it. Grafts are advised to replace lost portions of peritoneum, to strengthen suture lines in stomach or intestinal operations, to cover the end of the cystic duct or reinforce the bile ducts, and to reinforce the peritoneum in threatened perforation.

254. Generalized Subcutaneous Emphysema following Fracture of the Ribs.

ACCORDING to N. TAGLIAVACCHE (*La Prensa Méd.*, Argentina, September 20th, 1919) emphysema following fracture of the ribs is, as a rule, more or less localized. Generalized emphysema, on the other hand, is rare, Alexander and Follet having collected only twenty cases from literature. It is usually a mild affection, the air in the subcutaneous tissue being absorbed spontaneously in from eight to twenty days. The fatal cases on record, such as three of those reported by Alexander and Follet, were due to complications, such as collapse of the lung, haemopneumothorax, and infiltration of air into the mediastinum. Tagliavacche reports a case in a man aged 58, who as the result of a fall from a height of 6 metres fractured the left fifth rib. In the course of two days the emphysema involved the whole of the face and neck, subcutaneous tissue of the thorax, abdomen, and scrotum. In the upper limbs, only the palmar aspect of the hands escaped. In the lower limbs the emphysema extended down both thighs and the left leg, but was absent on the right leg and both feet. During the first few days examination of the lungs was difficult, owing to the subcutaneous emphysema, but when the emphysema began to subside slight pneumothorax was detected in the left chest. Wool and bandages were applied and renewed every two or three days. On his discharge, sixteen days after admission, the emphysema had entirely disappeared except at the site of the fracture.

255. Peliosis Rheumatica simulating Appendicitis.

THE surgeon faced with a case of apparent peritonitis or obstruction (appendicitis, intussusception, etc.) is apt to forget that the signs of these conditions may be closely simulated by purpura. This is, of course, particularly true of children, and it is notorious that many an abdomen has been opened to find that purpura or the peliosis rheumatica of Schönlein is present. FANTOZZI (*Il Policlinico*, September 15th, 1919) records a case which narrowly escaped operation. A boy, 12 years old, was admitted to hospital with slight fever, small rapid pulse, anxious face, vomiting, and acute abdominal pain localized in the right iliac fossa. The diagnosis of acute appendicitis was made. On undressing the child a petechial rash was found in the region of the elbows and, on closer observation, over the lumbar-renal region. An inquiry into the history revealed the fact that a month previously the child had noticed a rash on his thighs which had quickly spread over the entire body, and he had been confined to bed for several days with slight fever. The rash, which was rose-red at first, became yellow in about a week and disappeared, leaving behind troublesome pruritus. A few days later painful swellings of the joints began, attacking successively the ankles, knees, shoulders, and elbows. Swelling of the body was also noticed, but at this time no rash. The painful oedema of the joints and body soon subsided, and the patient seemed almost well again when the abdominal crisis supervened, and the child was brought

to hospital. The author refers to other cases in the literature of gastro-intestinal pain associated with purpura. Recent monographs on the subject agree that the three characteristic symptoms of peliosis rheumatica of Schönlein are petechial eruption of the skin, painful oedema of the joints, and abdominal pain which may simulate appendicitis, general peritonitis, or total intestinal obstruction. Fantozzi suggests that the abdominal pain is due to the presence of petechial patches on different parts of the peritoneum. This hypothesis has been supported by cases examined at autopsy. In concluding, the author makes the following suggestions: (a) That in crises of abdominal pain it is well to remember the possibility of rheumatic purpura. (b) If a rash is present this suspicion is confirmed. (c) In the absence of a rash, swelling of the joints should be looked for. If these precautions are taken many useless laparotomies may be avoided.

OBSTETRICS AND GYNAECOLOGY.

256. Prochownik's Diet in Pregnancy.

EHRENFEST (*Amer. Journ. of Obstet.*, October, 1919) considers the claim of Prochownik, mentioned in many standard textbooks of midwifery, that the adoption of a specific diet by the mother is capable of so reducing the amount of fat in the fetus that easier labours are rendered possible, especially in certain cases of pelvic contraction. This diet was poor in liquids and carbohydrates and rich in proteins, and in general resembled that usually prescribed for diabetic patients. That fetal development can be noticeably influenced or actually retarded by food restrictions is held by Ehrenfest to be incompatible with our present knowledge of biology. The fertilized ovum is an individual organism not necessarily subject to maternal metabolism, and the placenta, far from being a passive mechanical filter, functions by supplying all the substances essential to the development of the fetus as long as they are available in the maternal organism. It is on the question of the weight alone, which is chiefly dependent on the amount of fat tissue, that the whole problem of the Prochownik diet turns. It is admitted that overeating on the part of the mother may have an etiological relation to excessive weight of the newborn child, but the author holds that this relation is neither definitely established nor as obvious as occasional clinical reports would indicate. Overeating is commonly associated with physical inactivity, and such inactivity tends to cause overcarrying, which is the most conspicuous causative feature in excessive size of the newborn. Ehrenfest concludes that increase of food is necessary in pregnancy, and that the Prochownik diet is not adapted to the special needs of the pregnant woman—in fact, in the absence of most careful supervision, it may actually be responsible for toxæmic conditions.

257. Serum Diagnosis of Pregnancy.

FIEUX and MAURIAC (*Gaz. hebdomadaire des sci. méd. de Bordeaux*, October 19th, 1919) describe a complement deviation reaction for which good results are claimed. Having made a preliminary test of antigens prepared from various placentas they determined that chorionic villi of early ova of from six to twelve weeks furnished good antigen with the serum of pregnant women, but that placentas of three to four months gave variable results, whilst placentas from the fourth to the ninth month were without antigenic value. In preparing their antigen they took the villous masses of living ova of from two to three months. These were washed in saline for four or five minutes to rid them of any blood clots and were minced and triturated to a homogeneous paste, which being spread on glass plates was dried in a vacuum desiccator over sulphuric acid. The dried substance thus obtained was powdered and stored in the ice-chest. At the time of use a certain amount of this powder was carefully triturated in saline solution, and the mixture, being left on ice for twenty-four hours, was then centrifuged, the supernatant fluid containing the antigen. Such antigens are rejected as have a pink or reddish tint, are too anticomplementary, or act on the red blood corpuscles. The results are given of 33 tests with 16 complete or almost complete deviations, all being cases of pregnancy, and 14 frankly negative results, at least four of these being cases of pregnancy, the other three results being doubtful and all being from pregnant women. In a later series of tests, numbering 48, there were 19 positive results, all probably being cases of pregnancy, and 23 negative results, 13 of which were certainly pregnancy cases and the rest other uterine conditions, whilst 6 results were doubtful, including at least 3 certain

pregnant cases. The authors say that they have never had a frankly positive result in a non-pregnant case, nor with serum from pregnancies later than the fifth month nor in the case of a dead fetus. They are quite sensible of the slender bases on which their reaction rests, but their modest statement disarms criticism and is in striking contrast to the claims of the Abderhalden reaction, which, once so boomed, is now almost forgotten.

258. An Operation for Prolapsus Uteri.

FREEMAN (*Surg., Gyn., and Obstet.*, November, 1919) details an operative procedure which he has used in 11 cases of prolapsed uterus with successful results. The uterus is brought through a median suprapubic incision, and if the patient is still in the child-bearing period she is sterilized by ligation and division of the tubes. A strip of fascia lata about six inches long by three-fourths inch wide is taken from the outer aspect of the thigh. A pair of small sharp-pointed curved forceps is plunged from one side of the uterus to the other close beneath the peritoneum covering the fundus just internal to the attachment of the tubes. Through this tunnel the fascial strip doubled longitudinally is drawn and secured by catgut at each end of the opening. The tendinous insertions of the recti muscles having been uncovered the ends of the strip are pulled over them one on either side of the abdominal incision. The peritoneum is closed and the ends of the fascia are pulled tight enough to hold the uterus firmly against the abdominal wall and are then tied and sutured to each other. The wound is closed in layers. Fascia lata has the advantages of being easy to obtain, strong, and not stretching to any extent, and is not absorbed but incorporated into the tissues. Several of the author's cases have developed ventral hernias. Cystocele, rectocele, and badly torn perineum would have to be repaired in addition.

PATHOLOGY.

259. Value of the Wassermann Reaction.

BROWNING and KENNAWAY (*Brit. Journ. of Dermat. and Syph.*, July-September, 1919) consider that it is out of the question to expect 100 per cent. of results free from dubiety. That the test has inherent limitations should be appreciated by everyone. When means have been taken to exclude the most important sources of error by suitable controls there will always be the fundamental consideration to recognize—namely, that the difference between a negative and a positive serum is quantitative and not qualitative. There is no sharp line of demarcation between syphilitic and non-syphilitic serums; there are always borderland reactions. The authors reckon that these constitute about 5 per cent. of cases. They point out that when a given syphilitic serum is tested with different specimens of complement, the degrees of deviation may vary considerably. This is an important observation, and its effect is to make the recording of degrees of positiveness—for example, four *plus*, three *plus*, etc.—quite meaningless.

260. The Leucocytes in Chronic Appendicitis.

FRIEDMAN (*Amer. Journ. Med. Sci.*, October, 1919), from a routine examination of the blood of so-called dyspeptics, many of whom are actually suffering from chronic appendicitis, suggests that in the differential count we have an important aid in the diagnosis of chronic appendicitis, provided an enumeration of the large mononuclears and the transitional leucocytes is made. There is a definite increase in the number of these cells in the blood of those suffering from chronic appendicitis, although this increase may be slight at times. This "transitional leucocytosis," though not an invariable finding, has a definite value. It is found in chronic appendicitis more frequently than a hyperleucocytosis or a polynuclear leucocytosis, and more often than positive x-ray indications. It may be actually observed and clinically demonstrated that a transitional leucocytosis points to appendicular disease. It is absent in gastric ulcer, cholecystitis, renal colic, etc. If present in these or in other abdominal conditions there is a chronic appendicitis complicating the existing condition. The author follows Wood in taking the percentage of transitionals normally as 2-4 and of large mononuclears as 1, the total percentage of both together being therefore 5. There is no adequate explanation at present for the frequency of a transitional leucocytosis in chronic appendicitis. Friedman finds an increase of both transitional leucocytes and large mononuclears, or of either of them, in 87 per cent. of demonstrated cases of chronic appen-

ditis. The condition often persists in the blood after appendicectomy has been performed.

261. The Etiology of Influenza.

FROM a study of the literature and his own investigations R. KRAUS (*La Prensa Méd.*, Argentina, October 10th, 1919), of the Bacteriological Institute of the National Department of Hygiene of Argentina, is convinced that the causal agent of the epidemic of 1918-19 is Pfeiffer's bacillus, associated in numerous cases with the pneumococcus, streptococcus, and parameningococcus, and possibly also with a filtrable virus which is the cause of the severe complications. He regards the prophylactic use of a vaccine composed of *B. influenzae*, pneumococcus, streptococcus, and parameningococcus as probably the only effective method of warding off influenza and its complications.

262. Syphilitic Appendicitis.

IN a series of papers published by the late Professor Gaucher in 1916 and 1917 it was argued that appendicitis was often due to syphilis, especially congenital syphilis. He also suggested that acute relapses of appendicitis were due to syphilis, and that they could be aborted by mercury. He cited many cases of congenital syphilis complicated by appendicitis, and in a family of eight children, all suffering from congenital syphilis, appendicitis occurred in as many as five. In support of his theory, his pupils Joltrain and Brier have shown that in 33 cases of appendicitis Wassermann's reaction was positive in 14. After criticizing the arguments on which this theory is based, H. BOAS and O. WISSING (*Ugeskrift for Læger*, June 4th, 1919) record 67 cases of appendicitis examined for syphilis. The examination of the blood was not undertaken till the eleventh day after operation, as the serum of recently anaesthetized patients occasionally gives a positive Wassermann reaction. In 65 of the 67 patients there was no history of syphilis, and no clinical or serological sign of it. Of the two exceptions, one patient suffered from a recent outbreak of secondary syphilis and gave a positive Wassermann reaction, the other had contracted syphilis fourteen years earlier and had been treated with mercury for three years. He presented no clinical sign of syphilis, and Wassermann's reaction was negative. The authors conclude that their material affords no support for the theory that syphilis causes appendicitis, and they suggest that Joltrain's and Brier's high percentage of positive Wassermann reactions may have been the outcome of serological examinations made directly after operation. This error might well have been made in 1909 and 1910—the period in which Joltrain's and Brier's observations were conducted—when the ability of a general anaesthetic to affect Wassermann's reaction was not known.

263. Pseudomyxoma Peritonei.

KING (*Amer. Journ. of Obstet.*, October, 1919) reviews the theories regarding this rather unusual pathological condition, which is characterized by the presence of a gelatinous material in the peritoneal cavity, covering the surface of the intestines, causing adhesions, and leading generally to a fatal termination. It is generally agreed that practically all cases in women result from the effect on the peritoneum of the colloid contents of ruptured pseudo-mucinous cysts of the ovary, and in men from ruptured hydrops of the appendix. Some have supposed the condition to be the result of implantation of tumour fragments on the peritoneal surfaces, others consider it to be a productive inflammation, the colloid material becoming organized with a stimulation of granulation tissue. Microscopically the tissue resembles myxomatous tissue; there is a framework of fibroblasts and capillaries embracing the colloid material in a meshwork. It invades the intestinal wall, destroying the elastic tissue and bringing about intestinal fistulae. In certain cases it would appear that the peritoneal surfaces really secrete the pseudo-mucin, a fact which does not fit in with the theory of productive peritonitis.

264. Congenital Cystic Lymphangioma.

J. ABOULARAGE (*Il Policlinico*, Sez. Prat., October 5th, 1919) reports a case of congenital cystic lymphangioma of the axilla in a child aged 12 months. The tumour, which at birth was the size of a hen's egg, increased in size until it became as large as an adult's fist and occupied the whole of the axilla and upper third of the arm. At the operation for its removal it was found to consist of a conglomeration of cysts, some of which contained blood and others serum, and to be adherent to the skin, muscles, nerves, and vessels of the axilla. The greater part of the tumour was resected and complete recovery took place.

EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE.

235. Treatment of Rumination in Infancy.

MONRAD (*Ugeskrift for Læger*, September 18th, 1919), has come to the conclusion that the physical sense of gratification experienced by rumination is an important factor in the continuation of this trick by infants. The inference from this is that if the patient's attention can be distracted whenever the rumination begins, it will ultimately forget the pleasure the practice gave, and abandon it. The following case illustrates this point: An infant, aged 6 months, had been breast-fed for the first three months. Afterwards he was bottle-fed on diluted cow's milk. This was well tolerated till a fortnight before admission to hospital, when intractable vomiting set in. In hospital he was at once seen to be a "ruminant." Various changes of diet and of methods of feeding were tried, but he steadily lost ground, a considerable proportion of his food being vomited in the act of rumination. After two months in hospital he was practically moribund. Rumination ceased only when he slept. Repeated examinations revealed no abnormalities of the gastric juice, nor signs of obstruction. When he was in *extremis*, kept alive by saline and camphor injections, the scheme was adopted of diverting his attention whenever he began to ruminate. He was taken out of bed, carried about the ward, and entertained in a variety of ways. The result was so strikingly beneficial that in three days the saline injections could be abandoned. He gained weight rapidly, and soon could sit up in bed and play by himself. After two months the constant watch over his bed could be relaxed, and though he was not completely cured of his habit, the rumination was indulged in much less frequently and vigorously, and seldom led to actual vomiting.

266. Fatal Idiosyncrasy to Atropine in an Infant.

E. BOHN-JESPERSEN (*Hospitalstidende*, November 5th, 1919) records the case of a girl, aged 2 years, who had suffered for about a month from phlyctenular conjunctivitis and photophobia. She was very nervous and excitable, having to be firmly held while a 2 per cent. solution of cocaine was instilled into both eyes. On the third day of treatment the cocaine solution contained atropine. About 8 drops were instilled, 4 into each eye. The amount of atropine sulphas given was therefore about 1½ mg. The atropine was administered about midday. The patient seemed well on the way home, became drowsy in the afternoon, but was well when she went to bed at 7. She slept till 1.30, when she drank some gruel. After that she fell asleep again. At 6.30 next morning her mother found her snoring and in convulsions. A doctor who was immediately summoned found her unconscious. The pulse was irregular and barely palpable, and the muscles of arms, legs, and neck twitched. Stimulants were given, but there was no improvement, and she died at 2 p.m. There was no scarlatiniform rash, and it was curious that so long an interval should have elapsed between the administration of the atropine and the onset of symptoms. The author makes no reference to a *post-mortem* examination, nor to the total amount of cocaine administered.

267. Castellani's Haemorrhagic Bronchitis.

J. BENECH (*Rev. méd. de l'Est*, November 1st, 1919) gives the following description of this form of exotic bronchitis, which has been introduced into France since the war, and often simulates tuberculosis. The incubation period is only one or two days. The onset is characterized by tracheo-bronchial pain, followed by muco-purulent expectoration, which is sometimes accompanied by headache and pains in the limbs and often by fever of a few days' duration, ranging from 100.4° to 104°. At the height of the disease the cough becomes less hoarse and the sputum assumes its characteristic appearance. The expectoration is at first sight homogeneous, being constituted by muco-purulent sputum streaked with blood or by a definite viscous haemoptysis. But the most striking feature is the subsequent haemolysis of the sputum. The fluid portion becomes pink coloured, while the muco-purulent part turns white and becomes adherent to the wall of the spitting cup or floats in the haemolytic fluid. The physical signs are those of ordinary bronchitis, with occasional evidence of consolidation at the apices or congestion at the bases. The

general condition usually remains fairly good. As a rule the expectoration becomes muco-purulent at the end of three or four weeks and then dries up. The physical signs completely disappear and the patient usually recovers without a relapse. Four varieties of the disease have been described: (1) An acute form, as above; (2) a relapsing form, in which the effect on the general condition is more marked; (3) a chronic form, which may last for years and then assume a rapid and malignant course; (4) associated and complicated forms, which include cases complicated by pneumonia, bronchopneumonia, tuberculosis, and pulmonary mycosis. On bacteriological examination of the sputum the *Spirochaeta bronchialis*, which is the causal agent of the condition, is found in enormous numbers. The prognosis is generally favourable. The most serious event is for the disease to become chronic, as this often gives rise to a serious general condition and favours the development of intercurrent pulmonary disease. There is no specific treatment, but Castellani recommends antimony tartrate as the only drug which appears to have a definite action on the haemorrhagic process.

268. Hydatid Disease in Uruguay.

ACCORDING to V. ZERBINO (*Rev. méd. del Uruguay*, September, 1919), hydatid disease is one of the most prevalent disorders in Uruguay and of recent years has shown an alarming increase. Of 53,437 patients admitted to two hospitals in Montevideo during the quinquennium 1913-17, 718, or 1.37 per cent., had hydatid disease, and if children only be considered, 216, or 4.34 per cent. The increase has been relatively greater in children, that is, up to 15 years of age, than in adults. Thus during the quinquennium 1896-1900 the percentage in children was 20.95 and in adults 79.05, while in the period 1913-17 it was 32.95 in children and 67.05 in adults. Zerbino's figures show that echinococcosis is pre-eminently a disease of childhood and youth. A few cases were found at 2 years of age and even earlier in life, its frequency then rapidly increased so that between 3 and 6 there were as many cases as between 35 and 40. The proportion still rapidly increased up to 10 and then remained stationary from 10 to 20. The maximum was reached between 20 and 25. The number of cases then declined less rapidly than it had risen, becoming less frequent after 40 and rare after 50.

269. Typhus Fever.

ACCORDING to A. POROT (*Paris méd.*, November 8th, 1919) the eruption of typhus always first appears on the flanks, where it becomes most pronounced. In only 4 out of 46 cases observed by him in the Tunis epidemic of 1909-10 did the rash become petechial. The application of a cupping glass, as shown by Murchison, often proved of diagnostic value in rendering a pale eruption distinct. Porot emphasizes the frequency of sphincter disorders, which occurred in 10 out of 46 cases. The tendon reflexes in such cases were usually diminished. Deafness due to labyrinthine disturbance was found in 11 cases. In 3 out of 4 fatal cases convulsions occurred. In one case convulsions were succeeded by persistent hemiplegia with aphasia—a rare complication, as it occurred in only two of Murchison's 15,000 cases.

270. Gangrenous Ulceration of the Genitals in Varicella

B. PONTOPPIDAN (*Ugeskrift for Læger*, July 16th, 1919) records two cases of gangrenous ulceration of the genitals in sisters aged 6 and 4 years. Shortly after they had developed varicella ulcers broke out on and in the neighbourhood of the vulva and buttocks. These ulcers were numerous, very tender, with irregularly circular outlines, and with a yellowish grey pseudo-membrane covering the base of each ulcer. In the case of the eldest child there was an ulcer of the size of a small coin on the left buttock just behind the vulva. On the inner anterior aspect of the left labium majus there was another fairly large ulcer, and a third ulcer was situated on the middle of the right labium majus. A fourth ulcer was considerably smaller. In the case of the younger child there were three ulcers on the inner aspect of the right labium majus, and one on the corresponding aspect of the left labium majus. There were also numerous smaller ulcers, ranging from the size of a lentil to that of a cherry stone, scattered over both labia majora. The vesicles scattered over the trunks of

both children were characteristic of varicella, with this exception that here and there they were gangrenous. The *Spirochaeta pallida* could not be found in the ulcers, and both Wassermann's and von Pirquet's reactions were negative. In about ten days the ulcers had almost healed. Professor Rasch (ibid.) suggests that this condition is identical with the disease described by Jonathan Hutchinson in 1882 as varicella gangrenosa—a term commonly misapplied to multiple infectious gangrene of the skin.

271. Neuroses of Recruits.

MEAGHER (*Journ. of Nerv. and Ment. Dis.*, October, 1919) records the results of a nervous and mental examination of 54,400 recruits in two American camps. Only a small percentage of the cases were sick, but while in one camp all soldiers (24,400) were examined, in the other only those soldiers whose regimental medical officers or line officers thought required a special examination were brought before the board. From the two camps a total of 700 men were rejected. These cases would have made inefficient soldiers had they been sent overseas, and large numbers of them would have broken down under the stress of war. The rejections fall under six heads: (1) Nervous diseases, (2) psychoneuroses, (3) psychoses, (4) inebriety, (5) mental deficiency, and (6) psychasthenic states. Under Group (1) a total of 206 men were rejected for complaints ranging from arterio-sclerosis and syphilis of the central nervous system to facial paralysis and sciatica. Group (2) produced 135 rejections, and Group (3) a further 99. The fourth group (inebriety) included alcoholism, morphinism, and other drug habit victims, and produced 36 rejections. The surprising total of 154 men were judged to be mentally defective, and the psychasthenic group accounted for 70. Major Meagher gives much detailed information, and his article impresses the reader with the importance of a procedure which saved the American Expeditionary Force nearly a battalion of potential invalids.

272. Influenzal Meningitis treated by Lumbar Puncture.

G. ROSENTHAL (*Paris méd.*, September 15th, 1919) reports two cases of influenzal cerebro-spinal meningitis treated by lumbar puncture and spinal lavage with normal saline. In the first case lumbar puncture and lavage were performed four times, 100 to 200 c.cm. being given on each occasion. In the second case the process was performed eight times—in six with normal saline and in two with normal saline to which 5 c.cm. of a 5 per cent. solution of collargol had been added. The lavage was continued until the fluid withdrawn was normal in appearance and contained a minimum of formed elements. The cerebro-spinal fluid in the two cases was opaline rather than purulent. Its albumin content was scanty and it did not show any spontaneous coagulation. The cellular content consisted mainly of polymorphonuclear leucocytes. No micro-organisms were found in smears or cultures.

273. Post-influenzal Alopecia.

AT a meeting of the Danish Dermatological Society NANDER and RASCH (*Hospitalstidende*, July 16th, 1919) discussed the frequency with which loss of hair occurred after influenza. Nander had seen about twenty cases in a month, and the cases observed early in 1919 had suffered from influenza in October and November of 1918. Three months was the usual period between the development of influenza and the alopecia, the onset of which seemed to depend on the severity of the influenza. Thus the comparatively mild epidemic of influenza in the summer of 1918 had not been followed by an outbreak of alopecia, whereas the more violent epidemic of the following autumn had yielded many cases. Rasch had found the alopecia develop two months after the outbreak of fever, reaching its maximum in a month. In the most severe cases each finger-nail often showed Beau's transverse markings, their position in the middle of the nail showing that three months had elapsed since the fever.

274. Influenzal Paralysis of the Abducens Nerve.

M. MEYERHOF (*Med. Klinik*, September 28th, 1919) notes that in the epidemic of influenza in 1889-90 diplopia due to paralysis of the muscles of the eyes was occasionally observed, and that by 1904 as many as sixty cases had been published. The nerves affected, in the order of frequency, were the abducens and the oculo-motor. In the recent epidemic the author observed as many as six cases of abducens paralysis, and in two of these necropsies were made. In both cases a careful macroscopic examination was made of the brain, the eyes and their muscles, as

well as of the nasal cavities. In the first case numerous punctiform haemorrhages were found in the cerebral hemispheres, but the brain centres of the ocular muscles were intact, and the orbit and nasal cavities showed no macroscopic sign of disease. Practically the same positive and negative observations were made in the second case, with this difference, that in the second case the cerebellum, as well as the cerebrum, showed punctiform haemorrhages. After giving details of all his cases, the author concludes that the paralysis of certain muscles of the eyes during or soon after an attack of influenza is due as in the case of diphtheria, to the action of the toxins of the specific infection on the nerves of these muscles.

SURGERY.

275. Primary Carcinoma of Gall Bladder.

PRIMARY carcinoma of the gall bladder is generally believed to be a rare disease. SMITHIES, however, in a review of 1,000 pathological gall bladders, found malignancy in 31 specimens. Of these gall bladders the neoplasm was primary in 23. In an interesting paper (*Amer. Journ. Med. Sci.*, January, 1919) Smithies analyses the sex incidence, average age, duration, and character of symptoms, association of cholelithiasis, and operative results. The male is more commonly affected than the female (16 to 7), the average age 59 years. In 16 cases a previously harmless type of gall bladder dyspepsia had existed for some nine and a half years, with a rapid aggravation of symptoms during an average of ten months. A second type of history is one without previous gall bladder trouble where symptoms have set in some three or four months previously and run a rapid course. Twelve cases gave a previous history of typhoid fever. The most outstanding feature of the previous history is the loss of weight, which is often astonishingly rapid, and this, with an unaccountable anorexia, jaundice, and abdominal tenderness, is suggestive of gall bladder neoplasm. It is noteworthy that only 30.4 per cent. of the cases were diagnosed correctly before operation. An abdominal tumour was present in 74 per cent. of cases, usually in the right hypochondrium, and the liver was frequently enlarged. Eleven cases were x-rayed, and in five atypical shadows were seen in the gall bladder zone, suggestive of calculi. Cholelithiasis was actually present in 16 out of the 23 cases (69 per cent.), and of the remaining cases the early histories of 4 were suggestive of the condition. This coincidence of gall stones and cancer of the gall bladder is a well-known fact, and haled rather naturally to the hypothesis that the stones are important contributory factors to the development of the neoplasm. Smithies does not go so far as to support this entirely, though his figures will no doubt be seized upon (and perhaps rightly) by the champions of gall stones-cancer theory. Smithies believes that one cannot exclude the possibility that the calculi are the result of the cancerous change altering the excretory function of the gall bladder. It would have been interesting to know whether the 7 cases with a rapid and short history had gall stones or not, but Smithies does not enlighten us on this point. A coeliotomy was performed eleven times, in 4 cases the gall bladder was removed, and once posterior gastro-enterostomy for obstruction. In the other 7 cases the gall bladder was drained. Only two patients were well longer than four years, the others died rapidly. Smithies gives the order of frequency of cancer in the organs concerned with digestion thus: (1) Stomach, (2) caecum and colon, (3) rectum, (4) oesophagus, (5) gall bladder, (6) liver, (7) appendix.

276. Epithelioma of the Lower Lip in a Man of Twenty-four.

C. RASCH (*Ugeskrift for Læger*, July 16th, 1919) records the case of a fisherman, aged 24, who had been quite well until about six months earlier, when a fissure developed in the lower lip. On his admission to hospital an indolent, much indurated sore, of the size of a 10-öre piece, was seen to be covered by a blood-stained crust, the removal of which revealed an irregular, granulating surface. The neighbouring glands were not enlarged, there was no clinical evidence of syphilis, the *Spirochaeta pallida* could not be found in spite of repeated examinations of the discharge from the sore, and Wassermann's reaction was negative. Von Pirquet's reaction was positive. Epithelioma having been diagnosed, the sore and the neighbouring tissues were excised, and the new growth was seen under the microscope to be a typical pavement-celled (canceroid) epithelioma. The patient had been sent to

hospital with the diagnosis of syphilitic chancre. At a little distance the sore looked like a typical chancre, but this diagnosis was at once altered to that of epithelioma when the irregularity of the surface of the sore was noticed; the lymphatic glands were found not to be inflamed; and other signs of syphilis were lacking. The duration of the sore for about six months was also indicative of malignant disease rather than of syphilis.

277. Perforation in Gastric Cancer.

FRIEDENWALD and MCGILANNAN (*Amer. Journ. Med. Sci.*, January, 1919) describe four cases of perforation in gastric cancer. Such perforations, due to the necrosis and subsequent digestion of the neoplasm, are not very common. Most statistics place the frequency of the occurrence at 2 to 3 per cent. Perforation may be of the acute type, simulating the ordinary peptic ulcer perforation, or it may be chronic, leading to local peritonitis and abscess formation. The chronic variety is, in all probability, much commoner than statistics would lead us to believe, the signs being overlooked or misinterpreted owing to the general wretched condition of the patient. Of the four cases recorded by Friedenwald and McGilannan, three were acute perforations and one chronic. The former are much the more interesting. In the first case perforation followed some two months after a palliative gastro-enterostomy, the growth being too far advanced for removal. The second died a few hours after the onset of acute symptoms and a small opening was found in a carcinomatous mass in the body of the stomach. The other acute perforation (Case 4) was found in a small annular cancer near the pylorus. The hole was cauterized, sutured, and covered with omentum. The carcinomatous nature of the supposed growth is probable but not proven. The chronic perforation was seen in a negro with an advanced cancer of the stomach. A fistula had developed leading from the cavity of the stomach through the abdominal wall to the exterior. It may be urged that this is an example of direct invasion of the abdominal parietes, but it is difficult to see how such infiltration can come about until the stomach becomes glued to the muscles by a plastic peritonitis. It may be noted that two of these four cases were operated upon for their perforations, but both died in a few hours.

278. Hydrocele: Mannino's Operation

PEPE (*Studium*, October 20th, 1919) describes two cases of the ordinary idiopathic vaginal hydrocele treated by Mannino's operation. This method is little known in this country, and for ease of execution and value seems to stand midway between Jaboulay's operation and the more bloody excision. Pepe uses a scrotal incision, though this is quite unnecessary. The steps of the operation are as follows: A longitudinal incision 10 cm. long is made through the skin of the scrotum 3 cm. from the median raphe, and the tunica exposed by gauze sponging. The liquid contents of the sac are then drawn off with a trocar and cannula to avoid flooding of the towels, etc. The tunica is incised the full length of the skin incision, and the testis and epididymis inspected. The cut edge of the tunica vaginalis is now turned in and sutured with a few points of No. 0 catgut to the para-testicular sulcus on each side of the testis and epididymis in such manner that the serous surfaces will adhere to one another. The anterior folded edges of the tunica vaginalis are then pulled together over the testis and accurately sutured together.

279. Retinal Tuberculosis

JACKSON and FINNORF (*Amer. Journ. of Ophthalm.*, October, 1919) report three cases of tuberculosis of the retina. Their first case is of extreme interest, for they were able to study the early retinal lesions, and they had the opportunity of watching the case for two and a half years. The cases occurred in men of 28, 33, and 25 years respectively. The authors' conclusions are as follows: Retinal tubercle begins with infiltration in the superficial layers, over the vessels, most commonly over the retinal veins. Later these vessels show signs of a perivascularitis, with alterations in calibre. This is the stage in which haemorrhages occur, and it is at this time that patients usually first come under observation, because of the visual disturbance caused thereby. Haemorrhages may be small and confined to the retina, in which case they generally clear up completely and good vision is restored, or they may be of gross size, subhyaloid in position, frequently bursting into the vitreous; such cases nearly always develop a retinitis proliferans later, and great impairment of vision is the result. A macular crown of white spots, such as is met with in cases of albuminuric retinitis, may be present, but it is not a constant feature of the disease. Very often both eyes are affected. The course of the

disease is very protracted. Provided that no pyrexia nor other general contraindications are present cases improve on small doses of tuberculin given once a week. The paper is illustrated by a good coloured plate of the early retinal lesions and by two photographs, one of which shows the bands formed by retinitis proliferans.

280. Post-operative Colic

A. SCHWARTZ remarks (*Paris méd.*, November 22nd, 1919) that all surgeons who have performed an abdominal operation are familiar with the post-operative colic from which their patients suffer. Spasms of pain develop twenty-four or forty-eight hours after the operation, or even later, and last, as a rule, for some hours, disappearing on the expulsion of flatus. The pain is accompanied by considerable disturbance of the general condition, rapid pulse, nausea, and vomiting. Schwartz has found that the expulsion of gas can be accelerated and the pain relieved by the application of an icebag to the abdomen. The ice should be changed as soon as it melts, and its application should be continued until flatus is expelled, which usually takes place in about twenty-four hours. Attention meanwhile should be paid to the skin and a piece of flannel applied if necessary. The following explanation is given of the action of the icebag: After every operation on the abdomen there is a stage of intestinal paralysis, which is followed by a stage of spasmodic contractions, which lasts until the intestinal gas is expelled. It is probable that the ice prevents the spasms while allowing peristalsis to continue. Three cases, of umbilical hernia, appendicitis, and hysterectomy respectively, are recorded in which this method proved successful.

OBSTETRICS AND GYNAECOLOGY.

281. Natural Delivery after Caesarean Section.

WILLIAMS (*Amer. Journ. of Obstet.*, October, 1919), after briefly discussing the views held as to the healing of Caesarean scars, reports seven cases in which delivery by the natural passages took place after a previous operation of Caesarean section done for such conditions as placenta praevia, eclampsia, inertia uteri, contraction ring, or abnormal presentations in the primipara. He quotes with apparent approval the opinions of Findley and Norak that not more than 2 or 3 per cent. of Caesarean scars are liable to rupture in subsequent labours. As a result of his personal experience, of experimental study, and of a review of the literature, he considers that in those cases where the operation had been done for a condition that no longer obtains the patients should be allowed to go into labour with the expectation of delivery by the natural passages. Again, in cases where Caesarean section is necessitated by failure of the natural forces in labour, the patients should be given a choice between repeated Caesarean section and the test of labour in the full realization that the operation may be necessary after all. In the original operation great care must be taken to obtain a perfect approximation of the uterine incision in its entire thickness, as the inner fibres have a tendency to retract beneath the outer fibres, and unless particular care is taken to prevent this by including all the layers in the sutures the result will be a thinned and weak scar.

282. Gangrenous Appendicitis and Labour.

GRATTAN (*Surg., Gyn., and Obstet.*, November, 1919) records a rare case of acute appendicitis complicating labour. The patient was a healthy primipara, aged 22, whose first symptoms of appendicular trouble occurred simultaneously with early labour pains. The temperature had risen to 100.4°, and palpation revealed abdominal tenderness in the right iliac and lumbar regions, reaching a maximum at a point 1½ in. above the anterior superior spine. With definite girdle pains and commencing dilatation of the cervix, the case presented considerable and serious difficulties of diagnosis. An oblique lateral incision was made, beginning in the flank an inch above the iliac crest and carried down parallel to Poupart's ligament. Turbid fluid escaped. High up above the incision a tense fluctuant sausage-shaped mass was found and brought down by gentle traction; this was a completely gangrenous appendix, distended with fluid, but still unperforated, containing a coprolith at its proximal end. Great care was exercised in the closure of the wound in view of the impending labour. The patient was delivered of a child nine hours after the operation, chloroform being administered again to allow of low forceps application. The third stage of labour was uneventful. The baby was difficult to resuscitate, and after alternating periods of apnoea and

normal breathing, it died of heart failure seven hours after birth. The author attributes this apnoea to the toxins from the mother's appendix. The patient herself had almost fatal post-operative complications, cardiac and renal failure, in all probability from a toxic origin. Slight jaundice developed. Complete recovery resulted.

283. An Unusual Bicornuate Uterus.

CORNELL and EARLE (*Surg., Gyn., and Obstet.*, November, 1919) give particulars of a uterus bicornis unicollis in a woman, aged 36, a multipara, who was admitted to hospital complaining of severe pain in the lower abdomen. During previous pregnancies no abnormal condition of the uterus had been noticed. At examination a single cervix was found with a soft, tender, freely movable mass to the left side, and a hard globular mass to the right side, the latter being thought to represent the body of the uterus. Under the diagnosis of an unruptured ectopic pregnancy with a fibroid uterus laparotomy was performed, and a double uterus was found, each half having one tube and one ovary attached to it. It was realized then that the condition was really a pregnant uterus bicornis unicollis, with one horn containing one large and several smaller fibroids. The left ovary contained the corpora lutea, the right being normal. The complete uterus was removed. Two ova were found in the left horn, and the authors calculate that one of these was seven and a half weeks old and the other a little over eight weeks—possibly a case of superfetation.

281. Prolonged Retention of Placenta.

LECÈNE and PROMSY (*Ann. de Gyn. et d'Obstét.*, October, 1919), in a very careful and informative paper, discuss the question of the relationship of retained placental fragments to benign and malignant chorionic growths. Fairly voluminous fragments of placenta may be retained in the uterine cavity for a considerable time. Such masses have been considered—wrongly in the authors' opinion—as benign tumours, capable of acquiring malignant characters. Without denying the possibility of transformation into chorion-epithelioma, they regard such an occurrence as altogether exceptional and even as unproven. Nor should the placental polyp be regarded as a benign tumour, seeing that it does not grow by the proliferation of its own elements expanding the surrounding tissues as tumours do. The retained placenta is only a sort of graft, which may continue to survive, sometimes for a very long time, by the help of the maternal circulation, but which in the end is either absorbed or eliminated. The apparent increase in the size of these remains is due to the accumulation and organization of blood clots, and is comparable to a thrombus growing along a blood vessel; in short, these prolonged placental retentions are simply residues with a precarious life, having only a transitory existence in the organ in which they are retained. Clinically, one may find prolonged placental retentions showing themselves only after a long period of tolerance. The initial abortion may have escaped sufficient notice. The symptomatology may be most variable, and is very often superposable on that of much more common uterine affections, such as submucous fibroids or cancer of the body of the uterus. Confusion may be avoided by careful investigation of the history of the previous pregnancy and by dilatation and curettage. In the great majority of cases curettage is sufficient to cure the condition.

PATHOLOGY.

285. Mixed Tumours of the Kidney.

BERRY (*Journ. Med. Res.*, September, 1919) reports three cases of mixed tumours of the kidney in adults. The various views regarding the tissue of origin of the so-called hypernephromata are briefly stated. Various authorities regard these as being sarcoma derived from adrenal rests or from regeneration of nephrogenic tissue. It is true that the hypernephroma may present a very confusing picture, depending on the differentiation of its cells, and may even sometimes give the appearance of a fibro-sarcoma. The author's three cases were respectively a mixture of fibro-sarcoma and adrenal cell carcinoma, a combination of a fibro-sarcoma and a papillary adenocarcinoma, and an adrenal cell carcinoma with leiomyosarcoma. As the cell types were quite distinct, and as, in the first two cases, fibroglial fibrils were demonstrated in the sarcoma cells, the author regards the conditions as distinct double tumours and not as carcinomata with excessively cellular stroma reaction. The finding of

smooth muscle cells with myoglia fibrils in the third case seems strong evidence against the view that it is a stroma reaction. It must, however, be emphasized that double tumours are to be accepted only after exhaustive analyses; growth forms take such an immense variety of characters, and the appearances given by the phosphotungstic stain are not always to be accepted uncritically.

286. Meningococci in Skin Ptechieae.

MUIR (*Journ. R.A.M.C.*, November, 1919) relates two cases of rapidly fatal meningococcal septicaemia, the patients being in fair health in the evening and dead the following morning. In neither case did the autopsy reveal meningitis, nor was the meningococcus found in the central nervous system. Films made from the ptechieae showed Gram-negative diplococci in large numbers inside and outside leucocytes, in both cases. In the second case the organisms cultivated from a ptechia, as well as from the blood, were proved to be meningococci, type II, according to Gordon's classification. Histological preparations showed striking appearances. All through the cutis in the haemorrhagic area the organisms were seen in large numbers within the minute blood vessels, occurring most frequently as a layer on the endothelium, but not infrequently forming a plug in the vessel. There was no inflammatory reaction around the vessels containing the organisms, presumably on account of the extreme acuteness of the case. Professor Muir, reviewing similar observations in recent French, American, and German literature, concludes that the meningococcus is not infrequently present in ptechieae in cerebro-spinal meningitis, but whether it is invariably so only extensive observations can determine.

287. Pfeiffer's Bacillus in Measles.

SELLARDS and STURM (*Johns Hopkins Hosp. Bull.*, November, 1919), who examined several measles cases occurring a few weeks after an epidemic of influenza, found an organism indistinguishable from the *B. influenzae* of Pfeiffer in 25 out of 31 cases. They obtained this organism readily in the sputum and from the conjunctivae. They failed to find it in the skin lesions or in the blood, but succeeded in isolating a highly parasitic bacillus of the same class from an excised lymph gland. As the active symptoms of the measles subsided these micro-organisms disappeared rapidly in three-fourths of the cases. Compared with strains isolated from true influenza, the measles strains showed individual variations, and the authors regard it as a possibility that haemoglobin-requiring bacilli represent a group of organisms containing distinct species. They are of opinion that the finding of the Pfeiffer bacillus both in influenza and in measles is an argument against the etiological relationship in either case, though the evidence at present available does not permit us to exclude the bacillus as a specific cause of some acute respiratory diseases. Several observers have previously noticed influenzal organisms in measles. It is worth while remembering this, because the symptoms of influenza and those of the pre-eruptive stage of measles may be identical.

288. Myxoma of the Heart.

NORTON (*Amer. Journ. Med. Sci.*, November, 1919) records an instance of this unusual condition in which the symptoms simulated those of bronchopneumonia. The pericardial sac contained 80 c.cm. of clear fluid. The heart was enlarged, weighing 510 grams, and the left auricle was filled with a tumour mass implanted by a broad base on its wall. The tumour was composed of two portions—one firm and elastic, attached to the heart wall, and the other an outgrowth from the first portion, comparatively soft and gelatinous. The harder portion came down to the level of the coronary artery, whilst the softer portion hung as a free plug between the mitral valves, thus rendering complete closure impossible. The tumour was covered by endocardium. On section it showed a preponderance of white fibrous-looking tissue in the larger portion, but scattered throughout it and preponderating in the smaller portion were areas of a distinct jelly-like appearance. Microscopically the tissue was composed of fusiform and stellate cells lying in a granular intercellular substance giving the mucin reaction—in other words, a myxomatous tissue. The author discusses the question whether these cardiac myxomas are true tumours or merely degenerating forms or organized thrombi, and lays stress on the fact that some 75 per cent. of all intracavity tumours are localized in the left auricle, whilst thrombi are equally as frequent in the ventricle as in the auricle. Of all primary cardiac tumours reported, the myxomata form 30 per cent.

EPITOME OF CURRENT MEDICAL LITERATURE.

MEDICINE

289. Studies in Pallaesthesia.

G. FRANK (*Il Policlinico*, Sez. Med., October 1st, 1919) summarizes his investigations on pallaesthesia, or the vibrating sensation, as follows: (1) Disturbances of pallaesthesia are observed exclusively in cases in which the anterior cornua or pyramidal tracts are involved, such as acute poliomyelitis, progressive muscular atrophy of the Aran-Duchenne type, amyotrophic lateral sclerosis, Erb's syphilitic spastic spinal paralysis, and disseminated sclerosis. (2) Disturbances of pallaesthesia are constantly observed in cases in which there is a compression of the cord, and especially of the pyramidal tracts, as in incipient Pott's disease; for which reason, if the compression is only slight, the symptoms may be absent altogether, as in incipient syphilitic spinal pachymeningitis. (3) Disturbances of pallaesthesia are constantly observed in diseases of the spinal cord in which the posterior columns are not affected, such as syringomyelia and haematomyelia. Moreover, they are often found in various affections of the spinal roots, such as tabes incipiens, radiculitis, etc.; while, on the other hand, the changes in vibratory sensation may be slight, even when the posterior columns are severely affected; in other words, disturbance of vibratory sensation is found exclusively and constantly—apart from incipient cases, in which they may be absent—whenever the motor fibres (lateral pyramidal tract) are involved.

290. Syphilitic and Arsenical Jaundice.

G. O. SCOTT and G. H. J. PEARSON (*Amer. Journ. of Syphilis*, October, 1919) state that jaundice occurring during early syphilis is of two types: (a) Syphilitic, in which the jaundice may appear before treatment or be provoked by the Herxheimer reaction appearing within the first three weeks after the first injection of the arsenical preparation, and due to a diffuse degeneration of the liver cells produced by the toxic action of *Treponema pallidum*. (b) Combined syphilitic and arsenical, appearing after the fourth injection, and due primarily to a syphilitic degeneration of the liver cells, on which is superimposed the toxic action of the drug. The writers recommend that every case of syphilis should be examined at all stages of the disease for any condition which might damage the liver, and treated with the greatest care to prevent the occurrence of jaundice. They regard the taste and smell of the arsenical compound after the injection as an important sign of early intolerance, and recommend a course of intraine, which they hold to be a specific for early or late combined syphilitic and arsenical jaundice, as soon as a reaction occurs or a sign of intolerance develops.

291. Pulmonary and Mediastinal Sequels of Chest Wounds and Gas Poisoning.

L. SERGENT and J. PRUVOST (*Journ. de méd. et de chir. prat.*, November 10th, 1919) describe the following pulmonary sequelae of wounds of the chest. (1) Haemoptysis. This is a fairly frequent occurrence, and is sometimes the only late manifestation of the wound. In most cases it indicates congestion round the wound or its track. The haemoptysis may be slight or profuse; occasionally it may recur frequently for fifteen to twenty-two months, and be accompanied by loss of strength, emaciation, and anorexia. It is very exceptional, however, for it to be symptomatic of post-traumatic tuberculosis. (2) Late infection. This sometimes gives rise to alarming symptoms. The most serious sequel is an abscess or actual gangrene of the lung developing in the neighbourhood of the track of the projectile. (3) Blood cysts are occasionally met with, being situated either in the subpleural tissue or in the substance of the lung. The lesions produced by gas poisoning are a mixture of chronic bronchitis, emphysema, small areas of bronchial dilatation, and pulmonary sclerosis without special localization, and are manifested by dyspnoea, cough, fairly profuse expectoration, retro-sternal pain, and sometimes attacks resembling asthma. X rays show a peribronchial and pulmonary sclerosis and an enlargement of the hilar and tracheo-bronchial glands. Tuberculosis is an infrequent sequel, occurring in only 9 per cent. of chest wounds. It is not due to the wound itself, but to prolonged suppuration, depression, and diminished resistance, which create a favourable soil for the tuberculous process. The mediastinal sequelae of chest wounds

consist of enlargement of the glands, mediastinitis, and involvement of the nerves or nerve plexuses of this region and are manifested by pain, dyspnoea, cardiac arrhythmia, disturbance of the oculo-cardiac reflex, enlargement of the thyroid, and inequality of the pupils.

292. Tabes accompanied by Active Syphilitic Lesions

ACCORDING to GIANNELLI (*Il Policlinico*, Sez. Med., October 1st, 1919) the association of secondary or tertiary syphilitic manifestations during life is not frequent, though such an occurrence is not exactly rare. Adrian collected 65 cases from literature, to which must be added 4 reported by Guszman and those of Nonne, who, though he does not give the exact number, states that he has repeatedly observed this association. Giannelli reports a typical case of tabes of ten years' duration in a man, aged 42, who had contracted syphilis, for which he had had no treatment, at the age of 25. When seen by Giannelli he presented gummatous lesions of the perineum and left leg, and, in addition, a perforating ulcer on the sole of the left foot, in the tissue surrounding which a typical *Spirochaeta pallida* was found. No previous instances have been recorded in which the spirochaete has been found in connexion with perforating ulcer.

293. Hydatid Cyst of the Brain.

PONCE DE LEÓN (*Rev. méd. del Uruguay*, October, 1919) reports the case of a boy, aged 11, who had suffered for three or four months from severe headache, which was gradually getting worse; he had also vomiting and a staggering gait. The general condition was good, and there were no ocular symptoms. Palpation of the skull showed areas of softening. The blood was normal on examination; eosinophilia 1 per cent.; 10 c.c.m. of cerebrospinal fluid were removed, examination of which showed nothing abnormal. The Weinberg and Wassermann reactions were negative, both in the blood and cerebrospinal fluid. Radiography of the skull showed some small fronto-parietal bone irregularities. Death occurred suddenly a few hours after the puncture. At the autopsy an enormous hydatid cyst was found occupying the whole of the occipital lobe, the parietal, and part of the temporal lobes. The diagnosis of cerebral hydatid had been made during life by Professor Morquio on account of the symptoms of cerebral tumour with cranial softening co-existing with an excellent general condition in a child who showed no evidence of syphilis.

294. Dysentery in Palestine.

BLACKBURN (*Med. Journ. of Australasia*, August 23rd, 1919) records his experience with dysentery in the Palestine campaign. Always more prevalent during and immediately after an advance into enemy country, it became less so when the troops were sufficiently stationary to permit of efficient sanitary precautions being adopted. Bacillary infections were about twice as numerous as amoebic, and it was possible to differentiate between the two from a naked-eye inspection of the stools and from the mode of onset, which, in acute bacillary cases, was abrupt, a few loose evacuations being followed by rapidly succeeding small squirts of blood-stained mucus, often without faecal odour. In acute amoebic cases the blood and mucus were less intimately mixed, and there were almost always traces of faecal matter. The treatment of bacillary cases consisted of absolute rest in bed, abundant allowance of water, but all foodstuffs were withheld until yellow or brown faeculent matter appeared in the stools, when the diet was cautiously increased from day to day. Sodium sulphate or magnesium sulphate in 3.6 gram doses was administered every two hours in a mixture with dilute sulphuric acid till the tenesmus was relieved and the stools became faeculent, when the dosage interval was gradually increased. Polyvalent antidyenteric serum gave remarkable results from 100 c.c.m. into the adductor muscles of the thighs on two successive days. Gentle saline rectal lavage, followed by a starch and opium enema, often enabled the patient to obtain some rest. The treatment of acute amoebic dysentery resolves itself into the daily intramuscular injection of emetine for twelve days, 0.03 gram being given eight and morning for the first day or two, followed by a single daily dose of 0.06 gram. If at the end of twelve days cysts of *Entamoeba histolytica*

were found in the stools, emetine bismuth iodide 0.18 gram was given by mouth each night for twelve nights, after which the stools were usually free from cysts.

295. Benzyl Benzoate in Amoebic Dysentery.

HAUGHWONT and LANTIN (*Arch. Int. Med.*, October, 1919) make a preliminary report on eight cases of entamoebic dysentery treated by benzyl benzoate. The cases are related in full. No case suffered untoward effects from the drug. The amoebae disappeared from the stools in nearly every case as the general symptoms subsided, but whether these cases are permanently cured or liable to future relapse cannot be determined at present. It is suggested that benzyl benzoate may be of particular value in mixed amoebic and bacillary dysentery where the condition of the heart forbids the use of emetin. The sedative action of the drug on the intestinal musculature is of importance. In an addendum by Asuzano two further cases are recorded in which both the trophozoite and encysted forms of the entamoeba disappeared under benzyl benzoate treatment within a week. The drug in a 20 per cent. alcoholic solution was administered in doses of 10 drops three times a day.

293 Friedländer's Pneumo-bacillus in an Epidemic of Pneumonia.

ZANDER (*Deut. med. Woch.*, October 23rd, 1919) observed an epidemic of pneumonia in a prisoners' camp between December, 1916, and April, 1917, the character of the disease being in several respects instructive. Both the contagiousness and mortality were great—144, or 36 per cent., of the 411 cases proving fatal. The high mortality and the inability of optochin to control the course of the disease led to an investigation of the epidemic by Professor Morgenroth and an assistant, who found Friedländer's pneumo-bacillus in every case examined. The morbidity was six times as great among young adults as among elderly persons, but the mortality was much higher among the middle-aged and elderly persons than among the young. The onset of the disease was gradual, the patients feeling unwell a day or two before the development of alarming symptoms. Only in a third of the total was the onset sudden and ushered in by a rigor. In many cases several lobes of the lungs were found to be involved at the first examination. The fever fell practically as often by lysis as by crisis, and its average duration was nine to ten days. Empyema occurred in as many as 20 cases; in 13 cases the pneumonia relapsed, and of these 3 proved fatal. Morgenroth's optochin was tried in 50 cases, the dose being 0.15 gram given daily for eight to ten days. It not only failed to affect the course of the disease, but it did not provoke any of the symptoms commonly associated with optochin poisoning. The authors discontinued this treatment when they realized that the infection was due to Friedländer's bacillus for which optochin has little affinity.

297. Intravenous Injections of Urotropine in Acute Articular Rheumatism.

F. DEUTSCH (*Wien. klin. Woch.*, September 6th, 1919) has treated 61 cases of acute articular rheumatism exclusively with intravenous injections of urotropine. The disease was severe in every case, and was associated with considerable swelling of the affected parts. The dosage was 20 c.cm. of a 30 per cent. solution of urotropine, the solvent being at first distilled water, later normal saline solution. The injections were repeated daily till there were signs of improvement. The number of injections ranged from six to fifteen, with an average of seven. A febrile reaction was common. Signs of bladder irritation were also noticed, culminating in three cases in haematuria. This complication was transient and harmless, and only in one case did it last as long as four days after the drug had been discontinued. In some cases the injections were supplemented by urotropine given by the mouth. The ages of the patients ranged from 16 to 34 years. Of the 61 patients, 56 were cured, no relapse occurring during an observation period of several weeks. In 2 cases there was a relapse after eight days, but recovery followed a renewal of the treatment. It failed altogether in 4 cases treated at a time when a comparatively weak solution of urotropine was given. Besides, these four cases were of old standing, the articular manifestations being associated with cardiac disease. Of the total, 27 were cases of relapse, 34 were early. None of the patients without signs of cardiac disease at the beginning of treatment developed such signs. The course of the disease in cases with signs of cardiac disease was comparatively protracted; but it seldom lasted more than a couple of weeks, and was unaccompanied by exacerbations.

The pain and swelling of the joints vanished as rapidly as under salicyl, atophan or melubrin. The fall of the temperature by lysis as a result of the injections caused the patient less discomfort than the fall, accompanied by profuse sweating, induced by salicyl.

SURGERY.

298. Tumour of the Pons Varolii.

THROCKMORTON (*Journ. Amer. Med. Assoc.*, October 25th, 1919) reports a case of a lad, aged 17½ years, who complained of nervousness and inability to walk properly, which had been gradually growing worse for three or four years, and preceded by a progressively increasing internal strabismus which was first noticed when he was about 8. Weakness of the right face and impaired hearing followed, with occasional headaches and at times vomiting, often of the projectile type. The gait was lurching and staggering, with a tendency towards the right, and the ataxia was of the cerebellar type, and not appreciably influenced by closure of the eyes. The characteristic cerebellar attitude of the head was present, with the chin turned towards the affected side and the head tilted to the opposite shoulder. Double choked disc existed, more marked on the right side than the left, and there was involvement of the ophthalmic division of the right fifth nerve, and of the sixth, seventh, eighth, ninth, tenth, and eleventh cranial nerves. Laboratory findings of the blood and urine were negative. A decompression operation exposing the whole of the right cerebellar lobe was performed without revealing more than an increased resistance felt by the finger in the region of the pons. Sixteen days later a hernial protrusion required paracentesis, when 75 c.cm. of clear cerebral fluid were withdrawn. The patient lived for almost five years afterwards in comparative comfort and without complete loss of eyesight. A mesial section of the brain revealed a spherical encapsulated gliomatous mass, 3.5 by 4 cm. in diameter, practically filling the fourth ventricle, and occupying the space between the superior cerebellar peduncles and the crus cerebri above, the medulla below, and the transverse fibres of the pons anteriorly.

299. Significance of Intercostal Neuralgia.

CARDARELLI of Naples (*Studium*, June 20th, 1919) in a clinical lecture emphasizes the importance of excluding by careful examination the possibility of aneurysm or neoplasm in cases of severe intercostal neuralgia, especially of the left side. Quoting from Valleix, whose admirable monograph on the subject should be more widely read, Cardarelli lays stress on the differences which exist between simple intercostal neuralgia and that due to pressure on the nerves, either by aneurysm or new growth. The clinical picture of pure intercostal neuralgia is as follows: The patient is almost invariably a young person of neurotic type. Medical advice is sought not so much on account of the intercostal pain, but because the patient believes, owing to the distribution of the pain (usually fifth and sixth intercostal nerves), that heart disease is present. Although the intercostal pain may be severe, it is not usually so intense that it cannot readily be borne. It is diffuse, intermittent, and responds to treatment. In exact opposition to the above picture, a patient suffering from pressure neuralgia complains of intolerable pain, which is constant, preventing sleep, definitely localized (more usually behind), and is obstinate to all forms of treatment. The patient is as a rule older, not generally of a neurotic type, and may give a history of syphilis or of a previous operation for new growth. Cardarelli's own case, which he describes in full, belongs to this latter category. He also gives brief clinical notes of other cases where mistakes in the diagnosis had been made. It should be noted that in all these cases intercostal neuralgia was the predominant feature, and for this symptom the patients were admitted to hospital. Cardarelli's case—a peasant 40 years old—two years previously was operated on for a growth of the right testicle. The testicle was removed, together with the inguinal glands of the right side. When the case was seen by Cardarelli a large mass could be felt in the right iliac fossa, but the pain for which the patient sought advice was in the back, to the left side of the vertebral column, was definitely localized, of intolerable intensity, and uninfluenced by drugs, morphine included. Cardarelli had no hesitation in diagnosing pressure neuralgia due to a secondary deposit in the lumbar glands. He rightly points out that with a malignant growth of the testicle these are the glands to be removed, and not the inguinal

ones, as had been done in this case. With reference to the other cases cited by Cardarelli, one was that of a soldier, admitted to hospital and treated for simple intercostal neuralgia. Before long, however, a small pulsating tumour was noticed in the back, and at autopsy an aneurysm of the descending aorta was found. Another case of aneurysm with severe intercostal pain was diagnosed first as a pleurisy with effusion, and later as a neoplastic pleurisy; later a typical pulsating swelling was discovered in the back. At the *post-mortem* examination an aneurysm was found which had burst into the pleura. These cases corroborate Cardarelli's statement that severe intractable neuralgia is a danger sign, and indicates serious organic trouble.

300 The Pleural Sequels of Penetrating Wounds of the Chest.

ACCORDING to COURCOUX (*Journ. de méd. et de chir. prat.*, November 10th, 1919), every penetrating wound of the chest is not necessarily accompanied by a lesion of the pleura apt to give rise to sequelae. In some cases, even when the projectile is left in the thorax, recovery takes place without any clinical or radiological evidence of pleural involvement. In a somewhat larger proportion of cases the reaction produced is very slight, and disappears so rapidly that it may be regarded as non-existent. Of 360 cases of penetrating wounds of the chest studied by Courcoux at the front, 23 per cent. were discharged from hospital after a fortnight to three weeks without having shown any appreciable lesion of the pleura. In Ombredanne's service at Tours he was able to study another series of penetrating wounds for a much longer period. Out of 191 cases, 40, or 21 per cent., showed no early or late pleural reaction on repeated clinical examination controlled by radioscopes. On the other hand, 151, or 79 per cent., showed some pleural reaction or lesion. Of these, 28, or 15 per cent., completely recovered within a period ranging from two to six months, while the majority—123, or 64 per cent.—still presented sequelae at the end of this time, which were classified as (a) very slight—65 cases; (b) more marked—45 cases; (c) serious—13 cases. Courcoux maintains that the tendency to recovery is most pronounced in the first six months after the wound, and that subsequent improvement is much slower.

301. Spontaneous Rupture of a Hydatid Cyst of the Liver.

R. GOMEZ (*Rev. méd. del Uruguay*, October, 1919) reports the case of a girl, aged 11, who had had a slowly growing swelling in the epigastrium since the age of 6. Two days before admission to hospital she had fallen down and struck her abdomen against a stone. She felt a severe pain and lost consciousness, and the epigastric swelling disappeared. A diagnosis of rupture of the cyst into the abdominal cavity with hydatid toxæmia was made. Vomiting, diarrhoea, and a generalized urticarial eruption were present, and Weinberg's reaction was positive. On the third day the child regained consciousness. The epigastric tumour gradually reappeared, and a median supra-umbilical laparotomy was performed. The free extremity of the omentum was found adherent to the hepatic cyst and strewn over with small cysts ranging in size from that of a grain of semolina to that of a hazel-nut. The omentum was resected, leaving only the part adherent to the hydatid cyst, which was the size of an ostrich's egg. The issue of the case is not recorded.

302 Transference of the Fibula.

CAMPBELL (*Journ. of Orthopaed. Surg.*, October, 1919) reports three cases of transference of the fibula as an adjunct to free bone graft in tibial deficiency, in which condition the leg deviates inwards with inward rotation of the lower fragment, and finally luxation with marked prominence of the head of the fibula occurs, interfering with the adjustment of any apparatus for weight bearing. A four-inch incision is made over the lateral aspect of the head of the fibula, and the deep fascia and capsule of the tibio-fibular joint are incised. All cartilage and fibrous tissue are removed from the head, care being taken not to injure the external popliteal or peroneal nerves. A cavity is then made in the inferior and external aspect of the tibia, into which the denuded head of the fibula is forced, and the periosteum of the two bones is sewn together, and the wound closed with catgut. Finally, the inlay graft is proceeded with. The advantages of this method are: (1) the possibility of lengthening the limb $1\frac{1}{2}$ inches; (2) early transference of the head will stabilize the limb and prevent shortening; (3) after eight weeks a stable limb is produced in which no false motion is possible between the knee and the ankle; (4) early stability prevents

motion and facilitates the development of the free graft; (5) a new blood supply is added to the tibia through the medium of the fibula, thereby promoting nutrition; and (6) the chances of complete success are greater. A two-stage operation is advisable in all cases where there is much difficulty from contractures of dense scar tissue in straightening the limb.

303. Necrosis of Index Finger from Lysol.

SOWLES (*Boston Med. and Surg. Journ.*, October 23rd, 1919) reports a case of necrosis of the index finger from lysol. A man, aged 29, four times in forty-eight hours soaked his finger in lysol solution for from fifteen to twenty minutes, producing a typical carbolic acid gangrene appearance. After cleansing with alcohol and dressing with boric ointment there was a fairly extensive slough from the dorsum of the finger resulting in permanent impairment of the terminal joint. The patient had poured an indefinite amount of lysol into a basin of water into which the hand was placed palm upward so that the dorsum of the index finger apparently lay in the concentrated lysol which had settled at the bottom of the basin without being mixed with the water. Although the makers of lysol recommend its use in 1 per cent. and 2 per cent. solutions, these directions are frequently ignored, or the concentrated lysol is not properly mixed with the water. This case affords a strong argument for the thorough mixing of such solution because of the danger of producing carbolic acid necrosis by too strong or imperfectly mixed solutions.

304. Isolated Paralysis of the Ilio-psoas Muscle

ISOLATED muscle paralysis are uncommon, and in many cases are not easily diagnosed unless a muscle has a specific function which can be tested with certainty. Such a test has been evolved for the ilio-psoas by Ludloff of Frankfurt. EBERSTADT, from Ludloff's clinic (*Muench. med. Woch.*, September 5th, 1919), reports five cases of ilio-psoas paralysis. He points out that there are two classes of case according to the etiological factors concerned: (1) Direct, where there is loss of function in the muscle due to congenital muscle defects, diseases of the nervous system, central or peripheral, or local muscle affections; (2) indirect—pelvic and hip-joint anomalies which produce loss of function in the ilio-psoas owing to a mechanical alteration in the line of traction; in this class the paralysis is apparent only. Of the cases studied two were said to be examples of congenital deficiencies in the psoas muscle two were due to injuries of the anterior crural nerve (warfare lesions), and one a case of spondylitis of the lower spine. Ludloff's test is carried out with the patient seated upright with the hips passively flexed to 90 degrees. Inability to lift the thigh—that is, to flex the hip-joint from the right-angled position, constitutes a positive Ludloff's phenomenon, and is indicative of paralysis or insufficiency of the ilio-psoas.

OBSTETRICS AND GYNAECOLOGY.

305 Influenza and Pregnancy.

E. HAUCH (*Ugeskrift for Læger*, June 26th, 1919) states that 88 cases of influenza—41 complicated by pneumonia—were observed in his maternity hospital. Of the 16 patients who gave birth during an attack of pneumonia, 12 died. The 4 who survived gave birth to 1 dead and 3 live infants. Only 3 of the infants of the 12 mothers who died were born alive and at term. Of the 6 patients who contracted influenzal pneumonia in the puerperium only 1 died. The mortality was also comparatively low among the pregnant women who escaped confinement while they were suffering from pneumonia, only 6 of the 17 patients in this class dying. These patients, who recovered from pneumonia without labour being precipitated, returned to their homes with signs of life in the fetus. The author concludes that labour is such a dangerous complication of pneumonia that every effort should be made to avert confinement. With this object he recommends opium suppositories; he also gives morphine, pantopon, scopolamine, and chloral. As complete rest as possible should be secured, and when stimulants are required camphor proves useful. As the fetus usually dies before the mother, there is seldom any indication for *post-mortem* Caesarean section. E. PETERSEN (*Ibid.*, July 3rd, 1919) notes that of 23 cases of influenzal pneumonia complicated by labour, 10 (that is, 43 per cent.) proved fatal. Most of the patients were suffering from severe bilateral bronchopneumonia on admission to hospital, and labour was premature in 13 cases. Post-partum atony of the uterus was common. The author believes that the transport of the patient

from her home or another hospital often gave a fatal turn to the illness, and he urges practitioners to keep their patients at home, even though conditions there are unsatisfactory. As for the conduct of labour, he recommends expectant treatment in the stage of dilatation. He gives the same advice for the stage of expulsion, with this reservation, that if it is delayed a general anaesthetic should be given and the forceps employed. The anaesthetic undoubtedly adds greatly to the risks in such cases, but the objections to forceps without anaesthesia are still greater.

306. Treatment of Umbilical Hernia in the Newborn.
JOB (*Rev. méd. de l'Est*, November 15th, 1919) reported two cases of congenital umbilical hernia in the newborn. One child, who was a premature infant of 7½ months, presented numerous other malformations and died soon after birth. In the other case the hernia, which was the size of an orange, was reduced and a longitudinal suture made. Although this gave way shortly afterwards, a cicatrix formed and recovery took place.

307. Subperitoneal Fibroid with Central Abscess.
DUVERGEY (*Journ. de méd. de Bordeaux*, November 25th, 1919) reports the case of a woman, aged 49, who developed signs of a rapidly growing tumour accompanied by very severe pain in the hypogastrium. On palpation a firm tumour was felt extending two fingerbreadths above the umbilicus, and filling the pelvis and a large portion of both iliac fossae. At the operation a large fibroid weighing 4 kilos was removed, which was adherent to the posterior surface of the uterine isthmus, which was also removed. In the centre of the fibroid was an abscess containing 150 c.cm. of creamy pus with a stercoral odour but without any trace of organisms.

PATHOLOGY.

308. Toxic Necrosis of Pancreatic Cells.
PARKER (*Journ. Med. Res.*, September, 1919) believes that toxins which cause lesions in the heart, liver, kidney, and adrenal, cause similar lesions in the acinar cells of the pancreas which have hitherto been overlooked. Microscopically the necrosis is found to occur in single acinar cells, groups of cells, or diffusely. The number of such lesions in a single section varies from one or two necrotic cells up to involvement of more than half the cells. The necrotic cells are invaded by polymorphonuclear and endothelial leucocytes, and are very quickly removed. Regeneration is rapid and repair complete. The condition has been found most frequently in pneumonia, diphtheria, acute peritonitis, and streptococcal infections. The author does not detail any extensive observations on other *post-mortem* specimens of pancreas which might serve as controls.

309. Effect of Influenza on the Blood Vessels.
O. STOECK and E. EPSTEIN (*Wien. klin. Woch.*, November 6th, 1919) have investigated the condition of the blood vessels of patients between the ages of 13 and 23 who had died within eight to fourteen days of the onset of influenza, and in whom the effects of other infectious diseases might reasonably be excluded. The most striking injury was found in the elastica interna, breaks in the continuity of the tissues being very numerous. The destruction of the elastic fibres was shown by changes in their staining properties, by the shape and position of the fragments, and also by a deposit of calcium salts detected here and there. Necrosis of the muscular elements of the media occurred in patches, and in some cases the muscular elements had vanished altogether over a wide area. Another change in the media was oedematous infiltration, the muscle fibres being split up by fluid. The intensity of these changes in the blood vessels was not uniform and their distribution was patchy; in some cases the arteries of the limbs were most diseased, in others the arteries of the abdomen. The coronary arteries were affected in almost every case. While the arteries of the systemic circulation were invariably affected, the arteries of the brain alone enjoying comparative immunity, the branches of the pulmonary arteries remained intact, except when there was direct extension of inflammation of the lungs to these arteries. Side by side with the destructive changes there was evidence of repair. This demonstration of far-reaching destruction of the muscular and elastic elements of the peripheral arteries explains the profound disorders of the vascular system observed by clinicians in many cases of influenza. The fact that the

peripheral vascular system, rather than the heart itself, is most affected is, no doubt, the reason why cardiac stimulants have proved so futile in combating the collapse of influenza.

310. Extreme Eosinophilia.
GIFFIN (*Amer. Journ. Med. Sci.*, November, 1919) reports a rather unique case of persistent eosinophilia with hyperleucocytosis and splenomegaly. The patient was a male, aged 31 years, who had marked splenomegaly and slight enlargement of superficial lymphatic glands, along with generalized anasarca and moderate anaemia. There was no indication of nephritis, and the Wassermann reaction was negative. Eight years previously he had had a probable typhoid fever, followed by pneumonia. Convalescence from this was protracted, and his former strength had never been regained. His first blood count revealed a secondary anaemia with a leucocyte count of 15,400, of which the eosinophiles formed 66.3 per cent. No parasites at any time were found. A lymph gland removed showed on section marked endothelial hyperplasia, with numerous eosinophile leucocytes and myelocytes. Rest in bed improved his general condition, so that he returned to work for a year. But on account of the persistence of the chronic anaemia and the presence of splenomegaly, splenectomy was decided upon. At that time he had a leucocytosis of 21,800, with an eosinophilia of 73.6 per cent. Splenectomy was followed by gradual and steady improvement of the patient's health and general strength, but within a month the leucocytes had risen to 97,200, with 79 per cent. of eosinophiles. Later the leucocyte count rose to 211,000, with eosinophiles to 90.7 per cent. Good general health was, however, maintained for a period of four years after the splenectomy. He died of bronchopneumonia with empyema. The necropsy revealed enormous numbers of eosinophile polymorphonuclears in all the haemopoietic organs, eosinophile myelocytes in large numbers in lymph glands, spleen, and bone marrow, and an obliterative pericarditis and fibrous hepatitis. The author mentions that Stillman reported a similar case in 1912, but there does not seem to be any other comparable case in literature. The origin and functions of eosinophiles are briefly discussed.

311. Acute Lethargic Encephalitis: Post-mortem Findings.
CLAUDE and SCHAEFFER (*Bull. et. mém. Soc. Méd. des Hôp. de Paris*, May 29th, 1919) report a case of lethargic encephalitis in a woman, aged 42, which proved fatal after three weeks' illness. Although she showed no evidence of syphilis the Wassermann reaction was positive both in the blood and cerebro-spinal fluid. At the autopsy lesions of acute encephalitis were found which were most pronounced in the peduncles, upper part of the pons, and optic thalamus. No changes were seen in the cortex, cerebellum, or cord. Ordinary inflammatory lesions were accompanied by atrophy of the cells of the nucleus of the sixth nerve, and to a very slight extent of the nuclei of the third and seventh nerves. No haemorrhagic foci were found. The lesions were very different from those found in other forms of acute encephalitis, especially in certain cases following influenza in which cerebral oedema is the principal lesion.

312. Essential Atrophy of the Pancreas.
OERTEL (*Journ. Med. Res.*, September, 1919) describes under this title a lesion in which quantitative loss and collapse of parenchyma are the only essential features and occur independently of either vascular or inflammatory changes or an increase in fibrous connective tissue. It occurs in youth and middle age, affects the parenchyma diffusely, progresses much beyond the limits of simple atrophy of cells and acini to structural solution, and is associated with characteristic, aborted, and atypical regenerative attempts of parenchyma cells. The pancreas is diminished in size and weight, its lobular distinctions either fused, nuclear form collapse without cicatricial contraction, or exaggerated from loss of tissues and fat elements. The configuration of the organ is fairly well preserved, though sometimes somewhat distorted, especially by greater loss of substance in the tail end. Ducts and blood vessels are not involved in the process. Microscopically there is found only atrophic collapse and disorganization of acinar architecture, with irregular, embryonic, often diffuse, cell proliferation. The author has investigated five instances of this lesion, which was always associated with severe, even acute, diabetes, ending in fatal coma. It appears that this lesion represents a pathological exaggeration of normal physiological processes of regression and progression which are constantly going on in the pancreas.

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